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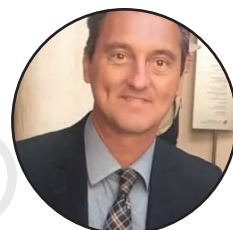
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Length of work experience and educational stage as elevating factors of work-related stress among Czech teachers

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Abstract

The present-day profession of kindergartner, primary and secondary school teachers in the Czech Republic is of a highly demanding nature. Being a helping profession, teachers are exposed to significant work-related stress, risk of burnout syndrome and other mental health issues. In such an environment, the issue of time – length of work experience together with the factor of different educational stage, could play an important role – as confirmed by the present research. The aim of the paper is thus to find out whether and how length of work experience and educational stage of Czech teachers elevate their work-related stress. The research sample consists of 594 teachers (119 kindergarten teachers, 262 primary school teachers and 213 secondary school teachers). Using OSI-R (Occupational Stress Inventory-Revised, author: Osipow) the categories of Overload, Role Insufficiency, Role Ambiguity, Role Boundary, Responsibility and Physical Environment were correlated with length of work experience (0–15; 15–30; 30+) and educational stage (kindergartner, primary and secondary school). The research survey was conducted in accordance with all applicable ethical considerations. In terms of length of teaching experience, teachers with the shortest experience (0–15 years) were significantly different from teachers with 15–30 years of experience (all $P < 0.001$) and 30 or more years of experience (all $P < 0.001$). In both cases, Role Overload and Role Responsibility worked together and induced lower job stress in teachers with 0–15 years of teaching experience. In the context of educational stage, kindergarten



and secondary school teachers differed in terms of the two roles ($P_{RO}=0.036$, $P_R=0.010$), with kindergarten teachers showing greater role-related stress compared with those from secondary school. The only effect of length of teaching experience was observed for Roles Insufficiency and Ambiguity. For Role Insufficiency, teachers with the longest (30+ years) teaching experience showed significantly less role-related stress compared with those with medium (15–30 years, $P=0.006$) and shortest (0–15 years, $P=0.013$) experience. For Role Ambiguity, again, teachers with the longest (30+ years) teaching experience showed significantly less role-related stress compared with those with the shortest (0–15 years, $P<0.001$) length of experience. The values of Role Boundary and Physical Environment were significantly different due to the interaction between length of teaching experience and educational stage. A post-hoc analysis showed that secondary school teachers with the longest teaching experience showed significantly lower role-related stress compared with secondary school teachers with medium teaching experience (mean 47.58 vs. 52.44, $\text{diff}=-4.861$, $P=0.019$). Finally, for teachers with the longest experience (30+ years), the physical environment induced significantly higher stress in kindergarten compared with secondary school (mean 51.35 vs. 45.87, $\text{diff}=5.480$, $P=0.155$). In conclusion, both length of work experience and educational stage play specific roles in teachers' work-related stress and suggest that especially for kindergarten teachers a specific type of psycho-hygiene and for secondary school teachers a type of inter/supervision could be supportive.

Keywords: Length of work experience, education stage, work-related stress, teachers.

Introduction

The teaching profession is subject to a significant degree of workload and stress. This is partly related to the overall setting of society: high demands on work performance, expectations of trouble-free adaptation to fast social changes, requirements for continuous self-education, prolonging the working age and moving the retirement age in Europe, unexpected social changes associated with various phenomena such as Covid-19, etc. To a great extent, this is also due to the very nature of the teaching profession, which is based on the demanding and multilayered relationship between teachers and students or parents – the fact that this is one of the helping professions. The complex nature of the helping character of the teaching profession was aptly summarized by Farmer (2020, p. 41): “Because education is a profession filled with relationship building, problematic relationships with students and parents can cause teachers undue stress. Teachers are subjected to a myriad of issues, from violence within the classroom to workplace expectations that are beyond the scope of their professional knowledge. Teachers may also experience compassion fatigue and burnout from constantly working with students who have severe issues. Parents and unsupportive administrators are also causing the educational workplace to be stressful and embedding a culture that causes teachers to leave the profession.”

As suggested by Hricová and Lovašová (2018), people in helping professions are significantly affected by the negative consequences of the fact that the essence of their work is helping – whether it be a high degree of stress, the risk of burnout syndrome, emotional exhaustion or the risk of a secondary trauma. Among the helping professions, the teaching profession has one of the highest rates of work-related stress (Kyriacou, 2015). Although according to some studies it is impossible to confirm a direct correlation between subjectively perceived work-related stress and physiologically measurable stress levels among teachers (Becker, Spinath, Ditzén, & Dörfler, 2022), work-related stress represents a sufficiently strong factor to significantly affect the level of mental health of teachers in primary and secondary schools (Ji, Wang, & Riedl, 2021). The high level of stress accompanied by a greater degree of emotional sensitivity on the part of teachers aggravated by a non-supportive environment in the form of more or less hostile actions on the part of students or parents may even lead to thinking about leaving the profession (Wadhera, & Bano, 2020). Disturbing and undisciplined students' behaviour in classes was considered by some studies (Fernet, Guay, Senécal, & Austin, 2012; Betoret, & Artiga, 2010; Chang, 2009) as the most significant external stressor – in the sense of a stressful situation associated with the performance of the teaching profession.

Given the fact that the teaching profession is in many ways unique among the helping professions, it is not surprising that its occupational stressors are unique as well and different from other professions (Urbanovská, 2001). The perception itself and the definition of stressors significantly differs between studies according to the



setting of each research. In their study, Kersaint, Lewis, Potter, & Meisels (2007, p. 508) examined and identified the factors that affected teachers in the sense of staying in or leaving the profession: paperwork/assessment, administrative support, financial benefits, joy of teaching, time with family and family responsibilities, which to a certain degree overlap with the stressors, but the concept is not exactly identical. In general, however, there is an agreement on the classification of stressors (internal and external) and on typical stressors. Typical examples of external stressors are the factors of working conditions and working environment. Typical internal causes of stress include especially personality factors, such as emotional sensitivity and intelligence, polarity between introversion and extroversion, degree of self-esteem, self-control, etc. A high degree of stress is associated with a lower degree of confidence in one's work performance and lower self-assessment. In the event of long-term stress associated with a lack of confidence in one's teaching abilities, the above-mentioned mental health issues may occur, including for example greater anxiety, insufficient resilience in relation to students' underperformance and disruptive behaviour, potentially leading to significant depersonalization and emotional exhaustion (Yu, Wang, Zhai, Dai, & Yang, 2014). Long-term work-related stress among teachers may directly lead to other serious phenomena: burnout syndrome (Dazdarevic, Colakovic-Loncar, 2017, Mijakoski et al, 2022, Schorn, & Buchwald, 2006) and mobbing (Aras, 2019, Akgun, & Temli-Durmus, 2020, Hakan Toytok, 2017).

Based on the above, it is assumed that the factor of time—beginning of the teaching career (0–15 years of experience) middle stage (15–30 years) or the last stage (30 years or more)—is a significant factor in the perception of work-related stress by teachers. This factor is the subject of the present research among teachers in the Czech Republic. The second factor examined in the study is the different educational stage of Czech teachers. Various studies address work-related stress in different educational stages: kindergarten (Costantino-Lane, 2019, Zhang & Zhang, 2018, Shirouzu, 2015, Bilal, 2022), primary school (Cakirpaloglu, Kvintová, Dobešová, & Křeménková, 2017, Sharma, Kandpal & Kumar, 2018) and secondary school (James, 2021, Soleimani, & Moinzadeh, 2012, Ramaiah, & Ramchandram, 2021, Gomes & Simaes, 2008). The present research focuses on teachers' experience across various educational stages and compares the degree of work-related stress between the stages.

Method

The aim of the research was to find out whether and how length of work experience and educational stage of kindergarten, primary and high school Czech teachers elevated their work-related stress. Research conducted via descriptive methodology.

Data collection

Data collection was performed by means of the Occupational Stress Inventory (OSI-R; Osipov, 2010) designed for measuring employee stress. The questionnaire is composed of 3 parts: 1. Occupational Role Questionnaire (ORQ), 2. Perceived Stress Questionnaire (PSQ) and 3. Personal Resource Questionnaire (PRQ). The authors of the present study focused solely on the Occupational Roles Questionnaire (ORQ) which uses the following six sub-scales: Role Overload (RO – measures the degree to which the individual copes with workload), Role Insufficiency (RI – measures the degree to which education, skills and experience meet the requirements of the job), Role Ambiguity (RA – measures the extent to which the individual understands the priorities, expectations and assessment criteria of the job), Role Boundary (RB – measures the extent to which the individual perceives the conflicting requirements of the role and loyalty in the job), Responsibility (R – measures the degree to which the individual feels responsibility for performance and Physical Environment (PE – measures the degree to which the individual is exposed to high levels of toxins in the surrounding environment or extreme physical conditions). The reliability of the factors/scales ranges from 0.70 to 0.89.



Sample

The research population consisted of 262 primary school teachers, with the majority being female. Participation in the research study was voluntary and anonymity of respondents during data collection was ensured. The basic characteristics of the sample are shown in Table 1.

Table 1. Sample characteristics of participants

	Kindergarten	Primary school	High school	P ^a
N	119	262	213	
Age, mean±SD	50.1±10.7	49.4±10.5	53.3±10.4	0.8
Sex, N (%)				<0.001
<i>male</i>	9 (8%)	28 (11%)	50 (23%)	
<i>female</i>	110 (92%)	234 (89%)	163 (77%)	
LTE, mean±SD	24.1±14.1	24.1±11.5	21.9±12.2	0.07
Stratified LTE, N (%)				0.003
0-15 yrs	43 (36%)	67 (26%)	72 (34%)	
15-30 yrs	27 (23%)	109 (42%)	81 (38%)	
30+ yrs	49 (41%)	86 (33%)	60 (28%)	

Abbrev: LTE – Length of teaching experience

^aPearson's Chi-squared test; Kruskal-Wallis rank sum test

Analysis techniques

No missing values were detected. For the scales of the OSI-R inventory, sex-specific weighted scores were first calculated according to the method manual. Two-way ANOVAs (with Type III Sum of Squares) were performed to analyse the effect of length of teaching experience and educational stage on several work roles that might affect work-related stress. In the case the interaction between the two sources of variation proved to be nonsignificant, the additive model was presented in the results. Tukey post-hoc test with correction for multiple comparisons was used to identify significantly different pairs. Data analyses and visualizations were performed using RStudio (v. 1.4.1717 with R environment v. 4.1.3).

Findings

The results showed (Table 2) that Role Overload (Figure 1A) and Responsibility (Figure 1E) were influenced by teachers' length of teaching experience and educational stage but these effects were independent of each other. In terms of length of teaching experience, teachers with the shortest experience (0–15 years) were significantly different from teachers with 15–30 years of experience (all $P < 0.001$) and 30 or more years of experience (all $P < 0.001$). In both cases, these two roles induced lower job stress in teachers with 0–15 years of teaching experience (Table 3). In the context of educational stage, kindergarten and secondary school teachers differed for the two roles ($P_{RO} = 0.036$, $P_R = 0.010$), with kindergarten teachers showing greater role-related stress compared with those from secondary school (Table 3).

Table 2. Effect of length of teaching experience and educational stage on work roles linked to stress (two-way ANOVA)

Source of Variation	ANOVA model	SS	df	F	p
Role Overload	Additive				
<i>LTE</i>		3163	2	13.837	<0.001
<i>ES</i>		715	2	3.129	0.044
Role Insufficiency	Additive				



	<i>LTE</i>		295	2	4.969	0.007
	<i>ES</i>		165	2	2.773	0.063
Role Ambiguity		Additive				
	<i>LTE</i>		1421	2	7.219	<0.001
	<i>ES</i>		350	2	1.777	0.170
Role Boundary		with interaction				
	<i>LTE</i>		312	2	2.244	0.107
	<i>ES</i>		98	2	0.704	0.495
	<i>LTE*ES</i>		677	4	2.432	0.047
Responsibility		Additive				
	<i>LTE</i>		5969	2	25.203	<0.001
	<i>ES</i>		1055	2	4.454	0.012
Physical Environment		with interaction				
	<i>LTE</i>	8	246	2	1.842	0.159
	<i>ES</i>		138	2	1.030	0.358
	<i>LTE*ES</i>		866	4	3.244	0.012

Abbrev: *LTE* – Length of teaching experience, *ES* – Educational stage, *SS* – Sum of Squares

For Roles Insufficiency and Ambiguity, only the effect of length of teaching experience was observed (Table 2). For Role Insufficiency, teachers with the longest (30+ years) teaching experience showed significantly less role-related stress compared with those with medium (15–30 years, $P=0.006$) and shortest (0–15 years, $P=0.013$) experience (Figure 1B, Table 3). For Role Ambiguity, again, teachers with the longest (30+ years) teaching experience showed significantly less role-related stress compared with those with the shortest (0–15 years, $P<0.001$) length of experience (Figure 1C, Table 3).

Table 3. The mean scores of individual roles across the categories of length of teaching experience and educational stages

	Length of teaching experience			Educational stage		
	0-15 yrs	15-30 yrs	30+ yrs	Kindergarten	Primary school	High school
N	182	217	195	119	262	213
Role Overload	52.77	58.07	57.25	58.04	56.28	55.01
Role Insufficiency	45.81	45.86	44.22	44.46	45.21	45.9
Role Ambiguity	52.36	50.45	48.56	51.78	50.41	49.66
Role Boundary	50.7	51.41	48.86	50.31	50.49	50.21
Responsibility	50.41	56.88	57.74	57.36	55.4	53.7
Physical Environment	49.35	49.03	48.8	50.19	48.95	48.55

The values Role Boundary and Physical Environment were significantly different due to the interaction between length of teaching experience and educational stage (Table 2). A post hoc analysis showed that high school teachers with the longest teaching experience showed significantly lower role-related stress compared with high school teachers with medium teaching experience (mean 47.58 vs. 52.44, $\text{diff}=-4.861$, $P=0.019$, Figure 1D). Finally, for teachers with the longest experience (30+ years), physical environment induced significantly higher stress in kindergarten compared with high school (mean 51.35 vs 45.87, $\text{diff}=5.480$, $P=0.155$).

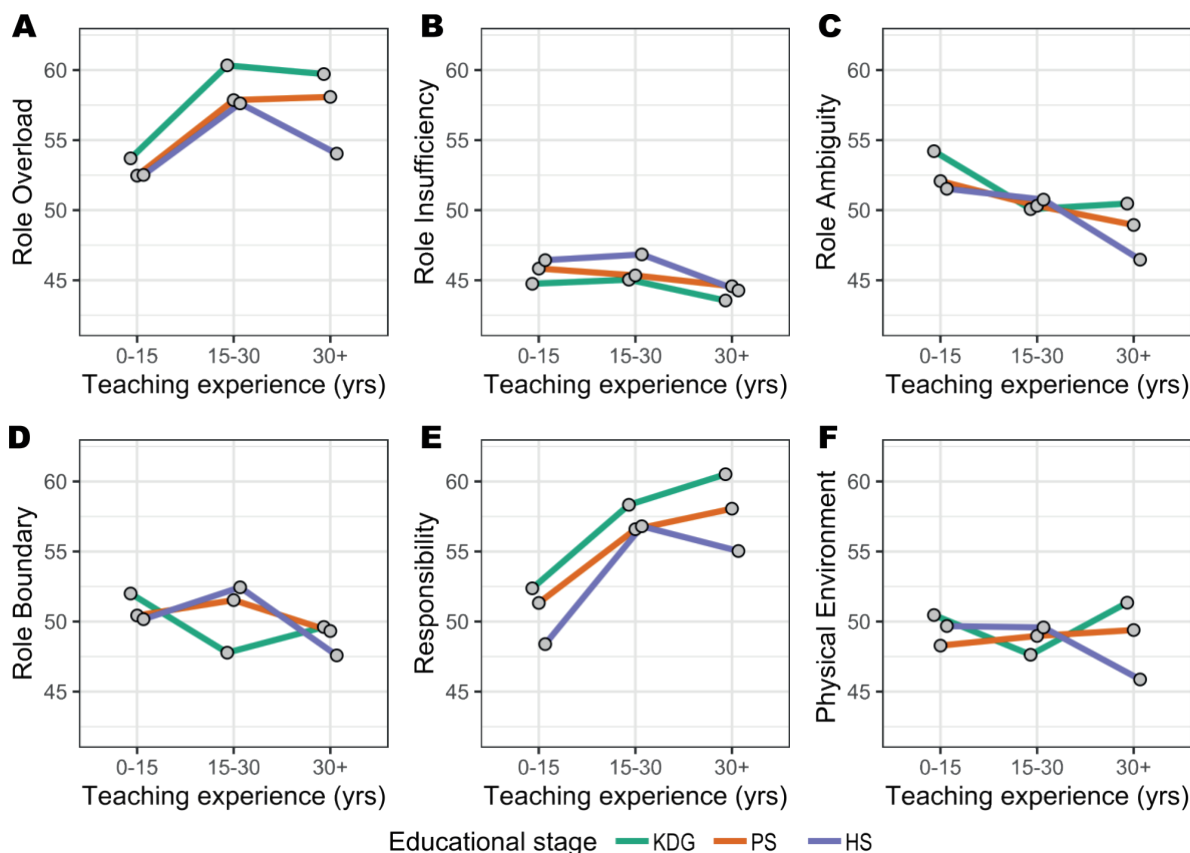


Figure 1. Line plots show the changes in the scores of individual work roles related to work stress depending on the length of teaching experience and educational stage. The effects are shown for (A) Role Overload, (B) Role Insufficiency, (C) Role Ambiguity, (D) Role Boundary, (E) Responsibility, and (F) Physical Environment. Abbrev: KDG - kindergarten, PS - Primary school, HS - High (Secondary) school, yrs - years

Results, Recommendations and Conclusions

The results of the research suggest that Role Overload (RO), as opposed to the other occupational roles (except Responsibility), shows a significant increase with the length of teaching experience from the beginning (0–15) to the middle period (15–30). This increase applies to all educational stages and is the highest for kindergarten teachers. This role also showed (together with Responsibility) the highest values of work-related stress. In practice, this means that teachers after several years of experience begin to perceive their workload as significantly increased, disproportionate and unsupported by the necessary resources. They may also perceive increased feelings of working under time pressure. They may perceive themselves as improperly trained or incompetent for some of their work duties. This trend culminates roughly in the middle of the second stage (15–30), in the case of kindergarten teachers it slightly decreases until the end of their career, in the case of primary teachers it slightly increases, while it decreases relatively sharply in the case of high school teachers. This means that teachers on the verge of the first and second stage need to be paid due attention. In this period, teachers may need their mental hygiene, resilience and work-life balance to be supported, but in particular they may need external help, especially from leading employees who can help balance their workload and provide sufficient professional support (training, continuing teacher education) in order to decrease teachers' perceived degree of stress and increase their feeling of competence.



Overall, the lowest values of occupational stress compared with other work-related roles was reported for Role Insufficiency. With respect to length of teaching experience, this level increased or decreased insignificantly and did not considerably differ in terms of educational stages. This means that teachers, regardless of their length of experience and educational stage, feel that their education, skills and experience meet the requirements of the job, their need for success and recognition as well as certainty of their future and careers are satisfactory, and they feel their work to be meaningful. Therefore, this role does not seem to require any recommendation.

The values of Role Ambiguity (RA) are generally around mean values with a decreasing tendency from the beginning of the teaching career until its completion, except for kindergarten teachers, where a decreasing trend is also observed but only until the middle of their career, followed by an increase, albeit slight. This means that gradually, teachers better and better (with the exception of kindergarten teachers) understand the priorities, expectations and assessment criteria of the job. Over time, teachers have gradually become well aware of what is expected of them, what they should spend time on and how they are evaluated. It appears that they know how to start new projects and progress in their career. They were also able to cope fairly well with the conflicting demands of their superiors. Except the slight deviation in kindergarten teachers, this tendency slightly increased in the course of their career. In view of the constantly decreasing value of this role, our recommendations are aimed at the beginning of the teaching career. School management should thoroughly inform beginning teachers about what is expected of them and how they are evaluated.

The values of Role Boundary (RB) are also around mean values. In the case of primary and high school teachers, the values slightly increase with the achievement of the medium length of experience (15–30) and then again decrease, slightly faster among high school teachers. In the case of kindergarten teachers, the values of Role Boundary are the highest at the beginning of their teaching experience and significantly decrease towards the medium period and then again slightly increase. The results of the research suggest that primary and high school teachers show a moderate score in feelings of entrapment between conflicting requirements related to their work and the feeling that their school does not support them, that they are not proud of what they do – throughout their career this feeling slightly increases and then again decreases. Alternatively, these feelings may be combined with not knowing exactly what powers and responsibilities superior authorities have. Although the values of this type of stress are still around mean values, our recommendation is directed towards school managers to pay more attention in the early stages of teachers' career and to clarify the boundaries of their responsibilities and supporting teachers in their identity and positive assessment. However, this need decreases over time (15–30) in kindergarten teachers but may be important at the beginning of their career.

Responsibility (R) is the second role with significantly increasing values. Moreover, this role worked together with Role Overload. A significant increase from the beginning of their career until the medium period was observed in kindergarten, primary and high school teachers. Only in high school teachers this value decreased towards the end of their career, while in the remaining two groups it continued to rise. Responsibility has the greatest effect on kindergarten teachers, medium effect on primary teachers and the smallest effect on high school teachers. Responsibility measures the degree to which teachers feel responsibility for their performance. An increasing score is informative about a high level of teachers' responsibility or the success of their students. A high score also indicates that teachers tend to feel responsible for the problems of others, which confirms the nature of the teaching as a helping profession. A high score can also be indicative of pressure associated with cooperation with difficult colleagues or the public, which in the case of the teaching profession can be well represented by students' parents. Our recommendation does not relate to decreasing the degree of responsibility – we believe this truly belongs to the teaching profession. This is perhaps also confirmed by the highest stress levels among kindergarten teachers – responsibility for smaller children is naturally greater than for less dependent children. In this respect, it would be very helpful if part of the responsibility for contact with problematic teachers was assumed by the school management. On the contrary, the core of our recommendation is aimed at strengthening teachers' mental hygiene, resilience and work-life balance.



The confirmed link between the only two roles with the highest stress rate—Role Overload and Role Responsibility—including the symmetrical and significant increase in values from the beginning of the teaching career towards the medium period (15–30) means that the significant increase in workload is likely to be associated with the high degree of teachers' responsibility. In practice, this could mean that affecting one role will also have an impact on the other role and that by deliberate work on the degree of responsibility in the early stages of the teaching career may help the growing overload, and potentially even vice versa.

The last role Physical Environment (PE) shows balanced values slightly below mean values, without major differences between educational stages and length of work experience; primary teachers maintain very balanced levels of stress over time, only slightly increasing; high school teachers in the last stage of their career are affected by the environment factor to a lesser extent, while kindergarten teachers are affected to a greater extent. The generally lower values in the teaching profession can be explained by the generally clean environment. In terms of physical factors associated with this role, a higher level was observed for noise or the feeling of isolation—teacher vs. class—which is classified as an emotional factor. We do not have a systemic recommendation concerning this role but we assume that the development of mental hygiene and resilience could be helpful.

Overall, we believe it is important that our recommendations are of a dual nature. On the one hand, they lead to the development of teachers' own resources: mental hygiene, resilience and work-life balance – whether carried out by teachers as a private activity or as a programme offered by their employer. On the other hand, they lead to a systemic activity of the school management: continuing teacher training not only in the area of stress coping but also their own competences in order to decrease teacher load (Role Overload). We also believe it is necessary for school management to deliberately set clear boundaries in teachers' responsibilities and cooperation (Role Boundary). In this context, helpful activities could be supervision which is not a usual part of Czech education. They are desirable due to the fact that teaching is a helping profession with a high degree of work-related stress. Relatively interesting approaches to reduce stress rates in teachers used in Western Europe and primarily in the USA and Canada are mindfulness programmes (Fabbro, Fabbro, Capurso, D'Antoni & Crescentini, 2020, Sun, Wang, Wan, & Huang (2019, Beshai, McAlpine, Weare, & Kuyken 2015) or supporting spirituality in education (Na'imah, 2020, Jirásek, Veselský, & Poslt, 2016, Veselský, Poslt, Majewská, & Bolcková, 2013). In the Czech Republic, these methods are not used.

With regard to the specifically oriented and narrowly focused methodological tool, the research covered only a small part of teachers' experience with work-related stress. In addition to the above results and conclusions, the research also suggested the need for further research studies including, for example, interviews with teachers. Specifically, it could be inspiring to focus more on Role Overload and Responsibility and to ask why the values among high school teachers decrease in the last period of their teaching career (30 and more) – contrary to the remaining educational stages. It could also be interesting to test the higher values for both roles in kindergarten teachers and the reasons behind the greater workload and the sense of responsibility.

There are several limitations to the study that should be mentioned. First of all, the online data collection, despite all precautions, may bias the results in a certain way. At the same time, this is a cross-sectional study where the changes in the variables over time cannot be observed.

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Accounting students alignment with active methods in a post-pandemic context

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Abstract

Professors in higher education are requested to use innovative methodologies to motivate and engage students. The focus in education tends to be the development of new skills such as creativity and critical thinking, key skills for students to be able to deal with uncertainty. This paper presents the case of a workshop proposed to students of a public accounting course. The TL method used was simulation combined with role-playing and it was the quantitative method. A survey was sent to students to gather their opinion regarding the workshop: content, simulation use, teamwork, role-playing, problem-solving and the format used. Results showed students are more engaged in their self-learning when working in environments where: “a controlled” stress is present, different students work together, problems are based on real situations. This study contributes to public accounting education, during a post pandemic period, showing the demand and alignment of the students with active methods.

Keywords: Active learning, public accounting, simulation, role-playing, crisis skills.

1. Introduction

In teaching and learning contexts role-play can be seen as an interaction between play, games, simulations and workshops and the students that perform the activities proposed with a learning outcome. With the use of role play, teachers encourage students to participate in activities inherent to the content being taught. The use of active methods allow students to practice the knowledge acquired in activities similar to reality, allowing them to develop their knowledge applied to the practice.

More and more professors in higher education are requested to use innovative methodologies to motivate and engage students in their path of learning. The focus in education tends to be the development of new skills such as creativity and critical thinking, considered key skills for students to be able to deal with uncertain realities. The future in professions, and life, will be marked by the post-pandemic stamp. The pandemic has shaken educational methodologies. On the one hand, the supply and demand for digital content increased and the teaching of theoretical content began to be done at distance and with digital support (such as videos, internet pages and digital documentation).



This study aims to understand how students perceived the use of active methods to enhance an active role by the combination of active methods – role-play, simulation - in their process of teaching and learning.

The problem inherent here, and to which an answer is expected, is the following: the students' posture and lack of motivation in traditional classes when compared to classes in which active methods are used.

Hypotheses:

- 1 - The use of the active methods role-play and simulation in a workshop format enables students' motivation;
- 2 – The attendance of students is higher in traditional classes or in classes where active methods are used;
- 3 – Students' performance is higher when faced with active methods alongside with traditional methods.

In the academic year 2021/22, second semester, the regent of the curricular unit of Public Accounting and also lecturer of Management Simulation Project II (where simulation is used since 2003) combined active methods at the public accounting subject. The combination consisted in the creation of a practical workshop composed by 4 moments of 90 minutes, here called “workshop”, where students used simulation and role-play to perform a set of activities. The main goal was to understand students' perception regarding their learning path while working in teams, with real documents, software and problems to solve in a short period of time. The practical application of the knowledge acquired along the theoretical classes was the main objective at the basis of this “workshop”.

Literature review

Active learning processes is certainly a major challenge for educators and trainers, who intend to develop, manage and promote learning in different educational settings. Presiding over facilitation processes means being able to create, set up, organize, and develop situations in which people are motivated to learn in order to acquire knowledge, skills, and competencies that foster professional and personal development.

The theme of active learning involves an activity of reflection, discussion, and sharing of theoretical approaches that support education and training professionals in enacting informed choice and questioning a range of assumptions concerning learning and teaching (Owens, 2020). Many academics and teachers are incorporating active learning into traditionally lecture-based classrooms. Active learning is known to increase student learning, improve student retention, especially for those who are underrepresented in accounting, and lead to several affective benefits such as improved engagement and interest, e.g. (Annansingh, 2019), (Jill, 2019)

The criteria that guided the choice of methods are clearly related to aspects of context, learning objects, different types of learning, as well as logistical aspects that have a direct bearing on the choices. Making an effort of classification with respect to the methods used in the different contexts, we could propose a first distinction highlighting some practical and distinctive dimensions for the development and growth of people and organizations. (Hernández-de-Menéndez, 2019), (Neelam, 2020)

Discussion methods are quite widespread in educational settings and are characterized by two major dimensions, the relational and the more technical-operational. (Johnson, 2018)

The first calls into question relational, power management, and group management and coordination skills in different educational and training contexts. The second concerns the knowledge and use of techniques and tools that facilitate discussion and foster its development. Think for example of activities such as circle of voices, chalk talk, questioning, snowballing, conversational roles and many others (Johnson, 2018). In this case, facilitation has its centering in fostering connections, exchanges, relationships, and the management and adherence to rules set that allow for the active participation of all involved. (Molinillo, 2018)

Group work is itself a method, a way through which learning processes are promoted in different educational contexts, by the methods and techniques that facilitate the processes of animation, collaboration and cooperative learning. One could also speak in this sense of approaches or modes of group work (Deslauriers, 2019) determined by contexts and participants. These are methods that invoke the concept of learning as experience sharing, collaboration, involvement and other variables that from time to time must be considered to facilitate group work



processes. Work in pairs, in triads, in groups of 5/8 people, cooperative learning (Theobald, 2020) with children and adolescents, teams and work teams are just some of the examples of this method. Among the most popular ones, we can mention here brainstorming, target plan, analog games, online group work, case analysis, and many others that educators and trainers have developed creatively and in the field over the years (Schleutker, 2019)

Experiential and active learning methods and strategies (Hartikainen, 2019) (McCoy, 2018): this family of methods promotes reflective and experiential learning, considering experience as a value for personal and professional development and growth (Bastos S. M., 2021) and using tools that facilitate reflection such as, for example, journals, reflective journals, portfolios, personal development plans (PDPs) and reflective writing [(Amora-Polo, 2019) (Thomas, 2020). Reflection, as a methodological device, allows for valuing experience (Chen, 2018) retracing the process and reviewing the premises that generated the experience and its consequences (Lorbach, 2019).

This dimension of enhancing experience and generating reflective processes also includes all those methods called interactive methods (Caggiano, 2020) characterized by the active involvement of the learner. Active learning is one of the most studied and discussed theoretical paradigms by the scientific communities of educators and learning process management professionals (Durk, 2020)

The fundamental factors of interactive methods are mainly the involvement of the learner, continuous invitation to interaction and continuous comparison, feedback and assessment with and within the group. Among the promoted activities that help generate interaction and involvement, we can belt out some such as one-minute paper, think, pair and share, formative quizzes, computer-based interaction systems and concept maps (Bastos S. M.-L., 2021)

Alongside these that represent the most widely used methods, we can highlight some such as simulations and workshops (Kioupi, 2022), (Fisher, 2019) that are based on real or simulated situations aimed at recreating real contexts where people can demonstrate, experiment concretely and operationally. It is a matter here of setting up processes in which the method is embedded in the context where it takes place. Facilitation in this case is characterized by techniques and methods such as the business game, case analysis, problem-based learning, role-play, performance-based learning and many others.

The appeal to laboratory situations does not only concern training contexts and programs that are more oriented toward a work-related dimension (Borte, 2020) (Ghilay, 2015). They also concern educational contexts dedicated to the growth of girls and boys, from kindergarten to preschool and elementary school. Facilitating learning processes with children means setting up contexts that encourage their sensory and intellectual development by offering them opportunities for socialization and cultural growth starting from an interactionist conception that looks at child development and socialization processes as interactive processes in which the child is recognized as having an active role in the relationship with the adult (Robertson, 2018). Laboratory methods inspired by the experiences of new schools and practical pedagogy workshops - with due readjustments of social and cultural-historical matrix - have this objective. The educator plays the role of director in them in order to encourage processes of exploration, manipulation, creation and expression, research and experimentation.

In the educational sphere, methods promoting intercultural education aimed at valuing diversity and heterogeneity as a resource within learning processes also deserve mention. Among them, cooperative learning can be mentioned again (Chan, 2015). Complex instruction is also based on proposing techniques of cooperation and collaboration in groups, with the aim of fostering a sense of democracy and overcoming status-related dynamics (Bosio, 2020). The goal of these methods is the promotion of socialization processes and the "diffusion" of levers supporting diversity education within the educational and social settings and strategies that the educator-director can enhance in this direction.



We can then mention the creative and art-based methods, in which the aesthetic dimension represents the resource from which to draw to set up learning situations. Painting, drawing, creating art objects, using images, famous paintings, expressing oneself through different forms of language such as: metaphor, theater, sculpture, music, dance, poetry and more, become the tool that conveys and generates learning under the guidance of an experienced facilitator. Associating images with words, creating sculptures with the body, staging a theatrical performance, composing a story or poem involves bringing into play different actions and strategies that lead to deeper learning . (Sewagegn, 2019), (Murillo-Zamorano, 2021) Art-based methods make it possible to give voice to ideas, feelings, and beliefs that would otherwise have been more difficult to express and bring to light.

Using role-play as an active learning method brings advantages to engage student in their path of learning, such as:

encourages students to create their own reality; 2. develops the ability to interact to other people; 3. increases students motivation; 4. engages shy students in class activities; 5. makes students self-confident; 6. helps students to identify and correct misunderstandings; 7. is agreeable and fun; 8. shows students that the real world is complex and problems that appear in the real world cannot be solved by simply memorizing information; 9. underlines the simultaneous use of different skills (acquired separately) (Craciun, 2010)

2. Method

This paper presents the case of a workshop proposed to students in the last academic year of an accounting and administration course. From a population of 220 students, 118 students enrolled voluntarily but only 95 attended (80,5%). We used active methods through the combination of simulation, work group, problem solving and role-play.

The workshop format had a single goal: to apply the theoretical contents provided during classes. Using the experience of Management Simulation Project course, the researcher created a set of activities and presented them in a script. Activities creation took into account the public accounting classes and its contents. Classes which most of students attended and all materials, such as, power point, exercises and others were available to all students. When the workshop took place 2/3 of the classes had already occurred. The technological tool used was an integrated accounting software (in use in public entities in accounting departments). The students who participated in the workshop were already using similar integrated accounting software, but for private organizations, while the software used in the workshop was intended for public entities and companies, and was a new and more complex software.

The quantitative methodology was the chosen one for the study. We created a questionnaire, using the Google Forms, only for the purpose of the evaluation of the workshop, at the end of the workshop we asked students to evaluate it by responding the questionnaires.

The survey was sent to students that participated in the workshop - 95 - to gather their opinion regarding the workshop: content, simulation, teamwork, role-play, problem-solving and also the format. The response rate was 62%. A descriptive study was carried out. The sample is non-probabilistic and consists of 220 higher education students from Porto Polytechnic School, in particular 104 students from sectorial accounting and 116 from public accounting. The total of students are engaged in the last academic year of their graduation in Accounting and Administration, and those two subjects are optional (students can choose).

The data collection tool was a survey conducted to the 95 students that participated in the workshop. The survey has 15 questions, where 6 with a "yes" or "No" scale of response, 8 with "Not important", "Important", "Really Important" as scale of response. The last question was open with the scope to gather other comments from students.



3. Findings

Data analysis showed that 88% of the students liked the workshop and considered important the contents addressed in the activities proposed. Regarding the duration of the workshop, only 62,7% of them agreed with the hour and a half of the workshop. On the open question, we found remarks related with this question, some students suggested that “time should be longer” and “we should have more workshops alongside the traditional classes along the semester”. They consider that practical workshops throughout the semester would facilitate the understanding of theoretical contents (98,3%).

Concerning the structure and organization of the workshop the majority of the students consider that the work was well conducted (76, 3%) while 93,2% answered positively to the script and adequacy of the activities proposed. When asked about “would you attend another workshop on the same format” 91,4% of them responded affirmatively.

Table 1. What your participation in the workshop worthy?

Question	Yes
Did you like the workshop	88%
The duration was adequate	62,7%
The contents were important for you	89,8%
The way the work was conducted was the most appropriate	76,3%
Would you like to participate in other workshops in the field of public accounting	93,2%
Do you consider that practical workshops throughout the semester would facilitate the understanding of theoretical content	98,3%
The script and the tasks proposed were appropriate	93,2%
Would you attend another workshop in the same format?	91,4%

The designed activities to perform during the workshop took as basis the theoretical contents given with the combination of the real practice in a public organization. Activities constructed and divided in subjects: expenditure and revenue budget; accounting entries in the budgetary accounting; analysis of the budget performance and reflection on real documents (provided by local public entities).

Table 2. Groups of activities promoted at the workshop

Question	I and RI
Analysis of the expenditure and revenue budget	32%; 65,5%
Accounting entries in the budgetary accounts	27%; 69%
Analysis of budget performance	27,6%; 65,5%



Reflection about documents sent	29%, 67,2%
by the National Directorate-	
General for the Budget was:	
I = important; RI = really important	

The students enrolled in the workshop were grouped randomly into teams of 3.. The functioning of the 90 minutes workshop was equal to the format that all students are engaged in the Management Simulation Project course, in order to achieve the goals defined for the workshop.

The format used, similar to Management Simulation course (all students attended this subject on the previous semester and are attending it in the second semester): three students per “company”, here a public company. Students have a script with several activities to do. The activities, which we call tasks, are composed by a brief description and a set of documents. The documents were created based on documents provided by local public entities, in order to give a greater adherence to reality to the tasks to be carried out by the students. The set of activities launched for the purpose of the workshop were grouped into execution tasks, analysis and resolution tasks and reflection tasks.

Structure of the workshop: 15 minutes to explain the script; 45 minutes to do the activities (students with the support to two teachers); 20 minutes to discuss students’ solutions and analysis of the accounting documentation created by them. Last 10 minutes to present the students the correct solution.

After the workshop all documentation was displayed at Moodle platform of the university so that all students had access to the accounting information produced during the workshop. After 15 days, a seminar was held on the themes worked on by the students in the workshop. This seminar had the participation of an expert in the field of public accounting, particularly in budget reporting. The goal was to discuss with students the difficulties felt by public accountants when reporting the information to the government. Of the 95 students who participated in the workshop only 48 attended this seminar (50.5%). We expected a greater adhesion by the students, however, the timing was not the best, since they were already in a period of continuous assessment exams.

4. Results, Conclusions and Recommendations

The findings allowed us to conclude that students want to learn with active methods where they are called to do, to prepare information by themselves, to solve difficult situations addressed to real situations. They are more engaged in their self-learning when working in environments where: “a controlled” stress is present, different students work together, problems are based on real situations, time management is essential, technologies applied to public accounting are real (not just for education), role-playing is constantly used, which obliges them to react immediately to provide solutions. This study contributes to public accounting education, during a post pandemic period, showing the demand and alignment of the students with active methods.

The implementation of active instructional strategies requires changes in teacher’s logic within the classroom environment. Active learning demands teachers to establish the goals to be achieved. Secondly, they must plan the class activities in order to encourage students to pursue the necessary knowledge to achieve the goals. (Konopa, 2015)

As main conclusion we can refer that the real challenge is to change teachers’ mindset and the organizational structure at universities allowing teachers to do different activities outside the curricula and the rigid schedule of the subjects. The availability of adequate tools and classes to develop this kind of activities were active methods are used is another negative point to stand out. Nevertheless, students enrollment in this activity was the highlight of this experience: a workshop to maintain and replicate in the next semestre. We made a proposal to the coordinator to replicate this activity every three weeks, for 3 hours, during the semestre.

This is a study that only as application in our country and at our school due to the organizational course curricula.



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The effect of reward and punishment in preventing undesirable behaviors in classroom management

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Abstract

In this study, the effect of reward and punishment on preventing undesirable behaviors in classroom management was tried to be examined. The study was carried out in the phenomenological pattern of qualitative research; 20 teachers working in preschool, primary school, secondary school and high school in Gölbaşı district of Adıyaman province participated in the research voluntarily with the maximum diversity method. In the research, semi-structured interview technique was used and the findings were analyzed by descriptive analysis method. According to the results obtained in the research, almost every teacher applies to reward and punishment practices in classroom management. This result makes us think that teachers manage their classrooms with a more behavioral approach. In the research, teachers who are married and have children benefit from alternative approaches such as giving students responsibility and making students feel valued in order to prevent undesirable behaviors in classroom management. One of the striking results is that preschool teachers use more rewards than other levels. This rate is observed at least at the high school level. Based on the research, it is suggested that in-service trainings be given in order to raise the awareness of teachers about alternative approaches in classroom management.

Keywords: Classroom management, undesirable behaviors, reward, punishment

1. Introduction

Classroom management refers to the creation of a systematic and safe classroom environment that allows students to learn and change desired behavior. The teacher and the student, who are the basic elements of classroom management, are multidimensional, complex, behaviors that cannot be easily understood. The awareness we gain about the world determines our perspective on people and therefore our methods of classroom management, and channels our thoughts and behaviors.

One of the important elements that play a role in creating a positive classroom environment is the human and professional characteristics of the teacher. As we cannot expect a teacher who does not have the qualifications required by teaching to exhibit effective behaviors in classroom management, and It is obvious that teachers who do not know and effectively use methods to improve learning environments will fail in classroom management. (Şişman & Turan, 2020, p.4) Another factor that should not be forgotten that constitutes classroom management is that it is necessary to approach students with a humanistic perspective in accordance with their emotional, social, cognitive development.

When it comes to classroom management, the main ones that come to mind are discipline and control. Even if the word discipline is perceived negatively, it refers to certain orders and systems that will bring positive behaviors in the classroom. Reward and punishment methods are used to create desired behaviors within these systems and orders.



To reduce the use of reward and punishment; It is necessary to plan the curriculum correctly, to act in accordance with the classroom rules, to be clear in the functioning, to determine the goals, to determine the level of accessibility of the goals, and to evaluate the changes in behavior. As it can be understood from all these points, it is an indisputable fact that any activity that is not regular and disciplined can not be successful.

In classroom management, being a guide and guiding students in gaining the desired behavior is one of the main responsibilities of teachers to be able to transform and prevent undesirable behaviors at the same time. Even if the teacher has prepared the classroom environment in the most appropriate way, undesirable behaviors are possible problems due to the fact that the study group is human.

While punishment is used to eliminate unwanted behaviors, reward is used to reinforce desired behaviors. The use of rewards and punishments varies according to students' age, education level and school type.

The purpose of this research; to reveal the effect of reward and punishment used to create desired behaviors in classroom management on student behaviors.

Problem Statement Do the rewarding or punishing practices used by teachers to extinguish undesirable behavior in classroom management have a lasting effect on the student's desired behavior change?

1.1 Sub-Problems

1. Is there a difference in the opinions of the teachers regarding the necessity of reward and punishment in the classroom according to the variables of age, marital status, having a child, gender, school type and seniority?
2. Is there a difference in the opinions of teachers in terms of resorting to reward and punishment practices in order to prevent undesirable behaviors in classroom management, according to the variables of age, marital status, having a child, gender, school type and seniority?
3. In terms of the relationship established by teachers between reward and motivation, is there a difference in teachers' opinions according to age, marital status, having a child, gender, type of school and years of seniority?
4. In terms of the relationship established by teachers between punishment and motivation, is there a difference in teachers' opinions according to the variables of age, marital status, having a child, gender, school type and seniority?
5. How does the reward and/or punishment given in the classroom management process affect the motivation of other students?
6. Is there a difference in teachers' opinions about positive and negative situations encountered in classroom management as a result of reward and punishment practices according to age, marital status, having a child, gender, school type and seniority years?
7. Is there a difference in the opinions of teachers about the necessity of reward and punishment practices and alternative approaches for an effective classroom management in terms of age, gender, school type and seniority years?

1.2. Classroom Management

Management and teaching are integrated in the education system. The first condition for effective teaching is effective classroom management. The teacher does not just teach; conducts research on future management, participation in management, management support and participation in management studies. Teachers play different roles in the classroom, the most important of which is undoubtedly classroom leadership. Classroom management is one of the important and difficult tasks for a successful teacher. It is believed that the first and most effective condition for success in education is the effective management of the classroom.



Permanent learning cannot occur unless the learning experiences of the student at school can be adapted to real life. In order for effective learning to take place, the activities in the school should be done consciously, planned and using appropriate tools, and should be based on real life. In this respect, the success of the teacher in classroom management is effective in the learning process. It can be said that the teacher is able to manage the classroom if he or she can provide a suitable environment for learning and maintain it. In other words, a teacher who is good at classroom management is generally a good teacher (Kıran, Demirtaş, Taş, Tabancalı, Tok, Erkılıç, Dağlı, 2005).

1.3. Unwanted Student Behaviors Encountered in Classroom Management

Undesirable student behaviors may vary according to teachers' classroom management and perceptions. For some teachers, even a small noise in the classroom can be an undesirable student behavior, while some teachers may perceive this situation as an exchange of ideas with each other. The surest way to prevent undesirable behavior is to get to the root of the problem causing the behavior. Although this method is quite complicated, it is essential for a definitive solution (Karaoğlu, 2008).

Schools are not just institutions where knowledge is acquired, students begin to adapt to social rules and the national moral values of the society they live in. In this regard, the first social relations take place in schools. Unfortunately, these social relations are not always perfect, students sometimes see the reason for their disappointment, unhappiness and inadequacy in the teacher. It is known that teachers with low professional competence perceive negative situations personally, approach these behaviors of students in a punitive and vengeful way, while teachers with high professional competence control their emotions better and manage the solution processes for undesirable behavior well (Dulay, 2017).

1.3.1. Reasons for Undesirable Student Behaviors in the Classroom

Reasons for undesirable behavior in the classroom; From the personal structures of the students, the physical conditions of the classroom, the lesson sky, the teaching method techniques, the attitudes and approaches of the teachers towards the students (Tekin, 2019)

Reasons arising from the personal structure of the student: It is a fact that should be taken into account by teachers that students' ideas, feelings, subjects they like, and the areas in which they are talented will be very different from each other. Some of the undesirable behaviors that may occur due to the individual differences of the students are listed below:

- The students' having problem of focusing,
- Not being tidy in their work, messy work,
- Distraction of other friends from working,
- The student's lack of affection towards his schoolmates and teachers,
- The student's not knowing and/or not applying the cleaning rules, (Danaoğlu, 2009)

Causes arising from the physical conditions of the classroom: An important element for learning is the place where learning will take place. Classroom environments should therefore be well planned according to the student's age, interests, and course content. Today is the age of technology and the more sensory areas we are exposed to information, the easier we can learn. For this reason, the color combination, heat, light, sound and technological arrangements in the classroom are all important elements in the physical structure of the classroom, these elements affect learning positively or negatively. Therefore, in line with the available possibilities, the classroom environment should be arranged in a remarkable and motivating way depending on the content of the course (Gündoğdu, 2013).

Reasons stemming from the education program and teaching method techniques: The more the student needs the information he will learn in his daily life, the more remarkable the lessons taught in the lesson are related to life. Therefore, education and training programs should not be disconnected from daily life. Students are hungry for success, but the program and uniform memorization-based teaching techniques that are not directed to their



interests and abilities create a feeling of failure in students. For this reason, teachers should transfer education programs to students through the right techniques (Gündoğdu, 2013).

Reasons originating from the teacher: Students spend the most time with their teachers after their families, especially considering the lower levels. At primary school level, a classroom teacher spends at least 30 hours a week with students, which may be more than the time they spend with their families for some students. Therefore, students tend to take their teachers as role models. Students informally learn behaviors such as order and planning from their teachers. For this reason, teachers should always be aware of this model. The teacher should be impartial and friendly towards the student. Teacher's attitudes and behaviors can be the source of undesirable behaviors.

1.3.2. Reasons for Undesirable Student Behaviors Out of Class

The main source of undesirable student behavior is external sources. The teacher needs to be a very good observer and follow up like a detective and find the source problem that causes the unwanted behavior. Out-of-class resources are divided into three groups: family, environment and school.

The first environment that the child encounters the world is the family environment, and many personality traits are developed and shaped in the family environment. Children who grow up in families with strong and healthy family relationships and an environment of love, compassion and respect tend to be more sensitive and understanding towards their environment. However, the child who encounters violence, profanity and distrust in the family will reflect these problematic situations to his environment. For this reason, factors such as family peace, cultural structure of the family, socio-economic status can be the cause of undesirable behaviors (Tekin, 2019).

People learn behavior through imitation. Children learn by imitating many behaviors they see in the environment. Unfortunately, the child cannot be conscious of whether the behavior he has learned is the right behavior. The teacher needs to know the environment well in order to analyze the unwanted behaviors brought by the student from the environment very well. The negative behaviors brought by the child from the environment are actually very wide-ranging. Not only his friends, family, home environment, but also social media, newspaper and TV sources are among the environmental factors (Tekin, 2019).

1.4. Hierarchy of Actions Against Undesirable Student Behaviors

The first step of the activity stages for the undesirable behavior in the classroom should be to find the source of the behavior. Apparent misbehavior is actually a reflection of the root problem. The teacher should always be aware of this. If the problem behavior is very insignificant and has not affected anyone unconsciously, it is best to ignore this behavior. Sometimes, even if the behavior did not affect anyone unconsciously, it may be the behavior of the student with a high probability of repeating because he did not know that he was wrong. When the teacher encounters such a problem, he should talk to the student after the lesson, make him realize his mistake and raise the awareness of the family. They should control their anger in the face of behavior, deal closely with students with problematic behaviors, and give them value and responsibility. Students who exhibit problematic behavior should be given a chance in the fields they can achieve and should direct them to sportive and artistic activities (Gündoğdu, 2013).

1.5. Models for the Prevention of Undesirable Behaviors in the Classroom

1.5.1. Redl and Wattenberg Model

In this model, the psychological and social factors that affect the students' movements are focused on. In the model, negative behavior tends to spread rapidly among students, so the teacher should consider the speed of spread before reacting to negative behavior. If the behavior does not propagate quickly, the behavior can be ignored. If the rate of spread is high, the behavior should be intervened immediately. Some suggested intervention practices may include making eye contact, expressing disapproval, going to him, and resorting to humor (Can, 2014).



1.5.2. Kounin Model

Kounin (1977) emphasized the importance of the ripple effect mentioned in chaos theory in establishing discipline in the classroom. According to Kounin, when the teacher changes the negative behavior of a single student, the situation also regulates the behavior of other students in the class. Kounin observed that this wave effect had a greater effect on students at the beginning of the school term and stated that classroom management should be decisive against negative behavior. The teacher should inform the student with verbal warnings that he is aware of everything that is going on in the classroom and that he does not turn a blind eye to undesirable behavior.

1.5.3. Skinner Model

According to Skinner, the main way to make behavior positive is the reward-punishment method. According to him, systematically rewarded behavior evolves students' behavior in the preferred direction. If the teacher rewards the pleasant behavior, the student is motivated to repeat the same behavior. Teachers can increase their interest and effort by giving rewards such as verbal comments, facial expressions, gestures, smiles, nice words, grades and stars to reinforce their students' positive behaviors in the classes they lead.

1.5.4. Gordon Model

Teacher-student interaction in the model; open, attentive, independent, based on the completion of mutual needs. The first thing to do is to identify the root of the problem. If an event that occurs in the classroom affects the teacher directly and undesirably, the problem is the teacher. Similarly, if a situation really, directly and undesirably affects the student, the problem is the student. Sometimes the problem can originate from both sides. In this case, conflict may arise between the two parties. Gordon recommends using the "no loser" method in conflicts (Kayıkcı, 2013).

1.5.5. Dreikurs Model

The model, which is also called the logical consequences model, states that students may show some undesirable behaviors in order to attract attention in order to satisfy their need for belonging. These behaviors are competing for superiority with the teacher and his environment, taking revenge and attracting attention. The teacher should be aware of these behaviors and it is aimed that the students take responsibility for their own behavior in order to eliminate the problems and that the problematic behaviors are concluded with democratic options. Instead of using rewards and punishments to correct undesirable behaviors, what an effective teacher should do is to set simple classroom rules and encourage students to apply the rules. (Dulay, 2017)

1.5.6. Glasser Model

In the model called Reality Therapy, Glasser stated that human beings are social beings and therefore act in line with their social needs such as love, admiration, success. At the root of undesirable behaviors lies the human need to be understood. The teacher should be a good observer and should be sanctioned for paying for wrongdoing. Paying a price is to take responsibility for the behavior and should not be perceived as a punishment. The teacher is a guiding guide in this model (Kılıçoğlu, 2015).

Class rules have an important place in the model. All stakeholders of the classroom hold meetings under the guidance of the teacher in order to maintain classroom discipline. Thanks to these meetings, problem situations are handled with the cooperation of teachers, students and parents. Students are supported to produce solution plans for problem situations. In this way, it is thought that students' sense of responsibility will develop (Nazlı, 2015).

1.6. Reward (Reinforcement)

The concept of reward, also called reinforcement by some researchers, is the stimulus given to the person in order to create the desired behavior accepted by the society in general and to ensure the continuity of this behavior. These stimuli can be tangible objects (chocolate, money, gift) that create feelings of happiness and contentment



given to the person expected to display the desired behavior, as well as gains given to the person concerned (playing games on the computer, meeting with friends, playing games...) (Budak, 2009; Arslan, 2007 ; Karadas, 2020).

In all stages of the education period, the award has a very important role in the behavior of students' newly exposed knowledge, skills and attitudes and in making the acquired behaviors permanent. The reaction of the teacher to the behavior of the students in the classroom and the effect of the reaction on the student are important. If the teacher's behavior has a positive effect on the student, the behavior is expected to be repeated. Teachers can shape student behaviors by using the right reward practices (Erden, 2005:161).

There is a clearly perceptible necessity to have control over reward use. As a result of the rewards applied in the absence of control, the individual's intrinsic motivation may disappear or reward dependence may occur. In order to eliminate this negativity, it is emphasized that this practice should be done in a systematic way by fading the awards over time. In addition, one of the important points to be considered while giving rewards is the establishment of a reward-behavior bond. Identifying the right prize is a very important point. In this direction, it seems appropriate to examine what types of awards are (Karadas, 2020).

1.7. Punishment

Punishment is an unfortunate method (deprivation, physical violence, isolation, etc.) or the right taken from the person (such as cutting off his allowance) in order not to repeat an unpleasant behavior or to prevent it from becoming a habit. Punishment creates fear. The person does not do it because he does not want to repeat the unpleasant behavior, but because he is avoiding punishment. After a while, the penalty loses its effect. The person becomes almost immune to punishment, being exposed to physical violence or being prevented from doing the things he likes does not affect the person after a certain period of time and the person continues his unpleasant behavior. The person resorts to new undesirable behaviors such as lying to avoid punishment (Navaro, 2001)

Considering the negative aspects of it, we should stay away from punishment practices as much as possible, in education, in the family, in short, everywhere. The correct application of punishments in the decision applied at school does not have a negative effect on the student, on the contrary, it can be effective in correcting the student's behavior. However, imposing heavy penalties on the child's personality is harmful, therefore, it is psychologically objectionable (Charles, 1996). Studies show that punishment is less effective and less permanent than reinforcement in changing student behavior. Inappropriate behavior, which is thought to have been eliminated after a certain time, may occur again (Eripek, 1991: 142)

2. Method

This research was carried out in the phenomenology pattern of the qualitative research method. Designing new methods and approaches suitable for the situation at all stages of the research and making changes in the structures of the research constitute the essence of qualitative research (Neuman, 2012: 228; cited in Karataş, 2015). Phenomenology is an approach that tries to reveal how people make sense of their experiences, perceptions and concepts by investigating deeply what reality is (Cemaloğlu, 2020). The phenomenon in this study is the perceptions of teachers about the effects of reward and punishment methods used in classroom management on students.

In this study, the study group was determined by using the "maximum diversity sampling" technique, which is one of the purposeful sampling types. "The logic and power of purposive sampling lies in choosing information-rich situations to study deeply" (Patton, 2018: 230). The study group in the research is volunteer teachers working in preschool, primary school, secondary school and high school affiliated to the Ministry of National Education in the Gölbaşı District of Adıyaman Province in the 2021-2022 academic year. In this study, the symbols T1, T2...T20 were used instead of the names of the teachers who contributed to the research in order to comply with the ethical rules.



Before collecting the research data, the literature on the subject was scanned and a semi-structured interview form was prepared by the researcher. Interview is a very powerful communicative method in which the researcher asks general open-ended questions to the participant and records the answers given, including at least two people, used to reveal the perspectives, personal experiences, feelings, perceptions and values of individuals. (Yıldırım and Şimşek, 2008: 40-41; cited in Karataş, 2015). In the study, a semi-structured interview form developed by the researcher was used to obtain the data. The interview form consists of two parts. The first part consists of 6 questions containing the personal information of the participants, and the second part consists of seven open-ended questions.

The data collected at the last stage of the research process go through the descriptive analysis method. Descriptive analysis is used in the processing of data that does not require in-depth analysis, quoting is done directly to present the answers of the participants that will provide clarity to the subject, the themes for the interview questions are determined, the findings introducing the interviewees are evaluated with the descriptive analysis method (Guzelyurt, Tok, Tümas, & Uruğ, 2019: 23).

The data in the study started to be collected in November 2021. The questions in the semi-structured interview form were answered with a total of 20 participants, 5 from each school type, and the answers given to each participant were read again and the answers were confirmed to be correct. Descriptive analysis was used in the analysis of the data. The data obtained from the research were coded and the coded data were divided into themes and summarized and interpreted in the light of these themes. In addition, direct participant opinions were included in the study and the findings section was completed. The data found in this research were tried to be analyzed with a general-to-specific analysis. A conceptual structure was created with the resulting codes.

In qualitative research, validity is examined in two types as internal validity and external validity. Internal validity: It is the success of the process followed while collecting the research results in revealing the studied reality. What are the principles, rules, or plans used to validate the findings? Are there any facts or events that are unclear or unrelated? The questions in the form aim to increase the internal validity. External validity is the generalization of the research, or rather, it gives similar results at different times (Morse, 2016; Patton, 1990; Silverman, 2016; cited in Baltacı, 2019).

Reliability is divided into two parts as external and internal reliability. External reliability is the confirmability of the research. In order to establish external reliability, the participants of the research and their other sources should be clearly stated. In addition, data collection tools and data analysis should be reported in detail (Connelly, 2016; cited in Baltacı, 2019). Internal reliability is the study of how consistent the research is.

All the data obtained as a result of the research are shown by comparing them with each other and with the literature. During the study, an expert lecturer on qualitative research techniques was consulted. The demographic characteristics of the participants in the province, district and school types where the research was conducted were expressed in detail.

For the internal reliability of the research, the statements of the participants were directly quoted, and the collected data were associated with the results of the research in order to ensure external reliability. In addition, the raw data obtained in the research will be stored so that they can be used in different studies.

3. Findings

Do you think that reward and punishment is necessary in the classroom in the education process? The findings regarding the variables of age, marital status, having a child, school type and seniority year are as follows.



Table 3.1. Distribution of Teachers' Views on the Necessity of Reward and Punishment in Classroom Management

CODES	f
Both methods required	12
Both methods are unnecessary.	2
Only reward required	6

When Table 3.1 is examined, it has been observed that opinions on the necessity of reward and punishment in classroom management are generally gathered around the opinion that two methods are necessary. (12/20) Apart from this, teachers stated that reward is necessary but they act cautiously about punishment (6/20), while other teachers stated that they do not find it appropriate to use both methods (2/20).

Do you apply reward and punishment practices to prevent undesirable behaviors in classroom management? The findings regarding the question are as follows.

Table 3.2. The Distribution of Teachers' Views Regarding the Application of Rewards and Punishments by Teachers

CODES	f
Material reinforcer	4
Social Reinforcer	6
Symbolic Reinforcer	1
Type 2 Punishment	3
Type 1 Punishment	1
Giving responsibility	1
Making eye contact	2
Ignoring	2
I do not use punishment	3
I do not use rewards and punishments	5
I use rewards and punishments	4

Table 3.2. When examined, 4 people (4/20) say they use material reinforcement as a reward, 6 (6/20) say they use social reinforcement, and 1 (1/20) say they give symbolic reinforcement. 3 (3/20) who say they will use type 2 punishment, 1 who say they will use type 1 punishment (1/20), 1 say that they will give responsibility (1/20), 2 say that they will make eye contact (2/20), say that they will ignore The number of those who say they do not use punishment is 2 (2/20), 3 (3/20) who say they do not use punishment, 5 (5/20) who say that they do not use rewards and punishments, and 4 (4/20) who say that they use rewards and punishments.

What do you think is the relationship between reward and motivation? The findings regarding the explain question are as follows.

Table 3.3. Distribution of the Effect of the Award on Motivation According to Teachers' Views:

CODES	f
It perpetuates the desired behavior.	9
Symbolic and social reinforcement increases motivation.	4
Provides adaptation to school, makes you taste success, improves self-confidence	4
Continuous reward negatively affects motivation.	3

Table.3.3. When examined, 9 people (9/20) said that "it makes the desired behaviors permanent" about the reward-motivation relationship of teachers; "Symbolic and social reinforcement increases motivation." 4 people



who said (4/20); 4 people (4/20) who said “It provides adaptation to school, tastes success, improves self-confidence”; “Continuous reward negatively affects motivation.” There are 3 people (3/20) who say that.

What do you think is the relationship between punishment and motivation? The findings regarding the explain question are as follows.

Table 3.4. Distribution of the Effect of Punishment on Motivation According to Teachers' Views:

CODES	f
Affects motivation negatively	11
It varies	3
Extrinsic motivation delays the behavior	4
Affect positively	1

When the distribution of the effect of punishment on motivation according to teachers' opinions is examined, 11 teachers stated that punishment affects motivation negatively. (11/20). It is 3 people who say that it will sometimes affect positively and sometimes negatively (3/20). While 4 (4/9) teachers said that punishment delays undesirable behavior, 1 (1/20) teacher stated that punishment affects motivation positively.

How do the rewards and/or punishments given in the classroom management process affect the motivation of other students? The findings regarding the question are as follows.

Table 3.5. Teachers' Views on the Effect of Reward and Punishment on Other Students:

CODES	F
Affects other students positively in two applications	7
Reward positively affects punishment only delays undesirable behavior	7
The award affects other students sometimes positively and sometimes negatively.	3
Two applications affect other students negatively	3

When the Teachers' Opinions on the Effects of Reward and Punishment on Other Students are examined, the number of teachers who said that they had positive effects on students in both practices was 7 (7/20). The number of teachers who said that reward has positive effects and punishment only postpones undesirable behavior is seven (7/20). The number of teachers who say that the award sometimes affects other students positively and sometimes negatively is 3 (3/20).

Can you give an example by explaining the positive and negative situations you encounter in classroom management as a result of reward and punishment practices? The findings for the question are as follows.

Table 3.6. Distribution of Teachers' Views on the Positive and Negative Aspects of Rewards and Punishments:

CODES	f
Reward leads to positive behavior	11
Does not cause permanent effect in both methods	6
Punishment affects the student negatively.	3

When the distribution of teachers' opinions about the positive and negative aspects of reward and punishment practices is examined, there are 11 (11/20) teachers who say that reward leads to positive behavior, 6 (6/20) say that it does not have a permanent effect in two methods, and 3 (3/20) teachers who say that punishment affects students negatively. .



Do you think rewards and punishments are necessary for effective classroom management? If not, what can be done as an alternative? The age findings for the question are as follows:

Table 3.7. Teacher views on the necessity of reward and punishment and alternative approaches

CODES	f
Reward required punishment should not be used	7
Both methods are required	7
Class rules must be determined	1
Responsibility must be given	3
Successful sides should be revealed	1
The work done should be made loved	1
Students should be valued	1
Fundamental change must be made in the education system.	1

When the table is examined, the opinions of the teachers as an alternative to reward and punishment are as follows. 7 people (7/20) who say that reward and punishment should not be used, 7 people who find both methods necessary (7/20) say that they should not set class rules 1, who say responsibility should be given 3, who say that successful aspects should be revealed 1, 1 who says that the work done should be liked by the student, There is 1 person who says it should be valued and 1 person who says let's make a radical change in the education system.

The opinions expressed by some of these teachers are given below.

T9: *"The reward and punishment are effective in providing class dominance."*

T14: *"Positive bonds should be developed with the student rather than rewards and punishments."*

4. Results, Conclusions and Recommendations

When the distribution of teachers' opinions about the positive and negative aspects of reward and punishment practices is examined, the majority of teachers say that reward leads to positive behavior. According to the findings, while most of the teachers find the reward positive, they generally do not view the punishment practices positively. The reason for this may be their classroom management experience and their knowledge on classroom management. Contrary to the findings (Bolat2017, Dökmen2005, Yiğit2003, Sadık2004), it has been revealed that reward and punishment do not have a positive effect on student behavior.

When teachers' views on the positive and negative aspects of reward and punishment practices are examined in terms of age, the teachers who say that reward leads to positive behavior are mostly in the 36-40 age range. The teachers who stated that it does not have a permanent effect are 30 years old and over. Opinions about the negative effects of punishment on students were evenly distributed. In this respect, it is thought that the age variable is not very effective in teachers' opinions about reward and punishment.

When teachers' opinions about the positive and negative aspects of reward and punishment practices are examined in terms of the variable of having children, it can be said that teachers who have children consider reward beneficial and punishment harmful. It was stated more frequently by teachers who have children that rewards and punishments do not have a permanent effect. Here, there was a significant difference in the perspectives of teachers with children on reward and punishment compared to teachers without children. Teachers who have children may reflect the behaviors they use to their own children to other students in the classroom. Özen Altınkaynak et al.(2018) stated in their study that the use of rewards in education can harm the child as much as punishment, since children who are attached to rewards will feel punished when there is no reward.

When the opinions of teachers about the positive and negative aspects of reward and punishment practices are examined in terms of gender, the opinion that the reward leads to positive behavior is dominant among men, while



female teachers who believe that both methods do not have a permanent effect are more common than men. There are more women than male teachers who say that punishment affects students negatively. In this respect, it can be thought that female teachers have more experience than men regarding the harms of using rewards and punishments in classroom management. The reason for this may be due to the mothering roles of female teachers. Although male teachers have a paternal role, it seems possible to reach such a result when it is considered that women spend more time with children than men.

When teachers' opinions about the positive and negative aspects of reward and punishment practices are examined in terms of the school type variable, the reward leads to positive behavior at least at the high school level. The opinion that it does not have a permanent effect in both methods is evenly distributed. It has been stated that the punishment affects the students negatively, mostly at the secondary and high school levels. This can be thought of as the fact that primary school and preschool teachers cannot clearly observe the negative effects that may occur when they use rewards and punishments in the classroom. Another reason is that young children's motivation to win prizes may take longer than other age groups, and it can be thought that their fear of punishment affects the student for a long time. Perhaps at this age, reward addiction may occur more in children. Bolat (2017), Özen Altinkaynak et al. (2018) emphasized that being deprived of a reward is perceived as punishment by the child and is negative for the child.

The opinions presented by teachers as an alternative to reward and punishment are as follows. 7 people who say that reward and punishment should not be used, 7 people who think both methods are necessary, 1 who say that classroom rules should not be determined, 3 who say responsibility should be given, 1 who say that successful sides should be revealed, 1 who say that the work done should be liked, 1 who says that the student should be valued, and a radical change in the education system There is 1 person who says let's do it. Based on this, it can be thought that most teachers do not have an alternative way of replacing reward and punishment. In the research T17. He stated that "*Positive bonds should be developed with the student rather than rewards and punishments.*" Similarly, according to Gündüz and Bayer (2011), reward is an external motivation source. Curiosity, which is necessary for learning, inhibits the desire to make an effort. Punishment, on the other hand, does not give positive results because it causes fear, grudge and anger. Based on rules, options, responsibilities, life opportunities instead of rewards and punishments, environments should be created where the student feels valuable, respected and free to make their own decisions and is aware of their responsibilities.

When the opinions of teachers about the necessity of reward and punishment and alternative approaches are examined in terms of age variable, there is a common view among all age groups that the punishment is necessary and the punishment should not be used. Teachers who say that both methods are necessary are mostly in the 36-40 age range. All of the teachers who say that responsibility should be given are between the ages of 36-40. Teachers in other items are distributed in different age groups. The fact that the teachers who stated alternative methods are in the age range of 36-40 may suggest that they have reached a certain maturity in life. Similar results with the research were observed in Kayıkçı's (2013) study.

When the opinions of teachers about the necessity of reward and punishment and alternative approaches are examined in terms of marital status variable, almost all of the teachers who use alternative methods, give responsibility, reveal the successful aspects of the student, make the student love the work they do, and value the student, are married. Only one single teacher used the expression "I give responsibility to the student". Marriage is a big responsibility. It includes dedication, understanding, valuing and respect. Perhaps this is why married teachers use alternative approaches to reward and punishment in the classroom environment.

When teachers' opinions about the necessity of reward and punishment and alternative approaches are examined according to the variable of having children, alternative approaches are mostly expressed by teachers with children. This may be due to the fact that teachers, who are parents, observed the limitations of reward and punishment practices in the development of their own children and that they needed to turn to alternative methods.



When the views of teachers about the necessity of reward and punishment and alternative approaches are examined in terms of gender, the teachers who state that reward and punishment are necessary and offer ideas about alternative approaches are mostly female teachers. Therefore, there was a significant difference in terms of gender variable. The higher incidence of women may be due to their more interest in child development than men due to their maternal instincts.

When the opinions of teachers about the necessity of reward and punishment and alternative approaches are examined in terms of the school type variable, it was stated that reward and punishment should not be used at all levels, and this view was mostly expressed by secondary school teachers. Teachers working at all levels find both methods necessary. The teachers who use this expression the most are preschool teachers. Guzelyurt et al. (2019) stated that, as in this study, preschool teachers are willing to use rewards and punishments, and generally apply outdated behavioral classroom management styles. Giving responsibility to students was mostly expressed by teachers working in secondary schools. Other alternative approach ideas were mentioned mostly in high school and primary school. Based on these findings, we can think that as the school level rises, teachers may be applying more up-to-date classroom management approaches.

Most teachers are aware of the negative effects of punishment in classroom management. However, they find it necessary to use reward and punishment practices in terms of classroom management. It has been determined that the teachers who find the punishment useful are mostly 36 years old and over. Married teachers also found it necessary to apply more rewards and punishments than single teachers. They especially emphasized that it is wrong to give rewards all the time. It has been observed that teachers who have children avoid punishment more than those who do not. This situation is remarkable.

The teachers who participated in the research stated that they rarely preferred punishment and stated that the reward contributed to the motivation of the students. In reality, students may exhibit desired behavior while the teacher is in the environment in order to reach the reward, or they may suppress undesirable behaviors just to avoid punishment. The method of reward and punishment is mostly used between the ages of 26-30, and alternative methods such as ignoring, giving responsibility and making eye contact are concentrated in the age range of 26-30. All teachers who stated that they did not use rewards and punishments were married, and it was observed that married teachers preferred reward and punishment practices less than single teachers in terms of marital status variable. Teachers who have children seem to be aware that, compared to those who do not, using rewards actually harms the child and does not cause the desired permanent behavioral change in the student. In addition, it was observed that male teachers used reinforcement more than female teachers. It has been determined that less rewards and punishments are used in high school compared to other levels.

The study shows that teachers find the reward necessary for student motivation. The opinion that the reward perpetuates the desired behavior is mostly accepted by the teachers aged 36-40. While married teachers emphasized that the award was necessary for motivation, they also emphasized that the continuity of the award was wrong as a footnote. Married teachers find it important to indicate why the award is given in the awards given in their decision. Teachers with children think that the reward affects motivation positively when the desired behavior becomes permanent. Female teachers who say that continuous reward affects motivation negatively are more common than males. High school teachers mostly use alternative approaches for motivation.

The teachers stated that non-continuous rewards increase the motivation of other students because they want to reach the reward, that other students do not exhibit undesirable behavior in order to avoid punishment, and that the same rewards are always given to the same people, reducing the motivation of other students. They also stated that it should not be used too often since they also expressed their aspects. In terms of marital status variable, it was determined that single teachers preferred more reward and punishment. Reward affects other students



positively; punishment only delays undesirable behavior. All of the teachers who answered that the award affects other students, sometimes positively and sometimes negatively, are married. It has been determined that teachers who have children do not prefer reward and punishment in classroom management. Reward positively affects punishment only delays undesirable behavior; reward affects other students sometimes positively and sometimes negatively; Only 1 of the 13 teachers who answered that both practices negatively affect other students does not have a child. Female teachers do not find reward and punishment very effective in terms of affecting the success of other students. The opinion that rewards and punishments affect other students positively is seen mostly in preschool level. High school teachers mostly stated the view that punishment only delays undesirable behavior. The school levels of the teachers who use the award as sometimes positive and sometimes negative effects on other students are balanced. There are 3 teachers working at the level of 1 preschool and 2 primary school who say that in two methods, they work negatively on other students. 1 teacher has a similar view. Most of the teachers who present statements as punishment defers the undesirable behavior have 11-15 years of seniority. Teachers who say that the award sometimes affects the motivation of other students positively and sometimes negatively, have mostly 0-5 years of experience. Teachers who say negative effects mostly have 6-10 years of seniority.

According to the findings, while most of the teachers find the reward positive, they generally do not view the punishment practices positively. It was stated more frequently by teachers who have children that rewards and punishments do not have a permanent effect. There are 2 females and 1 male teachers who say that punishment affects students negatively. It has been stated that the punishment affects the students negatively, mostly at the secondary and high school levels.

It was observed that most of the teachers participating in the research did not have an alternative way of replacing reward and punishment. The reward is an external motivation source. Curiosity, which is necessary for learning, inhibits the desire to make an effort. Punishment, on the other hand, does not give positive results because it causes fear, grudge and anger. Based on rules, options, responsibilities, life opportunities instead of rewards and punishments, environments should be created where the student feels valuable, respected and free to make their own decisions and is aware of their responsibilities.

The fact that the teachers who stated alternative methods are in the age range of 36-40 may suggest that they have reached a certain maturity in life. Only one single teacher used the expression "I give responsibility to the student". Marriage is a big responsibility. It includes dedication, understanding, valuing and respect. Perhaps this is why married teachers use alternative approaches to reward and punishment in the classroom environment. According to the variable of having children, alternative approaches were mostly expressed by teachers with children. When the research is examined, it is mostly female teachers who state that reward and punishment are necessary and offer ideas about alternative approaches. Therefore, there was a significant difference in terms of gender variable. Alternative approach ideas are mostly mentioned in high school and primary school.

Based on these results and conclusions we can suggest that;

1. Since a qualitative method was followed in this study, the same study can be done again with quantitative data.
2. Comparison can be made by repeating this study with quantitative or qualitative data in different provinces.
3. Teachers can be trained on the consequences of reward and punishment in the process of effective classroom management.

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A national governance model for sustainable COVID-19 containment based on Korea

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Abstract

Our research seeks to interconnect governance on disaster management with structural policy approach of Korea that we maintain has fostered a sustainable containment approach to the COVID-19 pandemic. We utilize primary research through a multi-method research design with 22 focus groups and eight in-depth interviews. Focus groups and interviews provided us with phenomenological research for personalized sense-making during the crisis and with a means to gain comparative insight into Korean government policies on COVID-19. Secondary data includes meta-analysis with 176 press releases, case data requested from the Korean National Assembly. Multi-level qualitative meta-analysis allowed us to interconnect concepts in existing research with a higher-level theoretical structure enabling conceptualization of a COVID-19 containment model based on Korea. Broader implications include the role of government in providing an ecosystem that engages private enterprise, embraces democratic values and participatory role of citizens in a context of a sustainable approach to containment.

Keywords: Governance; disaster management; COVID 19; ESG, Korea; sustainable

1. Introduction

On January 23, 2020 - with all eyes on Wuhan the world witnessed exercise of the authoritarian powers of Xi Jinping. Within five days the Chinese Government quarantined and “locked down” Wuhan. Shortly thereafter, we saw empty streets with images of healthcare workers in hazmat suits disinfecting streets and coffins lined up in mass graves. While the world was indeed alarmed, Wuhan seemed far and the virus with bat origins from a wet market seemed distant. Furthermore, given Chinese media censorship and state-wide surveillance, the world was left without transparent information yet alone an inkling of what was to come. While the human death toll is less than five percent, the existence of asymptomatic carriers and seemingly exponential community transmission has created a sense of psychological anxiety. Meanwhile, lockdown measures have contributed to widespread social unrest.

The COVID-19 pandemic provided unprecedented exposure to the wide variance in disaster management governance response. Such varied from extreme command and control with suppression of individual rights for the collective good in China to deliberate governance in the U.S., where individual states were encouraged to problem-solve and event compete for resources. Korea meanwhile adopted some compromise between collaborative and command and control governance.

The purpose of this study is to judiciously review the role of national governance of COVID-19 disaster management and to discuss the role of Korean government in enabling an environment in which free enterprise and democratic values have contributed to what we roughly describe as a COVID-19 containment model. Given crisis persistence and importance of guaranteeing inalienable rights, we argue that it is quintessential to consider governance theory interacts with containment policies that are sustainable and are less draconian command and



control approach in China. This study came about after 10 foreign students across three sections of a communications course at a major Korean University were put under strict lockdown and quarantine for two weeks after going to the famous nightclubbing area Itaewon. Accordingly, they were unable to leave their rooms to even use a microwave to heat frozen meals. This led to dynamic discussions related to the role of government, comparative cultural context and in-depth interviews. Students needed an outlet to share stories and means to apply perspectives to what would be a new normal life – with online education, extreme hygiene practices, limited social impact and widespread economic impact.

This paper makes five distinct contributions, the first is in terms of our multi-method research design that primary data from 22 focus groups and eight in-depth interviews with secondary data from the Korean government sources and independently sourced from the Korean National Assembly. Focus groups and interviews provide phenomenological research with insight into Korean government secondary descriptive sources related to COVID-19 containment strategies. The second contribution is related to disaster management and governance theory. We diverge from recent academic literature by integrating command and control with collaborative governance related to the need for prolonged disaster management. Our third contribution is in terms of application of disaster management lifecycle theory with empirical findings based on Korea. To facilitate understanding, findings are organized horizontally along a disaster governance epidemiological timeline and vertically within each of the four containment strategies. These findings also include specific insights gained from focus groups and interviews. Fourth, we integrate the concept of governance related to collaborative and command and control into our Korea COVID-19 sustainable containment model. We maintain that under extraordinary circumstances such as the current pandemic, command and control national governance is needed to strategic adjustment policy and swiftly act to contain the disaster, but that such policy should engage and be collaborative by considering the views and rights of the citizenry. Lastly, we integrate the concept of sustainability to address functions ordinarily under government domain. As the last stage of disaster management and through the examples of education and economic stimulus we discuss the need for the government to adjust policy to address macro-economic and societal needs. Included in discussion sustainability are implications in terms of a governance that is aligned with democratic societal values that includes transparent communication, collaboration between government and enterprise and voluntary civic compliance. Our study is designed to provide specific insight into COVID-19 sustainable containment approach in Korea that has been lauded by WHO and tapped by the UN as a model for best practices.

2. Method and Background

2.1 Disaster management

According to the United Nations Development Programme (UNDP), “disaster management refers to the development and implementation of policies to minimize damage caused by crises (UNDP, 1991). If the response is inadequate, disasters pose challenges to human lives as well as the control, reputation, and public legitimacy of leadership and the fundamental values of institutions (Rosenthal & Kuzmin, 1997). While historically, disasters were largely derivatives of nature such as floods, earthquakes, typhoons; crises have more recently evolved to include complex human caused disasters related to energy, including the Exxon Valdez oil spill and Fukushima Daiichi nuclear disaster; communication related breaches such as Y2K threats. In an increasingly complex and interconnected world, disasters also stem from ideological differences including terrorism from actors with state origins such as North Korea and 9/11 terrorists attacks on the World Trade Center in New York by actors such as al Qaeda without state affiliation.

Studies and literature on disaster management and infectious diseases such as SARS, MERS and Ebola tend to either focus on the epidemiology of the disease (Peer et al., 2020; Lee & Jung, 2019) or case studies with specific responses in national context (Eggers et al., 2020). COVID-19 specific disaster management research with frameworks or models tend to be divided into governance theory (Shaw et al., 2020), case studies documenting country specific strategies (Shangguan et al., 2020), leadership approaches (James & Wooten, 2005) or topical strategies (Salathe et al., 2020; Lee et al., 2020). Within the field of disaster management there is a void of studies that approach national disasters from a governance perspective and look at the process of management after their occurrence, largely in part as crises tend to be finite events in single locations and events demarcated by time. The only recent references to the central government coordination of national disasters were related to the U.S.



emergency planning in the Federal Emergency Management Agency role and the UN Disaster Risk Reduction [UNDRR] Framework on Sendai (UNDRR, 2015). We seek to fill a void by addressing COVID-19 as a crisis that intersects with governance from an applied national perspective with containment policies and insights related to implementation efficiencies.

2.2 National governance

The general term of “governance” refers to the act of governing and a process that influences decisions and actions within private, public and civic sectors (Emerson et.al, 2011). With the sphere of public governance, ideas of collaborative or society-centric governance emerges questions on the appropriate role of government in terms of leadership in times of crisis and how to regulate individual and group behaviour.

The Korean Government normally engages in devolved governance, collaborative governance and deliberative governance. However, in COVID-19, command-and-control governance and state centered approach were carried under the judgement that a national response was necessary. Within disaster management, we specifically draw upon two theories of governance. Collaborative governance, which broadly refers to processes and structures of public policy that constructively engages people across boundaries, levels of government and / or the public, private and civic spheres to carry out a public purpose that could otherwise not be accomplished (Emerson et.al, 2011). Governance and disaster management literature looks at the conditions at the outset to facilitate and discourage cooperation among stakeholders, such becomes critical to collective participation in mask usage, sanitization, social distancing and effective test for those deemed to be at risk or exposed to COVID-19.

The second theory is related to command-and-control governance for disaster management. Under command and control governance, one of the primary objectives of the initial response is the amelioration of public fear and the setting of a tone and approach to leadership. This includes communication aligned with public awareness and public health and often involves implementation of initial emergency relief plans and a coordinated communication strategy (Kim and Ashihara, 2020). Significant portion of disaster management governance since the 1990s purports that deliberative and less centralized structures are better prepared to engage in effective response than command and control. Such includes Nobel Prize Economist, Milton Friedman (2009) who advocated a limited role of government, stating that “When government- tries to rearrange the economy, legislate morality, or help special interests, the cost comes in inefficiency, lack of motivation, and loss of freedom.”

2.3 Sustainability

In terms of private enterprise, the term ‘sustainable’ is linked to long-term strategy with organizational and performance implications for organizations that integrate social and environmental issues into their processes through the adoption of corporate policies (Eccles, Ioannou and Serfeim; 2014). Firms mindful of environmental, social and governance (“ESG”) standards are significantly more likely to assign responsibility to boards; to make executive compensation a function of environmental, social and external perception metrics, contributing to moving the field beyond whether sustainability is linked to financial performance and towards understanding under what conditions and why sustainability pays (Margolis and Walsh, 2003).

Sustainability related to prolonged disasters is related to the need to consider how basic tenets of our life can function without undue interruption. Sustainability has two elements, one related to COVID-19 response which requires consideration of a prolonged crisis period and another related to the ability of policy enabling functionality. To this end, we address education and economic policy. The other element relates to political theory and systems. Related to the role of government under democratic capitalism Henderson (2020) maintains that in a functioning democratic capitalist system, protection of certain public goods requires governments functionally interact and collaborate to enable an eco-system in which free enterprise, democratic values and multinational corporations can co-exist with legal reinforcement to ensure equal rights, opportunity and prosperity for all. The COVID pandemic raises questions whether when it comes to well-being, human interaction, trade-offs between privacy and security as well as the role of government in ensuring our safety and well-being.



3. Methods

3.1 Participants and Procedure

Data collection came from primary and secondary data sources. Primary data was collected based on six in-class zoom recorded focus group discussions. Initially eleven teams of 5-8 students were assigned based on students major, gender, nationality, work experience, desire for leadership experience and Meyer's Briggs personality test results. Early discussions included discussions of containment strategies. These eleven teams, each with self-identified names were broken down into 22 self-selected smaller focus groups of 2-4 students which each chose a containment strategy and theory or comparative country focus. Across three sections of a Korean University business communications course, 67 students partook in focus group discussions, almost evenly divided by gender with 34 (50.7%) male students and 33 (49.3%) female students. Students were from diverse countries including Korea (41), China (13), France (4), Scandinavia (3), Italy (1), Germany 2), U.S. (2), and Trinidad and Tabago (1).

Table 1. Focus Group and COVID-19 Containment Topics

Focus Group	COVID-19 Containment Topics
G2 W2 F2 GA2 A2	Leadership: Review of Government related approaches to crisis management and application of a crisis management model including discussion of timing of response, rules, enforcement, logistics, personal protective gear. Country focus: New Zealand, US, China, Korea, Brazil
T2 S2 F1 A1 M1	Ethics: Individual rights vs. Common goods – investigation of privacy issues related to contact tracing and data tracking, isolation, and information management. Include quarantine and border control. Focus: Sinchonji and Itaewon Club outbreaks and solutions, legal aspects, game theory and European Law
G1 S1 SQ 1 SQ 2	Operations / Supply Chain – what is the role of testing, capacity and use of facial masks and how such affects the spread of covid with social distancing? Country Focus: U.S. / China, Korea
M1 G1 C1 PM	Education Policy: What is the impact on K-12 as well university. Restarting education – social distancing. Country Focus: Philippines, Singapore, U.S., China
T1 W1	Business / Economy: Indicate types of economic Aid packages, quarantine rules (who, how, enforcement) and impact of coronavirus on the economy
CN2 M2	Country focus: worldwide impact, Korea

Focus group discussion insights segued to a secondary process of more in-depth insights including selecting and interviewing eight individuals. Interviews were 1:1 and conducted in May – July, 2020. Students interviewed were asked the same five questions – related to perspective as an international student in Korea, testing experience, quarantine and compliance perspectives, comparison of government roles in handling COVID-19 and particular stories from their home country. Professional questions were tailored to respective specialties and professional roles. Interviews enabled unique sharing and facilitated understanding related to policy implementation. Interviews varied in length from 35 minutes to two hours and 12 minutes with the average lasting 1 hour and 17 minutes. Insights from focus groups are accordingly integrated into each section of findings.



Table 2. In-depth Interviewee List

IN-DEPTH INTERVIEWS		
	Country of Origin	Professional / Reason for interview
1.	Korea	Ear, Nose, Throat Medical Doctor
2.	Korea	Local quarantine public officer
3.	Korea (written)	Self-quarantined in apartment with sister studied abroad in NY and returned to Korea
4.	Italian	Father tested, mother shop keeper
5.	The Netherlands	Student tested and quarantined in Korea. Uncle had COVID, grandmother in nursing home
6.	German	Muslim student, quarantined in Korea
7.	France	Student, mother had covid and quarantined
8	Orange County, CA, US	Real Estate Fund Manager managing local complexes

Secondary data relied upon official data from the Korean Centers for Disease Control including review of 176 press releases from February 26th – August 27th, 2020 from media including newspaper articles from LexisNexis, and internet searches on Google and Korean search engine Naver; and from special requests to the National Assembly. Based upon an official inquiry, we received a daily count of new cases from January 20th – June 17th, 2020 and two white papers - one from the Government of Republic of Korea (ROK, 2020) and another from the Ministry of Economy and Finance (MOEF, 2020). This process was followed by manually cross-checking and updating data of data from the Korea Disaster Management Headquarters and Korea Disease Control and Prevention Agency (KDCA, formerly KCDC) website for timelines (KCDC, 2020).

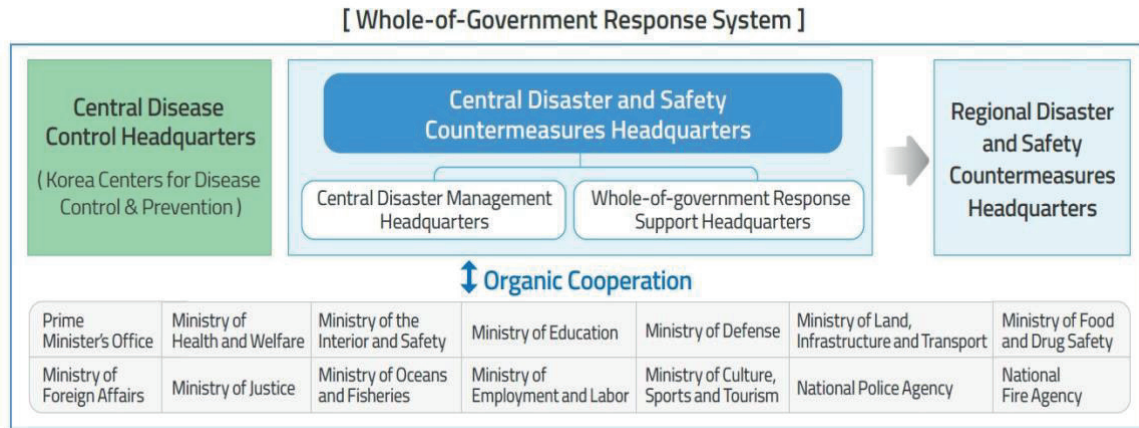
4. Research Design: National Governance Model

In devising our basic model, we evaluated both disaster management models and governance theories. We first evaluated disaster management model of Rosenthal and Kuzmin (1997) which outlines crisis typology and government roles. Rosenthal and Kuzmin conclude that tough and immediately effective action should be tempered by decisional restraint, prudence, open communications, and a long-term policy perspective. Next we evaluated Dynes (1990) emergency planning models related to military command and control and problemsolving models involving coordination and continuity. Dynes (1990), similarly concluded that response should be collaborative rather than centralized command and control. Lastly, we evaluated Deloitte Insights Government response to COVID-19 model (Deloitte, 2020) which integrates disaster management lifecycle theory in stages of response, recovery and thrive, with prescriptive COVID-19 related government strategies.

We adopted elements from each of these studies including open communication and long-term planning from Rosenthal and Kuzmin (1997), elements from the command and control and problem-solving models from Dynes and integrated some disaster management approach from Deloitte. However, we similarly rejected elements related to the inability for government to efficiently respond (Rosenthal & Kuzmin (1997; Dynes) and related to COVID-19 containment maintain a need for specific policies rather than general theory (Deloitte, 2020). After multiple iterations, we concluded on a model with national governance from a disaster management response perspective that also includes empirical findings. Accordingly, Figure 1 outline of our national governance related to Korean COVID-19 containment. Our model for COVID-19 disaster management includes the Korean Government as a defacto entity in charge, under which the Government designates power to the control tower, which for COVID-19 is the Central Disaster and Safety Countermeasure Headquarters and at the helm of decisionmaking. Given the expertise in infectious disease, the Korea Central Disease Control Headquarters is led by the director of KDCA with organic cooperation between agencies to ensure fluid collaboration.



Figure 1: Korean COVID-19 government response system

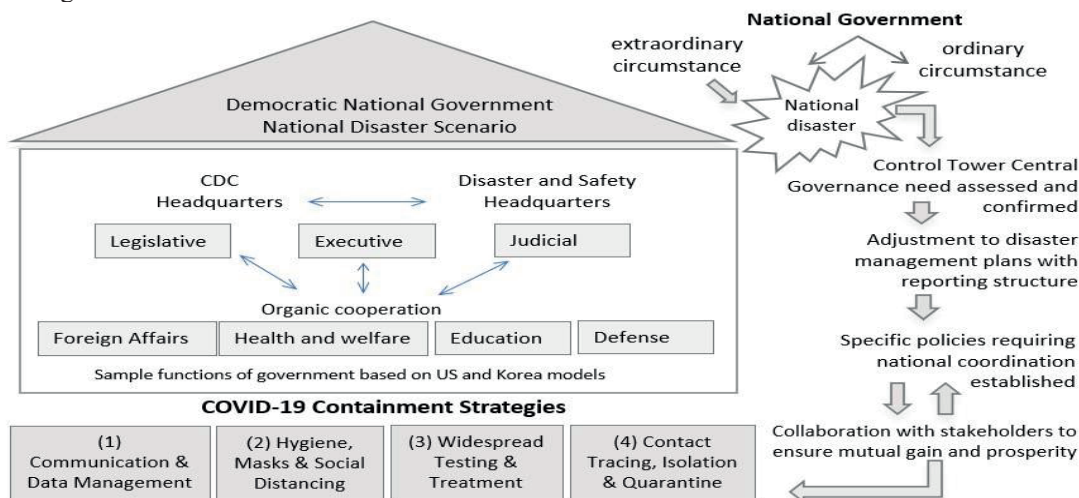


Secondary data and focus group discussions led to development of our five containment strategies. Each of the 22 focus groups then selected specific countries and models to frame governance response. Focus Group findings were integrated into our findings and supplemented our knowledge on policy and government research with practical insights and international insights. First hand understanding of variance in governance was particularly insightful especially given the timing of Korea as one of the first countries to adopt a containment approach that wasn't exclusively command and control from policy perspective. European and U.S. widespread lockdown which also led to racial and political unrest, spurred discussions related to sustainability with questions related to the role of government under democratic capitalism and as Rangan (2018) asked, "whether our quest for prosperity has produced great output is aligned with our desired outcomes and if the current system is sustainable?"

5. Findings: Containment Strategies

To provide context for national governance and specific government containment strategies Figure 2 builds upon our disaster management lifecycle model by placing the national governance and policies according horizontal timeline. [Appendix B](#), which follows organizes the same containment efforts in strategic verticals.

Figure 2: National Governance COVID-19 Sustainable Containment Model - I





5.1. Containment strategy 1: communication and data management

As one of the first democratic capitalistic nations exposed to COVID-19, the Korean Government was faced with the decision of controlling communication as the Chinese Government did or allowing free press. In the case of public health crisis such as COVID-19, accurate information enables the public to process the disaster and is an opportunity for the government to garner trust. Accordingly, under President Moon Jae-In's leadership, the Korean government opted for transparent communication and detailed information disclosure. From February 28th to August 27th, 2020 the Korean Ministry of Health and Welfare provided 176 press releases with 96 other official documents. The Korean Government also utilized high per capita mobile penetration rates of 95% and enabled an emergency alert system to send customized text messages including routes that COVID-19+ persons had traveled. Notably, alert details are not more limited in details due privacy infringement concerns. Korean government decided to disseminate and disclose raw KDCA data for experts, scholars, and doctors to analyze. Disclosure of data facilitated the development of a few widely adopted mobile apps, including Corona Map, for real-time tracking of confirmed patient routes; Now and Here to calculate the risk for commuting based on the traveled paths of confirmed patients and Co100, which sends an alert if a confirmed patient is within 100 meters. It is also possible to use of AI programming enabled detect abnormal lung X-ray images with scanning to determine whether the lung condition is from COVID-19. Korea also utilized big data processing in epidemiological investigation contact tracing and promoted the use of the Global Virtual Private Network of cloud computing (Lee et al., 2020).

Focus Group Findings: Containment Strategy 1: Communication & Data Management

INTERVIEW	COMMENTS
Student, The Netherlands	<i>My university and government in Netherlands wanted me to come home but I chose to stay in Korea. In The Netherlands the government took the virus seriously and initiated strict lockdown – in the beginning only one person per family could go grocery shopping and no more than 2 could ride in a car. We had a shortage of masks and alcohol sanitizer. In Korea there is hand sanitizer in every store and everyone wears masks.</i>

5.2. Containment Strategy 2: Hygiene, Masks and Social Distancing

A key tenet of the command-and-control governance includes the Korean Center for Disease Control's clear communication and rollout of guidelines for all retail establishments and residences to provide hand sanitizer, mandatory mask usage in public transport and social distancing guidelines. Other command-and-control examples of governance include: the Korean Government's decision to convene a Task Force of Mask Supply Stabilization Measures to assess production, distribution as well as raw material shortages given China's diversion of materials to their factories. Under Control Tower governance manufacturers were obliged to ship at least 80% to public channels at almost cost, despite surging international prices.

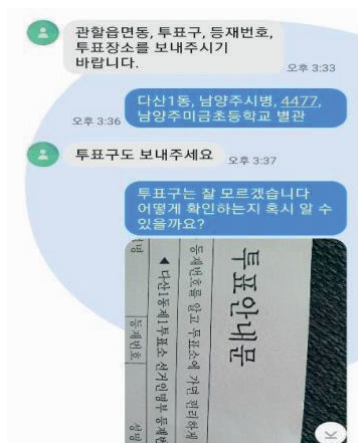
The Korea Governments mask rationing system that limited purchase per person to once a week according to one's birthdate and linked sales to individual national IDs and a national database to control demand. While decisions to wear a mask are personal choices, mandating mask usage on public transportation, through retail channels and relaying a sense of public duty created a sense of civic compliance. The Central Disaster and Safety Countermeasures Headquarters also provided clear social distancing guidelines including three stages: stage 1: distancing in daily life; stage 2, restricted social distancing; stage 3, where numerous clusters are reported within a community suggesting an outbreak; and stage 4 which includes ban on gatherings of more than four persons in the day and social distancing rules including a ban on gatherings of more than two people after 6 p.m. Clear communication from the government related to social distancing enabled the private sector to respond. Workplace guidelines for example recommended supply of hand sanitizer and temperature checks upon entrance, the closure of common spaces, ventilation, and supplies for hygiene. Social distancing guidelines provided prescriptive instructions regarding church gatherings, after school activities, fitness centers depending on the level of alert and social distance phase. For positive messaging, the Korean government coordinated a 300 drone air show that illuminated images of masks, hand washing and social distancing in the sky.



Table 3. Containment strategy 2: hygiene, masks and social distancing

Text Messages with
Quarantine Officer, with picture of
voting ballot

Korean Government Provisions received by quarantine subjects



Text message exchange between Korean local government delivered wet quarantine officer and quarantine subject re: voting procedure. delivered snacks, instant food, beverages and sanitizer, thermometers and wipes, hand disinfectant, and fresh fruits and vegetables with garbage disposal with the quarantine officer



Interviewee 4: Student, Italy

Left: "A sign in my mom's store to encourage a social distance of 1.8 meters inside and outside of the store".

"In Korea, people wear masks and do as they are told whereas in Italy and Western culture we have a culture to show our face a culture from Church and linked to security, for example robbers hide their faces with masks."

Focus Group findings Containment Strategy 2: hygiene, masks and social distancing

INTERVIEWEE	COMMENTS
California, US Real Estate Fund Manager	I know surfers in orange county on the beach giving away masks and people say, "God gave me a mouth and it is uncovered" – that they will never wear a mask. Of course, Orange County things is conservative and political.
Student The Netherlands	My parents grow tulips and provide immigrant workers with masks.



Student, France	<p>I keep thinking “where are the masks, where is the distance”. In Paris, no one cares. Now there are masks and people on trains get fined 130 Euros for not wearing a mask.</p> <p>The Government says ‘don’t wear masks’ but I wish they would say ‘we don’t have masks.’ My friend’s father who is a pharmacist was told only sell masks to medical professionals. Early in the pandemic, when my parents went out wearing a mask, everyone would look at them as if they were scary and contaminated. Sometimes, I show my friends and family a video of what Korea is like - to help people understand. In France, if you don’t show them they don’t understand.</p>
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5.3 Containment Strategy 3: Wide-fark Testing, Timely Test Results and Treatment

Command-and-control governance led to development of test kits, testing facilities and timely test result processing. In Korea, wide-spread testing and development of capacity were critical to early identification of cases and minimalization of disease contagion, especially given the unknown transmission by asymptomatic carriers. The Korean Government privatized the development and production of COVID-19 diagnostic kits. Rapid test kit production led to the ability to conduct wide-spread testing of over nine thousand members connected with the Shincheonji Church on February 20th. Collaborative governance between public and private enterprise led the Ministry of Food and Drug Safety to approve 72 test kit by 46 companies. Export of test kits have generated over \$200 million USD (ROK, 2020). Korea was the first country to implement walk-through and drive-through COVID-19 testing. Negative and positive pressure booths enable reduction in the time required for screening and reduction in the exposure of front-line medical personnel. For drive-through testing, medical personnel in protective gear take the driver’s sample through the automobile window, preventing the need to disinfect the area.

Effective testing strategy involves efficient turnaround time for test results. KDCA indicates that DNA testing takes six hours with results typically sent by text message within 24 hours. This was verified by interviewee Kraim Smatterkin who we interviewed related to the super spreading night club incident. On March 2nd, 2020 Kraim was quarantined by his Korean University after he and about 30-40 other international students visited the gay nightclub in Itaewon, the scene of a super spreader event. Professional interviewee Seenog Asai, an ear nose throat doctor in Korea with a private clinic verified that he had been tested four times after COVID positive patients visited his clinic. The government contacted him and came to disinfect his clinic. In all cases, test results in Korea were delivered by text within 24 hours.

With 4.08% of the Korean population tested as of September 13, 2020 (See Appendix A), only a few other countries have more per capita including Iceland, which tested 6% of the population by April 24, 2020 (Gudbjartsson, 2020) and which we also verified in a separate discussion with an Icelandic colleague in the professional focus group. Related to treatment, Korea benefits from a socialized well-functioning medical system. With government having designated all COVID testing take place at regional public health centers, upon testing positive COVID-19 patients are categorized into mild, moderate, severe, and extremely severe cases. Mild cases are monitored and treated at residential treatment centers with check-ups twice a day, while moderate, severe, and extremely severe cases are admitted to Infectious Disease Hospitals or nationally designated treatment facilities for in-hospital treatment (KCDC, 2020). In Korea, all testing costs for suspected cases, in-hospital care and treatment costs are covered by the National Health Insurance or government funds.

Focus group findings: containment strategy 3: widespread testing and treatment

INTERVIEWEE	COMMENTS
Student The Netherlands	In the Netherlands, my uncle contracted COVID in Spain; he has a suppressed immunity and lung disease. Although the doctors said they are 90% sure he has the COVID, they did not test him as they didn’t have enough tests (April, 2020). They told him to go home and wait it out.



Student, Italy	My father works for the Port run by the Italian Government and did the antibody test with results in 24hrs. Antibodies would imply exposure but he was negative. Three of his colleagues were positive for antibodies but negative for COVID-19. My dad also collected money with his motorcycle group and bought masks and donated them
Student, France	In Paris, my mother got COVID and was in quarantine with my father. The French Government called every day to check in, even if information was entered into an app. The government came to our house with white hasmat suits but were casual – saying ‘don’t worry and don’t go to the hospital’. I told my mom “wear a mask” but in France, no one cares. Europeans think – “why should I wear a mask when others don’t”. Now there are masks and on public transport people without masks get fined 130 Euros. Sometimes, I video to show my friends and family what Korea is like – I try to make people understand. In France, if you don’t show them, they don’t understand.

5.4. Containment Strategy 4: Contract Tracing, Isolation and Quarantine

Contact tracing is an important part of epidemiological investigation. In Korea, tracing first includes investigation with interviews to attain a detailed record of their whereabouts at given times. Based upon the investigation results, exposure risk assessment is conducted with potential access to medical records, cellular GPS data, credit card transactions, CCTV footages. Any identified contacts are subject to official self-quarantine along with health education and symptom monitoring. Government roles include hiring and training of hundreds of epidemic intelligence service officers, training of local health centers. While initial contact tracing processes required approval from government agencies and telecom providers taking to 24 hours, an online platform reduced that time to only 10 minutes.

In the case of Korea, privacy tracking was legally approved as a mechanism to inform the public after MERS, when prioritization of patient privacy allowed confirmed patients to freely roam the streets, which caused a public outcry. COVID presents a challenge to cultural values which become intertwined with legal context and a societal need to assess trade-offs in context of public good versus private interests (Focus Group: FG2). A Pew Research survey in May 2020 showed that 48% of Americans are negative to mobile tracking of COVID-19 positive with 62% reporting government tracking to ensure compliance with social distancing recommendations would be “somewhat” or “very unacceptable” (Focus Group: FG3).

Our interview process included Koreans officially quarantined (Interviewee: Shera Mino) as well as quarantine officer (Interviewee: Enkyung Jee) who revealed details on isolation and quarantine measures. One example of a nexus between collaborative governance and command and control is in Daegu fifteen community treatment centers of Samsung and LG dorms were converted to admit over three thousand people. Interviews with a quarantine officer and those in quarantine, we confirmed that local government officers check-in twice a day with self-quarantined patients and those in quarantine are tracked with GPS. Interview sources indicated that quarantine implementation measures included coordination of the voting time and agreeance to keep the voting open late to ensure prevention of contagion and having to send a photo of the voting ballot to the quarantine officer with a time stamp.

Figure 3. Focus Group findings: Containment Strategy 4

COMMENTS	
INTERVIEWEE	
Student The Netherlands	In the Netherlands, my grandmother is 95 years old was quarantined in an elderly home. When some elderly people contracted the virus, all elderly were quarantined with only a nurses coming and going. Conditions were so bad it was publicized on a talk show.



6. Findings

Sustainable Policy

In terms of our model and scope of research, sustainable policies are activities that are ‘ordinarily’ within the scope of national governance but may require adjustment to ensure disaster recovery. For the purpose of our governance model, two salient examples include education and economic policy.

6.1. Education Policy

Given school year timing with a school year starting in March, Korea was one of the first countries to evaluate how to do social distancing in education. The Korean Ministry of Education nationalized the re-opening and all decisions related to online and offline classes. To assess public opinion and the impact on the families the Ministry of Education conducted regional surveys. As a result, the Government decided to reduce the number of students physically in the school building to about one-third with students sitting alternately with some schools installing partitions of cardboard or acrylic between desks. All students are required to wear masks and interaction in the classroom is limited. School was online-offline hybrid with set days and times differing by grade and region. Focus Group POM-1 found that social distance was incurred with meals in classrooms. Students recommended to bring their own utensils and drinking water.

An example of collaborative governance includes diverse online content for science, math and software developed by the Ministry of Education the Korea Educational Broadcasting System (EBS) to provide public access to private channels. The government also collaborated with Samsung Electronics and LG Electronics to provide 36,000 smart tablets to low-income families (ROK, 2020). While the effectiveness of online education is debated, the Government has made concerted effort to ameliorate challenges related to online learning.

Table 4. Sustainable Policy – Chinese social distancing in school



Focus Group: CT1

Picture: Hangzhou, headmaster who took precautions at Yangzheng Primary School wearing specially adapted hats to make sure they didn't forget to keep their distance.

6.2. Economic Policy and Financial Stimulus

We include economic policy given that in macro-economic and fiscal policy, economic stimulus is a key instrument in economic recovery and that such measures are critical especially as the pandemic impact is global and impacting some industries and segments that may otherwise not be able to endure the crisis of unknown duration. The Korean Government has introduced comprehensive policies to protect the public and burgeon the interests of those most vulnerable to economic contractions – low-income families, informal-sector employees, part-timers, women, and the disabled. Specific stimulus and fiscal policy measures are included in Table 2.

Table 5. Sustainable Policy – Financial Stimulus

Sustainable Bloc 2: Financial Stimulus		
Measure / Policy	Amount	Details
Employment stability	US\$8.4 billion (10 trillion KRW)	To support and to create over 550,000 jobs.



Relief Package Program	US\$113.5 billion	Support for corporate financing, stabilization and insertion of (135 trillion KRW) liquidity into financial markets, initiation of super-low interest rates to SMEs with loan guarantees to MSEs.
Key Industry Stabilization and Bond/ Securities Market Stabilization Fund	US\$33.6 billion (40 trillion KRW)	Allocation of liquidity into markets and support for key industries like low-cost carriers \$252.2 million USD (300 billion KRW); and car manufacturing.
Emergency Disaster Relief - \$335 Payments	\$10 billion (14.3 trillion KRW)	Emergency relief payments to all Korean households of \$840 (1,000,000 - 400,000 KRW) per household.

In accordance with collaborative governance, Korean economic stimulus measures tied stimulus to vouchers supporting SME with trackable spending and expiration all households in the amount of \$840 (1 million KRW) for a four-person household. Related to worldwide impact, Moneyball Focus Group reported that worldwide, 196,756 flights were tracked on February 21, 2020. The number tumbled to ~155,000 in mid-March. By March 29th, worldwide flights fell to just 64,522.

Sustainable Bloc 2: Focus Group findings - Financial Stimulus

INTERVIEWEE	COMMENT
Orange County, California, U.S. Residential Real Estate Fund Manager	Our debt is through Freddie Mac and their policies changed. Lenders are now required to carry cash reserves in addition to principle and interest for added security, so we suddenly need more capital. Through the U.S. Cares Act there is an eviction moratorium preventing landlords from evicting anyone in America. That essentially means that any tenants who don't pay rent are considered bad debt. There has been talk of renter relief where the government may allocate funds and cut checks to landlords as a type of unemployment insurance, but we still need to wait and see.

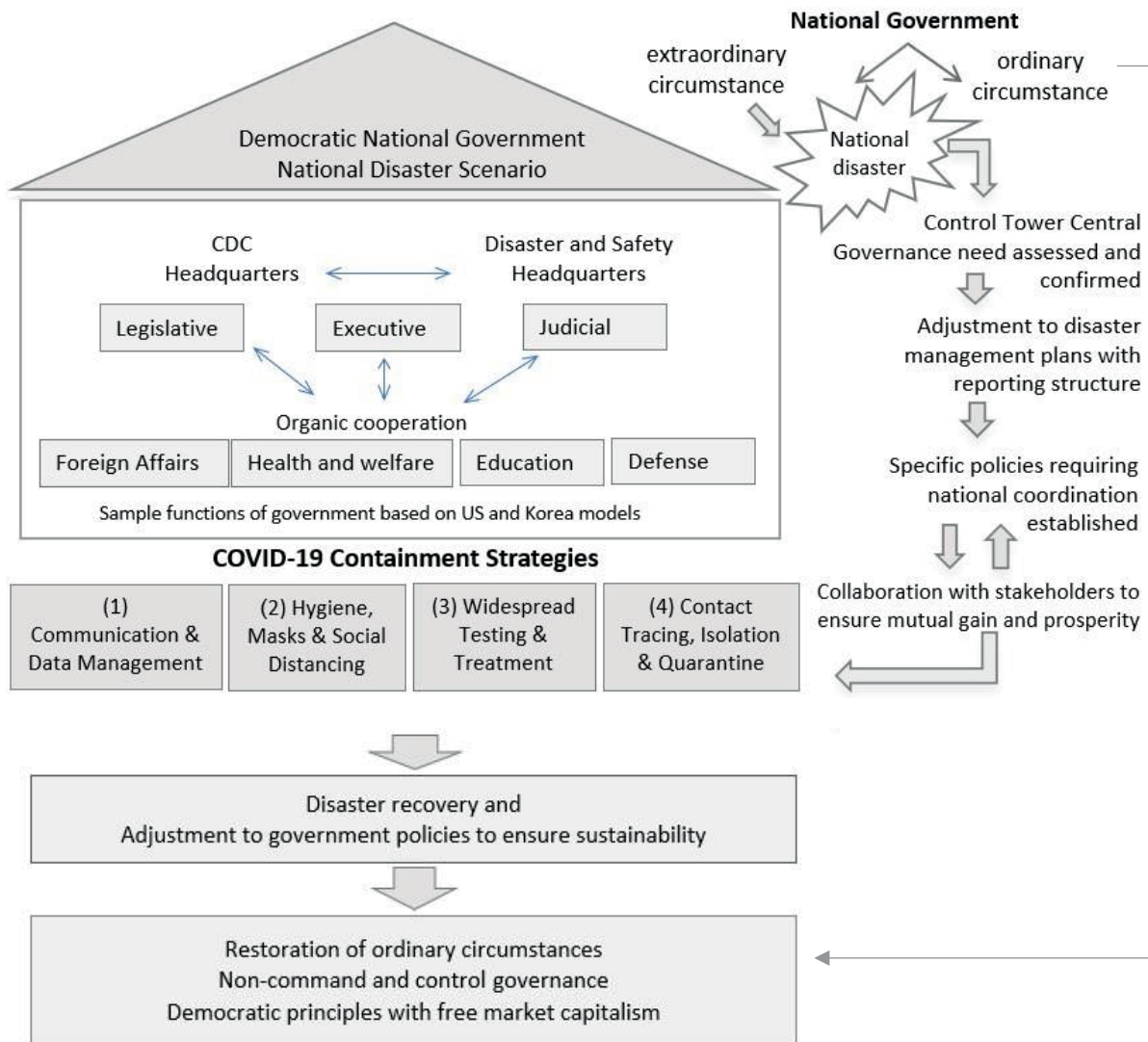
6. Results, Conclusions and Recommendations

The figure below demonstrates that once containment strategies are implemented and effective, then disaster recovery stage of disaster management ensues. At this point governance focuses on sustainable containment and restoration of ordinary circumstance. Under such model, we posit that governance changes from a command control governance to collaborative governance. We note that the process of containment engaged stakeholders to ensure mutual gain and democratic principles.

This study utilizes a multi-method research design that utilizes focus groups and interviews to provide phenomenological research on of subjective views and supplement cultural insights with personal stories and link theoretical principles of governance with disaster management and COVID-19 containment strategies. In the ongoing assessment of best practices of governance, we share insights into sustainable practices that are less draconian than lockdown. Through the case of COVID-19 disaster management in Korea, we seek to align disaster response with national governance based on collaborative and command and control theory. In presenting this case, we organized government actions horizontally according to an epidemiological timeline and vertically including four containment strategies. To the extent possible, we identified the 'what', 'when' and 'where', and particularly focused on the 'how' of policy as we believe real insight comes from understanding of practical details and actual methods of implementation. We also explore 'by whom' as tandem to government command and control is the collaborative engagement of stakeholders, namely the scientific community, private enterprise and society at large. Focus groups and interviews provided valuable insight and were conducted to prevent overreliance on the government data.



Figure 4: National Governance COVID-19 Sustainable Containment Model - II



Conclusions and implications are as follows: The first is related to methodology and the importance of phenomenological research and multi-method research design. We seek to broaden the dialogue by offering insights based on 24 focus groups who offer a breadth and depth of insight and compliment theory with the idea that focus group research has social constructionist epistemological framework that presupposes that sensemaking is no pre-existing, but rather collective process based on social interactions and discussion (Wilkinson, 1998). COVID-19 pandemic is still novel and variance in approaches requires a collective and collaborative engagement across geographies, cultures, professions, and generations.

Second, disaster management and governance theory. We diverge from recent academic literature by offering a model that integrates command and control with collaborative governance theory. Our model purports that under extraordinary and prolonged circumstance such as the current COVID-19 pandemic. Effective measures include national response and coordinated efforts that span across national security and border control, public policy for social distancing, manufacturing, distribution and controlled pricing of PPE to prevent contagion and management of a healthcare system to treat those that fall ill. Henderson (2020) notes inclusive governments are transparent,



democratic, effective market-driven supported by a strong society and free media whereas extractive governments are ruled by a few on behalf of a few. In other words, command and control governance is tempered by collaborative judgement that places the citizenry above power and political ideology.

Our third contribution is in terms of application of disaster management lifecycle theory with empirical findings based on Korea. To facilitate understanding, findings are organized horizontally along a disaster governance epidemiological timeline and vertically within each of the four containment strategies. Containment under collaborative governance also embraces the importance of stakeholder engagement. In democratic capitalist countries, we envision a national disaster command and control governance role with transparent information management and engagement of stakeholders. Such national leadership embraces the free press, empowers the scientific community, and engages private enterprise in developing innovative solutions for mutual prosperity. For example, the swift convening of a task force on masks and regulation of production, distribution, pricing and rationing enabled Korea to produce sufficient masks for public consumption. Initial coordination of national needs and government policy helped ensure collective interests were prioritized. Once basic public need being fulfilled, in the case of masks and testing kits, typical market principles ensue with companies allowed to profit from burgeoning global demand.

The fourth implication is related to the role of technology and innovation. Command and control governance enabled wide-spread testing, quick test results necessary for identification of COVID-19 positive patients and prevention of mass community transmission. Innovations such as the positive and negative pressure walk-through testing and drive-through testing sites further reduced the need to disinfect, saving time and expense. The ability to process big data increased the efficiency of contact tracing and utilization of AI to read x-rays for diagnosis improved operational efficiency and management of treatment.

The last implication is related to the topic of individual privacy versus common good benefit – integral in governance theory. In the case of Korea, the ability to identify those exposed to COVID-19 and to isolate them prior to further contagion has inextricably linked with the ability to allow the rest of society to function and avoid draconian lockdown. Individual values are also tied to civic compliance and need for mass adoption of sanitization, masks and social distancing. Such debate the notion of tracking COVID-19 positive patients and mandatory download of apps to allow GPS monitoring facilitate the establishment of compliant mindset and individual sacrifice for the greater society.

Limitations to this study include that focus groups provide limited views and are not representative of the general population of their culture. Our evidence and governance model is largely based on the specifics of the case of Korea, an ethnically non-diverse country with half of the population living within the vicinity of Seoul; hence models of governance and disaster management would benefit from additional substantiation from other countries. We also recognize the specific policies have not independently been proven to be effective with specific statistical verification of the effects of such policy. Additional studies might also look at factors or indexes such as wellbeing (De Neve & Sachs, 2020) or cultural values that may serve as a proxy for civil compliance related to governance and risk tolerance.

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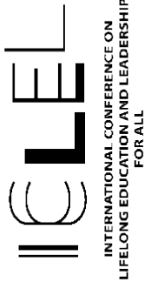
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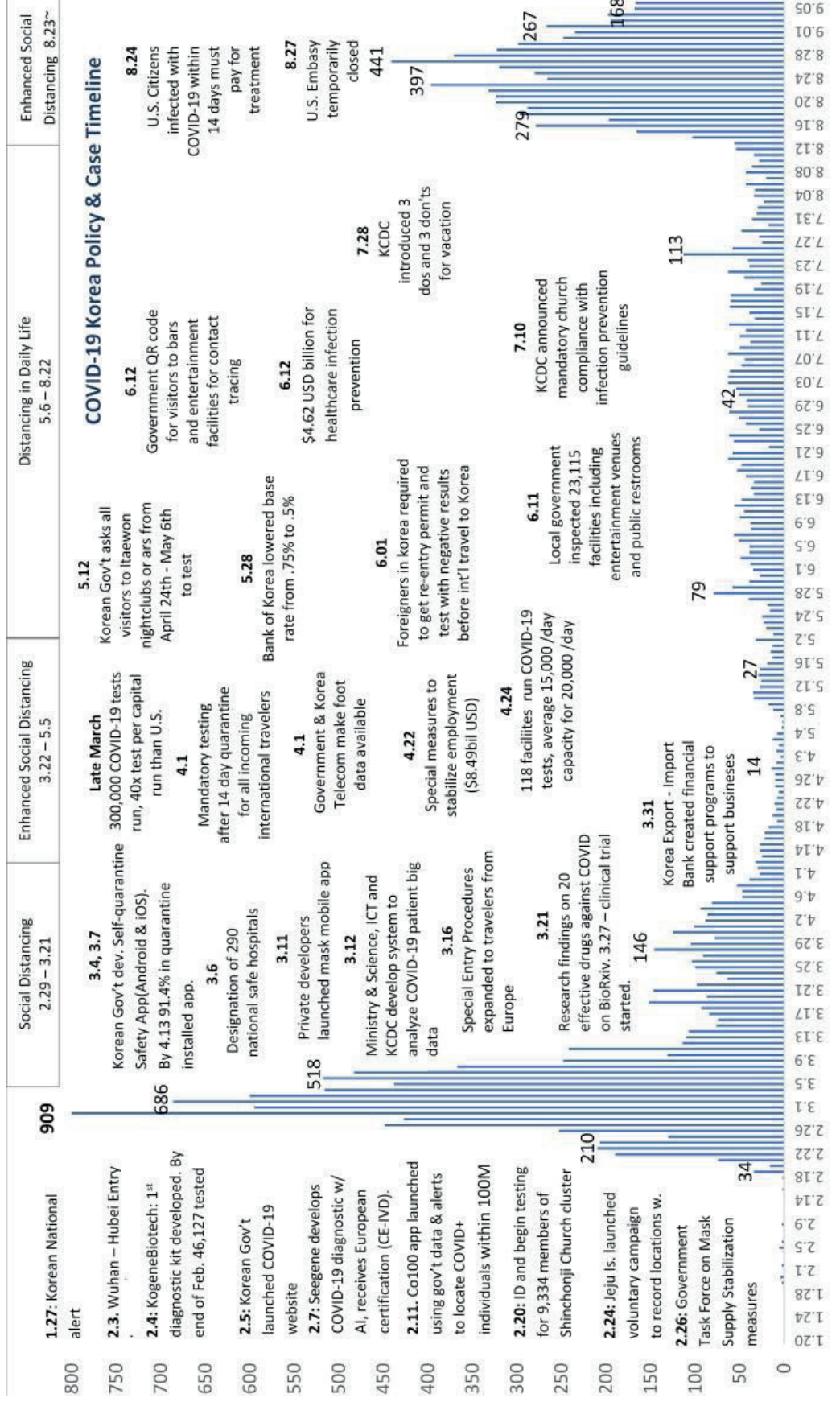
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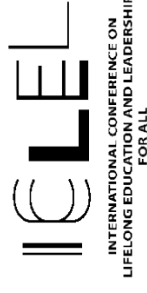


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Appendix A. COVID-19 Korea Policy and Case Timeline





Appendix B. Containment Strategy Actions by Category

COVID-19 Containment Strategies

Strategy 1: Communication & Information Management		Strategy 2: Hygiene, Masks & Social Distancing		Strategy 3: Wide-spread Testing and Quick Test Results & Treatment		Strategy 4: Contract Tracing, Isolation and Quarantine & Border Control	
1.27 2.23	Crisis Alert raised level 2 → level 3 → level 4	2.4	KogeneBiotech: 1st diagnostic kit developed. By end of Feb. 46,127 tested	2.7	Seegene develops virus diagnostic with AI, receives European approval (CEIVD)	2.4	Special entry screen from Hubei (Wuhan).
2.5	Korean Gov't launched COVID-19 website	2.26	Government (MOEF) Task Force of Mask Supply Stabilization	2.20	ID and begin testing for 9,334 members of Shincheonji Church cluster	3.16	Special Entry Procedures expanded to travelers from Europe
2.11	Co100 app launched using government data and alerts	3.22 ~	Enhanced Social Distancing	3.1 3.6	Establishment of life treatment centers for mild cases / Designation of 290 national safe hospitals	4.13	Quarantine app with GPS tracking developed to monitor / contact quarantined. 91.4% in quarantine installed app.
2.24	Jeju Is. launched voluntary campaign to record locations w. Google Timeline	3.11	Private developers launched mobile app for mask retailers	3.21 3.27	Research findings on 20 effective drugs against COVID-19. Clinical trial started	4.1 ~	Mandatory testing & 14-day quarantine for all incoming international travelers.
3.4 3.7	Korean Government developed selfquarantine app for Android and iOS	4.1:	Government & Korea Telecom make foot traffic & roaming data available to researchers		Late March: 300,000 COVID-19 tests run, 40x test per capital run than U.S.	6.1	Foreigners in Korea required re-entry permit & negative test results before int'l travel to Korea
3.12	Ministry & Science, ICT & KCDC develop big data system to attain and quickly analyze patient data	5.29	Strengthening measures for Seoul metropolitan daily area	4.24	118 facilities to run COVID-19 tests, average 15,000 /day capacity for 20,000 /day	6.2	Designated high risk countries that require strengthening infectious disease control and prevention
4.1	Government & Korean Telecom (KT) made foot traffic & roaming data available	7.10	Central Disaster Safety & Countermeasure announced mandatory guidelines for churches	5.12	Korean Gov't asks all visitors to Itaewon nightclubs from April 24 th – May 6 th to get tested	8.24	U.S. citizens from abroad must submit negative COVID-19 test results & pay for treatment if COVID-19 contracted within 14 days.

Table 1: Korea Containment Actions by Strategy [20,21]

Source: Ashihara, Kim (Asia and the Pacific Policy Studies, 2020)



Transversal competences of future teachers of technical subjects and digital literacy in technical education

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Abstract

Digital Literacy as a concept has been used for many years and could be said to be firmly rooted in the family of literacies such as mathematical, financial, reading and technical, etc. Recently, however, it has become a concept that dominates the field of professional terminology and is very often used in strategic and conceptual materials. This term has a very broad content. Like Digital Competence, it integrates relevant knowledge, skills and attitudes and is seen as a concept that is permeated to varying degrees by other literacies. The term Digital Skills or Digital Knowledge is also used in conjunction with Digital Literacy.

Digital literacy has been a much-discussed topic in the context of Czech education in recent years, both the concept of digital literacy itself and the way of its development in pre-primary, primary and secondary education. The paper presents and analyses the didactic aspects of the implementation of the European Framework of Digital Competences for Teachers in teacher education programmes. Particular attention is paid to transversal competences in the competence model of the teacher, optimized for achieving digital literacy, enabling the subsequent development of digital literacy of learning individuals. The definitions and conclusions are discussed in the context of foreign sources and the currently addressed concept.

Keywords: Technical education; digital literacy; competences; transversal competences; teacher; technical subject.

1. Introduction

Digital literacy in the context of the European framework of digital competences for teachers

For a decade now, there have been calls in the Czech Republic for the need for a major overhaul of education in the use of digital technologies in the context of education. The concept, which is applied in practice, is already significantly outdated and does not fully reflect the development in the field of digital technologies, but also the needs that society puts (will put) on the student, the future graduate = employee. This concerns not only the skills in controlling technology, which is currently the dominant content of education, but above all the acquisition of competences for safe and effective functioning in the digital world, both in personal and professional life. Education in digital literacy needs to be addressed as a crosscutting theme across all or educational disciplines across educational levels. This, of course, entails achieving a solid level of digital competences among the educators themselves, i.e. teachers, as this is the only way to ensure that digital competences are adequately reflected in the style of their pedagogical work in direct teaching.

The issue of digital education was opened in the Czech environment as early as in 2005, when it was becoming clear that digital skills would become a key competence necessary for success in employment, socialization and personal development of each individual. By their nature, we can say that these are transversal competences, as they permeate the educational curriculum in a crosscutting manner. They include not only the ability to use the computer as a tool for work, information skills and media literacy, but also significantly include creativity, independent thinking, presentation and communication skills, teamwork skills, and the whole domain of attitude formation towards personal integrity, moral attitudes, acceptance and practice of ethical principles and tolerance. The modification of the official curriculum documents is therefore on the agenda and with it the requirement to equip teachers with the necessary competences. Their task is to prepare pupils to live and work in a digital society (Redecker, 2018).

The concept of digital literacy has been established in the awareness of the professional public mainly thanks to Paul Gilster and his book *Digital Literacy*, published in 1997, in which the author points out the need to acquire new literacy for life in the Internet century. Gilster (1998) defines digital literacy both in a broader sense and in a narrower sense. In a broad sense, it is "the ability to use computer networks to access resources and the ability to work with those resources" (Rosado et al., 2006, p. 5). In a narrower sense, it is "the ability to work in an online environment and to assess online information" (Rosado et al., 2006, p. 5). Gilster understands digital literacy as the ability to understand and use information in multiple formats coming from different sources, not only digital.



He stressed that digital literacy requires more critical thinking than technological competences, as this is the only way to make informed decisions in the media world. However, technological competencies are necessary to acquire content. From the above, it is evident that digital literacy is an ever-present need to be able to constantly adapt and develop skills in using new media (Kabel, 2012).

Above all, a digitally literate person should be able to (Bawden, 2008):

- think critically, make informed decisions about the content of the information found, and distinguish between content and form of presentation when evaluating it;
- acquire information and build knowledge from a variety of hypertext and hypermedia oriented information sources;
- manage incoming information;
- be vigilant in assessing the validity and completeness of material retrieved from electronic sources;
- develop a personal information strategy;
- use contact and communication with and get help from other people;
- understand the problem and address relevant information needs.

In 2000, the concept of digital literacy is described in the eEurope document, Information Society for All, where it is characterised as the ability to work with the Internet and multimedia resources, the ability to use these resources to learn and acquire new knowledge and skills, and the mastery of key competences such as competences for collaboration, creativity, adaptability or problem solving (eEurope, 2000). In a somewhat narrower sense, reflecting only the technological aspect and the skills related to the use of the Internet, this concept is reflected in some European Commission documents, where it is understood as the basic skills in the use of information and communication technologies, computers for obtaining, evaluating, storing, creating, publishing and exchanging information, for communicating and engaging in collaborative (social) networks via the Internet (European Commission, 2008). On the other hand, Covello (2010) presents digital literacy as a concept integrating several specific literacies into one (information literacy, computer literacy, media literacy, communication literacy, visual literacy and technological literacy).

In 2008, Bawden (2008) published a model of digital literacy that distinguishes between the components of four levels:

- A foundation made up of literacy in the traditional sense, i.e. reading and understanding text and knowledge and skills on how to use a computer;
- Existing knowledge and experience as the ability to understand today's diverse forms of information and the ability to integrate it into the digital world;
- Central competencies, i.e., reading and understanding information, both in digital and non-digital formats, completing and compiling knowledge;
- Attitudes, opinions, knowledge and skills formed and acquired in the previous levels set in a socio-cultural framework.

According to Martin (2008), digital literacy also includes the ability to successfully carry out digital activities in everyday life, i.e. involving work, learning, leisure, etc. Calvani, Fini and Ranieri (2009) summarize digital literacy as a combination of concrete and unquantifiable skills: *„digital literacy is being able to explore and face new technological situations in a flexible way, to analyse, select and critically evaluate data and information, to exploit technological potentials in order to represent and solve problems and build shared and collaborative knowledge, while fostering awareness of one's own personal responsibilities and the respect of reciprocal rights/obligations“* (see Figure 1).

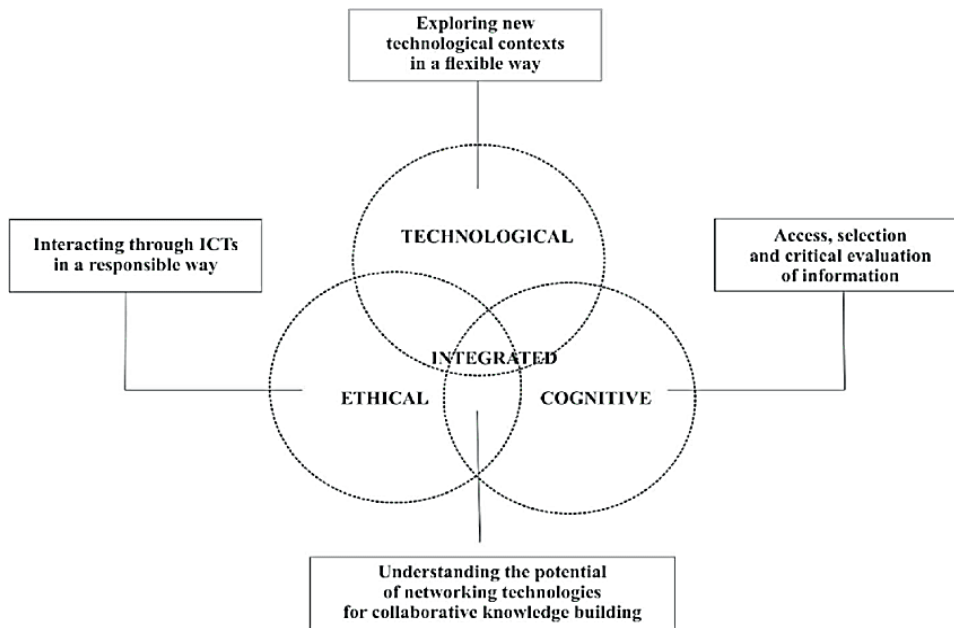


Figure 1. Intersecting Areas of Digital Literacy (Source: Covello, 2010, pp. 4.)

The current conception of digital literacy is related to the concept of digital competences as a set of knowledge, skills and attitudes, including relevant competences in using digital technologies to solve problems, communicate, collaborate, create, share and acquire knowledge effectively, critically, creatively, flexibly and ethically see. DigComp (Ferrari, 2012). Thus, digital literacy (Ala-Mutka, 2011) is conceptualized as encompassing three areas:

- Instrumental knowledge and skills for effective use of digital tools and resources;
- Advanced knowledge and skills for communication and collaboration, information management, learning, problem solving and meaningful participation;
- Attitudes to use skills strategically in an intercultural, critical, creative, responsible and autonomous manner.

Digital literacy is thus currently perceived as a broad concept that overlaps in various ways with other literacies that contain sub-components of both information technology and digital literacy.

In the European Commission's 2002 concept, among the eight key competences set for the compulsory primary education stage, the third is "ICT Competence" (European Commission, 2002). This competence is defined here as the confident and critical use of Information Society Technology (IST) in work, leisure and communication. Basic knowledge of ICT, i.e. the use of computers, is a prerequisite. Following the explicit inclusion of 'digital competence' among the key competences for lifelong learning, research activities have been carried out to specify it more precisely. One of the most important projects was undoubtedly the Digital Competence Project (DigComp), which was carried out by the Joint Research Centre's Institute for Prospective Technological Studies in 2011-2012 (Ferrari, 2013).

In 2017, the DigComp 2.1 digital competency framework was published, redefining the levels of achievement of each digital competency that had previously been specified in 2016 within the DigComp 2.0 document (Carretero et al, 2016). This European framework updates the previous 2013 concept defined in DigComp 1.0 (Ferrari, 2013) and divides the digital competences into five areas:

1. Information and data literacy
2. Communication and collaboration
3. Digital content creation



4. Security
5. Problem solving

Each of the above areas includes several more specifically targeted sub-competences. However, these competences do not include technological competences, which can be understood as the set of skills and knowledge needed to operate digital technology software and technology. While these competences can also be seen as a necessary precondition for the above competences and can thus be reflected in all five of these areas, when considering the development of digital literacy in education, it seems more appropriate to specify this area separately, as technological literacy is and should continue to be a fundamental part of education. The resulting framework of digital competences thus actually contains six main areas, complemented by sub-competences.

Incorporating transversal competences into teacher training

Although there has been talk for decades about the necessity of changing the style of pedagogical work in schools, and extensive research has been conducted on this topic, a transmissive style still prevails in the form of monologic verbal methods and underestimation of learner activation in direct teaching, which is manifested in the criticized encyclopedism and memorization. Thus, contemporary education does not sufficiently develop even basic key competences, and the same is/will be true of digital competences. This handicap of the Czech education system could be addressed by a higher level of use of activating methods and a greater use of integrated forms of teaching. High didactic effectiveness and growth of learners' motivation has been demonstrated in the application of electronic simulations (online simulation games), research and project-based learning, etc. (Králová, Novák et al., 2014).

Effective teaching management at the level of contemporary requirements for modern teaching means for teachers to have developed digital literacy and motivation to constantly work on themselves not only professionally, but also in the field of digital literacy. Digital literacy not only gives teachers the opportunity to use digital technologies and resources to directly support teaching, but also to interact much more effectively with colleagues, pupils and parents, as well as for their own professional development. The trajectory of the systematic transfer of transversal competences in the relationship between the teacher and his/her competences can be seen in the diagram in Figure 2.

Functional integration of digital technologies into teaching implies a change in teaching style from executive to facilitative, where the teacher becomes the facilitator, as learners are more independent in their use of digital technologies and need more guidance, indirect guidance and support. A digitally competent teacher must be able to implement digital technology supported learning activities aimed at developing learners' independent learning as well as group work. Digital technologies enable the optimisation of existing strategies for reflective practice and assessment of teaching, both in the area of formative and summative assessment, including systematic access to evidence for evaluating teaching processes.

The levels of digital competence of the teacher seek to determine the level of achievement of competence in terms of skills, knowledge and attitudes. These three aspects can be characterized as (Ala-Mutka, 2011):

1. instrumental knowledge and skills for effective use of digital tools and resources;
2. advanced knowledge and skills for communication, learning, problem solving and participation;
3. attitudes to use relevant knowledge and skills.

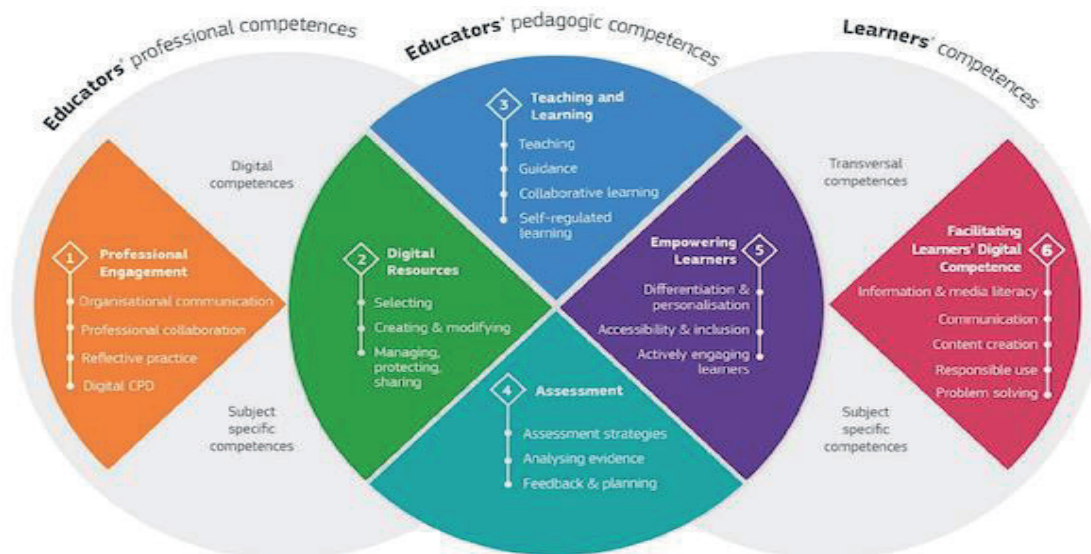


Figure 2. Digital literacy and transversal competence. Source: <https://publications.jrc.ec.europa.eu/repository/handle/JRC107466>

Teachers' level of digital competence has been the subject of much research worldwide, with mixed results. For example, according to Mahmud and Ismail (2010), research on teachers in Malaysia found that most teachers have average knowledge and skills in ICT, while in Ukraine, on the other hand, research has shown that teachers have above average levels of digital competence (Kuzminska, Mazorchuk, Morze, Pavlenko, & Prokhorov, 2018). According to Jirkovska et al. (2019), 42% of teachers consider themselves to be less advanced users of information and communication technologies. Research in New Zealand has yielded findings that the use of digital technologies in teaching correlates with the level of digital competence (Madsen, Thorvaldsen, & Archard, 2018). On the other hand, there is research that demonstrates that proficiency with digital technologies does not automatically imply the ability to use these technologies to support learners' learning and development (Suárez-Rodríguez, Almerich, Orellana, & Díaz-García, 2018) and needs to be linked to psycho-pedagogical and other technical aspects (García Martín, & García Sánchez, 2017).

2. Methodology and aim of the research investigation

The development of digital competences can therefore be fully considered as one of the general objectives of education. Although many teachers - unlike today's students who have already been born into the digital age - cannot be considered 'digital natives', it is essential to ensure that teachers actively participate in the general objectives of education. The research, which was conducted in the early 2020s, focused on future teachers of the Faculty of Education and aimed to identify certain knowledge and user specificities in their digital competences. In the research, we addressed the areas of:

- Apps used by prospective teachers to communicate
- Digital services and software used for teaching
- Use of digital technologies for didactic purposes
- Assessment of the level of knowledge in software and hardware
- Assessment of the level of knowledge in the field of digital communication
- Assessment of knowledge in the area of digital security

A self-constructed questionnaire was created for data collection. The content of the questionnaire was developed on the basis of the analysis of research studies, strategic documents of the Ministry of Education, Youth and Sports



of the Czech Republic and the European Commission concerning the creation of the necessary framework of digital skills of the citizens of the European Union. In terms of structure, the questionnaire consisted mainly of multiple-choice items, some of which use Lickert-type scales, while others allow the answers to be selected or sorted. Some items could also be supplemented with the opinion of the respondents themselves. The questionnaire was implemented in an online form using Google Forms. At the end of data collection, the total number of respondents was 215. Data were analyzed using chi-square test of independence, chi-square test of goodness-of-fit, ANOVA, T-tests for two independent samples, and paired T-tests. All data received were processed using ISPPS Statistics.

3. Conclusions of the research investigation

In the area of applications used by prospective teachers for communication, questions were asked about the means-applications and the frequency of their use for communication. The response options were on a four-point scale with grades of 'always', 'often', 'sometimes' and 'never'. Of the answers obtained on the type of application, the respondents mentioned the following: e-mail, Internet telephony services (Skype, Messenger, WhatsApp...) and discussion forums (chat rooms, blogs). Of these tools, Messenger was the most frequently used by respondents - 82% in total. Other communication tools are used only occasionally in about 10% or less. Following these responses, a question was asked about the use of social networking sites (Facebook, Twitter, Instagram, Yammer, Google+ and WhatsApp). Facebook was the most frequently used network (47% use it several times a week). The second most used network was Instagram, with 32% of respondents coming into contact with it several times a week. Respondents then mentioned the use of other social networks as a minimum.

As these are future teachers, we asked about the digital services and software they would use for teaching. Respondents' answers included cloud services, OneNote, graphic editors, presentation software, QR codes, videos, animations and other digital learning tools (e-publications and e-learning resources, webinars, online educational courses, virtual labs, e-learning). Most respondents then reported that they would use presentation software for teaching (92%), but 69% would also use other digital tools in combination such as videos, animations and graphic editors, electronic publications and e-learning resources (56%). E-learning, for example, would be used by 34% of respondents. We did not find a correlation between the ability to communicate online and the use of software and online applications for learning.

Following on from the previous questions, questions were then asked about the use of digital technologies in teaching for didactic purposes, as this is an area that future teachers should be guided to by their training. The results of the survey showed that the respondents mainly see digital technologies in teaching as an opportunity to better understand the subject matter (89%), to create an overall picture of the subject matter (82%) and to better remember the material (81%). The least frequent response was the reason for analysing problems related to the curriculum (69%). Here, however, we could see a link with the use of digital services and software for conducting lessons.

Finally, we were concerned with assessing the level of knowledge of software and hardware. The cumulative frequencies of positive responses from software are as follows: the most confident of all respondents in terms of being able to explain what file and document sharing means (79%), MS Office applications (74%) and learning applications (71%). Just over 50% can explain what cloud services mean (51%). 45% of respondents could explain the term LMS - e.g. Moodle. However, only 21% could explain what an RSS feed means. In terms of hardware knowledge, the cumulative frequency of positive answers in this area is as follows: 97% of respondents could explain what an e-reader means, 86% could explain a convertible laptop, 48% a visualizer, 43% a voting device, 68% could explain a phablet, 65% an interactive table. Looking at these results, a pretty good knowledge of software tools and hardware can be traced.

When assessing the level of knowledge in digital communication, the cumulative frequencies of positive answers show that respondents would be best able to explain terms such as social networks (89%), blogs (87%), shared documents (81%), video conferencing (75%), internet telephony - e.g. Skype, Messenger (78%). Fewer could already cope with terms such as tweets (47%) or virtual assistant (31%). Overall, the responses appear to be very balanced in terms of digital communication and ability to explain. The concept of social networking is then quite dominant.

The last point of our research was then to assess knowledge in the area of digital security. The cumulative frequencies of positive responses show that respondents would have the least difficulty explaining the concepts of



spam (91%), computer viruses (87%), and cyberbullying (85%). They are less familiar with terms such as open licence and content (76%), hoax (75 %) and digital footprint (60 %). They are least likely to be able to explain the content of the term phishing (57%). Interestingly, however, in this important area, subjective understanding ratings for none of the terms fell below 55%.

4. Conclusion

The issue of digital literacy in the context of education has been actively addressed for many years in different ways in terms of the breadth of competences, the intersection with related concepts and, last but not least, in terms of regional or national concepts. An integral part of this issue is the definition of digital literacy in terms of transversal competences reflecting disciplinary diversity, which is particularly important in the preparation of future teachers for school practice.

The present paper presents data from a larger research study aimed at identifying the digital competencies of secondary school teachers, with an emphasis on human and social science teachers.

In the presented paper, our research has shown that prospective teachers have an awareness of issues related to digital literacy, use digital resources, and have some insight into the didactic and methodological application of digital and information communication tools in teaching. Nevertheless, many areas related to cloud services, e-learning or virtual labs are perceived significantly less. It also emerged that although respondents have a positive view of the pedagogical potential of digital technologies, they are relatively less familiar with the forms and means of digital learning. Thus, a certain discrepancy can be noted between the expectation of pedagogical effects of the application of digital technologies and only moderately developed knowledge and user aspects of their application in teaching.

The results described in this article capture a certain state of development of digital competences among future teachers, practically before the outbreak of the COVID-19 pandemic. These data can thus also serve as a certain frame of reference for comparison, to determine whether the forced transition of schools to online teaching has brought about a more fundamental change in this area.

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Declaration of Authorship

I do solemnly declare that I have written the presented research thesis by myself without undue help from a second person others and without using such tools other than that specified. Where I have used thoughts from external sources, directly or indirectly, published or unpublished, this is always clearly attributed. The presented intellectual work of this research thesis is my own. In particular, I have not taken any help of any qualified consultant.



The teaching activities for digital literacy in mathematics teaching

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Abstract

The increasing role of technology in everyday life and in the school environment creates a constant need to ensure that pupils have the skills and knowledge necessary to use it effectively, and also a need to develop those skills and knowledge. The range of digital technology tools is expanding all the time, and it is therefore necessary to continuously respond to the current situation in the school environment. The school environment then needs to be modified so that teachers and pupils perceive digital technologies as tools and resources that can help them in the ever-changing education reality. It is particularly important that teachers at the input and pupils in the course of learning and at the output have the required level of competency in digital literacy. They should be able to understand and use information in different formats and from different sources available through digital technologies. For this reason, the paper aims directly at mathematics lessons and presents two activities that have been implemented with pupils to support the development of their digital competencies. One activity focused on geometry to consolidate the knowledge of geometric concepts, and the other on arithmetic to practise basic multiplication. The paper describes in detail the experience of implementing these activities in lessons and analyses the pupils' activities accompanied by pictures on the basis of qualitative research. It concludes with recommendations for teachers.

Keywords: School activities, digital literacy, arithmetic, geometry, mathematics teaching

1. Introduction

Around the early 1980s, experimentation with the use of digital technologies at universities began (Major et al., 2017). Since the introduction of the current generation of tablets in 2010, the development of tablet hardware technology has reached a mature state. This enables the development of more stable platforms for educational applications. The popularity of tablets has led to an increased interest in educational applications, especially in schools. Recently, however, especially due to the COVID-19 pandemic, there has been a proliferation of mobile technologies in education, with research also demonstrating the high value of implementing such devices in the classroom (Hwang & Wu, 2014; Olivier, 2005; Papadakis et al., 2016; A. E. Traxler, 1941; J. Traxler & Wishart, 2011).

Alongside the need to better understand the use of digital technologies to support learning, there is a strong political will in the Czech Republic to implement these processes into curriculum documents (Edu.cz, 2022). The impact of technology on mathematics education and the importance of tablet-mediated learning is recognised as an important area of study and the competencies are seen as key life competencies and are crucial for "active engagement in all aspects of life" (Volk et al., 2017, p. 1). The use of tablets has a high potential to improve learning, in terms of several aspects: high usability and integration of multiple functions within one device (cameras, microphones), ease of customisation and support for inclusive teaching, touch screen, accessibility and, last but not least, portability (Svela et al., 2019).

Thus, it can be summarised that the tablet is a very effective tool for immediate work in the classroom. Unlike a computer, the tablet is easily portable, is designed to be easily carried by the pupils, and no additional accessories need to be connected to it for normal work. The pupils can use it if they need to take a picture of an interesting idea from the board or a classmate's notebook, or to write down the tasks the teacher has set at the end of the lesson. Tablets use operating systems that are adapted for touch. This makes it possible to use the tablet even in situations where using a computer is impractical.



This is also related to the wide use of the tablet with regard to the age of the pupils. As many studies have shown, tablets can be used effectively in teaching preschoolers (Rikala et al., 2013; Zaranis & Valla, 2018), young primary-school children (Papadakis et al., 2016) and pupils at the 2nd level of primary school (Mailizar & Fan, 2020), as well as in the training of prospective teachers (Aksu, 2014).

The tablet is also specific in its multi-device integration. A common feature of the tablet is a camera, which can be used to record pupil activities, for scanning or as a video camera. Tablets include a microphone that can be used not only as a recorder but also as a sensor in physics lessons. The tablet is designed for occasional work – it cannot completely replace a traditional computer or laptop. There are currently three most widely used tablet operating systems: iOS from Apple, Android from Google and Windows from Microsoft (Klupal, 2014).

The aim of the paper was to test the effectiveness of using tablets to increase the digital literacy of primary-school pupils in mathematics. The following research questions were established to address the stated objective:

(RQ1) What are the possibilities of using tablets in teaching mathematics at the 1st level of primary school?

(RQ2) How do pupils evaluate the activities?

(RQ3) What are the differences in the evaluation between the groups?

2. Method

The research was carried out in the academic year of 2021/2022 in the form of a qualitative design. The research method was an analysis of pupils' work in the classroom, in a total of two lessons in a small school setting¹. Two activities were implemented in the research, with geometric and arithmetic content.

1. Activity: *Circumference of polygons*

Topic: Revision of the circumference and area of polygons

Source: https://phet.colorado.edu/sims/html/area-builder/latest/area-builder_en.html

Age of the pupils: 9-10 years old

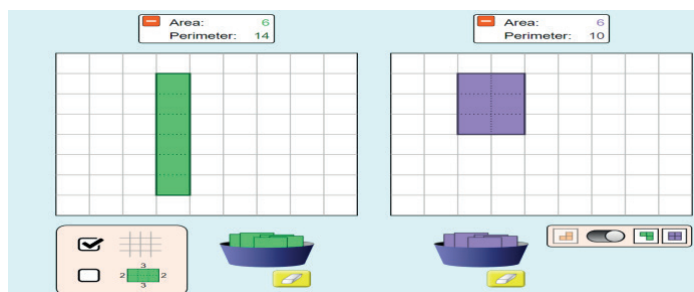
Number of pupils: 10

Content of learning: Geometry in space and plane

Learning objective: Better understanding of the concepts of the circumference and area of polygons; awareness that circumference changes as the shape changes.

Assignment: The pupils were asked to use a specified number of tiles (8, 12, 16) to create a polygon with the largest circumference and a polygon with the smallest circumference in a square grid. Their task was to observe changes in the areas of squares in the polygon (Fig. 1).

Figure 1. Circumference and area of polygons²



¹ A school with one class where children of different ages (mainly between 6-10 years old) are educated together. Mostly in rural areas due to the lack of pupils in each grade.

² https://phet.colorado.edu/sims/html/area-builder/latest/area-builder_en.html



The pupils plotted the results of their observations and testing in a squared-paper M2 notebook.

2. Activity: *Multiplication table*

Topic: Revision of multiplication and division in the field of multiplication of numbers 1-5

Source: https://phet.colorado.edu/sims/html/arithmetic/latest/arithmetic_en.html (multiplication)

https://phet.colorado.edu/sims/html/arithmetic/latest/arithmetic_en.html (determination of factors)

Age of the pupils: 8-9 years old

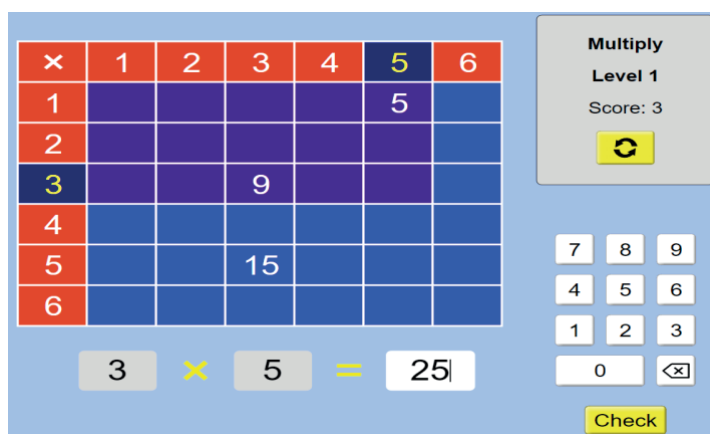
Number of pupils: 2

Content of learning: Number and numerical operations

Learning objective: Understanding the principle of the multiplication table based on the number of squares contained within a rectangle in a chosen specified square grid.

Task 1: The pupils were asked to determine the result of the problem they were given and then compare the result with the number of rows and columns in the multiplication table (Fig. 2).

Figure 2. Multiplication table – Task 1³



Task 2: In an advanced version of the first task, the pupils were asked to determine (find) the factors whose product gives the result shown. In this task they could help themselves visually with the help of a “paw”, which showed the result in the multiplication table (Fig. 3).

Figure 3. Multiplication table – Task 2⁴



³ https://phet.colorado.edu/sims/html/arithmetic/latest/arithmetic_en.html

⁴ https://phet.colorado.edu/sims/html/arithmetic/latest/arithmetic_en.html



3. Findings

Activity 1: The duration of the activity was set at 25-30 minutes; however, in reality on the given research sample it lasted 45 minutes. The teacher went through the assignment with the pupils and then everyone opened the program on their tablets. The activity assignment was uploaded in MS Teams, in the Mathematics channel, in the “Year 3” team.

The pupils were told to place a specified number of tiles and then rearrange them to form a polygon with the largest circumference and a polygon with the smallest circumference. Thus, it was a research-oriented lesson in its nature, because the pupils were supposed to find out that with a given number of tiles you could create different polygons of different circumferences, but the area of the polygon would not change; the concept of circumference had been mastered by almost all the pupils passively (after several hours of practising, counting and plotting), some even actively (Fig. 4).

Figure 4. Examples of pupils working with the correct solution

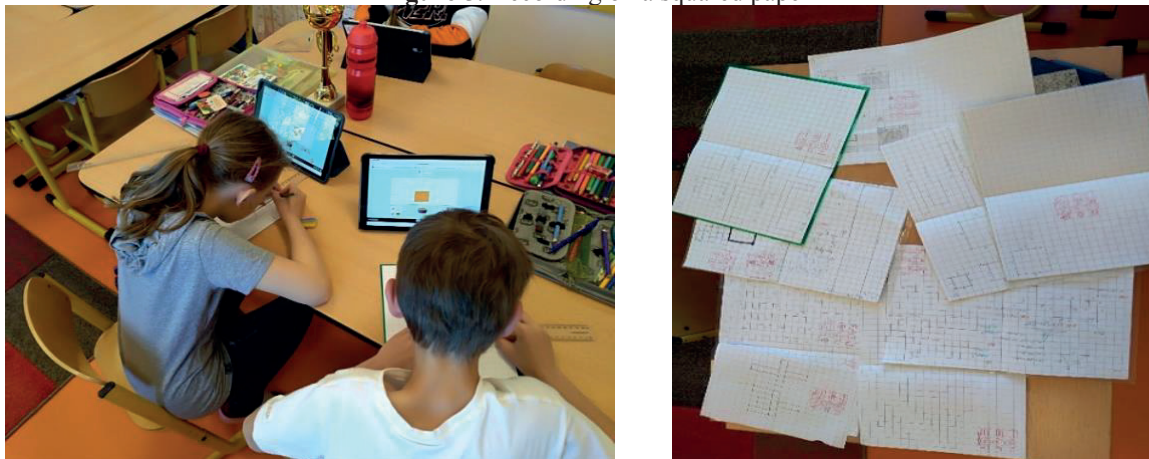


There were two pupils with disabilities in the research sample. During the activity, these pupils first played and filled the area randomly with the tiles before they understood the objective of the assignment. However, neither of them was able to draw correctly in the notebook what they saw on the tablet.

Overall, six pupils out of the eight other pupils performed the assignment correctly, the remaining two needed a little help from the teacher (illustration on the interactive board with the example of eight tiles), which interrupted the process of experimentation but, on the principle of analogy, the remaining pupils were then able to engage in the activity, work purposefully and observe the change in areas.

At the same time as solving the task on the tablet, the pupils were to record their solutions on a squared paper. With the exception of the two pupils with disabilities, all pupils in the research sample were able to do so (Fig. 5).

Figure 5. Recording on a squared paper





Of the total number of pupils, six described the activity as: “I liked it, I understand it and can work independently” and four as: “I liked it, I need help.”

Activity 2: The approximate duration of the activity was set at about 25-30 minutes. The teacher went through the assignment with both pupils and then everyone opened the program on their tablets. The activity assignment was also accessible from MS Teams.

Both pupils worked simultaneously on Task 1. Since they worked only on the tablet in this case, they both mainly proceeded only by trial and error (Fig. 6). For this reason, the activity was upgraded to include an element of pair work. The teacher put an empty multiplication table (wall size) on the floor and the pupils were given cards with the numbers 1-5 and they then placed them in the appropriate places. The pupils thus manually tried out the activity they had previously performed on the tablet.

Figure 6. Working with multiplication table



4. Conclusions and Recommendations

It can be summarised that the use of tablets in teaching had a high added value. The results show that the inclusion of tablets in mathematics lessons was interesting and engaging for the pupils at the same time. In a classroom where the pupils need more help, it can be recommended to accompany the whole process on an interactive board, so they are able to target their solutions by analogy.

Obviously, due to the small number of pupils, the results cannot be generalised, but on the other hand, tablet-based learning can be recommended for teaching in a small school. Tablets allow the teacher to better organise the lesson and incorporate graded (gradually advanced) tasks.

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Hybrid method in foreign language teaching

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Abstract

In general, many language teaching methods have been used in language teaching. However, in the last two years, the conditions in which humanity lived in the pandemic conditions directly affected the education-teaching process and inevitably had to resort to the distance education model as a method. In a period when almost everything is digitalized in every field, this transformation has been accelerated with the compelling effect of external conditions such as the pandemic, and this transformation process, which was thought to be ten or twenty years, has been compacted into two years. During the pandemic period we live in due to Corona-19, the distance education model has been implemented very quickly in all education levels and has been applied for about two years. At the end of the pandemic period, many problems were encountered in the field of education and training with purely distance education in a two-year period. The idea that distance education cannot replace face-to-face education has been reinforced. As a result of all these negativities experienced, different education-teaching models came to the fore due to the fact that the pandemic conditions improved a little more in the fall of last year, as the universities started the new academic year. While continuing the face-to-face education model in secondary education institutions, universities have decided to switch to a hybrid education-teaching model, 40% online and 40% face-to-face. In short, while face-to-face teaching was envisaged for all of the field courses, side courses or common courses called service courses continued to be given via distance education. Until now, this education-teaching method continues. In this study, in the context of foreign language teaching, the methods applied in the pandemic period and post-pandemic conditions in German teaching will be mentioned, and opinions and comments will be tried to be put forward by giving place to the applications of the hybrid learning method, which is still being applied. In this context, the problems experienced in distance education during the pandemic period and the applications applied to solve these problems are mentioned, and as a result, the effects of coeducation in language teaching, especially in terms of language skills, are mentioned.

Keywords: Pandemic, Corona-19, hybrid, distance education, foreign language, German language

1. Introduction

The pandemic caused by Covid-19, which emerged in 2019, has taken almost all humanity captive for almost two years, and therefore it has been declared a Pandemic all over the world. In the pandemic conditions, some arrangements have been made in our country as well as in the whole world, especially due to the necessities encountered in the field of education. In this context, an online distance education model has been adopted very quickly and efforts have been made to ensure that the education-teaching process is not disrupted at all levels. As a result, institutions that have entered the digital transformation process before have tried to fit this long-term transformation plan into a very short time like one year due to the obligations arising from the pandemic conditions. These efforts have also been successful, and at least access to the syllabus and content has been achieved. However, it can be said that the pandemic has also shown people how valuable, humane and necessary the face-to-face education and training process is.

The co-development of technology and education, albeit out of necessity, has changed the terminology of distance education. In this terminology change, the concepts of synchronous (synchronous) distance education and asynchronous (asynchronous) distance education came to the fore (Yorgancı, 2014). Synchronous distance education (simultaneous): It is a model in which two-way communication is provided and mutual interaction takes



place simultaneously, although the teacher and the student are physically in different environments. This training method, which takes place in real time, is called live lesson among the people. Tools such as video conferencing, live webinars, instant messaging can also be used in this method. In this method, students can ask their questions instantly, teachers can answer instantly and upload documents. However, in this method, students may not be able to access the information they want whenever they want. Login and permission may be required to access information. Synchronous distance education method requires an advanced, secure and uninterrupted internet infrastructure (Keleş 2020c; Yorgancı, 2014).

Asynchronous distance education (asynchronous): It is a flexible communication model independent of time and place. The things to be taught in the course are prepared in advance, and the prepared ones are delivered to the students on a web-based basis. The asynchronous distance education method is independent of real time. Students can access pre-prepared course materials at any time and ask questions to the lecturer via e-mail. There are messaging opportunities that encourage student interaction and involve teachers (Keleş 2020c; Yorgancı, 2014; Devran & Elitaş, 2017).

Due to the pandemic, Trakya University German Teaching Program 2021-2022 year 1 and 2 students had to complete their preparatory education with distance education. In the current 2021-2022 academic year, it has been observed that almost all of the students have insufficient German language proficiency in undergraduate program courses. In addition to some technical or infrastructure problems experienced by the students during the distance education process, they also seem to have passed the exams of the courses they took online without actively turning on the camera and actively participating in the course, and they seem to have succeeded. Despite all this, it was observed by the instructors in the face-to-face lessons that he was extremely far from the German language proficiency, which should be at the B2 level.

In the autumn of 2021, when the pandemic conditions were largely over, distance education was not completely abandoned with the transition to the face-to-face education model, and it was also decided to continue online education and training within a certain set of rates. For example, this rate was limited to 40%, except for field courses in universities, but it was decided that all exams would be conducted face-to-face. Therefore, it was decided to switch to hybrid education in general throughout the university. Face-to-face education and training activities are planned for the new term. However, online classes will be continued simultaneously. For this reason, it can be said that the mixed / hybrid method is now settled mainly in education processes.

2. Blended or Hybrid Teaching

This method, also known as "Blended Learning, hybrid learning", means blended or blended learning, which is used together with traditional, that is, face-to-face teaching, and modern new media or online materials. In general, e-learning activities are more autonomous and independent forms of study or learning that require students to work on their own. However, the co-education model is more ideal for students who do not know or are not suitable for autonomous work. From an institutional point of view, it has been understood that the mixed or hybrid learning model is more applicable in classroom environments in schools, and thus it is reinforcing in terms of student interests and wishes. Other advantages of the model are that it can be applied in all classroom environments where technological equipment is provided, and that it can be worked in harmony with school programs. Thus, in-class learning activities can be carried out of the classroom. In this way, the student both benefits from the advantages of face-to-face education and is developed in this direction by learning to work autonomously outside the classroom. In the blended education model, two stages are generally mentioned: The first is the presentation stage and the other is the e-learning stage. The presentation phase generally includes face-to-face teaching activities in the classroom. E-learning, on the other hand, covers all teaching activities outside the classroom. For this, of course, there is a need for teachers who know this model well. In this sense, the teacher is the system administrator and training coach. In the classroom environment, he is in the position of a guidance teacher. He is also a system



administrator and training coach in the extracurricular e-learning environment. The course curriculum should be a coherent and consistent curriculum that covers both stages. Lessons are organized by the teacher and in each of the lesson phases, “e-Learning” technical tools and materials are used, especially the online network connection. In this sense, blended learning is a combination of teacher-supervised e-learning and face-to-face lessons. The teacher factor is extremely important here. The concept of the guidance teacher, which is also defined as the Couching System today, is also the information systems manager. It guides students remotely or through electronic systems through the system.

Köksal, Arabacı, Koca and Ural (2021) conducted a case study at Trakya University Foreign Languages Preparatory School in the 2019-2020 academic year in order to determine the learning strategies of Generation Z students in distance education foreign language courses. As a result of the study, they determined that the learners almost never use metacognitive and affective learning strategies, and accordingly they experience motivation and concentration problems in distance education. As a result of the research, it was suggested that more visual materials should be included. Another important point is that besides digital materials and activities, different activities should be offered for learners who have technical equipment problems. In line with these suggestions, it can be stated that hybrid, in other words, blended education can have an important place in the language learning process.

The hybrid education model was put into practice in higher education institutions in the 2021-2022 academic year, and learners started to attend classes in school on certain days of the week and online on other days. However, due to the motivation and focus problems experienced in distance education, it was observed that the language development of Trakya University German Teaching Department students was negatively affected. Another study supporting Köksal et al. was conducted by Karasu and Sarı (2019). Karasu and Sarı (see *ibid.*) in their study based on the literature review emphasized that in-class and out-of-class learning environments should be organized in terms of educational principles so that language learners can organize their own learning environments and benefit from these environments efficiently. The lack of use of metacognitive and affective learning strategies, which Köksal et al. (2021) identified as lacking, can also be observed in Karasu and Sarı's (2019) literature review. In addition to the aforementioned studies, Asutay (2020) stated in his book "Foreign Language Learning and Teaching Methods" that the method of foreign language teaching through distance education is not suitable for students who have not developed autonomous learning and independent working skills. Based on this background, it is revealed that learners should be supported with necessary technical, educational and field knowledge.

In this context, in order to eliminate the negativities experienced and to bring the language development of the German teacher candidates to the required level, it was thought to create a multimedia-supported classroom, apart from the lesson plans. It is aimed to present a hybrid teaching model to learners through this class. Hybrid teaching autonomous study

2.1. Electronic Based Teaching

German: Elektronisch unterstütztes Lernen, Eng. E-Learning / Electronic Learning. It can be called electronic learning in a literal sense, but it is actually information-based learning and it means the use of information-based media, technical hardware, software, networks and infrastructures, new media in the language teaching process. It can be said that it is the current form of distance education that has developed starting from the letter-learning process. It can be called by different names according to the media used and the types of equipment, for example; computer-assisted education, web-based education, multimedia-assisted education, digital learning, distance / open education, synchronous / asynchronous education, virtual education, internet-based education, online education, mobile learning, etc. as.



The history of electronic learning begins with the history of computers and digital technology. In terms of learning machines, it can be said that it goes back much further. In the context of computers, e-learning has been considered within the framework of educational technologies and adapted to educational processes since the sixties. As computers developed over time and took their place in the education process, they began to be used in language teaching processes, and computers began to be installed in schools since the seventies. It can be said that all audio-visual language teaching tools in the seventies were replaced by computers. Therefore, with the development of computers, language laboratories were abolished and replaced by computers. Since the nineties, with the widespread use of the internet, networked teaching programs have been developed, so that a single computer can perform much more than all the functions of a language laboratory. In the nineties, the concept of "e-learning" began to be used much more effectively and functionally. Today, thanks to mobile learning, it can be said that smart phones are starting to take the place of computers. Along with the concept of e-learning, new informatics-based terms such as intermedia, multimedia environments, multiple coding, and educational software have emerged.

Many e-learning types have emerged under the name of e-learning, depending on the types of media. However, no type of e-learning can function alone without a textbook / theme or a certain curriculum (curriculum). Each of the aforementioned technological tools or information software are educational technological tools used for the realization of teaching. In e-learning, which provides its development with the distance education method, many technical methods are used from the beginning to the present day.

2.2. Teaching Management System

This stage is the stage of adaptation to courses, which is the first stage of information-based software and hardware and new media. "Software that enables the management of learning activities on the web is called instructional management systems (LMS)" (Paulsen 2002: Çoban 2016: 2). It includes segmentation of course content, transferring to software or programs, coding and management of the system. Thanks to the instructional management system, it is possible to register for courses, upload course content, share, access, receive-send feedback, synchronous-asynchronous exams, evaluations, keeping system records, etc. All activities are performed automatically. In this sense, membership, application and course process stages of each web-based e-learning environment are managed through the information system. In this context, the concept of web editor has emerged. Editorial or management system, from the very beginning of a web-based language teaching process; It carries out all processes such as application, membership, courses, lectures, online exams and certification through the system.

2.3. Videoconference

In this method, which we can call video talk, the student and the teacher communicate remotely, but with the help of a broadband network, in a virtual space, environment or classroom environment by video calling. Audio and visual elements are shared between the teacher and the student through communication tools. Recorded images are asynchronous teleconferences (Teleteaching) where the lesson presented by the teacher can be watched over and over again through memories or on the Internet. In this sense, video or teleconferences can be transmitted synchronously or asynchronously. Online foreign language lessons are used in the context of individual learning. Video chat rooms are also used. Most of this style today is video chat based conferencing, group, virtual classroom etc. Most of the activities can now be done via apps with smartphones. Therefore, most of these and similar techniques are also valid in the context of "mobile-learning". Google's "zoom" app is an example of this.

2.4. Webinar

It can be briefly described as an online seminar. It is a type of simultaneous video conferencing. Various slides, presentations, images, various types of files can be shared within the webinar. Thanks to the interaction feature, the participants of the webinar seminars can have questions and answers, dialogue, discussion, etc. can carry out activities. Webinar events are organized by experts in the field and participants can take part from all over the



world without restriction. Thanks to these teaching activities in the context of online education, virtual classes can be created and all information and documents related to the seminar can be shared electronically. In addition to voice / video calls, screen sharing, collaborative whiteboard, survey applications, etc. Many activities are possible. The important thing is that the connection quality and speed are sufficient. Webinar seminars are announced on the Internet in advance with advertisements. For this, a participant or membership link is opened on the relevant website. After the membership or participation procedures, participation in the webinar seminars is provided at the specified date and time. In addition to the technical hardware, the "Adobe Connect" program or tablet on computers and the "Adobe Connect Mobile App" application on smart phones are required. Headphones and microphones are other necessary tools.

3. Course Material

All printed and electronic course materials of language teaching courses offered in educational institutions are presented as packages or learning kits. It can also be acquired for individual learning purposes. In online language teaching processes, the course offering the service also has course materials offered online. However, the vast majority of them are offered online without the need for any printed material. In language teaching applications accessed by mobile devices, the content is completely loaded within the application and works without the need for any printed course materials.

The advantages and disadvantages of new technologies and many teaching methods used in the hybrid method and described above can be listed as follows:

4. Advantages of the 1st Method:

- It offers uninterrupted learning regardless of place, time and place.
- Creates equal opportunity in education.
- Instant evaluation and feedback is provided.
- Ideal for individualized education, it enables to use time effectively and efficiently both inside and outside the classroom.
- Requires autonomous work. Develops autonomous and independent working skills.
- It provides autonomous and independent learning opportunities for those who cannot find the opportunity to use a foreign language or who cannot go abroad.
- Improves the ability to use media and mobile devices and interacts with multiple communication tools.
- Resource and data can be accessed whenever necessary.
- It is a completely free and flexible way of teaching, except for institutions such as schools and fixed course schedules.
- It is student-centered and can be chosen from among numerous programs completely according to the student's desire and purpose.

4.2. Disadvantages of the Method:

- They are deprived of social and other opportunities of face-to-face education.
- Not suitable for those who do not know or are unable to learn autonomously and work independently.
- Since it is institutionally located outside the school and course environment, it creates too much flexibility, which hinders the stable execution of the program.
- May increase dependency on media tools.
- Since language is also a human and social phenomenon, it requires face-to-face conversation, so e-learning is incomplete.
- May not fully match certain learning needs.
- There is a system as a machine instead of a teacher, and it cannot guide a teacher. Instead, there are guidelines.



5. Conclusion

Due to the Covid-19 virus, which emerged in the city of Wuhan, China in the first half of 2020 and spread rapidly all over the world, sudden changes occurred in the field of education, as in all other fields. All education levels, from primary school to graduate education, have switched to distance education. Although it is known that today's students are the digital native generation, the digital teaching process in which both educators and learners were caught unprepared has brought some disruptions. The digital transformation process, which was previously announced by the Higher Education Institution, was carried out in a very short period of two years due to the pandemic. Thus, today, the mixed / hybrid teaching method has become used in almost every degree and level in primary, secondary and higher education. Even if the decision is made to switch to face-to-face education in the upcoming period, each teaching method briefly described above will continue to exist in the education process as the main forms of coeducation. As it is tried to be conveyed in this study, the pandemic process and its effects were experienced in Trakya University, Department of Foreign Language Education, Department of German Language Education. Finally, with the end of the pandemic, digital transformation has been achieved to a large extent, and hybrid education has been started and continues.

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Attitudes of 10th grade students towards mathematics lesson*

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Abstract

The aim of this study is to examine the attitudes of 10th grade students towards the mathematics lesson. In the study, the changes in the attitudes of 10th grade students towards mathematics lesson according to gender, school type, private lessons, grade point average, monthly income, father's education level, mother's education status were examined. 588 students participated in the study, in which the scanning model was used. The data of the study were obtained by using the mathematics attitude scale developed by Baykul (1990). Since the data of the study showed normal distribution, independent groups t-Test and One Way Anova test, which are parametric tests, were used. The Tamhane test was used as the data were not homogeneous in determining the groups with a significant difference as a result of the One Way Anova test. In the study, it was determined that the attitude levels of the 10th grade students did not show a significant change according to the variables of gender, private lessons, monthly income, mother's education level and father's education level. In the study, it was concluded that the attitudes of the students in the qualified school towards the mathematics lesson are higher than the students in the vocational high school, and the attitudes of the students in the middle level Anatolian high school towards the mathematics lesson are higher than the students in the vocational high school. It was determined that as the academic achievement of the students increased, their attitudes towards the mathematics course also increased. Finally, suggestions were made for the mathematics course in high schools and for researchers.

Keywords: 10th grade, Math class, Attitude, Attitude towards mathematics lesson.

1. Introduction

Individuals show an approach towards people, objects, events and institutions in their lives. Our attitudes towards the communicated variable determine how this approach will be. Attitude; It can be defined as the cognitive, affective and behavioral response predisposition that an individual organizes based on knowledge, experience and motivation towards social issues, objects or events in his environment (İnceoğlu, 1993 akt. Saracaloğlu, vd., 2004). This reaction tendency of the individual can be positive or negative. In other words, the individual can exhibit positive or negative attitudes towards people, objects, events and institutions. Individuals may show a tendency to show interest in the variable they have a positive attitude, to love, appreciate and deal with it. On the other hand, individuals may exhibit the tendency to be indifferent to the variable they have a negative attitude, dislike and not value it.

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One of the variables that individuals have positive or negative attitudes is mathematics course. According to Akgün (2002) the attitude towards the mathematics lesson; It is expressed as the total measure of whether mathematics is liked or not, the tendency to deal with or avoid activities related to it, and the belief that the mathematics lesson is useful or useless. Individuals can have positive or negative attitudes towards mathematics lessons. Akdemir (2006) students' experiences with mathematics will cause them to have positive or negative attitudes towards the mathematics lesson. Attitudes of students towards mathematics course can affect not only their view of mathematics but also their success in mathematics. Şentürk (2010) emphasized the effect of attitude on behavior and emphasized that there is a significant relationship between success in mathematics course and attitude towards this course. According to Çoban (1989), students' liking for mathematics has a significant impact on their success in this lesson and their attitudes towards this lesson. When students enjoy mathematics, their learning and motivation for this lesson will increase (Cornell, 2000).

It is important for students to have a positive attitude towards the mathematics course, not only for their success in the course, but also for the proficiency they need to gain and for the purposes of mathematics teaching. In the report published by the Ministry of National Education (MEB) on program development studies in Turkey, it has listed the curricula and the qualifications that students should acquire (MEB, 2017). In this report, among the mathematical competencies that students should gain, there is a positive attitude towards the mathematics lesson (MEB, 2017). In addition, in the secondary school mathematics curriculum that came into effect in 2018, one of the aims of mathematics teaching was stated as enabling students to value mathematics learning by gaining a positive attitude towards mathematics (MEB, 2018). This situation shows that it is important to gain a positive attitude towards mathematics in mathematics education policies in Turkey.

It is necessary to determine the arguments that affect their attitudes towards the mathematics lesson in order to give students a positive attitude towards the mathematics lesson and to give importance to the mathematics lesson. There are many different arguments that can affect students' attitudes towards mathematics. Many variables such as teachers, school administrators, classmates, parents, family relatives, and past experiences can affect students' attitudes towards mathematics. According to Yenimez and Özabacı (2003), students' attitudes towards mathematics lessons; They are affected by their experiences in the mathematics course teaching process, the teacher-student relationship, the exams they take, their friends and families. In addition, students' attitudes towards mathematics lessons may differ according to variables such as gender, private lessons, monthly income, mother's education level and father's education level.

When the literature is examined, it is seen that many variables that can affect students' attitudes towards mathematics lesson are examined. In the studies examined, it was found that there was no significant difference in the level of attitudes of male and female students towards the mathematics lesson (Akdemir, 2006; Berkant and Metin, 2020; Birgin and Demirkan, 2017; Çelik and Ceylan, 2009; Eskici, Ilgaz and Arıcak, 2017; Kurbanoğlu and Takunyacı, 2012; Sezgin, 2013; Taşdemir, 2008; Tuncer and Yılmaz, 2016; Yenilmez and Özabacı, 2003), women's attitudes towards mathematics lessons are higher than men's (Eskici, 2009; Linn and Kessel, 1996; Şentürk, 2010), It has been concluded that the attitude levels of men towards the mathematics lesson are higher than that of women (Barkatsas, Kasimatis and Gialamas, 2009; Gunderson, Ramirez, Levine, & Beilock, 2012; Pehlivan & Köseoğlu, 2011; Saraçoğlu, 2016). It is seen that there are different results from each other in the studies examined. It can be said that there is an uncertainty regarding the effect of gender variable on students' attitudes towards mathematics.

When we look at the studies discussed, it is seen that there are studies at the level of secondary school students about the level of students' attitudes towards the mathematics lesson. In addition, there are very few studies investigating the differences in students' attitudes towards mathematics according to arguments such as income level (Taşdemir, 2008), private lessons (Koca, 2011; Sezgin, 2013), grade point average (Pehlivan ve Köseoğlu, 2011). In this study, it was examined whether the students' attitudes towards mathematics differ according to their income level, private lessons and GPA arguments. In addition, it has been observed that most of the studies examined and examined have an old research history. With the changing technology and the differentiation of the opportunities provided in education, a change may have occurred in the attitudes of the students towards mathematics. This situation made the need for research to be done.

The aim of the study is to examine the attitudes of 10th grade students towards the mathematics lesson. For this purpose, the changes in the attitudes of 10th grade students towards mathematics lesson according to gender, private lessons, school type, grade point average, monthly income, father's education level, mother's education status were examined in this study.



2. Methodology

In the study, the survey method was used to examine the changes in the attitudes of 10th grade students towards the mathematics lesson according to the variables of gender, private lessons, school type, grade point average, monthly income, father's education level, mother's education level. Survey research can be defined as research in which the characteristics of the participants in a study about a subject or event are tried to be determined (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz and Demirel, 2020: 184).

Sample

The sample of the research consists of students studying in high schools in Hatay. The sample of the study consists of 588 students in this universe and selected by convenient sampling method. Convenient sampling; It can be defined as the method in which the sample that best serves the purpose of the research in terms of time, cost and ease of access variables is selected (Koç Başaran, 2017). The demographic characteristics of the students in the sample are given in Table 1.

Table 1. Attitude Scale Participants Demographic Characteristics

Variables	N	%
Gender		
Male	320	54,40
Female	268	45,60
School Type		
NL	177	30,10
ODAL	260	44,20
ML	151	25,70
Private Tutoring Status		
I bought	254	43,20
I did not take	334	56,80
GPA		
70 and below	157	26,70
70-80	149	25,34
80-90	158	26,87
90-100	124	21,08
Monthly Income		
3000 TL and below	209	35,50
3001 TL-9000 TL	296	50,30
9001 TL and above	83	14,10
Father Educational Status		
Illiterate	14	2,40
Primary school	124	21,10
Middle School	99	16,80
High school	158	26,90
University	193	32,80
Mother Educational Status		
Illiterate	13	2,20
Primary school	142	24,10
Middle School	118	20,10
High school	165	28,10
University	150	25,50
Total	588	100

When Table 1 is examined; 54.4% of the students are male, 45.6% are female, 30.10% are NL students, 44.2% are ODAL, 25.7% are ML students, 43.2% are taking private lessons. It is seen that 56.8% of the students did not take private lessons, the overall grade point average of the students is above 70, the income level of the students is between 3001 TL and 9000 TL, and the parents of the students are high school or university graduates.



Data Collection Tools and Process

In the study, the "Attitude Scale Towards Mathematics Lesson" developed by Baykul (1990) was used in order to determine the attitudes of the students towards the mathematics lesson. The 5-point likert-type scale consists of 30 items, 15 of which are positive and 15 of which are negative. The Cronbach Alpha reliability coefficient of the scale was found to be .96 by the researcher who developed the scale (Baykul, 1990). According to this value, it can be said that the scale has a high degree of reliability (Büyüköztürk, 2020).

The data of the study were collected in September 2021. The printouts of the data collection form were distributed to the students and they were asked to fill in on a voluntary basis. The data collection process took one week.

Analysis of Data

In the study, the data obtained from the students' attitude scale were processed into the data analysis program in order to examine the changes in the attitudes of the students towards the mathematics lesson according to some variables. 15 negative items in the scale were reverse-transformed. Then, the total attitude scores of the students towards the mathematics lesson were calculated. In order to determine which data analysis will be used in the research, the distribution of the data was examined. It was determined that the Skewness value of the scale was -.264, and the Kurtosis value was -.164. Skewness and Kurtosis values are expected to be between -1 and +1 and close to zero to provide the assumption of normality (Cokluk, Şekercioğlu and Büyüköztürk, 2021). It can be said that both values are between -1 and +1 and close to zero. In addition, the skewness index obtained by dividing the Skewness value by its standard error ($-0.264/0.151$) is 1.748. The kurtosis index obtained by dividing the kurtosis value by its standard error ($-0.164/0.201$) is -0.815. In order to provide the assumption of normality, the skewness and kurtosis index should be between -1.96 and +1.96 (Taşpınar, 2017). It is seen that the skewness and kurtosis index are between -1.96 and +1.96. According to these values, it was concluded that the data showed a normal distribution. For this reason, it was decided to use parametric tests in the study. In the study, independent samples t-Test was used to determine whether students' attitudes towards mathematics lesson change according to gender and taking private lessons. In the study, students' attitudes towards mathematics lesson; ANOVA test was used to determine whether there was a significant difference in the variables of school type, general grade point average, monthly income, father's education level, and mother's education level. Tamhane test was preferred because the data were not homogeneous in determining the groups with significant differences as a result of the ANOVA test.

3. Findings

In this section, the findings obtained as a result of the analysis of the data obtained from the research are given. The results of the analysis regarding the change in students' attitudes towards the mathematics lesson according to gender are given in Table 2.

Table 2. The Change of Students' Attitudes Towards Mathematics Lesson According to Gender

Variable	Gender	N	\bar{X}	S	sd	t	p
Attitude Towards Mathematics Lesson	Male	320	95.25	22.33	586	-1.652	.099
	Female	268	98.36	23.19			

When Table 2 is examined, although the mean attitude score of women towards mathematics is higher than that of men, this difference is not significant ($t_{(586)} = -1.652$, $p > .05$). Based on this finding, it can be said that there is no significant difference in the attitudes of male and female students towards mathematics. The results of the analysis carried out to determine whether the attitudes of the students towards the mathematics course differ significantly according to the status of taking private lessons are shown in Table 3.

Table 3. Change of Students' Attitudes Towards Mathematics Lesson According to Private Lessons

Variable	Private lesson	N	\bar{X}	S	sd	t	p
Attitude Towards Mathematics Lesson	I bought	254	97.42	21.83	586	.698	.485
	I did not take	334	96.10	23.45			

According to Table 3, the mean scores of students who take private lessons towards mathematics and those who do not take private lessons are close to each other. According to the results of the analysis, it is seen that there is no significant difference in the attitudes of the students who take private lessons and those who do not ($t_{(586)} =$



.698, $p > .05$). The findings regarding the change in students' attitudes towards mathematics lesson according to school type are given in Table 4.

Table 4. Descriptive Data of Students' Attitudes Towards Mathematics Lesson According to School Type

Variable	Group	School Type	N	\bar{X}	S
Attitude Towards Mathematics Lesson	1	Qualified High School	177	102.05	23.20
	2	Middle Anatolian High School	260	98.66	22.63
	3	Vocational high School	151	86.93	19.35

When Table 4 is examined, it is seen that there are differences in the mean scores of students' attitudes towards mathematics according to school types. The analysis results regarding whether this difference is significant or not are shown in Table 5.

Table 5. Change of Students' Attitudes Towards Mathematics Lesson According to School Type

Variable	Variance Source	KT	sd	KO	F	p	Fark
Attitude Towards Mathematics Lesson	Between Groups	20477.872	2	10238.936	21.114	.000	1-3 2-3
	In Groups	283685.434	585	484.932			
	Total	304163.306	587				

When the findings in Table 5 are examined, it can be said that there is a significant difference in the mean scores of students' attitudes towards mathematics according to school types [$F_{(2,585)} = 21.114$, $p < .05$]. According to the Tamhane test results, it has been determined that the students in qualified high schools and middle Anatolian high schools have higher attitude scores towards mathematics than the students in vocational high schools. The findings regarding the change in students' attitudes towards the mathematics course according to their grade point average are shown in Table 6.

Table 6. Descriptive Data of Students' Attitudes Towards Mathematics Lesson According to Grade Point Average

Variable	Group	GPA	N	\bar{X}	S
Attitude Towards Mathematics Lesson	1	70 and below	157	83.51	19.02
	2	70-80	149	92.49	17.79
	3	80-90	158	99.14	21.45
	4	90-100	124	101.32	23.81

When the averages in Table 6 are examined, it can be said that there are differences in the average scores of students' attitudes towards mathematics according to their grade point averages. The results of the analysis regarding whether these differences between the mean scores are significant or not are given in Table 7.

Table 7. Öğrencilerin Matematik Dersine Yönelik Tutumlarının Not Ortalamasına Göre Değişimi

Variable	Variance Source	KT	sd	KO	F	p	Fark
Attitude Towards Mathematics Lesson	Between Groups	25732.221	3	8577.407	17.991	.000	1-2, 1-3, 1-4, 2-4
	In Groups	278431.085	584	476.766			
	Total	304163.306	587				

According to the data in Table 7, it can be said that there are significant differences in the scores of students' attitudes towards mathematics according to their grade point averages [$F_{(3,584)} = 17.991$, $p < .05$]. According to the results of the Tamhane test; Students with a grade point average of 90-100 have a higher grade point average towards mathematics than students with a grade point average of 70-80 and 70 and below, students with a grade point average of 80-90 are higher than students with a grade point average of 70 and below. It can be said that the students with 70-80 range are higher than the students with 70 and below average. The findings regarding the change in students' attitudes towards mathematics lesson according to monthly income are given in Table 8.

Table 8. Descriptive Data of Students' Attitudes Towards Mathematics Lesson According to Monthly Income

Variable	Group	Monthly Income	N	\bar{X}	S
Attitude Towards Mathematics Lesson	1	3000 TL and below	209	93.88	21.65
	2	3001 TL-9000 TL	296	97.63	23.49



3	9001 TL and above	83	100.26	22.30
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When the averages in Table 8 are examined, it is seen that there are differences in the mean scores of students' attitudes towards mathematics according to monthly income. The analysis findings regarding whether this difference is significant or not are shown in Table 9.

Table 9. Change of Students' Attitudes Towards Mathematics Lesson According to Monthly Income

Variable	Variance Source	KT	sd	KO	F	p	Fark
Attitude Towards Mathematics Lesson	Between Groups	2969.299	2	1484.649	2.884	.057	
	In Groups	301194.007	585	514.862			
	Total	304163.306	587				

According to the data in Table 9, it was determined that there was no significant difference in the mean scores of students' attitudes towards mathematics in terms of monthly income variable [$F_{(2,585)}=2.884$, $p>.05$]. The findings regarding the change in the attitudes of the students towards the mathematics lesson according to the educational status of the fathers are given in Table 10.

Table 10. Descriptive Data of Students' Attitudes Towards Mathematics Lesson According to Father's Educational Status

Variable	Group	Father Educational Status	N	\bar{X}	S
Attitude Towards Mathematics Lesson	1	Illiterate	14	93.64	18.19
	2	Primary school	124	97.45	23.00
	3	Middle School	99	93.39	23.72
	4	High school	158	97.44	22.87
	5	University	193	97.44	22.35

When the averages in Table 10 are examined, it is seen that the averages of the students' attitude scores towards mathematics are close to each other according to the educational status of the father. The results of the analysis conducted to determine whether there is a significant difference between the averages are shown in Table 11.

Table 11. Change of Students' Attitudes Towards Mathematics Lesson According to Father's Educational Status

Variable	Variance Source	KT	sd	KO	F	p	Fark
Attitude Towards Mathematics Lesson	Between Groups	1477.086	4	369.272	.711	.584	
	In Groups	302686.220	583	519.187			
	Total	304163.306	587				

According to the data in Table 11, it has been determined that there is no significant difference in the mean scores of students' attitudes towards mathematics in terms of the father's educational status variable [$F_{(4,583)}=.711$, $p>.05$]. The findings regarding the change in the attitudes of the students towards the mathematics lesson according to the educational status of the mothers are given in Table 12.

Table 12. Descriptive Data of Students' Attitudes Towards Mathematics Lesson According to Mother's Educational Status

Variable	Group	Mother Educational Status	N	\bar{X}	S
Attitude Towards Mathematics Lesson	1	Illiterate	13	86.38	24.53
	2	Primary school	142	93.80	24.32
	3	Middle School	118	97.66	21.89
	4	High school	165	97.63	19.78
	5	University	150	98.44	24.56

When the averages in Table 12 are examined, it can be said that the mean scores of students' attitudes towards mathematics are close to each other according to their mother's education level. The results of the analysis conducted to determine whether there is a significant difference between the averages are given in Table 13.



Table 13. Change of Students' Attitudes Towards Mathematics Lesson According to Mother's Educational Status

Variable	Variance Source	KT	sd	KO	F	p	Fark
Attitude Towards Mathematics Lesson	Between Groups	3278.401	4	819.600	1.588	.176	
	In Groups	300884.906	583	516.098			
	Total	304163.306	587				

According to the data in Table 13, it was determined that there was no significant difference in the mean scores of students' attitudes towards mathematics in terms of the mother's educational status variable [$F(4,583) = 1.588$, $p > .05$].

4. Discussion and Conclusion

Under this title of the study, the findings obtained from the research and similar findings in the literature were compared with each other and the results were emphasized. In the study, it was determined that the attitudes of the students towards the mathematics lesson did not differ significantly according to the gender variable. It has been determined that the level of attitudes towards the mathematics course of the students who are male and female students are close to each other. When we look at the studies in the related literature, similar to the results of the research, it is seen that the attitude levels of male and female students towards mathematics lesson are close to each other (Akdemir, 2006; Berkant and Metin, 2020; Birgin and Demirkan, 2017; Çelik ve Ceylan, 2009; Eskici, Ilgaz and Arıca, 2017; Kurbanoglu and Takunyacı, 2012; Sezgin, 2013; Taşdemir, 2008; Tuncer and Yılmaz, 2016; Yenilmez and Özabacı, 2003) there are many studies. However, in the literature, female students are higher than male students (Eskici, 2009; Linn and Kessel, 1996; Şentürk, 2010), male students are higher than female students (Barkatsas, Kasimatis and Gialamas, 2009; Gunderson, Ramirez, Levine and Beilock, 2012). ; Pehlivan and Köseoğlu, 2011; Saraçoğlu, 2016) there are also studies in which he has a mathematics lesson attitude. The results of this study differ according to the findings obtained from the research.

In the study, it was determined that there was no significant difference between the attitude levels of the students who took private lessons from the mathematics lesson and the attitude levels of the students who did not take private lessons from this lesson. In the studies in the related literature, it has been observed that there are few studies examining whether students' private lessons have an effect on their attitudes towards mathematics lessons. In these studies, it was concluded that the attitudes of students who took private mathematics lessons towards mathematics lesson were higher than those who did not take private mathematics lessons (Koca, 2011; Sezgin, 2013). The results of this study differ according to the results obtained from the research.

In the study, data were obtained from a qualified high school that admits students with LGS scores, from Anatolian high schools that take students according to secondary school diploma grades, and from vocational high schools. According to the analysis of the data obtained, it was concluded that the students in qualified high school and middle level Anatolian high school had higher attitude scores towards mathematics than the students in vocational high schools. In the study conducted by Berkant and Metin (2020), it was concluded that the attitudes of the students studying at science high schools towards the mathematics course are higher than the students studying at Anatolian high schools and vocational high schools. Similarly, Sezgin (2013) determined that the attitudes of science high school students towards mathematics are generally higher than high schools. Kurbanoglu and Takunyacı (2012) found that students studying at Anatolian high schools have higher attitudes towards mathematics than students studying at regular high schools and vocational high schools. In the study conducted by Çelik and Ceylan (2009), it was determined that the attitudes of the students studying in science high schools towards mathematics course were higher than those of Anatolian high school and vocational high school students. The results of this study are similar to the findings obtained from the research. It is thought that the mathematics lesson experiences in primary and secondary schools are positive and the success achieved at these levels positively affects the attitude towards mathematics.

It was determined that there was no significant difference in the attitude levels of the students who took part in the application study towards the mathematics lesson. As a result of the analyzes made in the research, it was found that the students whose grade point average is between 90 and 100 have higher attitude scores towards the mathematics course than the students whose grade point average is between 70 and 80 and 70 and below. It has



been determined that students with a grade point average of 70-80 are higher than students with an average of 70 and below. In the study, it was observed that as the grade point average increased, the attitude scores of the students towards the mathematics course also increased. Based on this finding, it can be interpreted that success and attitude are related. Studies that found a positive and significant correlation between achievement and attitude support this interpretation (Baykul, 1990; Berberoğlu, 1990; Bloom, 1979). Pehlivan and Köseoğlu (2011) also concluded in their study that students with high achievement levels have higher attitudes towards mathematics than those with low achievement levels. These studies examined in the literature show similarities with the findings obtained from the study.

In the study, it was determined that monthly income did not create a significant difference in students' attitudes towards mathematics lesson. In his study, Taşdemir (2009) concluded that the attitudes of students studying in schools with high socio-economic conditions towards mathematics course are higher than students studying in schools with low socio-economic conditions. This finding differs from the findings obtained from the research.

In the study, it was concluded that the educational status of the father and mother did not make a significant difference in the attitudes of the students towards the mathematics lesson. In similar studies examined, it was concluded that there was no significant change in students' attitudes towards mathematics according to the educational status of their fathers and mothers (Başer and Yavuz, 2003; Pehlivan, 2010; Tuncer and Yılmaz, 2016). The results of this study are similar to the findings obtained from the study. In his study, Taşdemir (2008) concluded that the attitudes of students whose fathers are high school and university graduates towards mathematics lessons are higher than those whose fathers are illiterate and primary school graduates. This finding differs from the findings obtained from the research.

In line with the findings obtained from the research, the following can be suggested:

- It is seen that students with high achievement levels also have high attitudes towards mathematics. In order to increase students' success and their attitudes towards mathematics, in-class and out-of-class activities that will make students love mathematics should be included.
- It has been determined that the attitudes of the students in qualified high schools and Anatolian high schools towards mathematics lesson are higher than those of vocational high school students. In order for the mathematics lesson experiences to be positive in primary and secondary schools, great importance should be given to mathematics teaching at these levels.
- Student opinions can be taken in order to determine the reasons for the positive or negative attitudes of students towards the mathematics lesson.

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3D models in education and understanding of geospace

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Plagiarism Rate = 5%

Abstract

Integrating people with disabilities into mainstream society is one of the very important contemporary topics. One of the accented areas is the education of people with visual impairments via 3D printed models. Technological development in the last decade and, above all, the affordability of production means has undergone fundamental changes. A 3D printer is now available in almost all facilities dedicated to people with visual impairments. The contribution presents research on the importance of 3D models in reducing the information deficit caused by severe visual impairment. The concept of presenting space in context was created by combining available technologies and cooperating with special education experts. The first research results show how important a source of information 3D models are for people with severe visual impairment.

Keywords: Education, visual impairment, 3D printing, 3D models, tactile maps

1. Introduction

Integrating people with disabilities into mainstream society is one of the topics emphasized a lot. Furthermore, this is not only due to the societal importance but also to activities such as introducing inclusive education. However, a less emphasized topic is that people with disabilities often do not receive such services and aids that would make their integration and inclusion much easier in reality. One of these areas is the education of people with visual impairments.

At the Institute of Special Pedagogical Studies of the Faculty of Pedagogy of the Palacký University Olomouc, typhlopedia, a field dealing with the education of people with visual impairment, has a long history. Students and pedagogues actively solve the issue of spatial orientation of these people within the framework of teaching and practice. Because space is the domain of geoscience disciplines, cooperation between the Institute of Special Pedagogical Studies and the Department of Geoinformatics of the Faculty of Science of the Palacký University Olomouc was started already fifteen years ago.

The first modern tactile maps created by 3D printing techniques were already created in 2008, and the research results showed where the creation of tactile maps could develop. However, the time and financial complexity of creating the proposed maps essentially made their wider use in practice impossible. Nevertheless, with the development of modern technologies, various methods of 3D printing became more and more accessible, and experts from the Department of Geoinformatics also proposed modern methods combining 3D printing together with capacitive displays.

Thus, in 2018, new research began, focusing on tactile maps connected by TouchIt3D technology to mobile devices, which gives maps a multimedia dimension. The created maps underwent intensive user testing in practice, and the parameters of the maps and their technical solutions were optimized. Subsequently, research aimed at reducing the information deficit in the perception of space caused by severe visual impairments was started based on the needs of the target group of users. This paper presents how 3D models can help educate people with visual impairment, mainly in the context of geospace perception.



People with visual impairment

In the world statistics, there are around 285 million people with various types and degrees of visual impairment worldwide, of which approximately 30 million are in European countries. At the same time, the World health organisation adds that this number will increase sharply, concerning the increasing age of the population and the associated serious changes in the vision analyser. Visual impairment is then considered one of the most serious disabilities because, among other things, it causes deficits in the perception of the surroundings and thus in the acquisition of information in a traditional way (Růžicková et al., 2019). We consider a person with severe visual impairment as someone who has difficulties obtaining and processing information while performing normal activities of everyday life. In the International statistical classification of diseases and related health problems, 10th revision (ICD10), there is a statement of a loss of visual perception below one-third of the norm; in the 11th revision (ICD11), it is already below half of the visual acuity norm. The state of the field of vision (below 10 degrees) and possibly impairment of other visual functions (e.g. depth vision, adaptation to darkness and glare, or the ability to perceive contrasts and work with them) must also be considered. Therefore, we come to the fact that visual impairment affects an individual's life not only in terms of obtaining information but also when establishing contacts, creating ideas about space, or moving in it (Růžicková, Kroupová, 2020). In the Palacký University Olomouc research, we focus on reducing or compensating the information deficit caused by visual impairment.

3D printing technologies

The term 3D printing refers to additive manufacturing methods of a physical 3D model from data in the form of a digital model. Technologies are abundant in the market of 3D printing (Vozenilek, Vondrakova, 2014). Some do not only use an additive manufacturing process but combine it with a subtractive approach that is otherwise typical of conventional processes, such as milling. The historically oldest technology is referred to as the stereolithography technology, patented in 1986 (Thayer, 1986). The big boom in 3D printing came in the last decade when the market opened up to the community and open-source solutions after patents expired. As a result, the market currently offers dozens of production process designations that can be included under 3D printing (e.g. CFF - Continuous Filament Fabrication, DLP - Digital Light Processing, DLS - Digital Light Synthesis, DMLS - Direct Metal Laser Sintering, FDM - Fused Deposition Modeling, FFF - Fused Filament Fabrication, LMF - Laser Metal Fusion, LOM - Laminated Object Manufacturing, LPA - Nozzle-based method laser deposit welding with powder, LPM - Layered Powder Metallurgy, PBF - Powder Bed Fusion, SLA - Stereolithography apparatus, SLS - Selective Laser Sintering, SLM - Selective Laser Melting, SHS - Selective Heat Sintering, and others).

For the sake of clarity, possible 3D printing technologies can be divided into four categories: Curing of liquid material with UV light or another energy source, including stereolithography or so-called polyjet technologies, usually achieve high accuracy, on which there is practically no distinct layering. In tactile map production, technologies of this type can ensure sufficiently smooth edges and the creation of detailed relief structures and hatching. The most widespread principle is melting plastic and extruding it with a print head, such as FDM and FFF technologies. They involve melting a plastic string (referred to as a filament) in the print head (extruder), from which the material is applied layer by layer to the printing pad through the nozzle (Fig. 1). FFF technology printers can be purchased or assembled for lower hundreds of EUR. The third category is sintering or joining the powder with a laser or an adhesive mixture, which also includes SLS technology, in which it is possible to create a 3D model from steel, aluminium or titanium from metal powder. However, this method is very expensive. The last group includes cutting individual layers and putting them on the border between additive and subtractive manufacturing. An example of a specific technology is LOM (Laminated Object Manufacturing) for producing full-colour models from sheets of office paper, which are glued to the previous layer and cut into the desired shape using a special handle with a knife. Although the created model can be provided with a strengthening anti-touch coating, this technology is unsuitable for producing tactile maps.

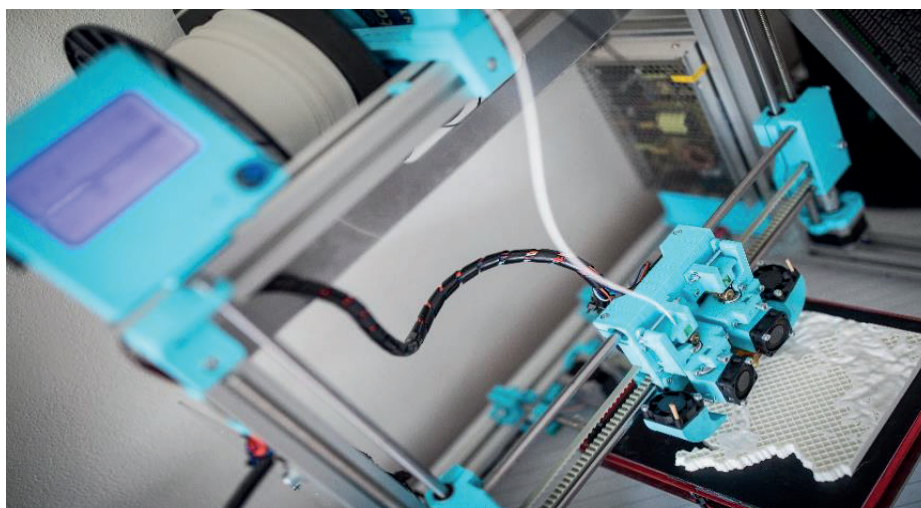


Fig. 1 – 3D printing technique using melting plastic and extruding it with a print head

Multimedia tactile maps

Traditional tactile maps use the third dimension to convey information about the attributes of displayed objects, which is often supplemented with Braille. If these tactile maps are made according to the cartographic principles, they can serve their purpose very well. However, despite the current technological development associated with the production of traditional tactile maps, their biggest drawback is still the limited amount of information they can convey. The argument for excluding Braille is most often the limitations associated with the tactile complexity of maps and also the situation when fewer and fewer people with visual impairment use (and well know) Braille (Barvir et al., 2021). Updating traditional tactile maps is also very problematic because to change an attribute, it is necessary to create completely new versions. For this reason, it has been a long-standing endeavour of cartographers (focusing on tactile maps) to equip tactile maps with multimedia elements and to replace individual Braille descriptions with an audio component.

Among the main advantages of such approaches are the newly acquired dynamism and the mentioned multimedia. Interactive tactile maps are created using various technologies and hardware to mediate the transfer of information toward the map reader. Interactive tactile maps enable a wide range of user interactions and can thus offer a completely different user comfort. The multimedia information can be updated very quickly with special software tools. Thus, to use current technological approaches, the production of tactile maps is an area with successful technological fusion.

TouchIt3D technology

The TouchIt3D technology was developed at the Palacký University Olomouc. It applies to all 3D printing processes using a 3D print of two or more materials, at least one of which is a conductive material.

The resulting 3D models can be made primarily of thermoplastics (e.g. ABS, PLA, PETG). The use of created objects is very wide. They can be used to control smartphones, tablets, electronic book readers, and others (Fig. 2). It primarily involves the creation of spatial 3D models used for presentation and navigation.

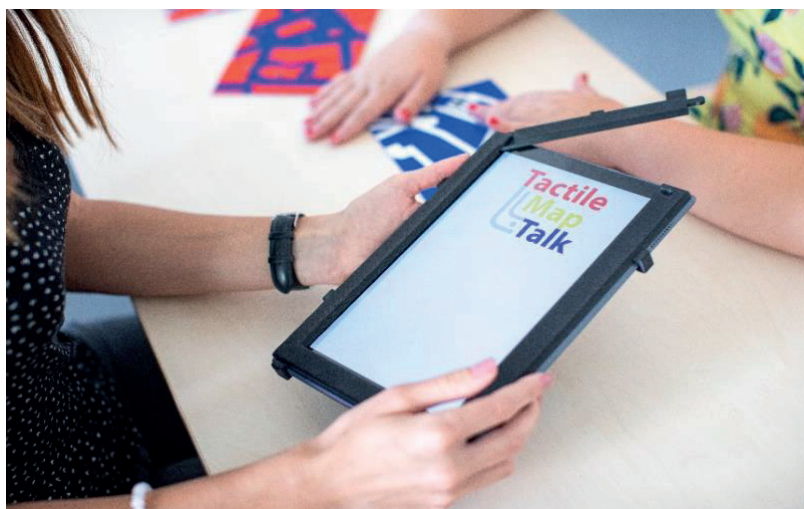


Fig. 2 – Using tablet with special developed software “Tactile Map Talk” to connect tactile maps with smart device

The technology is especially suitable for teaching children and adults and conveying information and knowledge to users with visual impairment. A very important application is the use of technology in the creation of interactive tactile maps (Fig. 3).

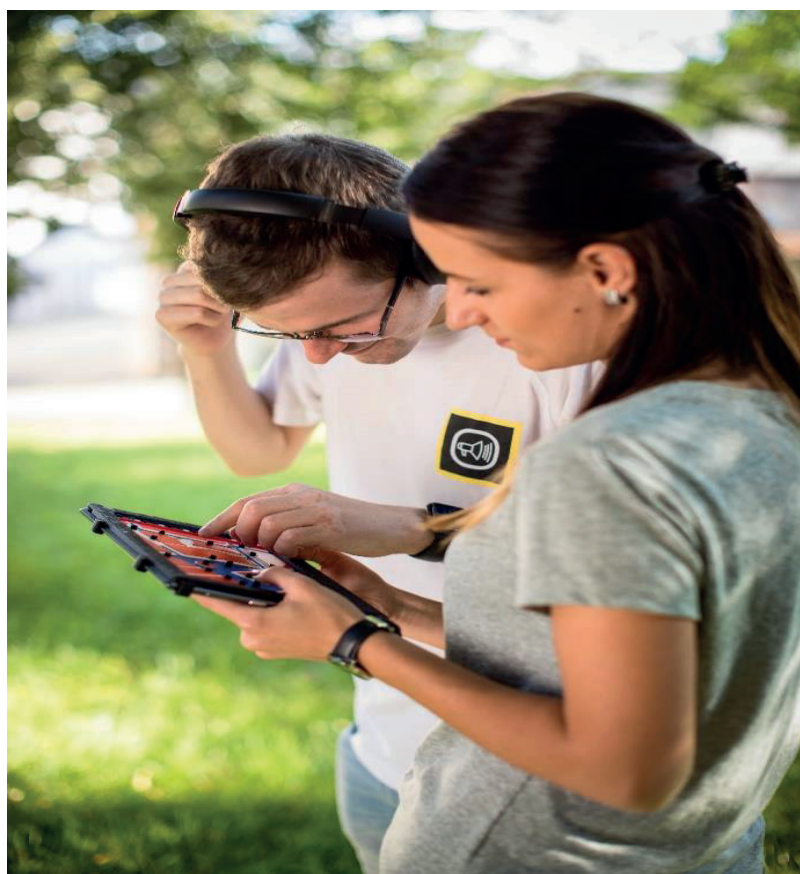


Fig. 3 – User testing of tactile map in the real situation of spatial orientation



Implementation of 3D models in education

In the Czech Republic, pressed embossed plastic foils, whose information capacity is limited, are most often used to teach people with visual impairment. In addition, in some cases, the relief is so complex that it is impossible to understand it properly. There are Braille descriptions and explanations for the maps, as well as Latin transcription for the benefit of the visually impaired, educators, assistants and other sighted users. Other aids include, for example, a plastic globe, which is a unique 3D aid.

Educators also try to use haptic maps printed on thermo-active paper (using P.I.A.F. fuser), but the understanding of space is two-dimensional, not realistically 3D. For this purpose, the suitability of creating 3D models has been confirmed.

We, therefore, focused our research on creating 3D models suitable for people with visual impairments. Although our first assumption was that we would have to generalize a lot in the 3D models we create, partial research focused on the levels of abstraction needed to acquire information by touch showed that this is not the case. Therefore, almost realistic 3D models were created with a certain reduction ratio. Historical monuments were selected as objects of interest, where user testing was subsequently carried out, and the degree of reduction of the information deficit in the perception of geospace could be evaluated (Fig. 4 and 5).

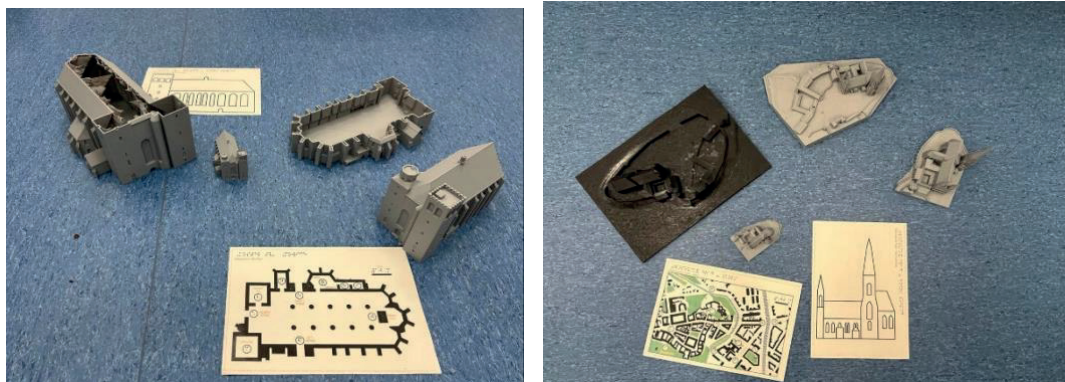


Fig. 4 – A set of created compensation aids. A “2D” map and plans printed on microcapsule papers using fuser technology, 3D models of locations and detailed 3D models of buildings, including the “inside view” to the floorplan.



Fig. 5 – User testing of 3D models of historical monuments and some interesting building elements during visit of a real one.



The importance of 3D models in the education of people with visual impairment

As mentioned above, one of the most significant consequences of visual impairment is the impact on the ability to orientate in space, to walk independently and the related information deficit regarding creating ideas about space and one's location. 3D models of buildings are usually created as part of the architecture project or as an attraction for tourists or visitors. In fewer cases, 3D models are intended for people with visual impairments. These models can alleviate or even minimize this deficit (Vondrakova et al., 2021).

3D models, plans and maps are a relatively old matter, but their accessibility has significantly moved towards users in recent years, thanks to the development of technology and, at the same time, lower financial demands for creating such a tool. In special pedagogy, 3D models can be considered a compensation tool. People with visual impairments can work with space thanks to 3D tactile perception, while they exploit the possibility of using all compensatory factors. Working with space is much more difficult for a person with visual impairment. This person must replace the analytical method of visual perception with a combination of the remote ear receptor and synthetic tactile perception. This "double combination" supported by cognitive processes and speech significantly reduces the deficit in this area. Further, it develops thinking, imagination, imagery, speech and, above all, awareness of oneself in space or the relationship to other objects in the given space.

User testing

Our research focused primarily on defining the specifics and consequences of visual impairment in connection with the perception of space, geospace (space in geographical context) and spatial relationships. It is really important to focus on user needs and user requirement and to distinguish differences between them, because of the adaptation of the resulting outcomes (Vondrakova, Vozenilek, 2016). The investigation/research procedure and course were specified based on the previous research outcomes and literature review. We decided on participant observation, an interview, a closely related experiment, and a visit to the given location (the location that an existing created 3D model represents).

Each part of our field testing begins with an interview with the respondents. The interview is based on pre-formed questions asking whether the respondent knows the presented location (in our case, one of the regional historical monuments), what he knows about it, how he imagines it, where it is located, what is connected to its history, culture, and others. The answers are recorded and then worked on for the conclusion.

After that, we proceed to the testing and refine the ideas, using 2D models, plans, and maps of the given location (Fig. 6) and then a 3D model with auditory elements. After the respondents are familiar with the monument and have the basic required information and knowledge, we set out to explore the monument with other senses. In our case, we visit the location (monument) and speak about acquired information interpretation. We are working with the model directly on location; we ask the respondent about his perception and about his spatial imagination of the location. Through a free interview, we obtain additional information that shows whether the respondent can create a comprehensive idea of the geospace. As part of the testing, we also tried an inverted concept, visiting the monument first and after the visit presenting 3D models, plans, and others, but this model did not work. Users only realized where they were on the models, and it took them longer to put everything in context.

Our respondents are students with visual impairments in primary and secondary schools and adults with severe visual impairments. No significant difference can be seen between pupils and adults during the testing. The difference is always seen when an individual loses sight later, uses residual visual perception, or has increased interest in a given location.



Fig. 6 – Comprehensive user testing: working with maps, plans and 3D models first, then a visit of presented location with following investigation of user perception and cognition.

2. Findings and conclusion

Based on the already performed testing, from the analysis of obtained information (mainly record sheets), observations and interviews with respondents and other experts, a pilot evaluation of the implemented research was carried out. Among the most important findings is the confirmation of the assumption that 3D models significantly develop the idea of a given location. The combination of a 3D model with sound and possibly a simple map and floor plan of the building (on microcapsule papers) provides information that forms a comprehensive view of the given monument after visiting the site, and pupils and adults can work with the space much better. During testing within the locality, it is necessary to have a 3D model (possibly even on a smaller scale) available and draw attention to important points of interest and facts again. A combination of large and small 3D models can be used during testing. At the end of each user testing, a summary must always be made with a model, map and plan, multimedia 3D model and other aids so that the knowledge is complete and stored as comprehensive knowledge.

Research is still ongoing. In its second phase, it will be focused primarily on finding out the degree of reduction of the information deficit when using various aids (simple maps, plans, generalized 3D models, realistic 3D models, TouchIt3D models with interactive multimedia elements). The research results and outcomes are available via the website tactilemaps.upol.cz.

Acknowledgement

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Bibliometric analysis of articles on brand value, brand experience and brand advocacy

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Plagiarsim Rate= % 11

Abstract

Brand value is defined as the value added to the brand by the positive or negative effect of the service provided to the consumers of the businesses after the name, symbol or use of any product. Brand experience is the set of elements that affect the customer emotionally, physically, mentally and spiritually. Brand advocacy means speaking positively about the brand or product and spreading his thoughts to others. The bibliometric data in this study was taken from the WoS database produced by Clarivate Analytics. The WoS database is one of the world's most important scientific citation search and analytical information platforms. This database offers researchers a comprehensive data content from different disciplines. For this reason, the specified database was preferred for the study. VOSviewer (Version 1.6.16) package program was used to create and display bibliometric maps for network analysis of journals.

This study examines the articles and citations used in the brand value (BV), brand experience (BE), brand advocacy (BA) literature and evaluates the knowledge structure of this research area to date. Many studies have empirically investigated BV, BE, and BA. However, no bibliometric study has been found that regulates the studies carried out together in this field. This bibliometric analysis study includes the examination of academic studies covering a total of 20,933 articles, including 20,463 B, 205 BV, 235 BE and 30 BA related articles, published on the Web of Science (WoS) platform. The aim of this study is to present a bibliometric analysis of research on BV, BE and BA. Analysis was conducted to reveal a series of intellectual influences that help to make sense of and shape these three variables and the interaction between them. In addition, this research provides information about the studies on BV, BE and BA, and identifies gaps and research opportunities in this field.

Keywords: Brand value, brand experience, brand advocacy, bibliometric analysis

1. Introduction

Antalya is a destination that requires intense competition in terms of hotel businesses. The reasons for this can be listed as the similarity of the concepts presented, the season being limited to certain periods and the charter intensity of the flights to the region. When this is the case, hotel businesses try to increase the rate of loyal customers in order to guarantee some of their occupancy. In order to provide this; businesses need to make a difference on the product or the service they offer and beyond that, they need to provide a memorable experience to the customer.

With the changes and developments in the field of Management and Marketing, the concept of brand and brand value has gained importance. Regardless of the sector in which businesses operate, their most important asset value has been brand value. Creating brand and brand value has been a powerful competitive tool for businesses. It also created the assets of businesses. However, a large part of the market value of brands consists of brand value. (Özgüven, 2010:1).

As a result of a brand experience that is below or above expectations, consumers may tend to share this experience with their relatives and social media connections. According to the results of a study, a satisfied customer shares his satisfaction with 4-5 people. Since the influence of reference groups is expected to be great in touristic



purchases, it is expected that each customer will leave the business satisfied and gain new customers. Because reference groups affect the behavior and perceptions of potential consumers, they can also create pressure in making a purchasing decision (Özbay, 2013: 54).

Brand advocacy, which is the last stage of the customer experience journey, is defined as consumers who have gained positive experiences about a product or service prefer the brand again and recommend it to other consumers without expecting any reward. It is of great importance for businesses as it contributes to the sales and marketing activities of the brand. In this study, it is aimed to reveal the perceptions of tourists staying in hotels belonging to a chain hotel brand about brand value, brand experience and brand advocacy according to some demographic characteristics.

Brand Value

The American Marketing Association defines a brand as 'a name, concept, signature, symbol, design, or combination of these that identifies a product or service and distinguishes it from its competitors'. While brand differentiates products and promises value, it also encourages beliefs, arouses emotions and activates behaviors (Kotler and Gertner, 2002: 249). Creating a strong brand and developing the created brand is a process that can be realized as a result of creating a chain of values, one after the other. Brand is a strategic issue. Only if a strategic point of view forms the basis of all work can a real brand value be created. (Ar, 2004:141).

The importance of the brand varies in terms of consumers, businesses and society. In addition, the brand provides the consumer with a guarantee of quality, the opportunity to compare with other products, assurance about product features, savings in product research time, after-sales service and gives detailed information about the features of the product. In terms of business; The brand is important with its sales enhancing, competitiveness, customer loyalty, opportunity to create a profitable market and creating demand (Halitoğulları, 2018: 24).

The concept of branding, on the other hand, is defined as the process of the company creating a brand image and identity for itself, the brand name coming to the forefront of the product's features and the customers becoming loyal to the symbol of this brand. Branded companies can easily stand out from their competitors in the sector they are in, and while the company's effort to make sales decreases, the consumer's tendency to buy also increases (Çağman, 2019: 37).

The concept of brand value was first defined in the marketing literature in the 1980s. In the 1990s, it started to gain more importance by both scientists and marketing researchers, and as a result, many articles and books were published (Rajh, 2005: 54). Although it is seen that different definitions of brand value are made in the literature, due to the brand's intangible property, consumer-based definitions of brand value are emphasized. Accordingly, brand value is a concept with definitions such as positive impressions, attitudinal tendencies, behavioral preferences (Rangaswamy et al., 1993); brand awareness, brand loyalty, brand associations and perceived quality (Aaker, 1991); brand awareness and brand knowledge formed by brand associations (Keller, 1993); loyalty and image (Shocker and Weitz, 1988); the value added by the brand name (Farquhar et al., 1991); increased utility (Kamakura and Russell, 1993); the difference between total brand preference and multiple preference (Park & Srinivasan, 1994); and total quality and preference orientation (Agarwal & Rao, 1996).

The concept of brand value is the additional value added to the product and the consumer by the positive impressions created by a strong brand name and symbol in the mind of the consumer. The said value is to make the market value of the product and the business more valuable than the assets of the business due to positive impressions (Alkibay, 2005: 85; Cop and Bekmezci, 2005: 69). A strong brand value of businesses in the eyes of consumers affects their preferences, sales, profit and market share, which means that the brand value is affected (Odabaşı and Oyman, 2002:373). Feldwick (1996) classifies the different meanings of brand value and expresses various approaches by simplifying them. Brand value (Wood, 2000: 662);

- The total value of the brand as a separable asset when sold or included in the balance sheet,
- Measuring consumers' loyalty to a brand,
- Beliefs that consumers hold about the brand.



Brands or products with high brand value can offer the benefits that consumers want and strive to achieve, respond to the changing demands of consumers over time, become reliable companies, use all marketing communication tools in an integrated way, and express the meaning of the brand in the best way. At the same time, it follows the changes related to its own value and can solve the problems in a timely manner and can make changes if necessary (Kocaman and Güngör, 2012: 144).

The feelings and perceptions of the brand and customers about the product and its performance are revealed with the brand value. The value of a strong brand; It shows the power of the brand to capture customer preference and loyalty (Kotler and Armstrong, 2004:291). The brand establishes a relationship between businesses and customers. A brand which has established a strong relationship with its customers; have the ability to distinguish, create preference, and provide prestige (Perry etc. Wisnom, 2003;12). For this reason, brand value is an issue that needs to be looked at and evaluated from the consumer's point of view. The consumers make comments about the brand, they feel loyalty to the brand, and as a result, it adds value to the brand. Measuring brand value is an issue that is gaining importance day by day. Because, when the value of the brand and other intangible assets exceeds the value of the other physical assets owned, the brand value must be known in order to realistically calculate the power of the institution and organization (İlgüner, 2009; 173).

Brand Experience

Experience is the consumer's perception of value during service purchase; defines it as the act of co-creation and development between the service provider and the consumer. This perceived value or benefit depends on the intensity of the emotions felt during the experience. However, it should be enough to make the consumer want to buy that experience. In order to define the service as an experience, it must include one or more of the elements such as personal interest, innovation, surprise, learning and interaction (Poulsson and Kale, 2004:268). Another definition is that the experience consists of the emotions and impressions that the customer perceives about the brand or company while using a product or receiving a service (Nagasawa, 2008, p. 314). According to Brakus etc. (2008:176), experience emerges when the customer researches a product, is exposed to an advertisement or marketing communication, buys and consumes the product or service, and turns into experiential value through sensory, emotional, mental and bodily stimuli. It provides an increase in the perceived value by the customer, which makes the brand superior to the other.

According to Schmitt (2009: 417), one of the researchers who introduced the concept of brand experience for the first time and also one of the pioneers of the experiential marketing approach, brand experience is the strategic elements that include the product itself, its logo, name, package brochure and advertisement that the customer encounters. Brand experience is conceptualized as subjective, internal consumer reactions (senses, emotions, and conditions) and behavioral responses of consumers motivated by stimuli associated with the brand, such as the design-identity-packaging-environment-communication of the brand (Brakus etc, 2009:56). In addition, customers experience the brand experience when they encounter the product (shopping, buying and consuming), with their feelings when they look at the product, and when they are exposed to any of the marketing communication tools such as television advertisements, brochures, advertisements, web pages (Brakus etc., 2009:53). According to other authors, brand experience is defined as the customer experience that causes an interaction between a customer and a product, a company or a part of its organization and provokes a reaction. This experience is personal and expresses the customer's participation at different levels (rational, emotional, sensory, physical and spiritual) (Shamim and Butt, 2013: 103). The concept of brand experience is especially applicable to activities where consumers encounter brands directly and interactively, unlike advertisements and traditional forms of communication (Zarantonello and Schmitt, 2013: 269). Brand experience, which is stored in the memory of the consumer for a certain period of time, can affect how he feels about the brand (Rameshan and Stein, 2014: 8). Brand experience is defined as the sum of the experiences that the consumer has as a result of using the brand in the past or interacting with the brand. As the consumer's experience with the brand increases, he understands the brand better and his loyalty increases (Chaiken etc, 1989:213). At the same time, the brand experience is motivational (Zaichowsky 1985:345). This focus is based on the needs, values and interests that motivate the consumer for the product and brand (Thomson etc., 2005:80). Thus, experiences occur when consumers show a personal relationship or interest in the brand. In addition, the brands that consumers are very interested in may not be the brands that provide the strongest experiences (Oliver etc., 1997:313).



Brand Advocacy

As consumers' access to new media increases in the digitalized world, it has become imperative to use strategies based on brand advocacy. Brand advocacy is the participation and dissemination of online and offline word of mouth (Lowenstein, 2011:17). According to Seeling (2001:25), advocacy involves the continuous use of language and energy, through words and actions, to improve the well-being of oneself, others, and the organization as a whole. In this context, advocacy is a big step forward in the developing relationship between companies and their customers. Customer advocacy is done by both internal and external customers (Motowidlo and Van Scotter, 1994:476), and the company is represented positively to the customer and the customer to the company (Seeling, 2001:28).

Generally, positive or negative attitudes of customers about a company, product and/or service may occur in different ways such as complaints, advice, repurchase, emotional attachment or sensitivity (Bloemer etc., 1999:1101).

According to Peck etc. (1999:51) loyalty steps in relational marketing are classified below as;

- “prospective customers” who can be persuaded to do business with the business once,
- “Customers” who may have a negative or neutral attitude towards the business but do business repeatedly,
- The “fans” who love the business but passively support it,
- “Advocates” who actively recommend to others and market for the business.

The place of the advocates, who are at the top of the loyalty ladder, for businesses and the contributions they can provide are very important.

Defensive customers are individuals who are emotionally attached to a company, product or brand and believe that they are treated in their own interests and create more value, make new and additional purchases, are willing to recommend, and voluntarily promote, advertise and direct through word of mouth communication (Bozkurt ve Çolakoglu, 2020:3995).

Brand advocacy, which is the more specific and narrow dimension of customer advocacy, is the activities of a consumer to become emotionally attached to a brand (Fullerton, 2003:340), to give news and positive verbal messages about the brand, and to direct others to be the buyer and user of the brand (Chakravarty etc., 2010:191). Ranaweera and Jayawardhena (2014:2649) stated that positive word of mouth is also called brand advocacy in the marketing literature and is used interchangeably. In the marketing literature, brand advocacy is most commonly associated with positive word of mouth, which is positive, informal communication among consumers about their experience with certain services, products, or providers (Westbrook, 1987:262). In other words, brand advocacy occurs when consumers who have passionate feelings about a brand try to promote it to others and defend it against those who oppose and vilify it. This also includes the consumer's willingness to try new products, services, and experiences, while disseminating positive opinions through word-of-mouth and being resistant to negative information or other problems (Pai etc., 2013:687; Cross and Smith, 1995:120).

The basis of the brand advocacy approach is that those who identify with an asset (this asset is considered a brand) perceive the success and failures of the asset as their own assets. In fact, there is an attitude of making significant efforts to support and improve the performance of this entity (Ashforth and Mael, 1989:21). Brand advocates; not only is the brand a rational buyer, but also believes that it is attractive and different from other brands, becomes defensive when criticized by its loyal customers, followers, other consumers, uses products containing the brand's logo or name, collects the brand's products, and even tattoos about the brand. They are the customers or consumers who are willing to try new products from the same brand, or even forgive when the brand is mistaken (Du etc., 2007:231). The definitions about the brand advocacy above show that brand advocacy involves creating mutually beneficial community connections that encourage users to proactively promote the business brand, products, and services to others through positive word-of-mouth. In other words, brand advocates are satisfied and loyal customers as long as they have a positive perception of the business brand, its products and/or services. Some people proactively share brands and their experiences with that brand, influencing other people's perceptions of a



particular business brand (Singh 2014:28). According to Alire (2007:546), only 14 percent of people believe what they see, read or hear in advertisements, while 90 percent believe their family, friends or colleagues because they know that there is no personal motivation behind their recommendations.

According to Singh and Trinchetta (2019:306);

- Brand advocacy increases the awareness of the business.
- Brand advocacy communicates business values.
- Brand advocacy increases the image of the business by sharing positive information about the business.
- Brand advocacy encourages community involvement, that is, more people being active towards the same cause.
- Brand advocates create unforgettable brand experiences.

As it is known, among the most influential forces affecting the consumption decision are brand value, brand experience and brand advocacy. Consumers become “brand advocates” when they are genuinely interested in a brand after experiencing it. These advocates offer positive word of mouth about the brand to others (Fuggetta; 2012; Wallace et al., 2012). There are many studies focusing on customer brand advocacy (MS), especially in the marketing literature (Becerra & Badrinarayanan, 2013; Fullerton, 2003, 2011; Jillapalli & Wilcox, 2010; Kwon et al., 2017; Raimondo et al., 2008; Stokburger). -Sauer, 2010; Turri et al., 2013; Wallace et al., 2012).

In this study, it is aimed to reveal a series of intellectual effects that help to make sense of, shape and explain the relationship between these three variables by making a bibliometric analysis of the studies in the literature on brand value, brand experience and brand advocacy, whose strategic effectiveness and importance are rapidly increasing in terms of businesses.

Bibliometric analysis is one of the important methods of examining scientific publication performance. With bibliometric analysis, information specific to the researched field can be obtained in detail in the form of relationships and patterns. The results to be obtained from here are important in terms of the degree to which the researched subject is respected by the countries and, accordingly, in determining the publication policy of the countries in question and determining which topics/themes are related to the international publication trend (Akyıldız & Yılmaz, 2020). Bibliometric analysis has become an important part of research evaluation methodology, especially in scientific and applied fields (Ellegard and Wallin 2015). In the analysis, studies in any academic field are divided into various parameters (subject, year, contributing institution, keywords, number of authors of the works, citations, common citations, etc.) and provide findings related to scientific communication. The data obtained is important in terms of showing the current situation in any discipline or branch of science, finding and solving problems according to the results (Temizkan et al., 2015). An in-depth analysis of the literature review on a subject with bibliometric methods also provides information for future studies with the evaluated results and emerging areas (Feng et al., 2017).

2. Research Method

This study was carried out according to the case study method, which is one of the qualitative research methods. Case study is a research method that provides an in-depth examination of a phenomenon or event (Yıldırım & Şimşek, 2011). In other words, a case study is a methodological approach that involves in-depth examination of a limited system by using multiple data collection to gather systematic information about how it works (Chmiliar, 2010). In this context, a case study is a method that a single situation or event is examined in depth longitudinally, data is collected systematically and what in the real environment is happening. It reveals why the event occurred in that way and what should be focused on in future studies with the results, (Davey, 1991). In the study, this method was preferred because it was aimed to examine of the articles published in the WoS database on brand advocacy in terms of bibliometric parameters to reveal the current situation. The research process was developed as follows:

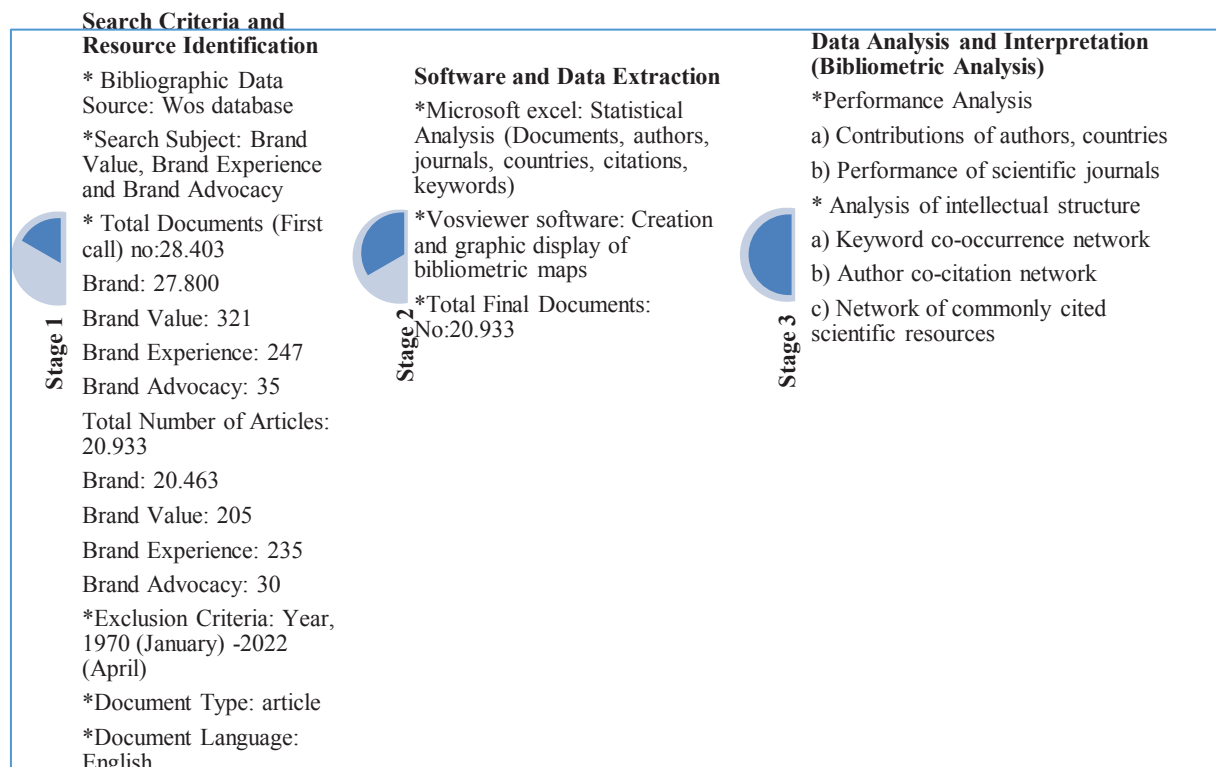


Figure 1. Methodological Process of Bibliometric Analysis
Source: Table by Herrero-Franco et al. (2021) is used.

The bibliometric data in this study was taken from the WoS database produced by Clarivate Analytics. The WoS database is one of the world's most important scientific citation search and analytical information platforms. This database offers researchers a comprehensive data content from different disciplines (Li, Rollins, & Yan, 2018). Thus, the specified database was preferred for the study. The scanning interval includes the articles published between January 2007 and October 2021. The bibliometric analysis technique was used in the study. OSviewer (Version 1.6.16) package program was used to create and display bibliometric maps for network analysis of journals. VOSviewer (Van Eck and Waltman, 2009), is an open source tool developed by Nees Jan van Eck and Ludo Waltman at Leiden University Science and Technology Research Center (CWTS) in the Netherlands (Akkaya and Ertekin, 2021). It is a scientific mapping program designed for the visualization of bibliometric networks. It can perform many bibliometric network analyzes such as keyword co-occurrence analysis and co-authorship analysis, as well as visualization of citation networks. VOSviewer visualizes bibliometric networks based on distance-based visualization approach. VOSviewer uses the VOS (Visualization of Similarities) algorithm developed specifically for the program in information visualization. It creates network and density maps (heat maps) with the connections between clusters and clusters, depending on the parameters determined within the bibliometric data sets through this VOS algorithm. (Uzgör, 2021)

3. Findings

When the researches on all three subjects are examined, a total of 27,800 studies were conducted on the subject of "brand", including 20,463 articles, 4,444 papers, 1,587 book chapters and 1,306 book reviews. A total of 321 academic studies have been conducted on "brand value", of which 205 are articles, 96 are papers, 12 are book chapters, and 8 are book reviews. A total of 247 research studies have been conducted on the subject of "brand experience", including 235 articles, 9 book chapters and 3 papers. 35 academic studies on "brand advocacy" were identified. 30 of them are articles, 3 of them are book chapters and 2 of them are papers. The publications published in the WoS database on the subject of "brand", "brand value", "brand experience" and "brand advocacy" were scanned between January 1970 and March 2022, and it was determined that a total of 20,933 articles were published according to the years. related bibliometric analysis was carried out.



First of all, we would like to point out that the search made with the word "brand" also includes article studies on other brand concepts such as "brand value", "brand experience" and "brand advocacy". While the number of articles published on the subject of "Brand" was 29 in 1970, the annual number of publications reached 1,977 at the end of 2021 at an increasing rate, and the total number of articles was 20,463 until April 2022. While there was 1 published article on the subject of "brand value" for the first time in 1983, an increasing number reached 24 per year in 2021 and the total number of published articles reached 205 until April 2022. While there were 2 published articles on "brand experience" in 2005, when the number of articles published until April 2022 is analyzed, it is seen that the total number of articles has reached 235. When the studies on "brand advocacy", which is the last concept to enter the brand literature, are examined, it is seen that the first publication was published in 2007, it is seen that the number of articles published in 2021 was 4, and it was determined that the total number of published articles reached 30 until April 2022.

The top 10 countries that contributed the most to the academic literature on these four concepts are shown in the table in Table 1. When the studies published by countries are examined, USA, England and Chia share the first three places in terms of "brand", USA, England and Australia take the first three places in "brand value", and the countries of USA, India and China are the first in terms of "brand experience". When we look at the origin of the article published on "brand advocacy", it is seen that USA, Australia and India are in the first three places. In all four categories, it has been determined that the USA has a large number of academic publications by far.

Table 1. Analyze Data Table of Top 10 Broadcasting Countries

No	Title: Brand	Record Count	% of 20.463
1	USA	6,040	29.517%
2	England	1,951	9.534%
3	China	1,475	7.208%
4	Australia	1,293	6.319%
5	Spain	1,053	5.146%
6	India	876	4.281%
7	Canada	868	4.242%
8	Germany	749	3.660%
9	France	705	3.445%
10	South Korea	679	3.318%
	Title: Brand Value	Record Count	% of 205
1	USA	47	22.927%
2	England	24	11.707%
3	Australia	18	8.780%
4	Spain	17	8.293%
5	France	13	6.341%
6	Peoples R China	11	5.366%
7	Taiwan	10	4.878%
8	Brazil	9	4.390%
9	India	9	4.390%
10	South Korea	9	4.390%
	Title: Brand Experience	Record Count	% of 235
1	USA	52	22.128%
2	India	34	14.468%
3	China	25	10.638%
4	South Korea	22	9.362%
5	Australia	16	6.809%
6	England	16	6.809%
7	Malaysia	15	6.383%
8	Spain	15	6.383%
9	Taiwan	13	5.532%
10	Pakistan	11	4.681%
	Title: Brand Advocacy	Record Count	% of 30
1	USA	13	43.333%
2	Australia	4	13.333%



3	India	4	13.333%
4	England	2	6.667%
5	Portugal	2	6.667%
6	Spain	2	6.667%
7	Ireland	1	3.333%
8	Netherlands	1	3.333%
9	Norway	1	3.333%
10	Pakistan	1	3.333%

Table 2 shows the top 10 institutions/Universities that made the most publications on these 4 concepts. Looking at the first three universities that publish on the subject of "Brand"; League of European Research Universities Leru is first with 340 publications, State University System of Florida is second with 329 publications, and Pennsylvania Commonwealth System of Higher Education is third with 243 publications. Considering the universities that publish about "brand value"; University of Zilina 6, Islamic Azad University 5 and Aston University 4 articles are in the top three places, respectively. When the publications on "brand experience" are examined; Indian Institute of Technology Iit Roorkee 8, Indian Institute of Technology System Iit System 8, and Indian Institute of Management Iim System 7 are in the top three ranks, respectively. Finally, when the publications on "brand advocacy" are examined; Texas State University San Marcos, Texas State University System and University of Western Australia are in the top three places with 4 articles each.

Table 2. Analyze Data Table of Top 10 Affiliations with the most Articles

No	Title: Brand	Record Count	% of 20.463
1	League of European Research Universities Leru	340	1.662%
2	State University System of Florida	329	1.608%
3	Pennsylvania Commonwealth System of Higher Education	243	1.188%
4	University of California System	239	1.168%
5	University System of Georgia	223	1.090%
6	University of London	217	1.060%
7	University of Texas System	217	1.060%
8	California State University System	204	0.997%
9	University of North Carolina	172	0.841%
10	University of Minnesota System	156	0.762%
	Title: Brand Value	Record Count	% of 205
1	University of Zilina	6	2.927%
2	Islamic Azad University	5	2.439%
3	Aston University	4	1.951%
4	League of European Research Universities Leru	4	1.951%
5	University of Birmingham	4	1.951%
6	Brunel University	3	1.463%
7	California State University System	3	1.463%
8	Copenhagen Business School	3	1.463%
9	Griffith University	3	1.463%
10	Louisiana State University	3	1.463%
	Title: Brand Experience	Record Count	% of 235
1	Indian Institute of Technology Iit Roorkee	8	3.404%
2	Indian Institute of Technology System Iit System	8	3.404%
3	Indian Institute of Management Iim System	7	2.979%
4	Griffith University	6	2.553%
5	Brunel University	5	2.128%
6	Columbia University	5	2.128%
7	Sejong University	5	2.128%
8	State University System of Florida	5	2.128%
9	University of Houston	5	2.128%
10	University of Houston System	5	2.128%
	Title: Brand Advocacy	Record Count	% of 30
1	Texas State University San Marcos	4	13.333%



2	Texas State University System	4	13.333%
3	University of Western Australia	4	13.333%
4	Edith Cowan University	3	10.000%
5	Texas Tech University	3	10.000%
6	Texas Tech University System	3	10.000%
7	Indian Institute of Management Lim System	2	6.667%
8	Indian Institute of Management Sirmaur	2	6.667%
9	Instituto Universitario De Lisboa	2	6.667%
10	State University System of Florida	2	6.667%

The top 10 journals that published the most articles on brand, brand value, brand experience and brand advocacy were examined in Table 3. When the journals have publication about "Brand" are examined, the first three are these journals: Journal of Business Research (618), Journal of Product and Brand Management (594) and Journal of Brand Management (585) publications. Considering the publications on "brand value", Journal of Brand Management (18), Journal of Business Research (7), and Sustainability were in the top three with 7 publications. When the publications on "brand experience" are examined, Journal of Brand Management (17), Journal of Business Research (12) and Journal of Retailing and Consumer Services are in the first three places with 11 publications. Finally, when the publications on "brand advocacy" are examined, first four journals are Arts and The Market (2), Journal of Hospitality Marketing Management (2), Journal of Marketing Theory and Practice (2) and Journal of Product and Brand Management (2).

Table 3. Analyze Data Table of Top 10 Journals with the most Articles

No	Title: Brand	Record Count	% of 20.463
1	Journal of Business Research	618	3.020%
2	Journal of Product and Brand Management	594	2.903%
3	Journal of Brand Management	585	2.859%
4	European Journal of Marketing	272	1.329%
5	Journal of Marketing Research	259	1.266%
6	Place Branding and Public Diplomacy	250	1.222%
7	Journal of Retailing and Consumer Services	249	1.217%
8	Psychology Marketing	226	1.104%
9	Sustainability	214	1.046%
10	Journal of Advertising Research	199	0.972%
Title: Brand Value		Record Count	% of 205
1	Journal of Brand Management	18	8.780%
2	Journal of Business Research	7	3.415%
3	Sustainability	7	3.415%
4	Industrial Marketing Management	6	2.927%
5	Journal of Product and Brand Management	5	2.439%
6	International Journal of Research in Marketing	4	1.951%
7	Journal of Marketing Management	4	1.951%
8	Journal of Retailing and Consumer Services	4	1.951%
9	Revista Brasileira De Marketing	4	1.951%
10	Global Business Review	3	1.463%
Title: Brand Experience		Record Count	% of 235
1	Journal of Brand Management	17	7.234%
2	Journal of Business Research	12	5.106%
3	Journal of Retailing and Consumer Services	11	4.681%
4	Sustainability	8	3.404%
5	Asia Pacific Journal of Marketing And Logistics	7	2.979%
6	Journal of Product and Brand Management	6	2.553%
7	Marketing Intelligence Planning	6	2.553%
8	International Journal of Contemporary Hospitality Management	5	2.128%
9	International Journal of Advertising	4	1.702%
10	International Journal of Retail Distribution Management	4	1.702%
Title: Brand Advocacy		Record Count	% of 30



1	Arts and The Market	2	6.667%
2	Journal of Hospitality Marketing Management	2	6.667%
3	Journal of Marketing Theory and Practice	2	6.667%
4	Journal of Product and Brand Management	2	6.667%
5	Asia Pacific Journal of Marketing and Logistics	1	3.333%
6	Breaking Banks the Innovators Rogues and Strategists Rebooting Banking	1	3.333%
7	Business Ethics a European Review	1	3.333%
8	International Journal of Pharmaceutical and Healthcare Marketing	1	3.333%
9	Journal of Advertising Research	1	3.333%
10	Journal of Brand Management	1	3.333%

It is seen that the same field categories are included in the first three categories related to each of the 4 concepts in Table 4. There are published 9352 articles in the Business category, 3826 articles in the Management category and 1700 articles in the Hospitality Leisure Sport Tourism category related to the concept of "Brand". It has been determined that he published 122 articles in the Business category, 74 articles in the Management category and 14 articles in the Hospitality Leisure Sport Tourism category on the concept of "brand value". It was determined that he published 147 articles in the Business category, 61 articles in the Management category and 41 articles in the Hospitality Leisure Sport Tourism category on the concept of "brand experience". appears to have been published.

Table 4. Analyze Data Table of Web of Science Categories

No	Title: Brand	Record Count	% of 20.463
1	Business	9,352	45.702%
2	Management	3,826	18.697%
3	Hospitality Leisure Sport Tourism	1,700	8.308%
4	Communication	1,424	6.959%
5	Economics	875	4.276%
6	Pharmacology Pharmacy	456	2.228%
7	Psychology Applied	452	2.209%
8	Food Science Technology	400	1.955%
9	Environmental Studies	378	1.847%
10	Environmental Sciences	362	1.769%
Title: Brand Value		Record Count	% of 205
1	Business	122	59.512%
2	Management	74	36.098%
3	Hospitality Leisure Sport Tourism	14	6.829%
4	Economics	10	4.878%
5	Environmental Studies	9	4.390%
6	Communication	7	3.415%
7	Environmental Sciences	7	3.415%
8	Green Sustainable Science Technology	7	3.415%
9	Multidisciplinary Sciences	5	2.439%
10	Social Sciences Interdisciplinary	5	2.439%
Title: Brand Experience		Record Count	% of 235
1	Business	147	62.553%
2	Management	61	25.957%
3	Hospitality Leisure Sport Tourism	41	17.447%
4	Communication	15	6.383%
5	Environmental Sciences	9	3.830%
6	Environmental Studies	9	3.830%
7	Green Sustainable Science Technology	9	3.830%
8	Economics	6	2.553%
9	Psychology Applied	6	2.553%
10	Psychology Multidisciplinary	5	2.128%
Title: Brand Advocacy		Record Count	% of 30
1	Business	20	66.667%
2	Management	9	30.000%



3	Hospitality Leisure Sport Tourism	5	16.667%
4	Communication	2	6.667%
5	Ethics	2	6.667%
6	Business Finance	1	3.333%
7	Education Educational Research	1	3.333%
8	Health Policy Services	1	3.333%
9	Information Science Library Science	1	3.333%
10	There is no 10th category.		

In Table 5, first-name authors who published about these 4 concepts were examined. Considering the authors who published on "Brand", Anonymous (76), Kim (53) and Keller (49) published. When the authors with the highest number of publications on "brand value" are analyzed, Hajli (3), Keh (3), Leone (3) and Raggio (3) are in the top four ranks. The authors who publish on the subject of "brand experience" are in the top three ranks as Khan (11), Rahman (8) and Zarantonello (6). Finally, the top 3 authors who have published the most about "brand advocacy" are Soutar (4), Wilk (4) and Badrinarayanan (3).

Table 5. Analyze Data Table of Top 10 Authors with the most Articles

No	Title: Brand	Record Count	% of 20.463
1	Anonymous	76	0.371%
2	Kim, J.	53	0.259%
3	Keller, K.L.	49	0.239%
4	Merrilees, B.	46	0.225%
5	Gupta, S.	45	0.220%
6	DeChernatony, L.	43	0.210%
7	Melevvar, T.C.	41	0.200%
8	Lee, S.	40	0.195%
9	Romaniuk, J.	38	0.186%
10	Phau, L.	36	0.176%
	Title: Brand Value	Record Count	% of 205
1	Hajli N	3	1.463%
2	Keh HT	3	1.463%
3	Leone RP	3	1.463%
4	Raggio RD	3	1.463%
5	De Chernatony L	2	0.976%
6	Foroudi P	2	0.976%
7	Gajanova L	2	0.976%
8	Goldfarb A	2	0.976%
9	Gupta S	2	0.976%
10	Huertas A	2	0.976%
	Title: Brand Experience	Record Count	% of 235
1	Khan, L.	11	4.681%
2	Rahman, Z.	8	3.404%
3	Zarantonello, L.	6	2.553%
4	Bapat, D.	4	1.702%
5	Fatma M	4	1.702%
6	Kim, J.	4	1.702%
7	Melevvar, T.C.	4	1.702%
8	Beig, F.A.	3	1.277%
9	Foroudi, P.	3	1.277%
10	Hwang, J.	3	1.277%
	Title: Brand Advocacy	Record Count	% of 30
1	Soutar GN	4	13.333%
2	Wilk V	4	13.333%
3	Badrinarayanan V	3	10.000%
4	Harrigan P	3	10.000%
5	Bilro RG	2	6.667%
6	Laverie DA	2	6.667%



7	Loureiro SMC	2	6.667%
8	Vashisht D	2	6.667%
9	Ali F	1	3.333%
10	Aljarah A	1	3.333%

In Table 6, the top 10 most cited articles related to these 4 concepts are presented. On the subject of "Brand", the first article has 2697 citations, the second ranked article has 2444 citations, and the third article has 2333 citations. In the article study on "brand value", it was determined that the first article has 544 citations, the second article has 165 citations and the third article has 152 citations. In the article studies on the subject of "brand experience", it was determined that the first article has 1539 citations, the second article has 221 citations and the third article has 209 citations. In the article studies on "brand advocacy", it was seen that the first article has 152 citations, the second article has 94 citations and the third article has 51 citations.

Table 6. Analyze Data Table of Top 5 most cited Publications

No	Title: Brand	Record Count
1	Dimensions of brand personality. Aaker, J.L. (1997). <i>Journal of Marketing Research</i> 34 (3), 347-356	2,697
2	Effects of Price, Brand, And Store Information on Buyers Product Evaluations. Dodds, Wb; Monroe, Kb and Grewal, D. (1991). <i>Journal of Marketing Research</i> 28 (3), 307-319.	2444
3	The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. Chaudhuri, A and Holbrook, M.B. (2001). <i>Journal of Marketing</i> 65 (2), 81-93	2,333
4	Consumer Evaluations of Brand Extensions. Aaker, Da And Keller, K.L.1990). <i>Journal of Marketing</i> 54 (1), 27-41.	1401
5	Building brand community. McAlexander, JH; Schouten, JW and Koenig, HF. (2002). <i>Journal of Marketing</i> 66 (1) ,38-54	1246
Title: Brand Value		Record Count
1	How perceived brand globalness creates brand value. Steenkamp, JBEM; Batra, R and Alden, D.L. (2003). <i>Journal of International Business Studies</i> 34 (1), 53-65	544
2	Brand Value Co-Creation in A Digitalized World: An Integrative Framework and Research Implications. Ramaswamy, V. and Ozcan, K. (2016). <i>International Journal of Research in Marketing</i> 33 (1), 93-106	165
3	Brand values related to industrial products. Michell, P; King, J and Reast, J. (2001). <i>Industrial Marketing Management</i> 30 (5), 415-425	152
4	Brand marketing for creating brand value based on a MCDM model combining DEMATEL with ANP and VIKOR methods. Wang, YL and Tzeng, G.H. (2012). <i>Expert Systems with Applications</i> 39 (5), 5600-5615	130
5	Multinational Production - Effect on Brand Value. Johansson, J.K and Nebenzahl, LD. (1986). <i>Journal of International Business Studies</i> 17 (3), 101-126	127
Title: Brand Experience		Record Count
1	Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty? Brakus, J.J.; Schmitt, BH and Zarantonello, L. (2009). <i>Journal of Marketing</i> 73 (3), 52-68	1539
2	The role of brand experience and affective commitment in determining brand loyalty. Iglesias, O; Singh, JJ and Batista-Foguet, J.M. (2011). <i>Journal of Brand Management</i> 18 (8), 570-582	221
3	Beyond technology acceptance: Brand relationships and online brand experience. Morgan-Thomas, A and Veloutsou, C. (2013). <i>Journal of Business Research</i> 66 (1), 21-27	209
4	Sensory marketing: the multi-sensory brand-experience concept. Hulten, B. (2011). <i>European Business Review</i> 23 (3), 256-273.	169
5	Using the brand experience scale to profile consumers and predict consumer behaviour. Zarantonello, L and Schmitt, B.H. (2010). <i>Journal of Brand Management</i> 17 (7), 532-540	168
Title: Brand Advocacy		Record Count
1	Unleashing the power of word of mouth: Creating brand advocacy to drive growth.	152



	Keller, E. (2007). <i>Journal of Advertising Research</i> 47 (4), 448-452	
2	Place branding: creating self-brand connections and brand advocacy. Kemp, E; Childers, CY and Williams, K.H. (2012). <i>Journal of Product and Brand Management</i> 21 (7), 508-515	94
3	Facebook 'friendship' and brand advocacy. Wallace, E; Buil, I and de Chernatony, L. (2012). <i>Journal of Brand Management</i> 20 (2), 128-146.	51
4	The impact of corporate social responsibility on consumer brand advocacy: The role of moral emotions, attitudes, and individual differences. Xie, CY; Bagozzi, RP and Gronhaug, K. (2019). <i>Journal of Business Research</i> 95,514-530.	45
5	Brand Advocacy and Sales Effort by Retail Salespeople: Antecedents and Influence of Identification with Manufacturers' Brands. Badrinarayanan, V and Laverie, D.A. (2011). <i>Journal of Personal Selling & Sales Management</i> 31 (2), 123-140.	39

In Figure 1, the number of publications and the number of citations by years of articles published on brand value, brand experience and brand advocacy are presented visually. It is observed that there has been a significant increase in both the number of publications and citations in the last 10 years.

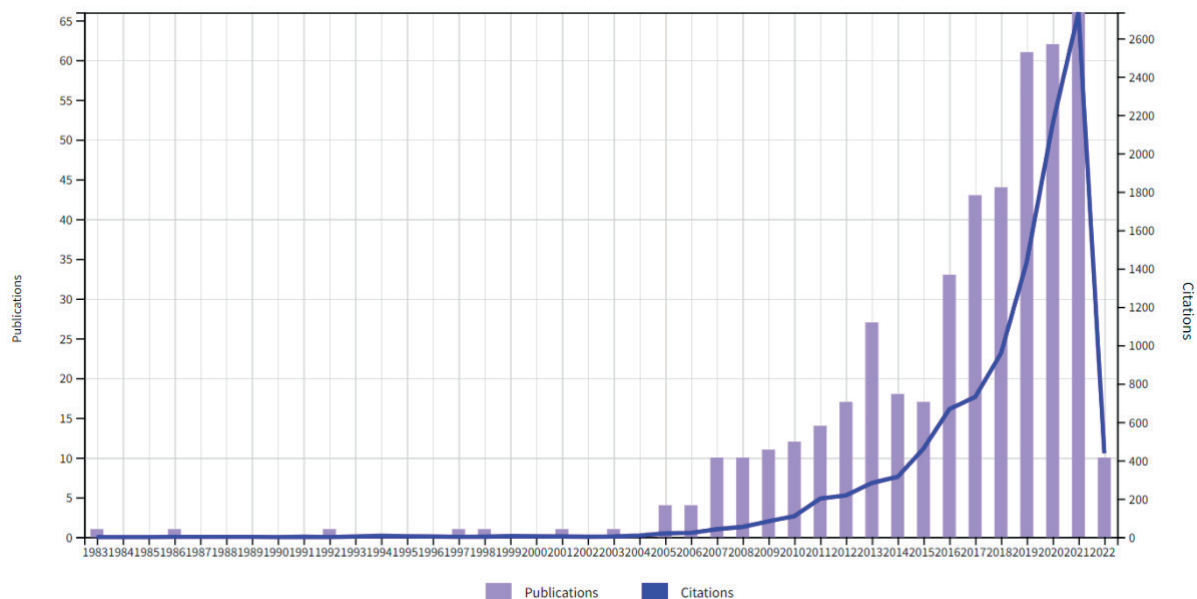


Figure 1. Mixed Publications and Citations of Brand Value, Brand Experience and Brand Advocacy

Figure 2 was created with the Vosviewer package program display bibliometric maps for the network analysis of the authors in a total of 470 academic articles on brand value, brand experience and brand advocacy. The number of publications and co-author relations of the authors in the analyzes are shown in Figure 2. Common networks of authors with at least 6 citations are shown. Here as the authors; Keller, Aaker, Brakus, Holbrook and Schmitt seem to have a strong network relationship.



When we examine the authors and keywords about each of the three concepts in more detail and look at the authors who have at least 6 citations and have the highest number of authors in studies on brand value (Figure 4), it is seen that there are authors named Aaker, Keller, Erdem and Kotler.

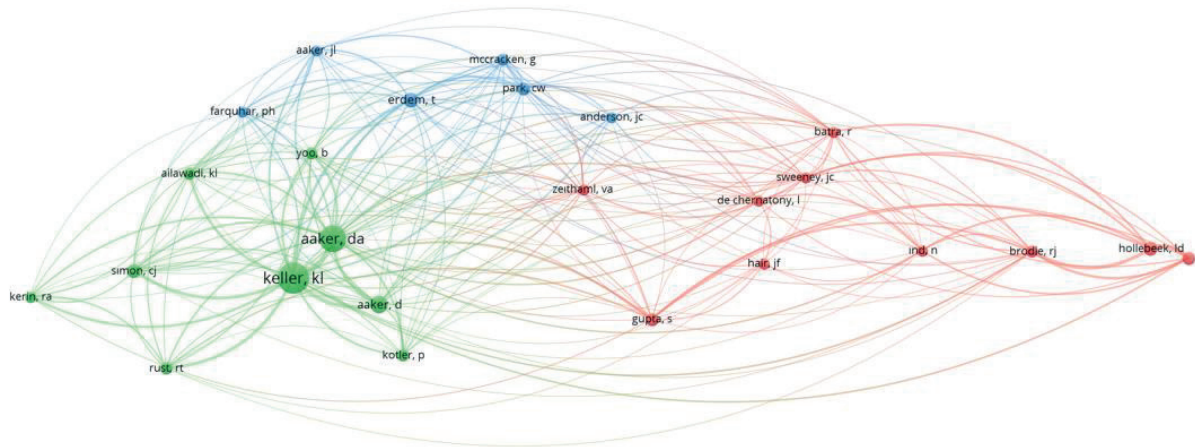


Figure 4. Number of Publications and Co-Author Relationships of Authors in Articles on Brand Value

When the keywords used in articles on brand value are examined as seen in Figure 5; It has been determined that keywords such as brand value, brand value, brand management, branding, costumer value, brand positioning, brand distinctiveness and brand compotitiveness were used.

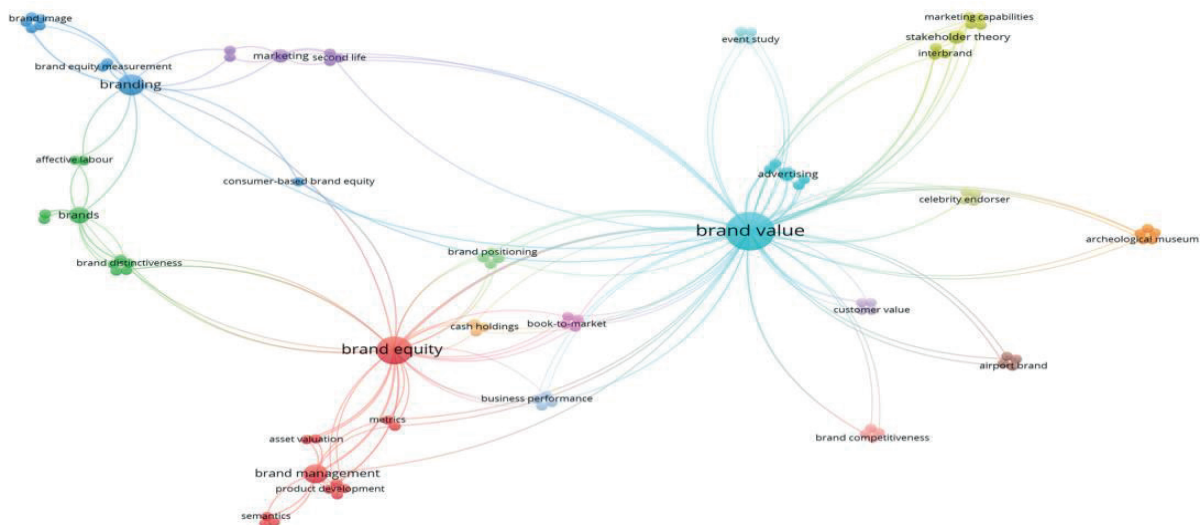


Figure 5. Keywords Used in Articles on Brand Value

The common network connections of the authors who had at least 6 citations in their article studies on brand experience are shown in Figure 6, It is understood that writers such as Brakus, Schmitt, Zarantonelli, Holbrook, Keller and Hair came to the fore and that these authors had a very intense co-authorship.

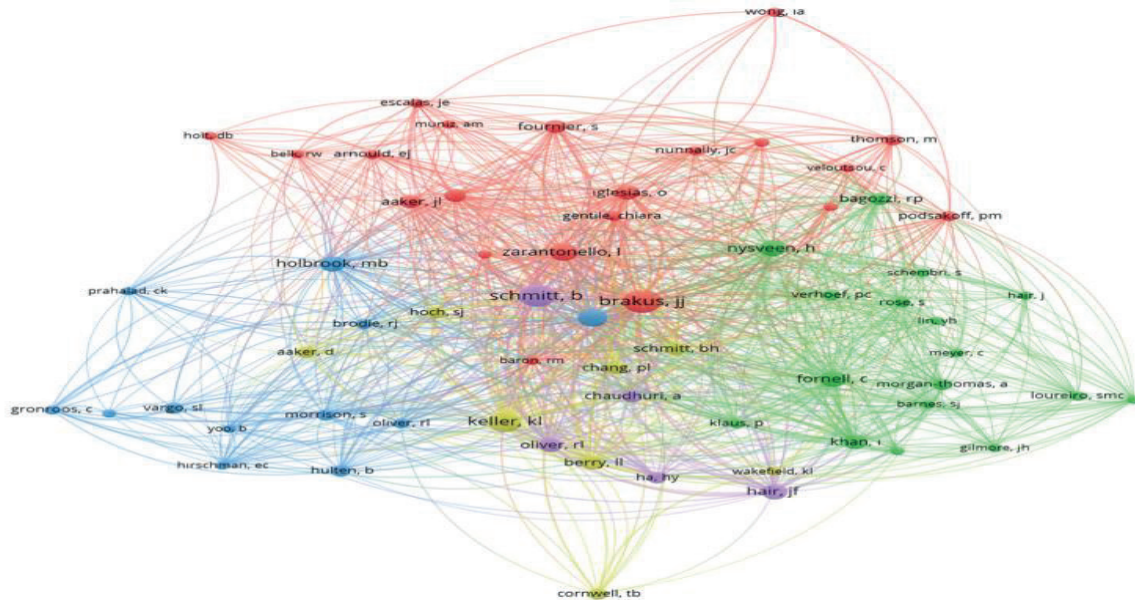


Figure 6. Number of Publications and Co-Author Relationships of Authors in Articles on Brand Experience

When the keywords used in the studies on brand experience are examined in Figure 7, especially brand experience subjects are seen. It has been determined that topics such as brand experience, brand loyalty, brand satisfaction, brand engagement, brand attitude, brand credibility and consumer behavior are discussed.

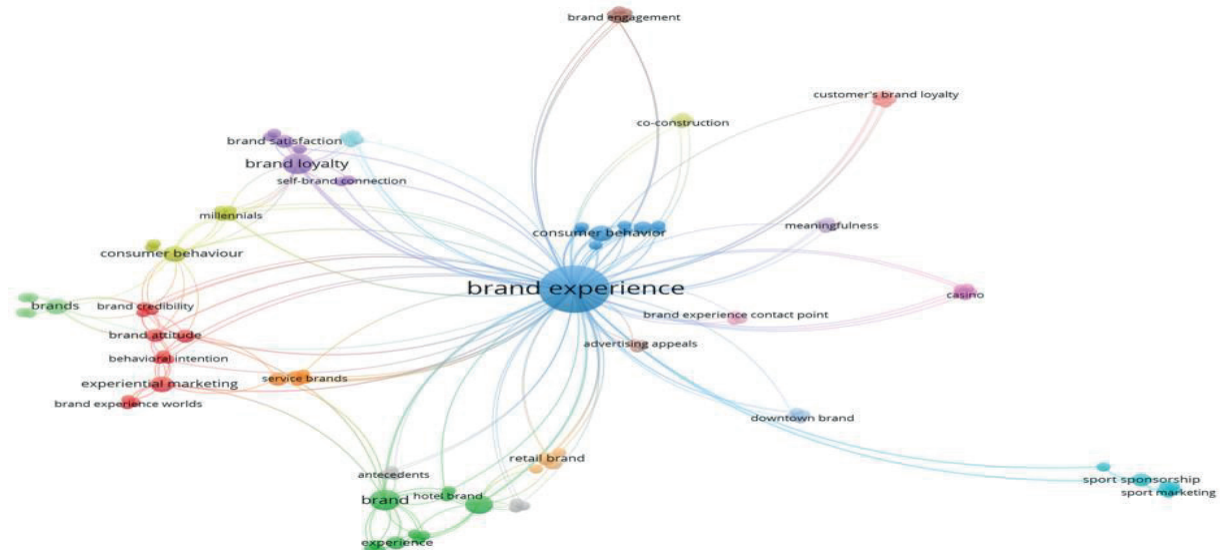


Figure 7. Keywords Used in Articles on Brand Experience

Figure 8 shows the authors and co-author network whose publications have at least 6 citations in article studies on brand advocacy. When this author network is analyzed, it is understood that authors such as Hennig-thurau, Badrinarayanan, Podsakoff, Keller, Kemp, Hollebeek, Kumar, Aaker and Fornell have a high number of citations and author networks.

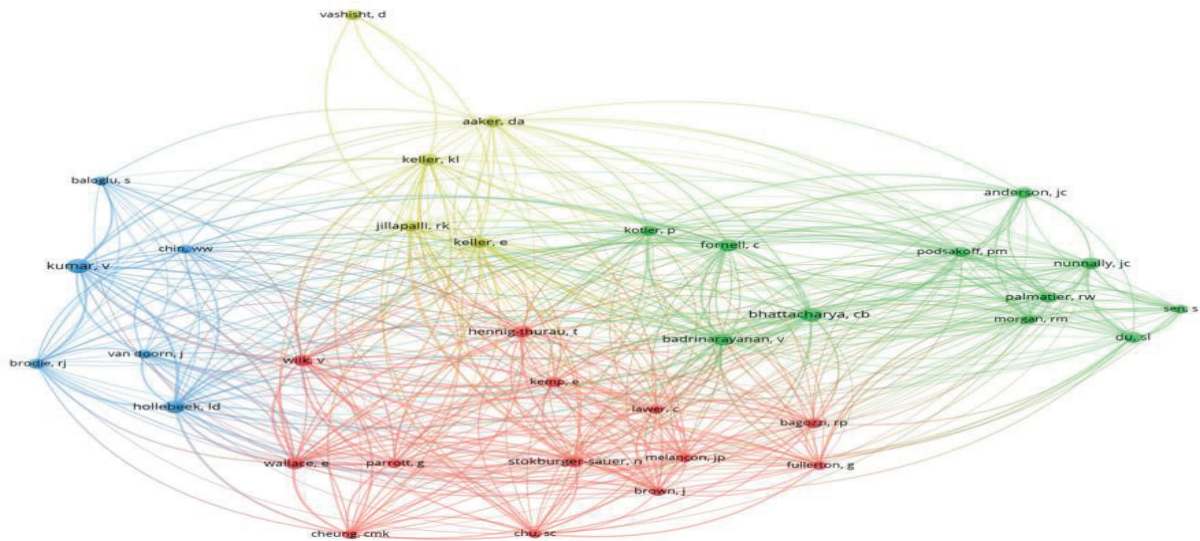


Figure 8. Number of Publications and Co-Author Relationships of Authors in Articles on Brand Advocacy

Figure 9 represents the main topics covered in studies on brand advocacy by keywords. In this context, when the keywords used in studies on brand advocacy are examined; It is understood that subjects such as brand loyalty, destination branding, customer engagement, corporate social responsiveness, brand advocacy behavior, Word of mouth and brand image are investigated, especially brand advocacy.

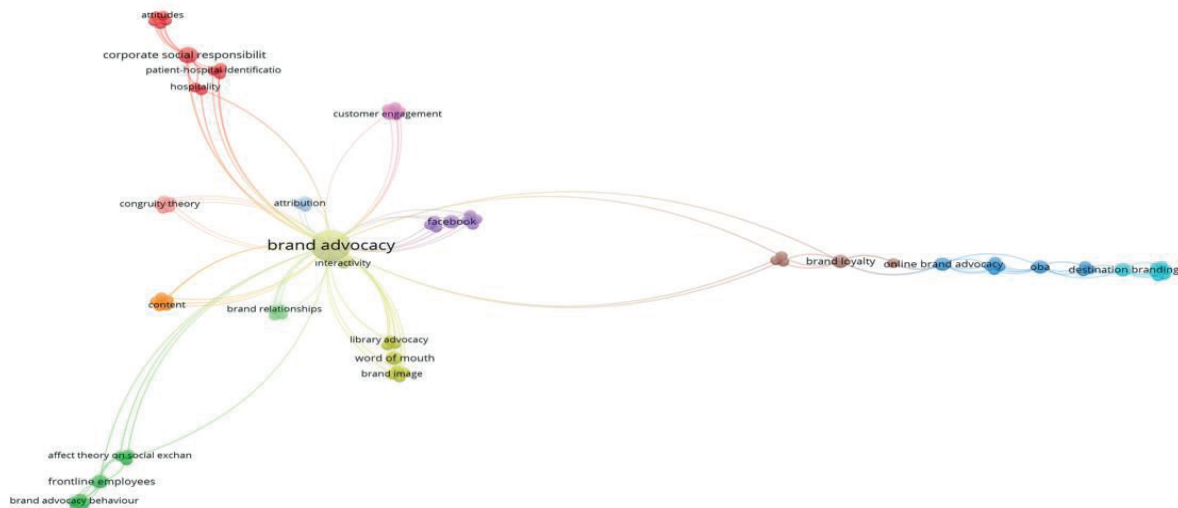


Figure 9. Keywords Used in Articles on Brand Experience

4. Results, Conclusions and Recommendations

In today's regional, national and global market whether they are destinations or businesses, the concept of brand advocacy is becoming more and more important in order to protect and increase the value of their brands. In fact, some authors emphasized the importance of using strategies based on brand advocacy (Lowenstein, 2011) and being a proactive brand advocate for customers who are satisfied with the brand's products and services and are passionately attached to the brand (Mitchell, 2013). Considering that the effect of advertisements is 14% and the effect of brand advocates is 90% in protecting and increasing the value of brands (Alire, 2007). Brand experience plays an important role in protecting and increasing the existing brand value of a business. While experiencing a



positive brand increases the perception of brand value, it also enables its customers to be voluntary and ardent brand advocates. Brand advocacy, which provides the highest protection and promotion at the lowest cost, makes a significant contribution to the promotion efforts of businesses. For this reason, it is thought that the interest in brand value, brand experience and advocacy, which has become an important and popular concept in the brand marketing literature, will increase gradually.

The findings of this study provide general information by examining the studies on brand value, brand experience and brand advocacy in the literature and provide some general information about researchers and studies on these issues. In line with the data obtained in the study, it was determined that there were not enough academic studies especially on brand advocacy. However, it is seen that academic studies on this subject have started to increase rapidly in recent years and brand advocacy has become a popular phenomenon. In this study, only academic articles scanned in the WOS database were examined. In future studies, different databases can be included in the analysis and more studies on this subject in the marketing literature can be included. The aim of the study is to present only bibliometric data on the subjects of brand value, brand experience and brand advocacy as integrated and disjointed. In this direction, evaluations can be made with different methods (meta-analysis, document analysis, etc.) in order to examine the mentioned studies in terms of purpose, method, technique and results.

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Investigation of the relationship between school principals' activity level and job satisfaction according to teacher perceptions

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Abstract

In this study, the relationship between the job satisfaction variable of teachers working in Vocational and Technical Anatolian High Schools and the activity levels of school principals was examined. At the same time, the effects of variables in the personal information form on job satisfaction and managerial effectiveness were examined. The sample of this study consists of 248 teachers working within the scope of revolving fund in Vocational and Technical Anatolian High Schools in Kahramanmaraş province, Onikisubat and Dulkadioğlu districts. In the research, "Personal Information Form", "Job Satisfaction Scale" (Keser & Bilir, 2019) and "Leader Effectiveness Scale" (Yılmaz, 2014) were used. In the light of the data obtained, the relationship between Leader Efficiency and Job Satisfaction was examined. A total of 194 teachers participated in the research. From the analyzes made, a significant relationship was found between professional seniority and leader effectiveness.

Keywords: Teacher perceptions, job satisfaction, executive efficiency, activity level

1. Introduction

In the 21st century, which is called the information age, all institutions and organizations have entered a continuous process of change, development and competition. With these developments, it is seen that all institutions, including the school, have to adapt to the events and changes occurring in their environment in order to continue their existence. Schools appear as institutions that are constantly developing and changing with new ideas, freely evaluating common wishes, and actively working to understand how people learn individually and collectively (Safia, 2020).

Just as a healthy cell structure comes to mind when a healthy body is mentioned, the concept of healthy education should come to mind as a healthy combination of all the elements that make up education or take place in the education system (Akçe, 2019). It is thought that the morale and motivation of the personnel should be at a high level in order to ensure efficiency in education and achieve the desired level of success. It is thought that managers should be a good model in the eyes of employees and arouse a sense of service on employees (Bozkurt, 2013).



In today's society, the role of school administrators in building a positive school climate gains importance (Şentürk & Sağnak, 2012). From this point of view, it is believed that providing a working environment that school administrators desire and can be effective for teachers, who are the most important party and practitioner on the education of students, is the most important prerequisite of effective education and that the school leadership behaviors put forward by the administrators have a great influence on the quality of education (Akçe, 2019). In today's society, the role of school administrators in building a positive school climate gains importance (Şentürk & Sağnak, 2012). From this point of view, it is believed that providing a working environment that school administrators desire and can be effective for teachers, who are the most important party and practitioner on the education of students, is the most important prerequisite of effective education and that the school leadership behaviors put forward by the administrators have a great influence on the quality of education (Akçe, 2019).

Effective school research is important in terms of improving the school and ensuring that it is effective (Abdurrezzak, 2015). Leadership is a function that encompasses the activities of motivating and directing the people working with, choosing the most effective and correct ways of communication and finding solutions to conflicts (Robbins & Judge, 2013). If we evaluate it in this context, it is necessary to accept that the influence of leadership in the success of schools is great.

In educational institutions, teachers and administrators are in constant interaction. Managers in this interaction; In order for them to fulfill their organizational goals, it is necessary to increase teachers' commitment to the institution, to increase their level of identification with the institution, to meet the needs of teachers, to ensure that they work happily, efficiently and willingly, and to be effective on teachers. The fact that the teachers working at the school work efficiently and willingly is important in terms of directing the students, who are the most important elements of the school, and the future of my society as a result. It is expected that the efficiency of the teacher, whose level of belonging to the school increases, will increase (Keskin & Seferoğlu, 2017).

In this context, in this study, the Relationship between School Principals' Activity Level and Job Satisfaction According to Teacher Perceptions was examined and the effect of school leadership behaviors and practices on teachers' job satisfaction was described according to teachers' views.

2. Method

In this study, it was aimed to examine the relationship between job satisfaction and leader effectiveness according to the variables of gender, age, professional seniority and educational status of the teachers in Vocational and Technical Anatolian High Schools. For this reason, descriptive survey model, one of the quantitative research methods, was used in the research. Descriptive survey studies are studies that enable individuals in the group to describe their views, attitudes, and facts about a phenomenon and event in studies conducted on large groups. This research method is used to describe the structure of objects, societies, institutions and the functioning of events (Ayberk & Aslan, 2017).

The universe of the research consists of 248 teachers working in the central districts of Kahramanmaraş, Onikişubat and Dulkadiroğlu in the 2021-2022 academic year. In this context, data were obtained from teachers working in Vocational and Technical Anatolian High Schools in Onikişubat and Dulkadiroğlu districts, which have revolving funds. Since the universe of the research was accessible, no sampling was done. Within the scope of the research, 194 teachers were reached and the obtained data were examined.



Table 1: Distribution of Research Participants by Gender

		N	%
Gender	Female	101	52,1%
	Male	93	47,9%
Your age	21-30	23	11,9%
	31-40	66	34,0%
	41-50	66	34,0%
	51 age and above	39	20,1%
Your Education Status	Licence	159	82,0%
	Master's Degree	35	18,0%
Vocational Seniority	0-5	19	9,8%
	6-10	34	17,5%
	11-15	62	32,0%
	16 age and above	79	40,7%

In the research, "Personal Information Form", "Job Satisfaction Scale" (Keser & Bilir, 2019) and "Leader Effectiveness Scale" (Yılmaz, 2014) were used. Cronbach Alpha values for both scales used in the study are given in Tables 2 and 3.

Table 2: Reliability and Validity of the Leadership Scale

Sub-dimensions	$\bar{x} \pm s.s$	Reliability	KMO
My manager (supervisor) performs leadership roles appropriately	3,82±1,05		
My manager fulfills his responsibilities as a leader well	3,77±1,17		
I am satisfied with my manager's overall effectiveness as a leader	3,88±1,13	.89	.87
I can work effectively under the leadership of my manager	3,77±1,17		
Leadership	3,80±1,03		

Table 3: Reliability and Validity of the Job Satisfaction Scale

Sub-dimensions	$\bar{x} \pm s.s$	Reliability	KMO
I am very satisfied with my current job			



Most days I come to work eagerly	3,77±1,17		
My work seems to be endless every day. (R)	2,11±0,94		
I find my job fun	3,96±0,94	.84	.83
I think my job is unpleasant.(R)	3,73±1,01		
Job satisfaction	3,81±0,88		

As can be seen in Tables 2 and 3, the Cronbach Alpha values in the sub-dimensions of both scales used in the study were .70 and above, and it was revealed that the study was reliable.

Findings

According to the data obtained as a result of the research, the relationship between the teachers' job satisfaction variable and the school principals' activity levels was examined.

- In the study, it was determined that the perceptions of leadership were not different according to the gender of the participants ($t = -0.06$, $p = 0.95$). It was determined that the leadership perception levels of female and male participants did not differ.
- In the study, it was determined that the job satisfaction levels of the participants were not different according to their gender ($t = 0.98$, $p = 0.33$). In the study, it was determined that the job satisfaction levels of male and female participants did not differ.
- In the study, it was determined that the leadership perceptions of the participants were not different according to their education levels ($t = -0.66$, $p = 0.51$). In the study, it was determined that the leadership perception levels of the participants who had undergraduate and graduate education did not differ.
- In the study, it was determined that the job satisfaction levels of the participants were not different according to their education levels ($t = 0.22$, $p = 0.82$). In the study, it was determined that the job satisfaction levels of the participants who had undergraduate and graduate education did not differ.
- In the study, it was determined that the leadership perceptions of the participants were not different according to their age ($F = 0.88$, $p = 0.45$). In the study, it was determined that the leadership perception levels of the participants who were 21-30, 31-40, 41-50 and over 51 years old did not show any differences.
- In the study, it was determined that the job satisfaction levels of the participants were not different according to their age ($F = 2.30$, $p = 0.08$). In the study, it was determined that the job satisfaction levels of the participants aged 21-30, 31-40, 41-50 and over 51 did not differ.
- In the study, it was determined that the leadership perceptions of the participants were not different according to their professional seniority levels ($F = 0.79$, $p = 0.50$). In the study, it was determined that the leadership perception levels of the participants who had a seniority of 0-5, 6-10, 11-15 and over 16 years did not differ.
- In the study, it was determined that the job satisfaction levels of the participants were different according to their professional seniority levels ($F = 3.63$, $p = 0.01$). In the research, it has been determined that the participants with a professional seniority level of 6 years or more have higher job satisfaction levels than the participants with less than 5 years.
- It has been determined that there is no significant relationship between the job satisfaction levels of the participants and their perception of leadership.



- It was observed that the leadership perceptions of the participants did not affect their job satisfaction levels ($r=-0.01$, $p=0.87$, $p>0.05$).

3. Results, Conclusions and Recommendations

In this part of the research, the opinions of teachers working in public schools in Kahramanmaraş Onikişubat and Dulkadiroğlu districts were examined, the Analysis of the Relationship between the Activity Level of School Administrators and Job Satisfaction According to Teacher Perceptions, teacher perception levels and these perception levels by gender, years of service at school, professional seniority and educational status. In addition, it was examined whether there is a significant relationship between the Level of Executive Efficiency and Job Satisfaction.

In the study, it was determined that the leadership perceptions of the participants were not different according to the gender. It was determined that the leadership perception levels of the female and male participants did not differ. In the study, it was determined that the job satisfaction levels of the participants were not different according to their gender. In the study, it was determined that the job satisfaction levels of male and female participants did not differ. According to these results, which emerged in Bayram (2020)'s study titled *The Effects of Servant Leadership on Organizational Commitment and Job Satisfaction: A Field Study*, it was concluded that the perception of the concept of servant leadership did not differ in terms of gender. These results are similar to our research. Saylık (2015) *According to Teachers' Views on Critical Leadership Competencies of School Principals*, male teachers were more likely to agree that school principals have critical leadership competence than female teachers. This is not in line with the research findings. In the studies conducted by Akbey (2006), it was found that gender does not affect critical thinking dispositions and levels. This is in line with the research findings.

In the study, it was determined that the leadership perceptions of the participants were not different according to their education levels. In the study, it was determined that the leadership perception levels of the participants who had undergraduate and graduate education did not differ. In the study, it was determined that the job satisfaction levels of the participants were not different according to their education levels. In the study, it was determined that the job satisfaction levels of the participants who had undergraduate and graduate education did not differ. Yılmaz (2014) found a significant relationship between the job satisfaction levels of the teachers participating in the study named *“Examination of Job Satisfaction and Organizational Trust Levels of Teachers Working in High Schools”* according to the education level variable. determined. This research differs with its findings. Bayram (2020) *The Effects of Servant Leadership on Organizational Commitment and Job Satisfaction: A Field Study* Before starting the research, it was predicted that the results of the participants' educational status would affect their leadership levels, their commitment to the organization and their job satisfaction. It was concluded that there was no difference. According to the research findings, it is said that the perception of servant leadership does not differ according to the education level and there is a homogeneity situation. This result is similar to our study.

In the study, it was determined that the leadership perceptions of the participants were not different according to their ages. In the study, it was determined that the leadership perception levels of the participants who were 21-30, 31-40, 41-50 and over 51 years old did not show any differences. In the study, it was determined that the level of job satisfaction of the participants was not different according to their age. In the study, it was determined that the job satisfaction levels of the participants aged 21-30, 31-40, 41-50 and over 51 did not differ. Soydaş (2021) found a significant relationship between the job satisfaction levels of the teachers who participated in the study named *“Examination of Job Satisfaction and Organizational Trust Levels of Teachers Working in High Schools”* according to the age variable. This also differs from the research findings. Bayram (2020) *The Effects of Servant Leadership on Organizational Commitment and Job Satisfaction: As a result of the analyzes and findings obtained*, the relationship between age groups and servant leadership was determined. It differs with research findings.



In the study, it was determined that the leadership perceptions of the participants were not different according to their professional seniority levels. In the study, it was determined that the leadership perception levels of the participants who had a seniority of 0-5, 6-10, 11-15 and over 16 years did not differ. In the study, it was determined that the job satisfaction levels of the participants were different according to their professional seniority levels. In the research, it has been determined that the level of job satisfaction of the participants with a professional seniority level of 6 years or more is higher than the participants with less than 5 years. Düzenli (2021) found no significant relationship between job satisfaction levels according to the seniority variable of the teachers who participated in the study named "Examination of Job Satisfaction and Organizational Trust Levels of Teachers Working in High Schools". It is similar to this research. According to the results of Safia (2020) Research on the Relationship Between the Transformational Leadership Roles of Secondary School Principals and the Learning Organization of Schools and Teachers' Job Satisfaction Levels According to Teachers' Perceptions, it is seen that there is a significant difference in the views of teachers on the transformational leadership roles of school principals according to their seniority. It differs with this research.

It has been determined that there is no significant relationship between the job satisfaction levels of the participants and their perception of leadership. It was observed that the leadership perceptions of the participants did not affect their job satisfaction levels. According to the data obtained in the study, it was seen that the manager's fulfilling his leadership roles, fulfilling his responsibilities well, satisfaction with the general activities of the manager as a leader, and working effectively under the leadership of the manager did not significantly affect the job satisfaction levels. In the study titled The Mediating Role of Self-Leadership and Psychological Empowerment in the Effect of Regular (2021) Perceived Fatherly Leadership Behaviors on Perceived Self-Performance, no effect was found between psychological empowerment and self-performance. These results reveal similar data with the research. Osmanoğlu (2021), in his research named The Effect of Leadership Styles on Innovative Work Behavior and Job Satisfaction, when the effect of transformational leadership and empowering leadership on innovative work behavior is examined; concluded that transformational leadership has a statistically significant and positive effect on innovative work behavior. These results differ from the research results.

According to the data obtained in the study, it was seen that the situation of being able to work effectively under the leadership of the manager did not significantly affect the level of job satisfaction. According to the data obtained in the research, there is no significant difference between the Gender, Age, Seniority, Leadership Perceptions and Job Satisfaction Perception Levels and Educational Levels of the Participants. According to the data obtained, it is seen that there is a significant relationship on professional seniority and job satisfaction. When evaluated as a result, consistent results emerged between the data obtained in the study and the opinions of the teachers. Based on the results of the research, the following recommendations can be made:

- According to the results of the examination on management, it is not possible to have a single management model that can be effective in every situation and in every organization. It can be thought that providing in-service training activities and management training to school administrators by the Ministry of National Education will contribute to the formation of an effective, productive and sharing education-teaching environment.
- It can be thought that a system where school principals can receive feedback will be implemented and their leadership style behaviors will be evaluated by teachers and they will be in continuous learning and development.
- It is the management staff that is responsible for the realization of the organizational goals in educational institutions and the provision of effective and efficient education and training environment conditions. Therefore, leaders with merit should be preferred in managerial appointments.
- Leadership skills can be developed with both theoretical and practical training by encouraging administrators to receive postgraduate education in the field of Educational Management.



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Philosophy of postmodernism and its influence on modern education

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Abstract

Changes in the economy, culture, technology in the second half of the 20th century and at the beginning of the 21st century brought to life the need for philosophical reflection, which puts forward a new value paradigm for interpreting the world, including education. The urgent tasks of addressing this topic are the need for a new approach to education and changing the conceptual framework of the philosophy of education.

On this paper we would like to discuss postmodernism philosophy and its' effects on modern education and education systems. Paradigm in education changing based on postmodern philosophy and new perspectives are necessary to create our future education system for 21 century skills.

Keywords : Postmodernism, philosophy, postmodern education, challenge in education system

1. Introduction

Postmodernization theories are revolutionizing modern ideas about education, and therefore it is difficult to overestimate the opportunities that the postmodernization challenge opens up for pedagogical theory and education. Post-modernization theory generally casts doubt on the idea of civilizational development and the general progress of mankind. If traditional educational plans and projects were based on the belief in the universality of such main emancipatory concepts as freedom, progress, equality, democracy, justice, and justified this from the standpoint of a single metalanguage, then postmodern theory denies such a single metalanguage. Postmodernism rejects such concepts (indicating perspectives) as democracy, progress, autonomy, equality, freedom), it considers them oversaturated with ideological and political tension, the desire for truth and the transformation of the individual, original, unique in honor of the mandatory "true order". In postmodernism, the "total" nature of knowledge experiences "dispersion, because there is no "single knowledge" (universal and "ahistorical"). In general, postmodernist ideas look rather contradictory, paradoxical, and indefinite. They can be perceived as a transitional state, when postmodernism successfully destroys the sides and elements of the previous era, but cannot offer a new methodology for transforming the world.

Postmodernism is strong only in its critical aspect, and not in its productive application to the experience of educational systems. Assessing the impact of postmodernism on relations in the educational sphere, in our opinion, one should agree with postmodernists in their positive-heuristic aspects of criticizing the claims of philosophy and other social sciences to "absolute truth", perfection, unlimitedness and ubiquity of the use of proposals and conclusions.

The purpose of this study is to assess the impact of postmodern ideas on educational practices. The distinctive features of the postmodern society, which act as "challenges" to science, culture and education, are analyzed. Actual problems and new tasks of education that arise with the growth of dehumanizing tendencies in postmodern society are considered. Research problem: how does the philosophy of postmodernism influence the development of modern education and which ideas of postmodernism can have a great influence on students.

Education is a key factor in the sustainable development of democracy and peace within each of the countries and between them, social integration and participation in the affairs of society. Education has a positive effect on generational, gender and class differences, social and economic barriers within society. Education is essentially a human right, which enriches the principles of his freedom and social responsibility, rational attitude to life and health. It is this understanding of education that stimulated the launch of the Bologna process, which is still regional, but focused on expanding the educational space, its accessibility, and openness. Education plays a key



role in this process. In the course of transformations in the modern globalizing world, one can still single out stable features that indicate that education, like the economy, politics, culture in general, is subject to the constant influence of postmodernism, it is, as it were, “planned” into the postmodernist space. The analysis of postmodern attitudes is of particular importance due to the fact that the followers of traditional pedagogy in their perception of the epistemological provisions of postmodernism experience a real drama (both moral and theoretical), since postmodernism not only deprives pedagogy of the “core of values” and “universal theory”, but also contains accusations of her ethno-, anthropo- and eurocentrism, leads to the dominance of nihilism, radical relativism and skepticism. Postmodernization theories are revolutionizing modern ideas about education, and therefore it is difficult to overestimate the opportunities that the postmodernization challenge opens up for pedagogical theory and education. Postmodern philosophy expresses disappointment in rationalism, in the values and ideals developed on its foundations. It is characterized by a skeptical attitude towards man as a subject of activity and cognition, a denial of anthropocentrism and humanism. Post-modernization theory generally casts doubt on the idea of civilizational development and the general progress of mankind. If traditional educational plans and projects were based on the belief in the universality of such main emancipatory concepts as freedom, progress, equality, democracy, justice, and justified this from the standpoint of a single metalanguage, then postmodern theory denies such a single metalanguage. Postmodernism refuses such concepts (indicating perspectives) as democracy, progress, autonomy, equality, freedom), it considers them oversaturated with ideological and political tension, the desire for truth and the transformation of the individual, original, unique in honor of the mandatory “true order” (Zbyshko Milosik, 2004). In postmodernism, the “total” nature of knowledge experiences “dispersion, because there is no “single knowledge” (universal and “ahistorical”). Each knowledge reflects some form of historical practice and in this sense is a substantiated “historical truth”. Postmodernists reject all universalist claims of the “Great Explanations” of the past (a complex of modernist theories and ideas), which embody the desire to cover all times and spaces at once, to discover the laws of society, its general structures and universal logic. These theories, according to postmodernists, are a “totalizing logocentric project” that produces “categorical truth” and “illusory rationalism.” According to postmodern ideas, the formal and general laws on which previous theories are based are neither independent nor objective. At best they are textually relative, and at worst completely arbitrary. Lyotard, for example, calls for declaring “war on the whole”, on truth as a system of analysis, and criticizes all previous philosophy as a philosophy of history, progress, liberation and humanism (Lyotard J.F, 1998). Moreover, anti-systematicity is understood not simply as an attempt to abandon the claim to the integrity and completeness of the theoretical comprehension of reality. According to postmodernists, the problem lies in the impossibility of fixing the existence of rigid, self-closed systems not only in the social and educational environment, but also in the economy, and in politics, and in culture. New, “postmodern” thinking generally arises outside of traditional conceptual oppositions (subject - object, whole - part, internal - external, real - imaginary), it does not operate with the usual stable integrity (East - West, capitalism - socialism, male - female, etc.). d) (Baudrillard J, 1995). Postmodernists reject the modernist belief that “there is a precise or decisive connection between science, social enlightenment, and social progress”, that the use of the social sciences will lead to the emancipation of all mankind. The uniqueness of the postmodern critique of modern social theory is that it denies the entire concept of the social sciences, which until now has been recognized and shared by all schools and paradigms. Postmodernists believe that sciences originating from the modernist tradition are trying to discover the “logic of society”, “a single and truthful language that “mirrors the world”, claiming to illuminate the “universal state of mankind”. They dream of discovering “a universal rationality that provides objective and value-free standards (Zbyshko Milosik, 2004). The denial of the legitimacy of the basic principles of education by postmodernists, the use of a discursive analysis of social reality leads to the fact that fundamental values will be reduced to a historical and social construction that reflects the specific relations of power, knowledge and truth in a given place at a particular moment in time. Abstract concepts, which have always served as indicators of the development of education, were the basis of all pedagogical projects, lose their universal significance in postmodernism (Zbyshko Milosik, 2004). Rejecting all modernist conceptions of social reality, postmodernists replace them either with the perception of reality as a “linguistic convention” (“convention”), or with the use of a contextual theory of reality. In fact, according to



Lyotard, there is not and cannot be a universal language, just as there is not and cannot be universal rationality – there are only different “language games” (Lyotard J.F, 1998). In general, such a methodological attitude in a positive sense contributed to the de-ideologization of science and education, the formation of pluralism and tolerance. Postmodernism does not accept the very idea of a border, a hierarchy, a ban. In postmodernism, classical oppositions between subject and object, sublime and base, humanitarian and natural sciences, beginning and end, present and past are abolished. One can not only turn into another: it is. It all depends on the direction of view. It is the perceiving subject who gives meaning to what he sees and organizes it in his mind. The place of the Author, who forms a set of quotations and borrowings, was taken by the Scriptor, who collects in a new order what already exists in the cultural space. The Scriptor connects endless chains of knowledge into random knots, and the Reader interprets them. Reality becomes intertextual, because everything is intertwined with everything, everything changes and often turns into its own contradiction. Under such conditions, a personality standardized and “hewn” according to the instructions of modern “owners of pedagogical identity” will not be able to realize itself. In its most radical versions, educational postmodernism comes to a complete denial of the expediency of the existing network of schools and to the transition to “anti-pedagogy”, since modern influences on young people are harmful and unreasonable, given the complete uncertainty of the characteristics of the future (society, economy, labor market, culture, etc.). d.). Postmodernism offers a not too serious attitude to the world, as if deprived of fundamentality and crumbling into pieces. It is characterized by eclecticism and a fundamentally playful, ironic attitude to the world, to spiritual and moral values. From the point of view of postmodern theorists, the worldview of a modern postmodern person does not have certain powerful foundations, because all forms of ideology are blurred, do not rely on will, everything that was previously considered incompatible coexists in it; there is no stable inner core in the postmodern worldview. The attitude of a postmodern person can be defined as neo-fatalism, because a person no longer perceives himself as the master of his own destiny, he believes in the game of chance, in unexpected, spontaneous luck. The goal, and even more so the big goal, ceases to be an important value; nowadays there is a “hypertrophy of means and atrophy of ends” (Paul Ricoeur). Disappointment in ideals and values, in the disappearance of the future, which turned out to be stolen, led to increased nihilism and cynicism. Ethics in a postmodern society fades into the background, skipping forward aesthetics, the cult of sensual and physical pleasures (Deleuze J, 1995; Derrida J, 1991). The belief in the complexity and fundamental inconsistency of social life leads to the perception of the category “feature” as one of the important foundations of the entire pedagogical theory. The world and people are diverse, and difference, peculiarity, dissimilarity to others is not a sin, but an expression of the wealth of our society. Therefore, in the future, it is necessary not to eliminate differences, features, but to cultivate them. This applies to pedagogical activity at all its levels, from educational policy to the daily reality of the school class. At the same time, it is not difficult to note the threats of accepting post-modernization proposals. They are associated with the absolutization of deconstruction and difference, as well as the denial of the emancipation project. For pedagogy, this means the recognition of every aspect of its activity as a movement towards domination, which means it is a threat to the “death” of pedagogy. But after all, no matter how discourses compete, whether public life goes beyond them, people are constantly doing very real things, and this makes pedagogy take the risk of finding ways to change the conditions in which we live (liquidation of injustice, discrimination and manipulation of consciousness). People, on the other hand, feel injustice and suffer quite realistically, and therefore “a specific inconsistency with the world” can become the basis for a certain pedagogical action (Zbyshko Milosik, 2004).

2 Method

New cultural values acquire special meaning in the system of higher education, which serves as one of the main agents of socialization, that is, the reproduction of the value structures of societies. Higher education in the new alignment of value orientations no longer serves as a source of dissemination of fundamental scientific values. Consumers of higher education primarily value: a) its “accessibility or “convenience”, i.e., the maximum reduction in physical effort to obtain the desired result; b) economic averageness and efficiency (“pay less - get more”); c) bright functional packages of training programs that facilitate the use of the “commodity”, which is knowledge



and skills; (Kozłowski P, 1997). d) the subsequent maximum commercial feasibility of the acquired knowledge. In this sense, universities are no longer seen as sanctuaries of the mind, and professors and teachers as clergymen. Both of them are more likely to evolve in the direction of service personnel, creating effective products that are ready to use. Moreover, the professorship produces a product in the domestic education market, and students (in the future, graduates and young professionals distribute it (i.e., themselves) in the external market (Robert Twigger, 2002). In our opinion, the main characteristics of education in the conditions of postmodernism are the following can be considered:

1. Rejection of the ideology of dictatorship as far as the worldview of the student is concerned. The school no longer seeks to form a person with given properties; it sets the task of developing the ability to reflect, transform; she prefers a man of possibilities, not realizations.
2. Plurality of pedagogical principles, which arose in place of one pedagogical system; moreover, they can be absolutely opposite, but at the same time not negate each other, but coexist peacefully.
3. Significantly greater freedom of teachers and students, which is sometimes perceived as destruction.
4. Transformation of the teacher's authority, which is no longer the embodiment of Truth and Knowledge. The teacher loses his institutional authority, which arises from the very fact of recognizing the role of a mentor. Authority is increasingly acquiring a "personal" character. In the situation of postmodernism, the teacher is called upon to create conditions for an "educational dialogue", where, together with his students, he will look for a path to success in a complex, changing world.
5. Implementation of multicultural education. In a situation where postmodernism affirms "differences" and features, the cultures and religions of the West lose their position as a standard against which all other cultures were perceived as "other - in the sense of" worse ". The teacher has no right to impose even a homogeneous student group a single way of seeing reality. Postmodernism opens the way to multicultural education, dialogue of cultures, as well as the realization of full equality for women.
6. Pluralism of lifestyles and subcultures in the school and student community. The transition to postmodernization approaches enhances the role of the class, the student group. The rejection of hard intellectualism, encyclopedism and traditional forms of education creates conditions for pupils and students to receive social practice and life experience. The teacher should be open to the values and lifestyles that pupils and students bring to classroom and extracurricular communication (youth subculture, music, slang).
7. Tolerance towards any differences and peculiarities of pupils and students. The belief in the complexity and fundamental inconsistency of social life leads to the perception of the category "feature" as one of the most important foundations of the entire pedagogical theory. The world and people are diverse, and differences, peculiarities, dissimilarity to others is not a sin, but the revelation of the wealth of our society. Therefore, in pedagogical activity at all its levels, from educational policy to the daily reality of a school class or student group, it is necessary not to eliminate differences, but to cultivate them.
8. Refusal of forced socialization, fitting to the "ideal identity" (Foucault M, 1996). Opportunities are created for liberation from the "chains of identity" that arise under conditions of forced socialization, and then the person himself creates the world, realizing that what seemed natural, universal, in fact, has a local, historical character. Of course, one cannot but agree with postmodernists in their positive heuristic aspects of criticism of the claims of philosophy and other social sciences to "absolute truth", perfection, and the limitlessness of the use of proposals and conclusions. It should be recognized that it would be advisable to expand and diversify the educational space, to supplement primitive one-line tasks with problematic ones with many answers and solutions, to support "non-standard" and original thinking, the richness and diversity of natural and cultural heritage, etc. At the same time, one must be careful with the transition to complete freedom of choice by students of their own "paths of development", the cultivation of doubts and relativism at all stages of education and upbringing (Fidler L, 1993). This may be useful, but not for everyone and not at all levels of the educational system. Otherwise, it is easy to form nihilism and a complete rejection of the culture and experience of our ancestors, distrust of the exact sciences, enthusiasm for all religions of the world and sectarian teachings.



3 Result and Discussion

In general, postmodernist ideas look rather contradictory, paradoxical, and indefinite. They can be perceived as a transitional state, when postmodernism successfully destroys the aspects and elements of the previous era, but cannot offer a new methodology for transforming the world. Postmodernism is strong only in its critical aspect, and not in its productive application in the experience of educational systems. Assessing the impact of postmodernism on relations in the educational sphere, in our opinion, one should agree with postmodernists in their positive heuristic aspects of criticizing the claims of philosophy and other social sciences to “absolute truth”, perfection, unlimitedness and ubiquity of using suggestions and conclusions.

The postmodern educational project emphasizes the use of knowledge for practical purposes as some guarantee of success. Knowledge, ideas, and language are created by humans, not because they are "true" but rather because they are useful. Truth does not exist, or it is unknowable. Truth is considered relative to culture. This point of view reflects the profound influence of postmodern ideas on the modern education system.

Phenomenon postmodernism in education is a radical revision and rethinking the foundations on which the entire building of the European culture and civilization. On the one hand, postmodernism is overly relativizes moral values and norms, discarding priorities and clear guidelines. On the other hand, the power of postmodern thinking precisely in the recognition of cultural polyphonism, which opens up space for genuine dialogue, in freeing it from dogmatism, emphasizing radical pluralism of language games.

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Relation between the levels of political skill of school administrators and their skills of using informal communication

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Abstract

This research has been carried out for the purposes of determine the relation between the level of political skills of school administrators and their skills of using informal communication. Descriptive relational scanning model has been used in the research. The sample of the research includes 211 administrators selected by means of simple random sampling. According to the research results, school principals have high-level political skills. It has been found out that they resort to sincerity at most and to social skilfulness at least among the subdimensions of political skills. The highest perception in informal communication has been seen in the sub-dimensions of “the Frequency of Use of Informal Communication” and “the Positive Consequences of Informal Communication”. In the correlation analysis, a positive, low-level and significant relation has been determined between the overall situation and sub-dimensions of political skills and the frequency of use of informal communication and its positive results.

Keywords: Political skill, education, informal communication, school administrators

1. Introduction

Every organization has its own clear goals. In addition, the stakeholders in the organization also have their own explicit or hidden goals to be successful and to gain power. In order to achieve these goals, employees exhibit some political maneuvers, tactics and behaviors. For this reason, today all organizations, regardless of their shape, purpose and structure, are seen as political arenas (Mintzberg, 1985). In organizations that have turned into political arenas, one of the important conditions for success is to be able to influence people. It is not easy for individuals to obtain and maintain power-status. To achieve this, they need to be politically skilled (Eryılmaz, 2017).

Where there is a power struggle, policies and, accordingly, political behaviors are seen horizontally and vertically. Individuals need these political moves in order to maintain the image they have designed and exhibited (Ferris, Davidson, Perrewe, & Atay, 2010). Technical knowledge alone is not enough to achieve success in business life. At the same time, it is necessary to know what and how to do it. In addition, while doing these, they need to know how to turn opportunities into advantages at the right timing and on the right ground (Ferris et al., 2010). For the implementation of these processes described, the concept of political competence comes into play.

Conceptually, political competence is to influence people by giving them confidence and belief (Buchanan, 2008) and to use their social skills in different situations that are encountered or may be encountered (Eryılmaz, Dirik, & Gülova, 2017). Political competence is the ability of someone in the organization to mobilize them for personal or organizational purposes by using their knowledge about another person or people in the organization (Ahearn, Ferris, Hochwarter, Douglas, & Ammeter, 2004; Ferris et al., 2010). of a leader; to the followers who see the goals



they have determined as their own in order to be effective and successful; In order to have these followers, he needs some skills such as communication, empathy, mentoring and influencing others (Ferris et al., 2010). In this context, political competence is, in a sense, the ability to manage perception. It can be said that schools, which are educational organizations, are political arenas because political behaviors are exhibited excessively. As with teachers in schools, the ability of administrators to achieve their goals is closely related to their political skills (Ahearn et al., 2004; Özdemir & Gören, 2016).

Managers need many side skills while trying to achieve all these through political competence. Some of these are oratory, diction, social intelligence, communication and the like. Perhaps the most important of these is communication skills. Communication in organizations takes place through two channels, formal (formal-formal) and informal (informal-informal). Formal communication is a communication network created as a requirement of the organizational structure in an institution (Tutar, 2003: 125). In formal communication, all roles, statuses and norms in the organization are predetermined. It is a form of communication that does not contain emotion and spirit and is based on a hierarchical order. Informal communication is; It is a form of communication that takes place outside of formal communication and includes all kinds of interactions that formal communication cannot foresee or ignore.

Considering all these, the political skills and communication skills of the administrators working in a school, especially the level of their use of informal communication, play an important role in achieving the school's goals. From this point of view, "What is the relationship between the political skill levels of school administrators and the way they use informal communication?" This question constitutes the problem statement of this research.

2. Method

In this study, descriptive-relational survey model was used. In scanning models, the event, person or object, which is considered as a subject in the research, is tried to be defined without changing their conditions (Karasar, 2008: 77). Descriptive-relational scanning models are to describe an event or situation as it exists in a research, and to determine the relationship between the variables, the effect and their degrees (Kaya, Balay, & Göçen, 2012).

In this research, the population consists of 436 administrators working in 67 official primary schools, 63 secondary schools and 45 high schools in the city center of Batman in the 2017-2018 academic year. Of these 436 administrators, 175 work in primary schools, 137 in secondary schools and 124 in high schools. Can (2017: 30) expressed the opinion that a sample view consisting of 165 people in a homogeneous distribution with a margin of error of 5% and 217 people in an inhomogeneous distribution in a population of 500 people may have the power to reflect the universe. By using the simple random sampling method, it was tried to reach the sample that has the power to represent the population in the research. In the simple random sampling method, the probability of all samples being selected is equal to each other and the selection of one does not affect the probability of the other being selected (Büyüköztürk et al.; 2016: 85). The universe of the research consists of 211 managers determined in this way. The information about the sample evaluated in the study is presented in Table 1.



Table 1. Information about the sampling in the study

		f	Yüzde (%)
<i>Position</i>	School principal	58	27.5
	School assistant principal	153	72.5
<i>Your field</i>	Verbal domain	102	48.3
	Numeric field	48	22.7
	Equal Weight	61	29.0
<i>School Type</i>	Primary school	71	33.6
	Middle School	71	33.6
	High school	69	32.7
<i>Seniority</i>	10 Years and Under	55	26.1
	Between 11 and 20 Years	120	56.8
	21 and Above	36	17.1
<i>The time you worked at your school</i>			
	12 Months and Under	52	26.6
	Between 13 – 24 Months	29	13.7
	Between 25 – 36 Months	38	18.0
	Between 37 – 48 Months	59	28.0
	49 Months and Up	33	15.6

In collecting data in research; Ferris et al. (2005) and adapted into Turkish by Atay (2009) and the "Informal Communication Scale in Schools" developed by Toytok and Doğan (2019). Cronbach's Alpha values for both scales used in the study are presented in Tables 2 and 3.

Table 2. Reliability analysis values of the political competence scale

Sub-Dimensions of the Scale	Number of Items	Cronbach Alpha (α)	
		Atay (2009)	In this study
Political Ability (General)	18	.86	.93
Social Resourcefulness	5	.79	.86
Interpersonal Impact	4	.74	.84
Networking Skills	6	.66	.89
Sincerity	3	.68	.93



Table 3. Reliability analysis values of the informal communication scale at schools

Sub-Dimensions of the Scale	Number of Items	Cronbach Alpha (α)	
		Doğan (2017)	The study results
Frequency of Use of Informal Communication	4	.58	.70
Causes of Informal Communication	4	.79	.82
Reasons for Using Informal Communication	4	.79	.80
Negative Consequences of Informal Communication	5	.81	.81
Positive Consequences of Informal Communication	6	.82	.89

As can be seen in Tables 2 and 3, Cronbach's Alpha values in the sub-dimensions of both scales used in the research are .70 and above, so the study seems to be reliable.

3. Findings

According to the data obtained as a result of the research, the results of the correlation analysis based on the relationship between the "political skills" of the managers and the "informal communication skills" are given in Table 4. According to the data in Table 4;

- There is a positive, low-level and significant relationship between the overall Political Competence and the Frequency of Using Informal Communication ($r = .209$ $p < .050$) and its Positive Results ($r = .199$ $p < .050$) sub-dimensions.
- There is a positive, low-level and significant relationship between the Social Proficiency sub-dimension of Political Skill and the Frequency of Using Informal Communication ($r = .207$ $p < .050$) and Positive Results ($r = .153$ $p < .050$).
- There is a positive, low-level and significant relationship between the Interpersonal Impact sub-dimension of Political Competence and the Positive Results of Informal Communication ($r = .183$ $p < .050$).
- There is a positive, low-level and significant relationship between the Networking Ability sub-dimension of Political Skill and the Positive Results of Informal Communication ($r = .194$ $p < .050$) and Frequency of Use ($r = .228$ $p < .050$) sub-dimensions. while being seen; There is also a negative, low-level and significant relationship ($r = -.140$ $p < .050$) with the sub-dimension of Reasons for the Occurrence of Informal Communication.
- There is a positive, low-level and significant relationship between the Sincerity sub-dimension of Political Competence and the Frequency of Using Informal Communication ($r = .170$ $p < .050$) and Positive Results ($r = .200$ $p < .050$).

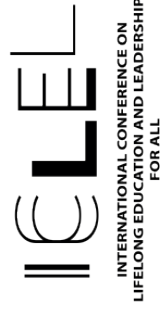


Table 4. Correlation analysis findings regarding the relationship between political skills and the ways of using informal communication.

	1	2	3	4	5	6	7	8	9	10
1 Political Ability Social Resourcefulness	1									
2 Political Ability Interpersonal Influence	.769**	1								
3 Political Skills Networking Skills	.769**	.842**	1							
4 Political Ability Sincerity	.700**	.745**	.764**	1						
5 Political Skill General	.898**	.921**	.943**	.863**	1					
6 Frequency of Use of Informal Communication	.207**	.135	.228**	.170*	.209**	1				
7 Causes of Informal Communication	-.028	-.083	-.140*	-.124	-.103	.033	1			
8 Reasons for Using Informal Communication	.119	.067	.092	-.012	.082	.126	.436**	1		
9 Negative Consequences of Informal Communication	.056	.018	-.061	-.043	-.010	.040	.520**	.349**	1	
10 Positive Consequences of Informal Communication	.153*	.183**	.194**	.200**	.199**	.241**	.215**	.368**	.071	1

p < .050*. p < .010**. p < .000***



4. Results, Conclusions and Recommendations

According to the results of the correlation analysis, significant relationships were found between the general and sub-dimensions of political competence and some sub-dimensions of informal communication. Positive, low-level and significant relationships were found between the general political competence and the sub-dimensions of Social Skills, Networking Skills, Sincerity, and Frequency of Using Informal Communication. It can be said that individuals with high political skills are quite successful in recognizing, understanding and interpreting their environment. As a result of these qualities, they can establish correct and strong relationship networks. While doing this, they can easily convince people that they are sincere (Atay, 2010; Özdemir & Gören, 2015). In the light of this data obtained while performing all these processes, it can be stated that they made use of informal communication, albeit low. Regarding the positive relationship obtained, it can be said that as the political competence levels of school administrators increase, the frequency of making use of and using informal communication will also increase.

According to the data obtained in the correlation analysis, positive, low-level and significant relationships were found between the general and all sub-dimensions of Political Competence and the Positive Results of Informal Communication sub-dimension. It is known that informal communication, by its nature, has positive and negative effects on organizations (Toytok & Doğan, 2019). What is important and necessary for managers is to benefit from the positive aspects of informal communication and use it for organizational purposes. In this respect, it can be said that political competence is an important factor for managers to be successful and effective (Moss & Barbuto, 2010). It can be said that individuals with political competence can establish very positive relations with both the employees in the organization and the organizational environment and they are more effective (Uğurlu & Bostancı, 2017). It can be stated that the obtained correlation data support this. It can be said that the possibility of benefiting from the positive results of informal communication will increase with the increase in the political competence of school administrators, since a positive and significant relationship has been obtained between the political competence and the positive results of informal communication.

Finally, in the results of the correlation analysis, a negative, low-level and significant relationship was found between the Networking Skill of Political Skill sub-dimension and the Reasons for the Formation of Informal Communication sub-dimension. Considering the items in the Reasons for Formation of Informal Communication sub-dimension, "Rumors and gossip are common in my school.", "Groups (ideological, fellow countrymen, etc.) are formed in our school as a result of intimacy and closeness.", "Informal communication gossip and rumor in cases where a change occurs in my school. increases." and "Informal communication channels come into play more during periods of increased administrative problems at school." expressions appear. With the help of the networks they will establish thanks to their political skills, the administrators can ensure that these perceptions, which are seen as the causes of informal communication, are eliminated or weakened. They can prevent the formation of administrative problems and groupings at school, and the increase of rumors and gossip. Thus, they can get the chance to eliminate the harmful and destructive aspects of informal communication. Due to the emergence of a negative relationship, it can be said that with the increase in the networking skills of school administrators, their perceptions of the causes of informal communication will decrease and they will not need these reasons.

In summary, in line with all the data obtained from the correlation analysis; It can be said that the frequency of use of informal communication in schools and its positive results will increase with the increase in the level of political competence of school administrators. As the positive results of informal communication in schools increase, it may be easier to move towards goals. In addition, since a negative, low-level and significant relationship was detected between the Networking Skill of Political Skill and the Reasons for the Formation of Informal Communication, school administrators would not need the reasons stated in the items in the "Reasons for



Formation of Informal Communication" sub-dimension as their ability to establish relationships increases, it can be said that this is a positive result in terms of organizational goals.

Although there is no research to determine the relationship between the level of political competence and the way of using informal communication among the accessible resources in the literature review, there are various studies to find the relationship between these two variables and different variables. For example, Akçakanat and Uzunbacak (2017) found a positive, high and significant relationship between political ability and proactive personality in their research; Özdemir and Gören (2016) found a positive, moderate and significant relationship between political competence and psychological capital. Crampton, et al. (1998) research on informal communication found a low and significant positive relationship between teachers' multicultural personality traits and informal communication.

Considering all the data obtained in the study, it can be said that school administrators have high levels of political competence, frequently use informal communication forms, but be careful when using them, benefit from informal communication in a way that contributes to their institutions, and avoid features that may harm the institution. The fact that they do not continue the informal communication outside the school with the intensity they use at school can be shown as an indicator of this. Based on the results of the correlation analysis, it can be said that the possibility of informal communication to progress positively within the organization will increase with the increase in the political competence of school administrators. Thus, informal communication can become a complement and supporter of formal communication rather than an obstacle or threat to achieving organizational goals. In addition, it can be said that this situation will not change according to the type of school, seniority and working time at the school.

Based on the findings obtained as a result of the research, the following recommendations were developed.

- By repeating this study in a different universe, the results can be compared and generalizations can be made.
- A comparison can be made between the two results by conducting a research in a format in which teachers can evaluate the political abilities of administrators.
- The relationship between the political competence levels of the managers and the motivation of the employees or organizational deviation can be investigated.

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The problem of the ineffective usage of human resources in the public sector

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Abstract

The purpose of this study is to explore the potential causes and consequences of the problem of ineffective usage of human resources in the public sector, through passive public servants, which is an extreme example and is also described as "benched" in the public sector. The lack of research focusing on the ineffective usage of human resources in Turkish public administration requires the study to use a research design with a strong exploratory aspect. Therefore, a qualitative case study research design is used for this study. The importance of this study is to contribute to the knowledge in the focus on the problem of effective use of human resources, which has been constantly mentioned but has not been empirically investigated until now. It is possible to be carried out within the framework of the study to collect and analyze data more easily, especially on sensitive issues such as passive public officials.

Qualitative case design allows to obtain detailed information about a particular social/administrative situation, event, or group and to make unique discoveries about problems. The selected research design will allow a holistic approach in terms of reasons, appearance, and results of ineffective usage of human resources. Face-to-face interviews were conducted with 20 public employees in the study sample. Interview questions consist of semi-structured and open-ended questions. After the analyses of the interviews, findings and suggestions were defined. The reasons for the ineffective usage of human resources can be summarized as follows; Political patronage relations, nepotism, incompetence, unawareness, etc. Consequences of ineffective usage of human resources can be summarized as; loss of motivation and possible job dissatisfaction and problems of person-environment harmony, financial weakness, loss of national performance, loss of confidence, loss of individual performance, and inefficiency.

Keywords: Human resources, human capital, public sector, ineffective usage, public personnel management



Introduction

One of the important problem areas of Turkish public administration is the public personnel system. The inability to create an effective, efficient and merit-based system in the public sector has been called the “public personnel regime crisis” (Dinçer & Yılmaz, 2003, vol. 1, p.101) and the Public Administration Basic Law, etc. tried to be solved by regulations. The aforementioned crisis causes reform demands in the field of public sector human resources to remain on the agenda. The first stage of successful reform is to identify existing problems with their interactions. The establishment of the Presidential Human Resources Office and the initiation of the Public-data study can be seen as important steps in this direction. With the support of studies to be carried out by independent researchers on public human resources, it is possible to provide the knowledge that will be a source for possible reform. This study will contribute to this knowledge in the focus on the problem of effective use of human resources, which has been constantly mentioned but has not been empirically researched until now. The studies can be carried out within the framework of the study is to collect and analyze data more easily, especially on sensitive issues such as passive public officials.

Complaints that public officials cannot be utilized effectively and that many civil servants receive salaries without working are frequently voiced in the public (Erdem, 2017). In the literature on Public Administration, there is a well-established opinion that the human resources employed in the public sector cannot be used effectively (Canman & Öktem, 1992). However, this opinion has not been supported by empirical research in a manner befitting its prevalence. In this study, when it comes to the effective use of human resources, the causes and consequences of "ineffective use of potential human resources" in Turkish public administration will be discussed through the example of idle duties such as central governorships and consultancy. The study aims to contribute theoretically to the literature on the dimensions and consequences of human resource waste. It is aimed that the results of the study will provide a factual basis for the transformations to be realized for a more effective human resources management in the public sector.

Passive public servants are public servants who cannot (can) not be used effectively because they are not given a task in line with their competencies. To be concrete, two types of passive public servants are envisaged within the scope of this study. The first of these is the public servants who were dismissed for any reason while performing a certain duty before and were brought to a position clearly behind the first in terms of functionality. The second is the public officials who are on the staff of an institution but do not have any duty or do not fulfill it even if they are given a task. The existence of these two types of public officials has also been determined by the violation decisions of the TR Public Servants Ethics Committee (TCKGEK). (Decision: 2009/37, 2010/28, 2011/4, 2012/2, 2012/19, 2012/26, 2014/63, 2018/138) However, this issue determined by the application is not the equivalent it deserves in the Public Administration literature. not found. While the gap in the literature increases the importance of the study, it makes it difficult to establish the theoretical basis. To overcome this difficulty, it was found appropriate to construct the theoretical framework on issues related to the study's problems. In the study, in this direction; The relationship between politics and management, nepotism, violation of the principle of merit, motivation, job dissatisfaction, and performance will be discussed.

Problem statement and sub-problems

The main purpose of this study is to draw a picture of the inefficient use of human resources in Turkish public administration. It aims to examine the antecedents and consequences of inefficient human resources that have been claimed in the literature by employing qualitative analysis. Moreover, it seeks to discover some antecedents and consequences of inefficient human resources that have not been mentioned in the literature.



Method

In this part of the study, the relevant concepts regarding the field study and the method used in its writing are expressed as follows: Research Design, Sample, Data, Analysis, and Research Questions.

Research design:

The lack of empirical research focusing on the ineffective use of human resources in Turkish public administration requires the study to use a research design with a strong exploratory aspect. Therefore, a qualitative case study research design is appropriate for this study. Qualitative situation design allows to obtain detailed information about a particular social/administrative situation, event, or group and to make original discoveries about problems (Berg, 2004, pp. 251-258; Denscombe, 2007, p. 45). Unlike quantitative designs, which focus on testing causal interactions and hypotheses, qualitative case designs focus on causal mechanisms and the creation of hypotheses (Gerring, 2006, pp. 39-48). The selected research design is a waste of human resources; It will allow a holistic approach in terms of reasons, appearance and results.

Sample:

In this study, extreme case sampling, one of the purposive sampling methods, will be applied. Extreme case sampling is a preferred sampling strategy in terms of obtaining rich observations about the relevant phenomenon from a sample in which a particular phenomenon is seen excessively. The mechanism, which is more evident in the extreme case, has the potential to contribute to the understanding of the average or ordinary aspects of the related phenomenon (Gerring, 2006, pp. 101-102; Yıldırım & Şimşek, 2011, p. 108). In this study, passive public servants are considered an extreme case in terms of effective use of human resources. The fact that they do not come to work for months despite receiving a salary, or that they cannot (be) assume a functional role despite being at the workplace, make these employees extreme examples of human resource waste. The knowledge to be obtained by researching passive public officials will pave the way for understanding and explaining lighter examples of ineffective resource use in Turkish public administration. In qualitative case design, the sample should not be large enough to represent the population statistically but should be formed in a variety that will reveal different aspects of the relevant case. A sample of 60 civil servants from the passive and business circles is expected to reflect the indicated diversity. Retired public officials who fit this definition will also be included in the sample. As a matter of fact, it is thought that retirees will answer questions more fearlessly, unlike public officials who still hold their positions.

Data:

Data will be collected by semi-structured interview techniques. One or two interviewers will attend the interviews, and if the interviewees give permission, the interview will be audio recorded. If permission is not given, what was spoken during the interview will be recorded in writing by the interviewees with the help of a computer. In order to determine the general framework of the questions to be asked to the interviewees, a list of guide questions was prepared. (Annex-1) Due to the exploratory nature of the research, the questions to be directed to the participants will be left open. First of all, questions will be asked that will allow the participant to express his/her opinion as they are, and then questions that will test whether the issues stated in the summary of the literature are equivalent in the field. The main expectation from the interviews is to describe the research subject with rich examples and to reveal examples that will allow explanations beyond the explanations that can be made using the literature.

Analysis:

In the first stage of the analysis, two researchers from the study team, one of the interviewers and one of the non-participants, will code the audio recording or the interview text. It is hoped that the coding is done by two independent researchers, which will increase the level of objectivity. In the second stage of the analysis, a theme list will be created by each researcher based on the codes. In the third stage, these theme lists will be discussed among researchers and coding will be done again by creating a common theme list. In the fourth stage, the codes



will be compared with each other and the final theme list will be created as a result of the discussion of all researchers. Based on this list, testable hypotheses will be created.

Research Questions

1. What are the reasons for the inefficient use of public sector human resources?
 - 1.1. Is the ineffective use of public sector human resources related to the reasons stated in the literature?
 - 1.1.1. Does the erosion of merit have an impact on the inefficient use of human resources?
 - 1.1.2. Does political patronage have an impact on the ineffective use of human resources?
 - 1.1.3. Does nepotism have an impact on the inefficient use of human resources?
 - 1.2. What are the reasons for the ineffective use of public sector human resources that are not foreseen in the literature?
2. What are the individual and organizational consequences of the ineffective use of public sector human resources?
 - 2.1. Does the ineffective use of public sector human resources lead to the individual and organizational consequences predicted in the literature?
 - 2.1.1. Does the ineffective use of human resources cause loss of motivation by damaging self-efficacy?
 - 2.1.2. Does the ineffective use of human resources cause a decrease in job satisfaction?
 - 2.1.3. What effects does the ineffective use of human resources have on individual and organizational performance?
 - 2.2. What are the individual and organizational consequences of the ineffective use of public sector human resources that are not foreseen in the literature?

Findings

In our field research, it has been determined that there are two main reasons for withdrawal. The first of these is the change of political party. Politicians' desire to work with teams close to them can bring about a change in politics, leading to a change in the public bureaucracy. Public officials, who are passive with political motives, explain this situation with "political concern", "political interest", "political conflict" or directly "politics". In all of these statements, it is in the position of an explicit or implicit criticism directed at practices contrary to the separation of politics and administration.

The second reason for withdrawal is a change in senior management. Although this category resembles a political party change in that it is based on the managers' desire to work with names close to them, it differs from it in that teams close to the same party liquidate each other. Although it is not clear exactly which of these two falls, public officials may also associate their dismissal with alienation from merit and nepotism. In fact, it is possible to treat these two categories as two aspects of favoritism.

In this case, the following findings stand out regarding the public servants who have been put inactive:

1. Public officials seek their withdrawal from the system, not in their personal deficiencies. Accordingly, nepotism is the main reason for their withdrawal.
2. Nepotism has two main aspects: politics and intra-organizational groupings.

Opinions of public officials on the consequences of their withdrawal; can be examined under three headings as an individual, organizational and national. The first of the individual consequences is loss of motivation (demotivation). This sometimes manifests itself in the weakening of intrinsic motivation, sometimes in the form of underestimation of the new task as a result of comparison with the old task. Passive withdrawal can also cause a weakening in organizational commitment. Withdrawal from the passive, apart from these two; There are also emotional consequences such as reproach, fear, and sadness. In the field research, it has also been determined that the consequences of being passive will not always be negative. Some public officials may engage in efforts to



improve themselves during their passive duties. In that case, it is possible to make the following determinations regarding the individual consequences of withdrawal:

1. Passive public officials may have undesirable results such as loss of motivation, decrease in organizational commitment, and negative emotional states.
2. Some public officials consider being passive as a leisure opportunity where they can improve themselves.

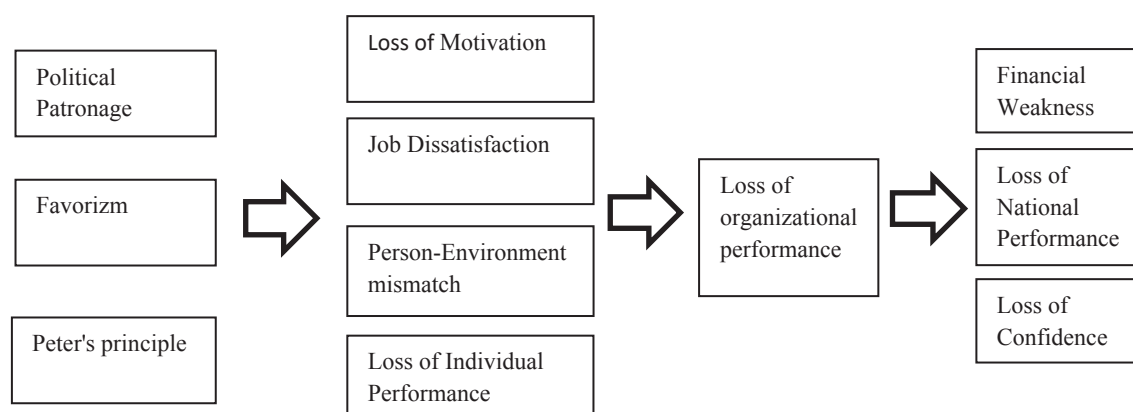
Public officials think that their dismissal from important positions harms institutions rather than themselves. The point emphasized here is the claim that the newly appointed team lags behind them in terms of experience even if they are good at their job. Newly appointed managers are not able to show full performance while warming up to their duties. This reduces organizational performance.

1. Passive public officials claim that their institutions suffer real damage due to the lack of experience of the newly appointed ones.

It has been observed that public officials do not have a clear idea of the national consequences of withdrawal. Although there are public officials who associate passive withdrawal with organizational results, it has been observed that national results are only answered when asked. This response is also based on the assumption that an individual outcome, such as loss of motivation, will have a national impact through its prevalence.

1. Some public officials argue that being passive can have negative consequences affecting the whole country due to loss of motivation. However, this is less strongly advocated than the individual and organizational consequences of withdrawal.

Table 1. Possible causes and consequences of ineffective use of human resources in the public sector



Results, Conclusions, and Recommendations

This chapter can be summarized as two-dimension as reasons and results: 1. Reasons for Ineffective Use of Public Sector Human Resources; 2. Consequences of Ineffective Use of Public Sector Human Resources.



Reasons for Ineffective Use of Public Sector Human Resources:

Merit is a set of practices that enable an effective public administration by appointing people with the qualifications required by the relevant task (Aykaç, 1990, pp. 94-100). One of the three basic principles of Turkish public personnel management, which is enumerated in Article 3 of the Civil Servants Law, is merit. The relationship between the ineffective use of human resources and merit can be considered in two contexts: The first is the ineffective use of human resources due to the deviation from the traditional principle of merit, and the second is the ineffective use of human resources caused by the inadequacy of the traditional principle of merit in terms of today's society and public administration.

Deviating from the traditional principle of merit means that public officials are appointed to a post because of their non-administrative affiliation. These connections may be political connections, as well as kinship, friendship, etc. There may also be more personal connections. In any case, these people, whose reason for their appointment is not related to the administration, will strive not for an effective and legitimate administration, but to maintain and develop their connections. However, the change of power of the people contacted, etc. Disconnecting them from the task for any reason will render the established connections meaningless. Because the new patrons are often rivals of the previous ones, they will not want to have people who are loyal to the former ones under them. Taking into account the fact that the protected person is not indispensable for the management, there will be a possibility that these people will be appointed to passive duties.

Protective relations in the public sector are not only today's problem. It has been seen that public administration has changed hands between bureaucratic parties, so to speak, since ancient times. Turkey has witnessed the rivalries of bureaucratic parties. Especially with the beginning of the innovation movements, the rivalry between these bureaucratic parties has moved to a dimension that can be described as ideological. (Findley, 2014) When one of the traditionalist and innovative parties became stronger in the 19th century, this brought about the discrediting of public officials belonging to the other party. However, the established patronage relations cannot be explained only by the traditionalist-innovative distinction. Patronage relations continued on a larger scale with altruistic motives such as holding the hands of young people and selfish motives such as creating a bureaucratic base. There are serious doubts that similar patronage relations continue today. For example, the new mayors elected by the Municipal Councils upon the resignation of some mayors in 2017, chose to replace many senior municipal bureaucrats appointed by the previous Mayor, although they were from the same party. (www.hurriyet.com.tr, 2017)

A form of patronage relations with a more prominent political aspect than in the 19th century is the intertwining of politics and administration. Although the separation of politics and administration is one of the founding dogmas of the discipline of Public Administration (Dobuzinskis, 1997), this target has not always been realized in practice. An extreme example of the intertwining of politics and administration has been seen in the USA as the spoils system. In this country, the change of the ruling political party has resulted in the change of hundreds of thousands of civil servants, even the smallest. Even though the USA ended the robbing procedure with the Civil Service Act (White, 1958, pp. 346-361), lighter forms of politics and administration are still observed around the world. In Turkey, II. Many political interventions were made in the public administration, from the public personnel reform during the Constitutional Monarchy period to the EMINSU incident (İlyas, 2016; Tural, 2009). Politicians still choose especially senior executives from among those they find close to them. This causes organizational bloating, as the public servants who are appointed to the place of the public officials who are close cannot be dismissed from the public due to the officer's assurance (Şen, 1995: 82-3). While public servants from the old period are promoted on a show basis, they are assigned to de facto passive duties.

In addition to political and bureaucratic patronage, more personal reasons may also cause public officials to be appointed to ineffective positions. Personal favoritism can be interpreted as a deviation from the impersonal



characteristic of the Webergil bureaucracy (Weber, 2012, p. c.2, 324). Favor of family and relatives, very close friends, or any close group are nepotistic practices seen in the public and private sectors and generally thought to have negative consequences (Kg. Jones & Stout, 2015; Mutlu, 2000; Pearce, 2015). Recruitment or promotion of a person as a result of nepotism will cause the favored persons to be placed in a privileged position in terms of financial rights and duties (TCKGEK Decision: 2016/45), thus causing the pacification of other public officials. In addition to favoritism, discrimination and intimidation can be seen among the possible causes of human resource waste. (TCKGEK Decision:2018/6) Personal favoritism can cause human resource wastage due to managerial change, as in political favoritism. In addition, changes in personal preferences or bilateral relations may result in insufficient use of employees.

Both political and personal favoritism are the results of deviating from the traditional principle of merit. The question that needs to be asked here is how functional the principle of merit, with its established form, is in achieving an effective administration today. According to Şen (1995), there is no theoretical deficiency in the principle of merit, the problems arise from the application. However, the traditional principle of merit also has inadequacies due to untestedness. Moreover, this latter is also in question for the periods when the traditional principle of merit began to be institutionalized. There is only one degree of difference between the information age, where uncertainties increase, and the industrial age. The situation of incompetence due to untestedness is discussed in Peter's popular work, which has a solid social analysis under its humorous style. According to Peter, when people demonstrate their merit in a job, they are promoted to a higher position. It is doubtful that those who successfully perform their lower duties will be able to continue the same line after being promoted, as their new positions require different competencies from people. If they are successful in their new mission, they will be promoted again. However, this rise will not continue forever and will end when they reach a position where they do not have the required qualifications. The place where promotion ends is where one's unworthiness emerges. Thus, everyone will rise to the point of incompetence, which will lead to the occupation of almost all positions in society at a given moment by those who have proven their incompetence (Peter & Hull, 1976). If Peter's claims are true, it may be possible to put a public employee, whose incompetence in a certain position is understood, to a passive duty. This means the complete loss of the employee.

Consequences of Ineffective Use of Public Sector Human Resources:

Consequences of ineffective use of human resources; It can be considered in three layers individual, organizational and public. The most important result in the individual layer is the loss of motivation and possible job satisfaction and person-environment compatibility problems. Although there is no research that directly addresses the subject in the literature, these results can be deduced from the existing theoretical ground. The possible relationship between the appointment of public officials to positions in which they are not effective and the motivation problems can be justified on different theoretical grounds. Here, the focus will be on Goal Setting Theory (ABK= Goal Setting Theory), Self-Determination Theory (Self Determination Theory), and Public Service Motivation (Public Service Motivation).

Sending public officials to positions in which they are not active does not indicate a loss in terms of money. Even in the central governorship, there are passive duties that are seen as hierarchical rise on paper and provide income increase. However, the fact that they do not suffer a loss of payment does not mean that they will not suffer from a loss of motivation. While accepting that money is an important tool in the motivation of employees, especially in terms of ensuring goal commitment, according to the ABK, the main determinant, in any case, is the goals. It has been shown by the experiments conducted on the ABK axis that money cannot be a motivator unless the purpose is determined. (Locke et al., 1981) Simple and unclear tasks that can be assigned to passive public officials will also have low motivation potential. Because easy or ambiguous goals cannot be motivated enough (Locke & Latham, 2002).



One of the problems that the ineffective use of human resources can cause at the individual level is the possible decrease in the level of intrinsic motivation. Fundamental conditions such as money, promotion, and organizational policies, which are necessary for people to stay in business life, do not have motivational features. What motivates people is the work itself. (Herzberg et al., 1962, pp. 113-119) The more internally a behavior is organized, the more it becomes a part of the self. Because internally organized work satisfies one's basic needs. (Ryan & Deci, 2000) Passive public servants are likely to experience problems in all of the autonomy, competence, and relational needs identified by the SPC as basic needs. Assigning public officials to jobs far below their capacity will lead to a lack of satisfaction with the need for competence. Being assigned to an undesirable staff and assigned with unimportant jobs will lead to a lack of satisfaction with the need for competence. Considering that an effective job will require close relations with other public officials and the society, passive duties will also mean a decrease in relational satisfaction.

Goal-setting and intrinsic motivation-based problems are common problems among segments. A more closely related consequence of the ineffective use of human resources is a possible decrease in the level of KHG. According to Perry and Wise, the basic motivation for people to enter the public office is their disposition to serve people and society. (Perry & Wise, 1990) Research shows that public officials are truly motivated to serve the public. (Frank & Lewis, 2004; Naff & Crum, 1999) HRG level increases depending on the social impact of the task. (van Loon et al., 2018) Passive public servants will probably see themselves as a burden to society, far from producing a positive social impact. This may result in a decrease in CHG levels. Another phenomenon to support this result is the negative relationship between extrinsic motivation and CSR. Since only extrinsic motivators are offered to passive public officials, this situation will rule out intrinsic motivation over time, and as a result, there will be a decrease in KHG. (Bellé, 2015)

Considering the strong relationship between motivation and job satisfaction, it can be argued that the ineffective use of human resources will have a negative effect on job satisfaction. Job satisfaction is a complex phenomenon with many determinants. Therefore, job satisfaction, which is expected to decrease in the framework of ABK, SCM, and CSR, may be supported by other factors. The lightness of their official duties may have led these passive public officials to different interests. It is possible that these new interests compensate for the dissatisfaction with the task. It is also possible for job satisfaction to be provided by extrinsic motivators. The final effect of the ineffective use of human resources on job satisfaction will only be described by the work to be done in the field. Like job satisfaction, person-environment fit also has many determinants. (Kristof-Brown & Guay, 2011) Therefore, it cannot be claimed that a decrease in motivation levels will irreversibly reduce person-environment fit. However, the negative impact of passive missions can be expected when other conditions are held constant. The fact that passive public servants perform unimportant jobs may cause them to become alienated from the job and the organization. This will bring about a regression in person-business and person-organization harmony. In addition, if the situation they are in causes these employees to not be able to manage the problems they have with their managers well, there will be deterioration in the person-manager harmony.

The effect of passive tasks on individual performance can be addressed in the short and medium-term. In the short term, when a public official is in a position where no functional work is expected from him, low performance is logically inevitable. The more important question for this study is whether their negative experience has a lasting effect when they return to active duties. The decrease in intrinsic motivation, HRQ, and person-environment fit can be expected to have a permanent negative impact on individual performance. However, if the negative developments in the aforementioned variables are temporary, it may be possible for the public official appointed to active duties to catch up with the previous level in their performance. The medium-term effects of passive tasks on performance can only be explored through field research, as it is a neglected topic.



The short-term loss of performance in the passive public servant may be ignored by the self-sacrificing management. However, these public officials will have negative effects on organizational performance even in the short term. Employees will expect the ratio of their contributions to the organization and the organization to be at the same level as the ratios of other employees. At this rate, the motivation levels of the employees who think that there is a situation against them will decrease. (Adams & Freedman, 1976). The fact that they are paid as much or sometimes even higher than other public servants without participating in functional activities may cause the underperformance of the passive public servant to be transmitted to other employees. Therefore, passive public duties will cause not only individual but also organizational performance loss. In addition, not benefiting from the knowledge and experience of these public officials will negatively affect organizational performance.

The effective use of public sector human resources will also cause public/social negativities that go beyond individual and organizational layers. These disadvantages can be grouped under three headings. First, extreme examples of ineffective use, such as passive duties, fall within the scope of disguised unemployment. These tasks will cause serious damage to the state finances and the country's economy. Secondly, the consumption of public resources without relying on real production will constitute a justification for bureaucratic slanders. This effect is likely to undermine the trust in the state by going beyond the bureaucracy. Finally, due to the loss of performance in the public organization, which is known to be important for the development of the country, it will make it difficult to achieve national targets in all fields, especially in economy, foreign policy, and security.

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The educational process in relation to health and safety as a prerequisite for the personal development of teachers and pupils

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Abstract

Health and safety education and training is an important societal issue that concerns many disciplines and activities. One of the most important areas is education, no matter whether this involves the preparatory education of children, pupils and students or the post-gradual, life-long education of workers in various professions. This article deals with health and safety issues in the context of education as a prerequisite for the development of students' competences in this field for their future measurement at universities and also as a prerequisite for their perspectives in their future professional life. The article presents the results of a survey conducted among school teachers in the Olomouc region, which is characterized as a primarily agricultural region with predominantly light industry. Based on a comparison with the situation in education in Slovakia and the conclusions of the research, the authors propose measures aimed at improving the level and quality of health and safety education.

Keywords: Education, health and safety; school, teachers, pupils

1 Introduction

The initial preparation, where the health and safety education of children, pupils and students is combined with questions of health and safety during the work of school employees on the one hand and on the other hand is associated with a societal challenge in the form of inculcating good habits, approaches and conduct leading to a safe life and work, is becoming increasingly significant. Education is one of the most complicated health and safety segments due to the fact that health protection primarily involves children, who frequently do not respect the rules and regulations, despite having been acquainted with them. In any case, as has already been mentioned, the complexity of the question of health and safety in education mainly depends on the type of school education, but also on the technical difficulty, i.e. health and safety will be significantly more demanding in technical, chemical or laboratory disciplines than in the case of language or art schools (Tomková, 2017; Tureková & Depešová, 2019; Tureková & Bagalova, 2018).

According to the National Action Program for Occupational Health and Safety issued by the Czech Republic for the last two years (Czech Focal Point), priority measures have been designated in the area of occupational health and safety, where the question of prevention, education and the training system play a crucial role. Health and safety education and training is an essential tool for systematically creating and developing expert knowledge, abilities and skills and also for creating the desired approaches and conduct among employers, employees and self-employed individuals, including the work environment, the safety of technical equipment and the optimisation of working conditions.

2 Legal-legislative questions of health and safety

The legal definition from the area of health and safety has a relatively long history in the Czech Republic, but also involves the connection of the Czech legal system with European legislation. In 1988, Czechoslovakia ratified Convention no. 155 of the International Labour Organization (Černá, Brácha, Marek & Kocián, 2002) which constitutes one of the state's decisive international obligations in the area of occupational health and safety. This



ratification entered into force on 2 December 1989 in the form of Regulation no. 20/1989 Coll. on the Convention on the Occupational Health and Safety of Workers and the Working Environment (Regulation no. 20/1989 Sb. - Convention no. 155 on the Occupational Health and Safety of Workers and the Working Environment).

The fundamental document which sets out the requirements for securing health and safety within the framework of the European Union is Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work, which characterises the occupational health and safety system in the European Union (Czech Focal Point). This directive defines the basic limits for employers in the area of risks and the risk factors which could endanger the health and safety of workers. It is characteristic for Directive 89/391 EEC that it contains a number of requirements also pertaining to the provision of preventive healthcare or the participation of workers in the decision-making on matters of health and safety in the workplace. In the Czech Republic, the requirements of Directive 89/391 EEC have been incorporated into several legal documents which have secured harmonisation with the legal system of the European Union (Paleček, 2002).

The Labour Code has become the fundamental regulation pertaining to occupational safety which, amongst other things, has introduced the term “risk” to our legal system as part of the process of harmonisation with the law of the European Union which has been ongoing since 2001. Act no. 262/2006 Coll., the Labour Code, as amended, has been supplemented by Act no. 309/2006 Coll. which regulates the additional requirements for occupational health and safety in labour-law relationships and secures occupational health and safety during activities or the provision of services outside labour-law relationships (the Act on the Additional Requirements for Occupational Health and Safety) The inspection of the compliance with the legal regulations aimed at securing occupational safety and compliance in labour-law relations is performed by Act no. 251/2005 Coll. governing labour inspections, which established the State Labour Inspection Office and the area labour inspectorates.

3 Education in the area of occupational health and safety

Quality can only be achieved in education pertaining to the area of health and safety, if there is a qualified approach from the trainers/teachers which leads to the development of expert knowledge, attitudes and skills in the area of health and safety issues (Tomková, 2017; Tureková & Depešová, 2019).

Expert education in the area of occupational health and safety at the level of the comprehensive educational program has not been adequately resolved in the Czech Republic and it is currently located within the zone of life-long education in the form of expert courses and training. We can name three such facts within this context:

- The current legislation concerning educational facilities (primary, secondary and apprenticeship schools and universities) has not resolved the issue of occupational health and safety comprehensively, but has only done so in partial steps within the framework of the individual disciplines and activities. Moreover, teachers at all types of schools usually do not have sufficient knowledge to be able to provide training and education in health and safety or occupational health and safety at the required extent.
- In the case of employers, especially small and medium-sized enterprises, the requirements of the Labour Code, which include the employer’s obligation to acquaint its employees with the occupational safety rules and therefore to comprehensively educate them in occupational health and safety, are never sufficiently met. The solution is often left to external companies with accreditation to realise courses for various areas of occupational health and safety or this work is assigned to (trained) employees who then train the other employees.
- Education in the area of occupational health and safety can essentially be provided by anybody without any guarantee of quality. The quality of the education is therefore dependent upon the expertise and teaching skill of the instructor.

3.1 Health and safety within the context of school

Education plays an important role in health and safety education, because pupils best acquire habits aimed at risk prevention at an early age. It is therefore essential to realise part of the education with activities aimed at acquiring a consciousness of the importance of health and safety and the principles of accident prevention. Health and safety therefore logically also constitute an inseparable part of the preparation of pupils in many educational subjects.



This preparation is also based on many technologies, types of didactic materials and so on. We have verified to what extent this applies at a number of schools in the Olomouc Region.

Health and safety has three basic areas in Czech schooling which are defined by the participants in the education process; the pupil, the teachers and the other school employees:

- a) The fundamental and generally binding regulation for schools and educational facilities, which regulates the health and safety of the pupils, is Act no. 561/2004 Coll. governing pre-school, primary, secondary, higher vocational and other education (the Education Act), as amended.
- b) The issue of the teaching staff is covered by Act no. 563/2004 Coll. governing pedagogical workers and Act no. 262/2006 Coll., the Labour Code.
- c) Non-teaching staff are especially subject to Act no. 262/2006 Coll., the Labour Code.

The area of health and safety has always constituted a fixed part of the curricular documents, which stipulated changes in the education system in the past and still do today. The fundamental curricular document for the level of schooling is the General Education Programmes for Education (MŠMT, 2015). The issue of health and safety appears there in basically all of the critical sections ranging from the objectives through to the key competencies, the educational content through to the cross-cutting themes. Here, the issue of health and safety is understood in wider contexts, i.e. as the result of the pupils' personal development (their attitudes, tolerance, communication etc.), which also constitutes the foundation for their conduct and decision-making. The issue of occupational health and safety is mainly realised here via two key (i.e. for the given area) educational areas (Nováková, 2007; MŠMT, 2015):

- Man and Health (Health Education).
- Man and the World of Work.

Other significant educational areas from the point of view of health and safety which, however, relate this issue to a specific discipline include:

- Information and Communication Technology.
- Man and Nature (Physics, Chemistry and Biology).

Schools became obliged to educate pupils in the area of health and safety as part of their school education program in the 2007/2008 school year. The school is responsible for the child or pupil in compliance with section 29 of Act no. 561/2004 Coll. governing pre-school, primary, secondary, higher vocational and other education (the Education Act). It clearly states that the school is responsible for the child or pupil in those areas involving any training or education which the school itself organizes (Dandová, 2008; Nováková, 2007).

Section 29, subsection 2 states that: "Schools and educational facilities secure the health and safety of the children, pupils and students during education, during any directly associated activities and during the provision of any educational services and they likewise provide the pupils and students with essential information to ensure their health and safety. The Ministry designates by decree the measures required to secure the health and safety of the children, pupils and students during their education in schools and educational facilities and during any associated activities." It is, however, also necessary to keep section 2, letter f) of Act no. 309/2006 Coll. - the Act in mind, as it regulates the further requirements for occupational health and safety ... and states that the employer, in this case the school, is obliged to equip the workplaces with the means to provide first aid and the means to call the medical rescue service (Dandová, 2008; Nováková, 2007).

The rules, regulations and other information pertaining to health and safety have to be provided to the children, pupils and students in relation to their age, which means that preschool children should be provided with information in a different way to, for example, pupils in the senior school at the primary level or to secondary or university students.

If we look, for example, at the state of the area of health and safety in the area of education in Slovakia, this has been enshrined in the appropriate laws and documents which define similar requirements for each educational



activity to those in the Czech Republic. Slovakia has a State Education Program (ŠPÚ, 2015) which is similar to the Framework Educational Program in the Czech Republic.

Providing a suitable structure for the work regimen and the rest periods for the pupils and the teachers and a suitable regimen of teaching while respecting the hygiene of learning and a healthy environment in the school's educational and other areas according to the valid technical standards (light, warmth, noise, cleanliness, ventilation, the hygiene facilities in the areas, the commensurate size of the seating and work furniture) is essential when realising the school education program. When organising trips, excursions, training and other parts of the educational process (outdoor school courses, swimming courses, skiing and snowboarding courses, walks...), it is necessary to proceed from the valid legislation (especially the school regulation, the outdoor school course regulation and the directive on swimming courses), while the informed consent of the pupil's legal guardian also plays an important role.

When providing an education in occupational health and safety, the school must:

- ensure the health and safety of the pupils and take their physiological needs into account;
- ensure suitable sanitary conditions;
- maintain records of any pupils' accidents at school with important information which characterises the injury and compile a record of each injury which has occurred during the educational process or during any activities organised by the school.

The school issues its school rules and other internal regulations, with which the pupils must be acquainted, for this purpose. As in the Czech Republic, it has also been statistically documented in Slovakia that the most school accidents occur during lessons of physical education held directly at school or during recreational activities for the pupils (sports games, excursions, skiing courses and excursions). It is necessary to emphasise the following when realising any activities outside the classroom (Tomková, Feszterová, Bulla & Depešová, 2019):

- the provision of thorough organisational readiness and a commensurate number of teaching staff and guides, for example instructors;
- the pupils have been informed of the program, the organisational measures and the appropriate attire in advance;
- the pupils have also been instructed with regard to the appropriate conduct at the venue of the school excursion or trip;
- the activity has been undertaken on the basis of information about the commensurate physical condition and state of health of the pupils.

As institutions providing education, schools also secure the health and safety of the pupils during activities that are directly associated with education, create the conditions for the health and safety of the pupils and inspect that they are being complied with.

The general requirements pertaining to each educational activity have been defined in the Slovak Republic in:

- a) the Labour Code,
- b) Act no. 124/2006 Coll.,
- c) Act no. 125/2006 Coll.,
- d) Act no. 355/2007 Coll.

The objective of education with regard to the inclusion of health and safety elements should be the provision of advice and instructions pertaining to the protection of the pupils against specific accident risks at school (Tomková, Feszterová, Bulla & Depešová, 2019):

- to know the methods and forms of compliance with the occupational health and safety in the school environment,
- to maintain hygiene at work during practical activities in the class, the laboratory, the gymnasium and so on,
- to know the principles for maintaining one's fluid intake,
- to understand the significance of ventilation (from the point of view of ensuring sufficient oxygen and the possible dissemination of air-borne illnesses),



- to know the consequences of the incorrect use of coal, oil, natural gas and any products made from them,
- to know the requirements for a healthy lifestyle and the consequences of drinking alcohol, smoking and taking drugs,
- to know how the sun's rays may affect the human organism, animals and plants due to the ozone hole and also the way of preventing the destruction of ozone,
- to know the basics for handling electricity, to justify the significance of electricity and the significance of its careful use

The teachers who take care of the pupils are responsible for their health and safety at school. Pupils learn to take responsibility for themselves and to actively maintain safety and protect their health as part of the education process. As such, the pupils should be demonstrably acquainted with the school rules, which include details on the conditions for securing the health and safety of the children and pupils, in compliance with the Education Act. The principal publishes the school rules in a public place and informs the legal guardians of the children and pupils of the publication and contents of these rules. In practice, the pupils are acquainted with the rules at the beginning of the school year, when their teacher takes them through the school rules and the rules for ensuring occupational health and safety. The pupils are also acquainted with occupational health and safety at the beginning of the individual subjects, as well as during the realisation of any activities which take place outside school (excursions, trips).

4 The opinions of school teachers from the Olomouc Region pertaining to their expert readiness to create and develop their pupils' health and safety competencies

The questionnaire survey was realised among 200 school teachers in the Olomouc Region with the objective of ascertaining how schools and their teachers comprehend the term "health and safety" within the context of the educational areas realised at their schools, how this issue has been incorporated into the schools' educational programs and the specific teaching plans for the individual subjects, including how the teachers perceive their expert preparedness to create and develop their pupils' health and safety competencies, what resources and educational opportunities they use to provide good quality lessons and also what didactic instruments, aids and methodologies they have or would like to have.

4.1 The methodology

The preparation, realisation and evaluation of the questionnaire survey took place in 2019/2020. The questionnaire for the teachers was prepared as an online survey and at the same time it was also sent as an attachment in a direct mail communicate (a motivational letter). The processing of the responses from the individual respondents was realised in the MS Excel system using standard statistical methods.

Is health and safety education part of the lessons in the junior level at school / the senior level at school?

Out of the total number of responses (200), 171 teachers stated that they taught health and safety in the junior school, while 28 teachers stated that they did not teach health and safety and 1 responded that they did not know. There was a similar question for senior school teachers, where 161 senior school teachers out of the total number of responses (200) stated that they taught health and safety in the senior school, while 32 teachers stated that they did not teach health and safety and 7 teachers responded that they did not know (see fig. 1).

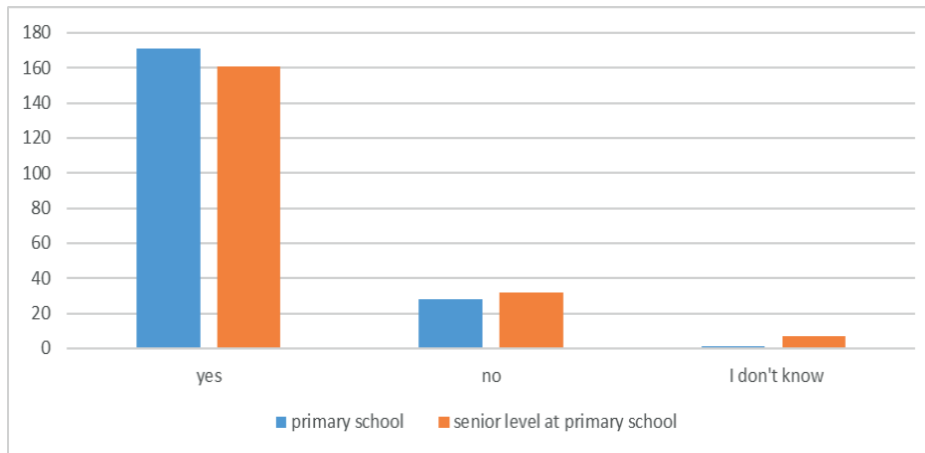


Fig. 1 The responses to the question as to whether health and safety forms part of the lessons at school

A supplementary question for both the junior and senior levels at school asked what educational areas this involved. The respondents from the junior level at school most frequently stated Man and Health, Man and his World and Man and the World of Work, while to a lesser extent this also involved Information and Communication Technology. The answers stating the areas Language and Linguistic Communication and Mathematics and its Applications, where the respondents would most probably not have been able to adequately incorporate the given topic, could be characterised as highly improbable and irrelevant. The respondents from the senior level at school likewise most frequently stated the areas of Information and Communication technology, Man and the World of Work, Man and Health and Man and Nature and to a lesser extent Man and Society. Once again, the answers stating the areas Language and Linguistic Communication and Mathematics and its Applications, where the respondents would most probably not have been able to adequately incorporate the given topic or where they merely associated it with a general statement on protecting health and safety, could be characterised as highly improbable and irrelevant. The areas of Man and Society and Man and Nature are not taught in the junior level at school, while the area of Man and his World is not taught in the senior level (see fig. 2)

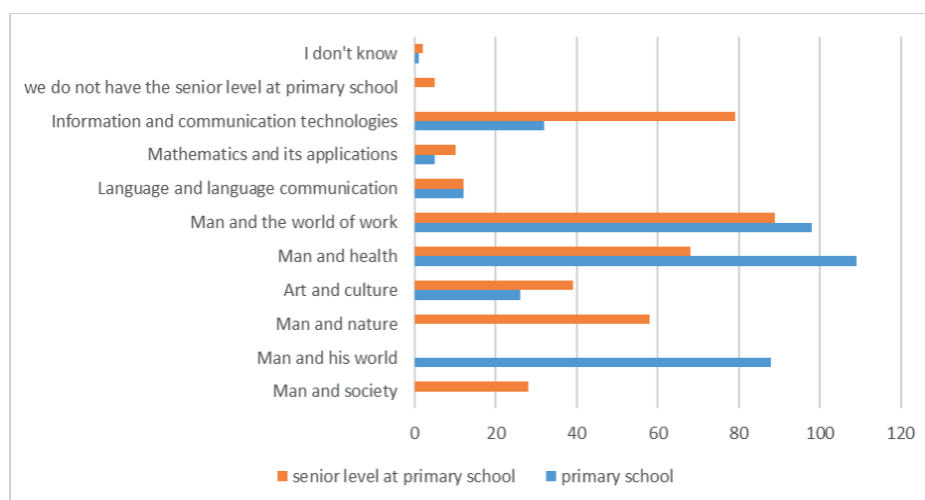


Fig. 2 The realisation of health and safety by level and educational area at school

Have any methodological guidelines been drawn up with regard to the issue of creating health and safety competencies in pupils?



Out of the total number of responses (200), 121 teachers stated that they knew of methodological guidelines for health and safety, 46 teachers stated that they were not aware of having come across them and 33 teachers stated that they did not know (see fig. 3).

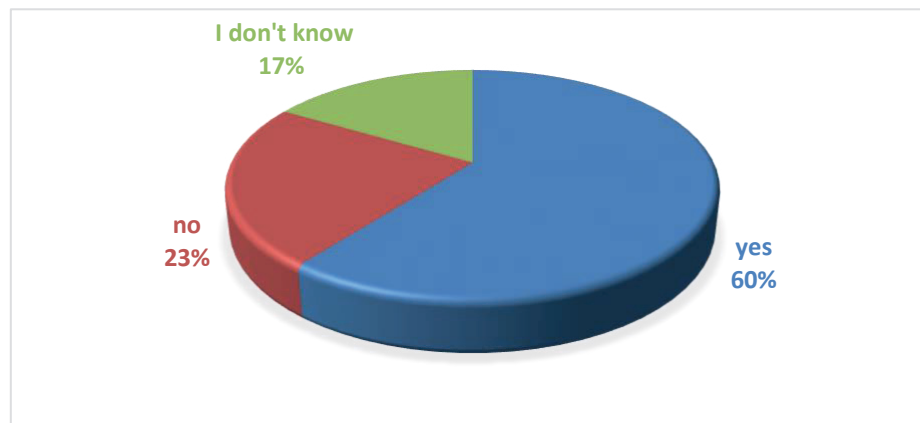


Fig. 3 Responses to the question as to whether any health and safety methodological guidelines have been prepared

Do you use the RVP methodological portal at <http://www.rvp.cz/>

Out of the total number of responses (200), 152 teachers stated that they knew of and used the methodological portal, 36 teachers stated that they did not use it and 12 teachers stated that they did not know about it (see fig. 4).

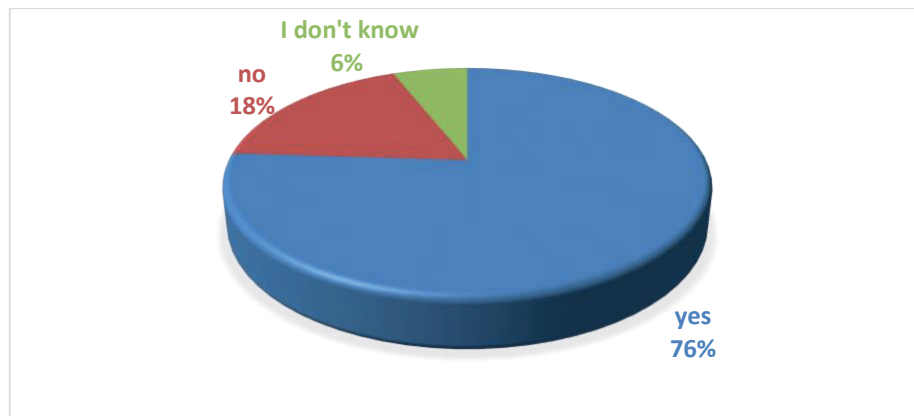


Fig. 4 The responses to the question as to whether the RVP portal was used for health and safety

Do you use any other portal, resource of channel? If so, which?

The answers showed that the internet was used as the source of information, other electronic media came in second and this was followed by literature, training/self-education. However, a number of cases of discussion groups, didactic aids and communication with pupils also appeared here (see fig. 5).

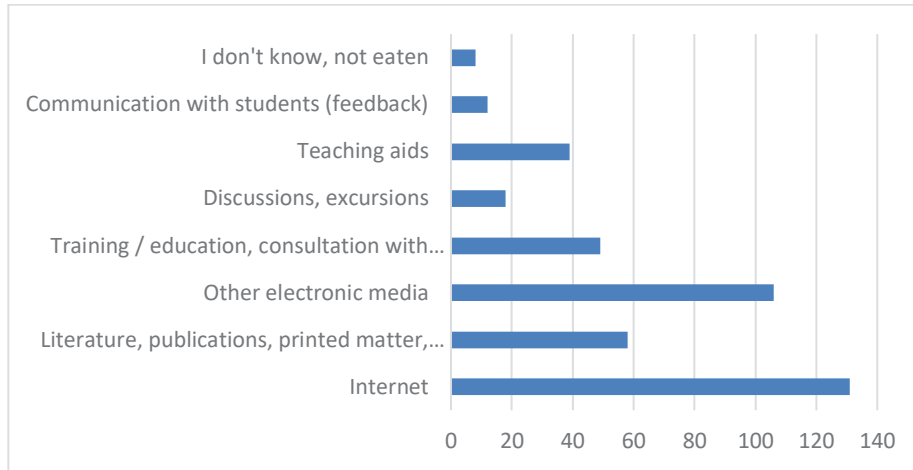


Fig. 5 The information channels used by the respondents to acquire information about health and safety

The other questions concerned the didactic aids, tools, etc. which the respondents used during health and safety lessons.

Do you consider the existing didactic aids for the area of health and safety to be suitable and relevant to the requirement for the formation of competencies in the pupils?

Out of the total number of responses (200), 89 teachers stated that the aids and materials were suitable, but 99 gave a negative response and 12 teachers stated that they did not know. The positive and negative answers were quite balanced (see fig. 6). Moreover, this also more or less corresponded to the next question as to whether the teachers would welcome any new didactic materials.

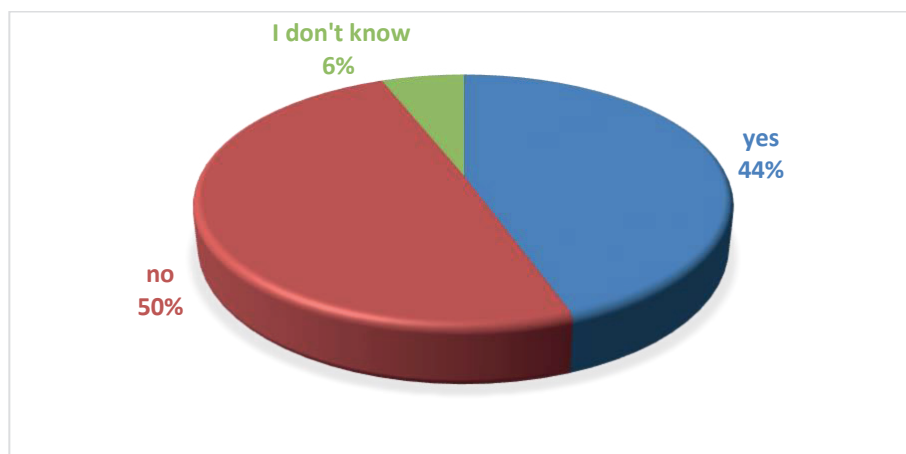


Fig. 6 The respondents' answers as to whether the didactic aids were sufficient



Out of the total number of responses (200), 120 teachers said yes, 65 teachers said no and 15 teachers were unable to answer or did not know (see fig. 7).

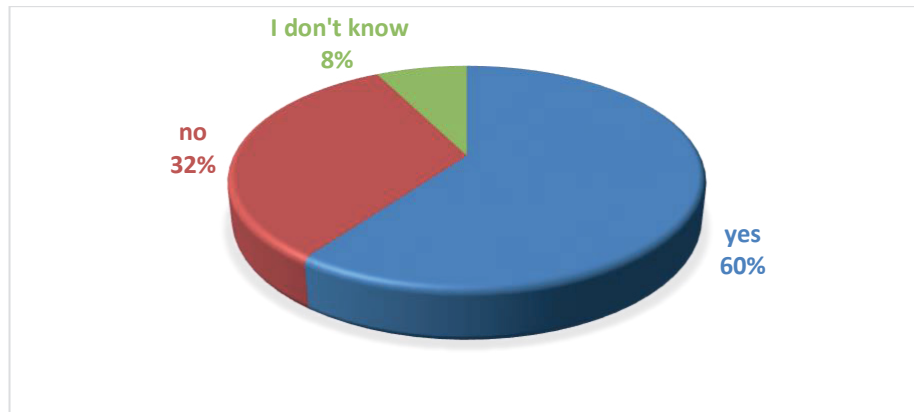


Fig. 7 The respondents' answers as to whether they would welcome any new didactic materials

We also asked whether the teachers would welcome any didactic materials and aids in one form more than in another. The teachers unequivocally preferred the digital form followed by the audio-visual, visual and 3D forms. Interactive boards and discussions also frequently appeared (see fig. 8).

It is a positive finding that health and safety is taught at schools across the gamut of various educational areas and more or less in line with the General Educational Program for schools. It is also positive that teachers perceive the need for innovation in their lessons and for modernisation in line with the current trends in the area of digitalisation, which should also increase the digital competence of both the pupils and the teachers. We should, however, also deal with the question as to what the actual lessons in the classroom look like. Unfortunately, it is very difficult to find answers to this question, as it requires independent, at times hidden observation.

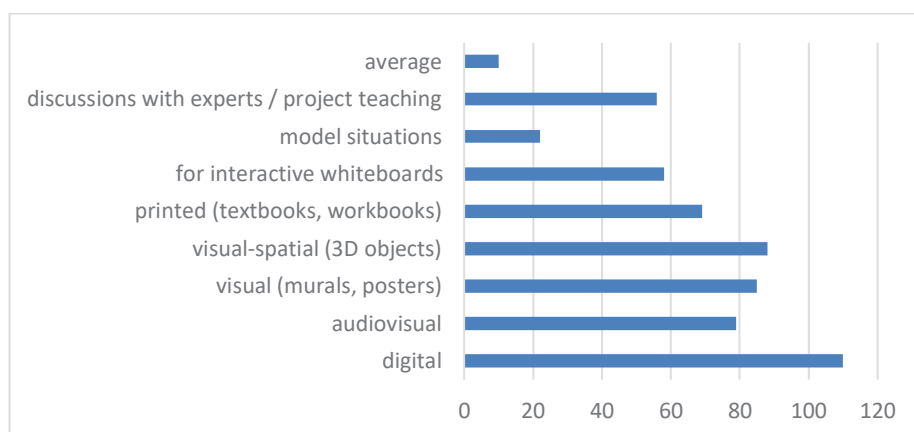


Fig. 8 The preferred form of the didactic aids and tools for teaching health and safety

5 Conclusion

The health and safety preparation of pupils at school is a fundamental precondition for the expansion of their competencies in the given area at secondary school, where they proceed after completing school. A good foundation will thus lead to appropriate procedures and habits in the future which will in turn appear in the pupil's



future professional life and as such in their acceptance of occupational health and safety measures (Tureková, & Depešová, 2019; Tureková & Bagalova, 2018; Tureková, Lukáčová & Bánesz, 2019).

The logical solution to this entire process of preparation for occupational health and safety would seem to be the inclusion of these questions in the educational program for existing and future teachers. It would also be a good idea to engage other institutions specialising in these very questions (for example the State Health Department, the Occupational Safety Research Institute and others) in the preparation of the educational programs for existing and future teachers with regard to teaching health to pupils (health and safety during work activities and at work).

At the same time, significant changes in the education system imply a new concept for the preparation of future teachers. Teacher trainees have always had to undergo demanding preparation for the complicated, dynamic, yet creative process of teaching, which essentially has to be developed from the point of view of professional competencies in the areas of theory, skills and personality. The same is true today and one of these areas involves occupational health and safety education (Tomková, Feszterová, Bulla & Depešová, 2019; Tomková, 2017; Tomková, 2018; Tureková, Lukáčová, & Bánesz, 2019). Of course, this concept cannot do without the need for the quick and simple acquisition of information in large and targeted amounts. One of the fundamental problems in the area of education about occupational health and safety is the discrepancy between the growing volume of knowledge and (especially from a legal and legislative point of view) its practical application and the limited possibilities of school lessons. It is therefore necessary to search for ways of bridging this discrepancy in the form of various approaches to choosing the curriculum, its incorporation into the didactic system and the choice of the method for presenting new knowledge in lessons. These approaches pertain to the area of occupational health and safety, but they also overlap it and point to a wider concept of the protection of individuals against adverse events. At the same time, it is also not possible to rule out further connections to the dominant disciplines, especially in the areas of the scientific-technical disciplines, such as modern technology, and other areas associated with the current level of society.

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Declaration of Authorship

I do solemnly declare that I have written the presented research thesis by myself without undue help from a second person others and without using such tools other than that specified. Where I have used thoughts from external sources, directly or indirectly, published or unpublished, this is always clearly attributed. The presented intellectual work of this research thesis is my own. In particular, I have not taken any help of any qualified consultant.



Examination of teachers' classroom management skill during pandemic

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Plagiarism Rate = 16%

Abstract

In this study, it was aimed to examine the pandemic classroom management skills of teachers. In this context, their views on how classroom management was carried out by teachers during the pandemic were sought. With these views, it was tried to reveal how classroom management skills were during the pandemic period. In the study, a total of 15 teachers, 5 primary schools, 5 secondary schools and 5 high schools, working in schools affiliated to the Ministry of National Education in the Akkışla district of Kayseri in the 2021-2022 academic year were determined as the study group. Research data were collected using a semi-structured interview form. The research data were obtained by transcribing the interview forms and interpreted through descriptive analysis.

Keywords: Classroom management, pandemic, distance education, virtual classroom management, virtual classroom

1. Introduction

The Covid-19 pandemic, which emerged in China towards the end of 2019 and then affected the whole world, had a significant impact on education. The closure of schools in all countries of the world has led to the end of face-to-face education. It was understood that education could not be interrupted for a long time due to the fact that the pandemic was not going to end suddenly, and as a solution to this, distance education was started by using different platforms through virtual classrooms. Thus, our existing understanding of education, school and classroom has also changed. Classrooms are learning environments where students' knowledge and skills are created, developed and their futures are shaped (Can,2020). Another definition of class is "each of the divisions into which students are divided according to annual tuition." (TDK). According to another definition, the classroom is the living and learning spaces where individual or group learning takes place (Turan & Şişman 2018).

According to Can and Arslan (2018), the purpose of classroom management is to create an effective and productive learning and teaching environment, and the effectiveness and success of teachers in classroom management are affected by teacher, student, family, school environment, administrator and environmental factors. The professional success of teachers and the success of students at school are affected by classroom management. According to Turan and Şişman (2018), the purpose of classroom management is to improve classroom learning, make learning fun, and guide students. While doing this, communication has a very important place. For an effective classroom management, the teacher should not forget that the students who make up his class come from different environments and he should know that it is important to get to know them. Again, the teacher who wants to realize an effective classroom management should know and analyze the society in which he lives and the environment of the school. For a successful classroom management, the teacher should gain the respect and love of the learners, hold himself responsible for the learning of the learners, and be consistent and reliable.

According to study the concept of classroom management and discipline are equated and misunderstood. He states that the discipline is within the concept of classroom management and has a sub-special area. He also stated that classroom management is not controlling students and providing discipline in the classroom, so teachers should



have the skills to communicate with students, to provide students with self-management and conflict resolution skills in problem solving, and to establish an effective learning environment.

According to study distance education aims to bring together the teacher and student in the same environment without limiting time and space, and the communication between them takes place through virtual classrooms created with the help of technology. Virtual classrooms are environments where teachers and learners do not have to be in the same environment, and the learning and teaching process is carried out simultaneously (synchronously) or asynchronously (asynchronously) based on technology (Can, 2020). The environment, software and hardware in virtual classrooms are traditional (Arslan & Şumuer, 2020). Distance and online education has emphasized the digital literacy skills of today's people and revealed their necessity. took it out. According to Yıldız and Seferoğlu (2020), people with high self-efficacy can get more efficiency and satisfaction from distance education. At this point, teachers should investigate whether their students' technology use skills are sufficient and correct their deficiencies, if any.

The pandemic has revealed that traditional classroom management and virtual classroom management require different skills. Because virtual classroom and traditional classroom have very different features from each other. The distance between teachers and students negatively affects the communication and relationship between them. According to Can (2020), it is more difficult for teachers to teach students they have never met in a virtual environment than to teach in traditional classrooms. For effective classroom management, planning before the lesson and interaction with the students during the lesson has an important place. In distance education, these features come to the fore even more and are needed.

In virtual classrooms, teachers cannot share their screens with their students during the lesson, the hardware they use freezes, the software cannot be opened with various system errors, the lack of technology usage information, the sound cannot be transmitted during the lesson, the connection cannot be connected to the lesson, the connection is disconnected during the lesson, the internet connection cannot be provided, the difficulties experienced by the teachers while teaching their lessons are among the problems (Arslan & Şumuer, 2020). Moreover, İpekli and Titrek (2022) claim that pandemic effected teachers attitudes towards distance education and virtual activities perceptions among teachers.

When face-to-face education was started during the pandemic process, mask, distance and cleaning problems emerged. In order to maintain the distance, the class size was divided into groups in crowded classrooms and the groups were able to come to school on different days of the week. In the middle of the week, in order to clean the schools, distance education was started with the whole class and thus education was tried to continue. In addition, vocational high schools with practical courses had to teach the courses theoretically, since they could not fully practice.

According to the literature review, it can be said that there is not enough research on pandemic classroom management. There are very few domestic studies on pandemic classroom management. In this context, it is hoped that the research will create a general conceptual framework for virtual classroom management and contribute to the effective pandemic classroom management skills of teachers and field experts. It is seen that traditional classroom management dimensions are generally included in existing studies. Within the scope of this research, it has been tried to reach a synthesis regarding the dimensions and characteristics of pandemic classroom management based on traditional classroom management dimensions.

The answers to the following questions, which constitute the sub-problems of the study, are sought.

1. Have there been any changes in your classroom management understanding during the pandemic process? Please explain.

What did you do to renew yourself in terms of classroom management with the pandemic? Please explain.

3. What does the concept of pandemic classroom management mean to you? Please explain.



4. What do you think has brought the pandemic classroom management approach to education and training in a positive way? Please explain.
5. What do you think the pandemic classroom management approach brought to education and training negatively? Please explain.
6. Where do you think the pandemic classroom management will lead the education and training process in the future in terms of teachers, students, school management and parents? Please explain.

2. Method

The research is a qualitative research and was carried out in a phenomenological pattern. Qualitative research has focused on human characteristics and various phenomena. Because it has been understood that these cannot be revealed with the sharp criteria of quantitative research methods. In other fields of social sciences such as psychology, sociology and pedagogy, research approaches that prioritize quality rather than quantity have begun to come to the fore. New approaches that allow for the in-depth examination of human beings have been developed, and the facts about the individual have begun to be investigated (Baltacı, 2021). In qualitative research, the findings contribute to the understanding of social events, as they enable the subject to be explored in depth (Karataş, 2015).

As the study group, the opinions of a total of 15 teachers working in the institutions affiliated to the Ministry of National Education in the 2021-2022 academic year in the Akkışla district of Kayseri were consulted. As the study group, two schools from primary and secondary schools were selected. Attention was paid to the fact that one of these selected schools was a village school and the other was in the district center. Thus, diversity was tried to be ensured. However, due to the fact that there is only one high school in the district, only the data were obtained from the teachers of a high school. The demographic characteristics of the interviewed teachers are shown in the table below.

Table 1. Demographic Information on Teachers

Code	Gender	Age	Seniority	Type of school
Ö1	Female	30	7 Year	Primary school
Ö2	Male	32	10 Year	Primary school
Ö3	Male	40	16 Year	Primary school
Ö4	Female	28	7 Year	Primary school
Ö5	Female	35	10 Year	Primary school
Ö6	Female	26	4 Year	Middle School
Ö7	Male	39	12 Year	Middle School
Ö8	Male	36	10 Year	Middle School
Ö9	Male	28	6 Year	Middle School
Ö10	Male	30	7 Year	Middle School
Ö11	Female	30	7 Year	High school
Ö12	Male	32	6 Year	High school
Ö13	Male	41	19 Year	High school
Ö14	Male	39	16 Year	High school
Ö15	Female	36	4 Year	High school

The research data were obtained by using the interview method, one of the data collection methods. A semi-structured interview form was prepared during the interviews with the working group. The questions in this form were prepared by taking expert opinion. The study was carried out by applying the semi-structured interview form beforehand. From the data obtained, the quality of the questions was examined and it was thought that it was sufficient in terms of revealing its purpose.

The research data were obtained by putting the interview forms into writing, and it was tried to be interpreted through descriptive analysis. Descriptive analysis is used in the processing of data that does not require in-depth



analysis and in evaluating the introductory findings of the individuals interviewed (Karataş, 2015). The names, surnames and schools of the teachers who were interviewed within the scope of personal data security and research ethics were not shared. The participant teachers were coded as T1,T2,T3...T15 V. Direct quotations from the interview form were included in the analysis of the data.

3. Findings

In this section, there are findings related to the data obtained by the application of the semi-structured interview form. Findings analyzing the sub-problem of the research are included. In order to reveal the classroom management skills of the teachers in the pandemic, whether there is a change in the classroom management understanding of the teachers in the pandemic, what they do to renew and improve themselves in terms of classroom management in this process, what they understand from the concept of pandemic classroom management, what the pandemic classroom management brings to education, positive and negative, and education. The findings about where the education can lead in the future in terms of themselves, students, parents and school management are included.

Findings related to the first sub-problem

The findings about whether there was a change in the classroom management understanding of teachers during the pandemic period, which included the first sub-problem of the study, are generally discussed as follows:

Three teachers who participated in the interview say that there is no change in their understanding of classroom management, while 12 teachers say that there is a change in their understanding of classroom management.

The opinions of teachers who stated that there was no change in their understanding of classroom management during the pandemic process are as follows:

"I do not think that there has been much change in my understanding of classroom management during the pandemic process. I can say that teaching methods and techniques have diversified rather than classroom management throughout the process."(T9),

"There hasn't been much change. The frequency of communication has increased. I spend more time explaining students' opinions in order to increase their motivation."(T7),

"There has been no change in our understanding of classroom management. However, there has been a change and distance in the classroom layout and student-teacher relationship (T10).

As a result of being away from the school, students move away from the rules, their attention decreases, learning deficiencies cause problems, increasing participation in lessons in online classes and trying to take precautions about whether they are behind the camera or not, students' relaxed attitude and behavior when they come to school after a long break, virtual classrooms Opinions have been received that it creates changes in the planning of the classroom, causes more activity-based planning that increases interest and motivation, and changes the classroom management understanding of teachers.

"I think that I am a more prescriptive teacher because health is very important and rules provide it."(T3)

"Student's staying away from school during this period, attending the classes without sitting during the class environment, caused a decrease in their learning gap, interest and desire. Therefore, I used methods such as reminding them that they were in the school environment before the pandemic process by approaching with a more understanding."(T6)

"Students have very short attention spans, so I increased the number of activities in the lessons"(T8),

"During the pandemic process, I learned that I had to plan my course preparations online and face-to-face (T11),

"With the transition to distance education, there has been a change in course management in order to ensure participation in online courses" (T13),

"Yes, it did. The classroom management that I used according to the developmental model caused various problems due to the students being away from school and classroom rules, as well as their learning deficiencies,



and it required me to use some precautionary methods first. it required me to resort to some reactive methods” (T15).

Findings related to the second sub-problem

In this process, due to the transition to virtual classrooms, teachers try to have information about the platforms that will provide this, they use more materials, videos and visuals in their lesson plans, they participate in in-service training, they try to benefit from postgraduate education, they try to use web design tools, in short, they feel themselves in using technology effectively. opinions were received that they resorted to development methods.

“Classroom management was difficult during the pandemic period. I found interesting music, videos, online games all the time. I researched constantly (T1),

“I learned how to use new programs online” (T2),

“Since there is little interaction in online education, I learned about different applications to reduce monotony. I learned Web 2 tools. I turned my lessons into various virtual games. I improved my digital skills (T5),

“I did a lot of internet research about my branch. I researched and tried to implement social distance activities. I got support from my groups. I attended in-service trainings (T6),

“Some of the footnotes I received during my graduate education during the pandemic process helped me about what I can do about it” (S9),

“Especially, I did research on how to actively employ Web 2.0 tools and conducted studies in this direction” (T14).

Findings related to the third sub-problem

Teachers, seeing the pandemic classroom management as a difficult process, expressed their opinions as the transition to online education, the lack of learning, planning the lessons according to changing situations and environments, taking precautions, producing solutions, and understanding, tolerance and empathy due to the difficulties experienced.

“It is much more difficult than real classroom management, it expresses carelessness, indifference and loss of success” (T1)

“It evokes the concept of difficulty. You have to live by the rules” (T3)

“It is different from the traditional classrooms. There are differences in the teaching methods and techniques we use in our virtual classrooms, the tools and materials, the plans we will realize, their implementation and evaluation” (T4)

“The ability to teach in a hybrid way means a process that is open to all possibilities, both online and face-to-face” (T11)

“Classroom management and online courses in distance education” (T13)

“Comprehension, tolerance, elimination of learning deficiencies, virtual classrooms and their difficulties” (T15)

“To be able to empathize” (S6)

Findings related to the fourth sub-problem

In the interviews, 3 teachers said that the pandemic classroom management does not have any positive side to education.

“I did not make a positive development in pandemic classroom management. Classroom management is an extremely problematic phenomenon in distance education. Since our socio-cultural structure and social bases are slightly different, distance education has become extremely problematic for teaching”(T10),

“Although the youth, who live together with technology, sometimes get more data in online learning environments, I think its positive aspects are overshadowed since it cannot be done in a complete order” (T11),

“There was no positive benefit for me” (T2).



Other teachers stated that we learn to use technology more effectively and beneficially, students take responsibility for their own learning, ease of access to information, independence of education from time and place, and increased adaptation to the digital environment as positive aspects.

"It provided positivity for finding online games and getting children accustomed to the digital environment" (T1,)

"It brings independence from time and place. It reveals different measurement and evaluation tools. Students can attend the lesson with video, audio and written forms, which provides a versatile assessment. Parents are enabled to participate more quickly and closely in the educational life of the students"(T4),

"During the pandemic, the digital environment and infrastructures we used in the distance education process helped us save time. It showed that education and training can continue throughout life, regardless of the environment" (S9),

"It gave the opportunity to learn independently of time and place" (T13,)

"We have seen how useful technology has become. However, a situation like education, which is at the very center of the social field, can be put into the center of technology" (T14).

Findings related to the fifth sub-problem

The negative side of this process was expressed as the teachers' attendance problem, the inability of the students to attend the classes, the decrease in interaction and communication, the decrease in interest and attention in the lesson, the deficiencies in the application, the problems experienced on the internet, the lack of measurement and evaluation.

"Students became distracted. The students' interest in the lessons decreased a bit. While the school was a popular place for some, it became an unpopular place for some. Social distance rules were seen as a disappointment for some students. Anxiety about the exam increased even more"(T7),

"Decrease in learning by doing, lack of attention and limitation in practice lessons" (T8),

"Student's interest in the lesson decreased. The school culture began to disappear in the students. Leaving grades without retirement and high grades in the lessons caused complacency in individuals and families. Although education is a continuous situation, this discipline was damaged by students not attending classes"(T10),

"How much can an understanding of education in which one of the main purposes of education is excluded from the school, which is a real society, can socialize the individual? This question is positioned in a very controversial place. Either the concept of education will be redefined or all the molds will be broken. In addition, this process has caused permanent social inequalities to grow as even deeper and burning problems. it will bring it to an even more unfair point" (T14),

"Not everyone has the opportunity to attend the virtual classes, it is difficult to control the listeners because the students do not turn on their cameras, there are many distractions, difficulties and disconnections on the Internet" (T15).

Findings related to the sixth sub-problem

Apart from the teachers who say that this process may be positive in the future, there are also teachers who think that it will be negative. While 9 teachers see the future positively, 6 teachers see it negatively.

It is suggested that teachers who see it negatively will break the bond between teachers, students, parents and school management, there will be a disconnection in emotional bonds and communication, academic success will decrease, and parents' intervention in the lesson.

"It will break the emotional bond between the teacher, student and parent triangle" (T8)

"Student, parent, school, all education and training components may become disconnected if the necessary communication is not provided" (T12),

"It will cause the academic achievement of students to decrease. The teacher will feel more lack and loss of lessons with students in other years. The parents will witness that the adaptation process of the students to the school will take longer" (T7),



"I don't think very positively. Parents are always in the classroom and interfere with students. Children get bored. It is much more difficult for teachers than face-to-face education"(T1),

"If the elements that make up the education process (school, parent, teacher, student...) continue completely remotely, there will be a disconnection between the elements and this situation will wear down the process"(T10).

Teachers who see the future of pandemic classroom management positively, on the other hand, say that learning will be individualized and students and parents will take more responsibility in this process, the school will cease to be a physical place, education can turn into a hybrid structure, access will be available at any time, and if there is a disruption in education for any reason, it can be compensated with distance education. Have such opinions.

"I think that the education process will continue in a hybrid way in the future" (T5),

"It can be positive for everyone. We can attend online trainings and meetings whenever we want, and it will become more common in the coming years. For parents, they can be more interested in the follow-up and control of the child's education" (T6),

"The learning that will bring the teacher to the point of a guide and a guide will be realized as a result of individual efforts, and the child of the parent who gives more opportunities to his child will be more successful if he is diligent individually" (T11),

"Maybe physical schools will be replaced by virtual schools in the future" (T13),

"Individuation, a very deep individualization" (T14),

"I think it will contribute positively. When education is disrupted, for example, due to weather conditions, education can be continued. Being able to attend various trainings without leaving home provides great convenience. Families can spend more time with their children and have the opportunity to control their learning"(T15).

4. Results, Conclusions and Recommendations

When the findings obtained as a result of the research are examined, when the views of the teachers who constitute the first sub-problem about whether there is a change in their understanding of classroom management, it has been revealed that there are changes in their understanding of classroom management. Teachers especially focused on distance education and virtual classrooms and stated that the deficiencies and problems caused by various reasons such as the decrease in interaction, communication, attention, interest, motivation and class participation in the lessons made on different platforms created changes in their understanding of classroom management. Fiş Erümit (2021) revealed that students experience a lack of motivation due to being under quarantine during the distance education process. This supports the problem of lack of motivation that teachers face in students in pandemic classroom management in our study. Kavuk and Demirtaş (2021), as a result of their research, stated that students experience a lack of attention during distance education during the pandemic.

The second sub-problem of the study is about what teachers do to renew themselves in terms of pandemic classroom management. Opinions were received from the teachers that they tried to develop their skills in using technological tools, tried to learn how to use various web design tools, paid attention to using games, videos, music and visuals in order to enrich the content of the courses, and participated in in-service trainings. According to the opinions taken from the students according to the research of Fiş Erümit (2021), it is seen from the result that the teachers showed weakness in classroom management and technology literacy during the pandemic period, that they mismanaged the problems experienced by the students, and that some teachers lectured without using technological tools in this process. It was stated that they entered researches and participated in trainings in order to end this deficiency. According to Başaran et al., (2021), teachers had difficulties in using distance education tools such as Zoom and EBA effectively during the pandemic process. The lack of infrastructure in the programs, their language being English, they had difficulties in using Office programs and defining courses. There are very few teachers who can use Web2 tools. As seen in the results of this research, teachers have deficiencies and as seen in our research, teachers are aware of these deficiencies and try to improve themselves to overcome them.



The third sub-problem of the research is what the concept of pandemic classroom management means for teachers. For teachers, it was a period of distance education, difficulty, hybrid model, living by rules, a period in which learning deficiencies are high, attention, interest and interaction is low, and requiring a little more understanding towards students due to negative situations experienced, management has expressed for teachers. According to Bülbül (2020), virtual classroom management includes establishing a positive student-teacher relationship, creating a classroom environment where cooperation is at the forefront, thinking about the psychological and social needs of students, and developing a sense of belonging. In our research, it can be seen that teachers do not only think about teaching while performing classroom management in this process, but also try to show empathy, understanding and tolerance towards students by thinking about their psychology, sociology and physiology due to the problems arising from the pandemic.

The fourth sub-problem of the study is what the pandemic classroom management approach brings to education for teachers in a positive way. It is seen that teachers list cleanliness as being responsible for students' own learning, easy access to information, independence from time and space, family taking more responsibility for the child's learning, saving time, and improving technology use skills. As a result of the research conducted by Fiş Erümit (2021), it was concluded that students take more responsibility in the distance education process compared to face-to-face education, and they exert more effort individually. However, according to Bülbül (2020), it is not possible to save time in this process. The reason is the preparation of the content, the transfer of the lecture notes to the digital environment, maintenance and updates in order not to disrupt the flow of the course.

The fifth sub-problem of the research is what the pandemic classroom management approach brings to education for teachers negatively. According to the teachers, not being able to attend the classes due to not having the internet and technological tools due to lack of opportunity, the abundance of distracting elements in the environment, problems with the internet, giving feedback and interaction to the students who do not turn on the camera, physical discomforts caused by sitting in front of the screen, lack of interest and motivation. opinions such as deficiencies in learning by doing and experiencing were stated. According to Yavuz and Toprakçı (2020), inadequacies arising from technology were emphasized the most as negativity.

The last sub-problem of the research is where the pandemic classroom management will be in the future in terms of teachers, parents, students, school management and parents. While some of the teachers see this as positive, some see it negatively. Those who saw it negatively shared the opinion that the parents interfered with the lesson too much, the students got bored and it was difficult for the teachers compared to face-to-face education, and the bond between the teacher-parent-student could be broken. expressed their views that individual responsibility will increase. Success in education and training, validity and compatibility with sociological, psychological and philosophical dynamics will be questioned and criticized and how it will be in the future will be revealed.

According to the findings obtained as a result of the research, it is a fact that there will be a structural differentiation in the functioning of education in the future and that traditional classrooms, schools, roads and methods will lose their importance over time. In particular, the outputs of technology in the field of education and training continue to become more and more widespread. In this context, the development of many models such as blended learning model, hybrid learning model, flipped classroom and learning model as a result of scientific research can be considered as an indication of this. Now, whether you are a teacher or a student, a parent or a parent, it can be stated that using technology effectively and adapting to changing conditions has become a necessity of the age we live in.

Based on the findings obtained as a result of the research, the following recommendations were developed.



- It is considered important for teachers, parents and school administrators to follow the technology required by the age and not to lag behind this technological movement. In this context, it can be suggested that educators can inform students about this technology, encourage its use, and act as role models.
- In order to adapt to the changing world dynamics, the Ministry of National Education can regularly recruit teachers and school administrators for in-service training.

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Historical objects and their accessibility for people with visual impairments

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Abstract

Model or 3D representation is not the domain of today. In the past, models were not primarily intended for people with visual impairments. However, people with visual impairments could use them and thus use their basic premise - 3D representations to develop their sense of touch or ideas about a phenomenon or space.

In our paper we will focus on the issue of historical objects as part of our culture. The paper will include a demonstration of different 3D models of historical monuments that exist in different places in Europe and serve to better grasp the space.

The paper is based on the TAČR project - Reducing the information deficit and developing the imagination of people with visual impairment through 3D models with sound elements, the key part of which are models of historical and religious monuments in CZ.

Keywords: People with visual impairment, historical object, 3D model, imagination

Introduction

People with severe visual impairment are one of the minorities who are easily distinguishable in society, both in appearance and behaviour. This disability then has a large number of consequences that affect not only socialisation, but also the acquisition of information and, where appropriate, its transmission. Compensation for the loss or significant limitation of visual perception then takes place through touch or hearing.

The sense of touch, as a more complex sense, conveys much more information, but over a longer period of time, and is therefore usually replaced by hearing, which, like sight, is a remote receptor. However, our paper specifically focuses on touch and the aids and devices that are compensatory for the people with visual impairment and help them perceive and become aware of micro or macro space with the help of understanding spatial relationships that are represented in tactile form.

History of tactilegraphic aids for the people with visual impairment

The first tactile aids that were created and could be relatively easily transformed into aids and resources for people with severe visual impairment were those that represented writing or written resources. Already in antiquity, i.e. in the period dating back to the 4th millennium BC-476 AD, we can find not only information about the first eye doctors (ophthalmologist) or eye surgeries, or the traditionally mentioned killing of people with disabilities, but also, for example, information about the Quintilian table. The Roman philosopher and rhetorician Marcus Fabius Quintilianus created a set of writing patterns engraved on a wooden tablet. This set was called the Tabella, and although it was created for the majority of society, its author himself pointed out that the writing thus made - depicted - was easily readable by touch and could be read even by the blind people. As Smýkal (1994) states, the possibility was also used by blind persons themselves - Didymos of Alexandria, a teacher of the famous college in Alexandria (4th century AD), called Chalkenteros (Iron) and Bibliolathas used kind of carved letters to mark books. (Sichová, 2022; Jeřábková, 2013)

The Middle Ages (476 AD-1492 AD) had already been influenced in attitude towards the people with severe visual impairment by the advent and development of Christianity - i.e. the establishment of shelters and charitable societies, as well as the enabling of basic education and training in universities. This period, however, is similarly



poor in tactile aids for the people with visual impairment as the previous period. Most of the tactile aids, then again, relate to different kinds of writing. Smýkal (2006) gives one such typeface, which was used to mark books and was based on Arabic characters formed by rolling and folding various materials such as papyrus. If we would like to credit the Middle Ages with optical aids, we must not forget to mention that here on we find the first references to reading glasses (1292 Roger Bacon, or 1316 in Florence), but this is only marginally relevant to our contribution. (Smýkal, 1994; Smýkal, 1995)

The modern era (1492-early 20th century) brought not only the need and desire to educate the able-bodied, but also the disabled. With the founding of educational institutes (the most important, as it is considered the first in Europe, is the 1784 Institute in Paris founded by Valentin Haüy) came the need for new aids, but also the need for a new - ideally universal - script. Each teacher, or institute founder and teacher in one, then invents/invents his or her own typeface - from engraved letters in wax tablets (Pero Mexia), or carved letters in wood (Lucas, Rampazetto), then on to smooth relief Latin (Aders and Hawefortz or Haüy) and pierced Latin (Klein). It is therefore no wonder that a competition was launched for the "universal" or ideal typeface for the blind, and that this competition was won by a blind teacher - Louis Braille. Braille adapted the military script of Ch. Barbier so perfectly that since 1850 no other typeface has been known in the education of the blind people. (Smýkal, 2006; Vojtko, 2005)

In addition to new forms of writing, however, in the modern period we encounter and must, thanks to educational efforts, encounter other tools, among which are maps - among the first creators of tactile maps I consider M. von Salignac, who created maps and plans using materials available to her (wool, felt, wire, etc.). Mapmaking was then taken further by, for example, the aforementioned J. W. Klein, who created maps by assembling wooden shapes from a kit for a given purpose. Since the 19th century, the relief globe has also been associated with maps as such. (Smýkal, 2006; Sichová, 2022; Prokš, 2010)

Further aids and models can then be found in the modern era. Thanks to modern methods, materials, but also the pressure of the teachers and the blind people themselves, the modern age brought a large number of tactile aids, which were intended not only to develop the sense of touch, but also to create an idea of space - we can name, for example, glued maps and models, maps stamped from a matrix into plastic, carved into stone, metal plates, etc., or tactile books. Last but not least, we would like to mention the models of buildings and interesting objects made in various ways, which will be the subject of the next part of this paper.

Models in the EU

Tactile models have been and are being created through various techniques - the most typical are models carved in wood (here we have chosen the model of St. Wenceslas Cathedral in Olomouc as an example, as well as the model of the National Gallery in Barcelona), made by casting in bronze or other metals (e.g. the model in Wrocław or the centre of Olomouc), carved in stone (e.g. the model of the Tata district), glued from paper or printed on 3D printers.

3D models of monuments or city centres have always been an enlivenment of exhibition spaces or interiors of castles and palaces. Often, however, they have been hidden behind glass or otherwise distanced from visitors (*File:Castello Estense, Ferrara 2014 138.jpg - Wikimedia Commons*, n.d.), either because of the fragility of the materials used, such as paper or cardboard, or because of the old museum principle of "no touching the objects on display". In addition to the models thus processed and exhibited, there are also wooden models, among which there are also models offered for touching (St. Wenceslas in Olomouc). In public space, models of cities or historical monuments cast in non-ferrous metals are very popular. These appear practically all over Europe in several variants. Models of historical cities, such as Uherský Brod at the time of Jan Amos Comenius (Bohun, 2020) or Brno at the time of the unsuccessful Swedish siege in 1645 in the Czech Republic (*Model města Brna | Archisluzba*, n.d.), models showing the current state of the city centre, as shown by the model of Nördlingen in Germany (*Stadtmodell 2012 – Nördlingen sehen und fühlen | Stadtmarketingverein Nördlingen ist's wert*, n.d.), Basel in Switzerland (rusty lazer, 2007, XXXX) and many others.

In addition to models of cities, or their historical centres, there are also separate models of historical monuments. His own model has the hill with the Church of All Saints on the Blood in Ekaterinburg, Russia, which was built on the site of the murder of the tsarist family by the Bolsheviks (*Category:3D map of the Voznesenskaya Hill -*



Wikimedia Commons, n.d.). The local St Peter's Cathedral in Pecs in Hungary has its own model from 2020. The model can also be found next to the Stephansdom in Vienna. But there are also models inside monuments - in fact, almost most major monuments in Spain are decorated in this way. Most modern models have embedded text in the local language, at least one world language, and also in Braille. There is a noticeable shift from models for intact to models accessible to the visually impaired. Companies involved in the production of models are already talking directly about city/braille models (*City models / Braille models - Kunstgießerei Plein GmbH*, n.d.). In connection with modern 3D printing technologies, there are also models made of new materials, such as the model of Florence Cathedral offered by the Czech company (*Printables*, n.d.).

Examples of 3D space processing



Fig 1 - Tata (Hungary)



Fig. 2 - Wroclaw (Poland)



Fig. 3 –Olomouc (Czech Republic)



Fig. 4 - Barcelona - National Art Museum of Catalonia (Spain)



Fig. 5 - Barcelona - Sagrada Família (Spain)



Fig. 6 - Olomouc - Dóm sv. Václava (Czech Republic)

Project TAČR

Our project focuses on the creation of audiotactile models of historical monuments - connecting tactile perception with auditory perception. Linking these two compensatory factors then provides people with severe visual impairment with the possibility of reducing their information deficit.

As part of the project, we decided to make specific historical monuments accessible through 3D printing in the form of 3D printed models. The selection of monuments was simple at first sight - the most valuable ones. UNESCO monuments seemed to be a sure guarantee, as the Czech Republic has 16 of them in total, but they are very inconveniently scattered. Therefore, the national cultural monument status was used for the selection. For a change, the Czech Republic has several dozen of them. Taking into account the division of the country into 14 regions, monuments were selected from each region, with two located in the capital city of Prague and two in



Olomouc, where Palacky University is located. Although it was not possible to avoid the same type of monuments, the emphasis was on their diversity. The buildings range from the Middle Ages to the 20th century. Included are mediaeval castles and ruins, churches from the Middle Ages to the Baroque, Renaissance and Baroque castles, a Gothic bridge, a Baroque village, a functionalist villa and a Neo-Renaissance theatre building. The target group of respondents is familiar with monuments reflecting the building styles of the 10th century. The project will come to an end next year, so we are in the phase of testing 3D audio-tactile models and collecting data from the testing. For this paper, the most important outcome is the fact that thanks to the models, blind people have the opportunity to get to know the monument, its location in space, but also some of its most important attributes. This resulted in 16 models of historical monuments, a glossary of new (historical) terms for visually impaired pupils, a guide to historical monuments and also models of some parts of monuments that are harder to describe - for example, the Litomyšl sgraffito in 3D printing. (Vondráková et al, 2020; Ruzickova, Kroupova, 2020; Ruzickova, Kroupova, 2020)



Fig. 7 - 3D models and representation of the castle and sgraffiti in Litomyšl

Conclusion

Printing with 3D printers is nowadays a relatively easy and cheap way of not only typhlographic representation. But for people with severe visual impairments in particular, 3D technology is an excellent way to convey a reality they cannot touch or hear. 3D technology then helps in the development of fantasy, imagination, but also spatial orientation or education. However, thanks to the development of technology, we can go much further - we can connect touch and hearing, we can combine these two ideas into one. And this can be done both through our project of 3D audiotactile monuments and other projects - audiotactile publications created in Slovakia.

We believe that over the past few millennia, humanity has made great strides forward in terms of technology, access and education for people with severe visual impairment, but we must not forget that the most important factor is the human factor. Without the people who invent and put technology into practice, without the users who test it, or without the empathetic people who just bring up a note and help, we would never have moved forward.

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Digital material typographic parameter formatting methodology

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Abstract

Technologies and digital material use are increasing for all types of daily tasks, especially for work and educational reasons. It is topical, as shown by the Covid-19 pandemic and the demand of many organisations and companies to go digital and reduce paper use due to environmental issues. It increases the digital near workload.

As there are no appropriate general recommendations or methodologies for digital materials, neither is individualised, and it is affecting users' abilities and performance of screen reading. Due to digital near workload, there is an increase in complaints and symptoms related to computer vision syndrome (CVS), digital eye strain (DES) and eye fatigue. It can lead to permanent changes in the vision system, its functions and eye health and some serious diagnoses over time.

Methodology for digital material typographic parameter formatting has been developed for use separately as manual formatting of digital text materials and for incorporation in the automatised app. It includes general basic recommendations for every digital material user, recommendations related to a specific group and individualised recommendations on several levels. Several personalisation levels can be reached only by the developed automatised app for this purpose but not manually. Appropriate digital material formatting is a part of the solution to improve the public health of digital material users and make digital materials more accessible for everyone.

Keywords: App prototype, digital material, formatting parameters, methodologies, personalised approach

Introduction

There is no doubt that it is a digital era with the fast development of technologies, and most daily tasks are moved to the digital environment, including working tasks and learning tasks, including reading from screens. It increased enormously over the last decade, especially during the Covid-19 pandemic due to quarantine. After restrictions and strict necessity of distant work, many organisations have chosen to stay full or partly on distant work. They are asking to use digital options from their clients as well. There are not only time consumption, expenditure reduction and other benefits for organisations and employees but also environmental benefits. In addition, many employees have found benefits in it and have decided to work distantly as much as possible. All remote work and education include digital work a huge part of the time.

The digital environment has pros and cons. There has been a focus on one of the main cones during this research – the increase of digital near workload. That leads to increased discomfort and different symptoms and complaints from digital material users related to computer vision syndrome (CVS), digital eye strain (DES) and eye fatigue due to digital near workload. That can lead to different vision systems problems and permanent changes such as accommodation and vergence system tiredness and dysfunction, myopia development and progression, different related ocular disease over time (Sheppard & Wolffsohn 2018), and a decrease in cognitive functions and different work or learning abilities (Radüntz 2020). There has been a focus on one of the main prose during this research as well – adaptability of the digital environment and the possibility to work on the digital solution with user centred and personalized approach.

One of the reasons for users' abilities and performance affection during digital screen reading is that there are no appropriate general recommendations or methodologies for digital materials or an individualized solution (Mackare & Jansone 2017a). Even worse, a lot of recommendations are taken directly from printed materials



(Kazazoglu 2020), but there is known what there the difference between reading from printed or digital format is (Ferrari & Short 2002; Nielsen 2000) as even working distance on screens is different, and it changes the physical size of letters (Bababekova et.al. 2011, Riou, et. al. 2011).

The author suggests one possible solution for this global problem: digital material typographic parameter formatting recommendations combined in methodology based on literature and user research and considering vision science basics and human development stages. It is complemented with an automatic tool for faster and easier formatting of digital documents and more individualised recommendations. It will be possible to supplement and modify for different use approaches and different user groups.

Method

Secondary data use of parameters, literature research, recommendation, and app analysis

Findings

First, the literature research has been conducted for existing digital text formatting recommendations. Over one hundred different materials have been researched as methodologies, recommendations, guides, research papers and formatting suggestions for that purpose. It shows the unambiguity of digital text formatting parameter recommendations as parameters is suggested in a wide variety (Mackare & Jansone 2017a; Mackare & Jansone 2018a). The result of the literature review is represented in Tab.1.

Table 1. Results of the literature review ^A

		Line length	Font	Body size	Heading size	Line spacing	Colour combination
range	Min.	25	-	8	12	1,15	-
	Max.	140	-	28	32	2	-
4 Top suggestions	1.	55	Arial	14	18	1,5	Black on white
	2.	75	Verdana	12	24	1,6	Grey on white
	3.	65	Georgia	16	14	1,15	Green on white
	4.	80	TNR	18	20	1,23	White on black

^A Table adapted by the author from a previous publication (Mackare & Jansone 2017c)

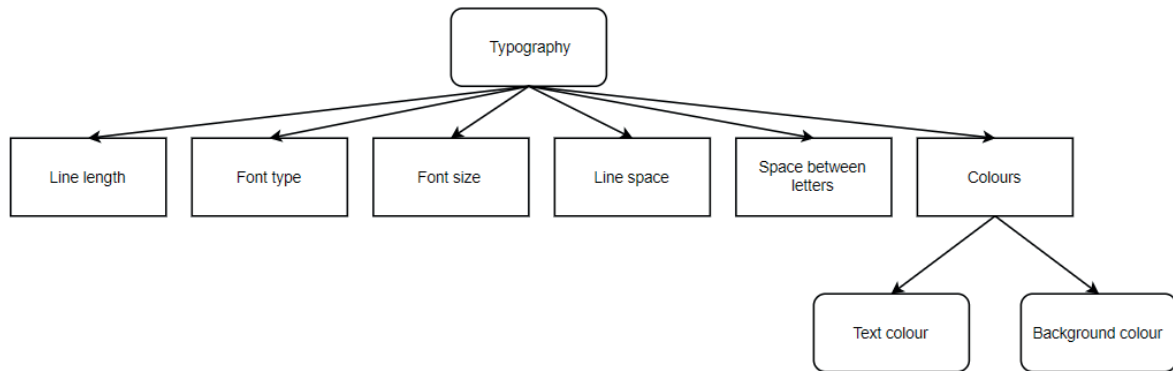
It also gives a perspective on mostly suggested and used typographic parameters for digital text formatting. These parameters are the font, body size, heading size, line spacing and colour of text and background. It can be supplemented by space between letters and line length, but these parameters are more connected to previous main parameters and changes in connection with them. It is represented in Tab.2.

From all most popular and important parameters, following have been chosen for recommendation: font, size and colour. Shown in Tab.3

The starting recommendation has been created based on the literature review for the four main parameters. It is represented in Tab.4.



Table 2. Typographic parameters of text ^B



^B Table adapted by the author from a previous publication (Mackare & Jansone 2019)

Table 3. Typographic parameters of recommendations

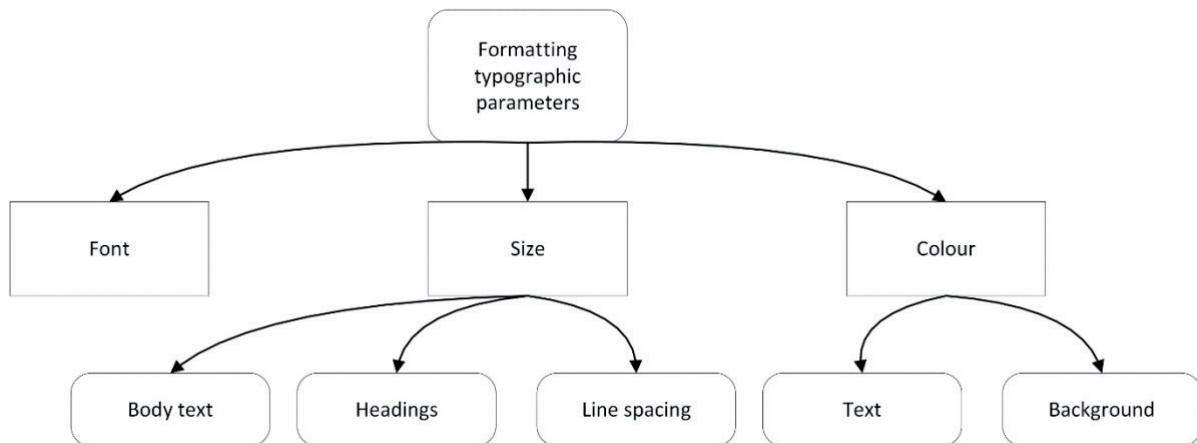


Table 4. Best recommendations based on theoretical findings ^C

FORMATTING PARAMETERS	RECOMMENDATIONS	FORMATTING PARAMETERS	RECOMMENDATIONS
Font	Body text: Arial, Verdana, Georgia and TNR Heading: Can use also other fonts	Line spacing	1,15 or 1,5
Size	Body text – min. 14pt Headings – min. 18pt	Colour	Black text on white background Grey text on white background Green text on white background

^C Table adapted by the author from a previous publication (Mackare & Jansone 2017a)

These parameters and suggestions are used for user research and formatting methodologies development.



User research

Several user research has been done to find user preferences and the best parameters for digital text to develop a recommendation. Several surveys and patient records research were conducted to reach this goal.

Previous authors' publications present a more extended research description (Mackare & Jansone 2017a, 2017b, 2018b, 2018c, 2020).

Recommendation development.

Recommendations have been developed over several years and are based on literature review and user preference research for methodology creation. In addition, a methodology is supplemented with theoretical and scientific background from vision science and human development point of view, practical observations in optometrist practice, and individual user-based approach suggestions and recommendations.

There are several general recommendations for any digital document creation:

- The text is created on the position of the portrait page in one column;
- The text must be divided into paragraphs;
- The text line length in characters (CPL) and words count per line varies depending on the font and size of the text, but it should match norms of 45 – 85 CPL or 12 -16 words per line;
- Use one font of body text for the whole document;
- one different font for headings can be used in addition;
- not more than three different colours for text are used for the whole document.

All recommendations focus on a standard working distance with a computer screen of 50-65cm from the users' eyes but can differ by distance or screen size change.

There are five primary levels of recommendation developed. Recommendation levels differ with user type and access level and recommendation type, variety and personalisation level, user-centred approach and additional feature possibilities.

Level 0 - Limited, general recommendations: it is an overall-basic recommendation for everyone. It is suggested for any digital text user. It has been found to be more appropriate than the current guidance methodologies that are based on printed text recommendations. It is shown in Tab.5.

Table 5. Level 0 – limited, general recommendation of formatting parameters for everyone

Formatting parameters				
Font	Body text size	Heading text size	Line space	Text and background colour
Arial	12pt	16pt	1,5	Black on white

Level 1 - General basic recommendations: it is for non-registered users (in the app) as an overall-basic recommendation for three main age groups; everyone can use that.

Recommendations were created for the following three age target groups:

- school-age children 7-15 years old;
- adults of working age before presbyopia 16-39 years old;
- adults of presbyopia age 40+.



As the target groups depicted at this level are in a wide age range within the group, it is also not possible to recommend an unambiguous recommendation of one value, but there are limits to the value of the recommendations. It is presented in Tab.6.

Table 6. Level 1 – general basic recommendation of formatting parameter limits for everyone

Target group by age	Formatting parameters				
	Font	Body text size	Heading text size	Line space	Text and background colour
7-15	Arial	12-18pt	≥14-20pt	1,5	Black on white
	Verdana				Very dark grey on white
	TNR				Black on white
16 - 39	Arial	≥14pt	≥16pt	1,15	Black on white
	Verdana				Very dark grey on white
	Georgia				Very dark green on white
40+	Arial	≥14-16pt	≥16-18pt	1,5	Black on white
	Verdana				Very dark green on white
	Georgia				Very dark grey on white

More specific suggestions can be used from Tab.7.

Table 7. Level 1 – general basic recommendation of formatting parameters for everyone and accessible for non-registered users of the app prototype version 3.0

Target group by age	Formatting parameters				
	Font	Body text size	Heading text size	Line space	Text and background colour
7 - 15	Arial	14	16	1,5	Black on white
16 - 39		12	14	1,15	
40+		14	16	1,5	

This formatting has been found to be more appropriate based on user research preferences; top 3 favourites for font, size, and colour combinations.

All followed levels are developed for registered users, but some levels could also be used manually.

Level 2 - Basic recommendations: it is for basic registered users (in the app) and is slightly more personalised as have three basic questions from users for possible different suggestions: age, gender and primary everyday language use.

There are developed nine age groups for primary target users. That have been chosen based on specific human development stages and other changes during life – psychological, physiological, perceptual, and health-related. (Mackare & Jansone 2019). These age-based recommendations is presented in Table 8.



Table 8. Level 2 – basic recommendation of formatting parameters for registered users by age group

Age group	Formatting parameters				
	Font	Size Body	Size Heading	Line spacing	Color
3-5	Verdana	14 *	16 *	2 *	Black on white
6-12	Verdana	12	14	2	Black on white
13-15	Georgia	16	18	1,15	Black on white
16-25	Verdana	12	14	1,5	Black on white
26-35	Verdana	12	14	1,15	Black on white
36-39	Arial	14	16	1,5	Black on white
40-55	Verdana	14	16	1,5	Black on white
56-65	Verdana	14	16	1,5	Black on white
66+	Verdana	14*	16 *	1,5 *	Black on white

* Prospective recommendation

The newest version also includes recommendation differences based on users' gender. It is shown in Tab.9.

Table 9. Level 2 – basic recommendation of formatting parameters for registered users by age group and gender

Age group	Gender	Formatting parameters				
		Font	Size Body	Size Heading	Line spacing	Color
3 - 5	women	Verdana*	14pt*	16pt*	2*	Black on white
	men	Arial*	16pt*	18pt*	2*	
6 - 12	women	Verdana	12pt	14pt	2	Black on white
	men	Arial	14pt	16pt	1,5	Very dark gray on white
13 - 15	women	Georgia	16pt	18pt	1,15	Black on white
	men	TNR	14pt	16pt	1,5	Very dark gray on white
16 - 25	women	Arial	12pt	14pt	1,15	Very dark gray on white
	men	Verdana	12pt	14pt	1,15	Black on white
26 - 35	women	Verdana	12pt	14pt	1,5	Black on white
	men	Arial	14pt	16pt	1,15	Very dark gray on white
36 - 39	women	Verdana	14pt	16pt	1,5	Black on white



	men	Arial	14pt	16pt	1,5	Very dark gray on white
40 - 55	women	Verdana	14pt	16pt	1,5	Black on white
	men	Arial	14pt	16pt	1,5	
56 - 65	women	Verdana	14pt	16pt	1,5	Black on white
	men	Arial	16pt	18pt	1,5	
66+	women	Verdana	16pt*	18pt*	1,5	Black on white *
	men	Arial	18pt*	20pt*	2,0*	

* Prospective recommendation

In progress is the development of the additional suggestions based on primary everyday language (for example, Latvian, English, Russian, or any other) use as a human is establishing preferences often on habit, and there is a need to take into consideration also specifications of language.

Level 3 - Progressive recommendations: are based on second-level recommendations but are adapted and supplemented with additional aspects of users' preferences and individualised needs for a more individualised formatting approach. Recommendations depend on the features of several factors.

Recommendations are based on different groups of questions:

- complaints and symptoms;
- vision correction;
- vision status and eye problems or diseases;
- reading and learning difficulties;
- personal restrictions or disabilities;
- cultural differences;
- professional features;
- working distance;
- technical aspects of screen;
- etc.

A full description is presented in developed methodologies (Mackare & Jansone 2022).

This level of recommendations already makes it more difficult to apply formatting to documents manually when creating materials for groups of people. Still, developed material in methodologies can provide a general understanding of digital content developers and be a useful and helpful source of information. It is a valuable source for:

- teachers,
- special education teachers,
- speech therapists,
- other support professionals,
- parents with children with
 - learning or reading difficulties
 - visual impairments and with mild or severe changes,



- any user with visual impairments or severe changes,
- as well as users of any age who have difficulties or problems working with digital materials (especially text for work with documents or educational reasons) and want to find out and improve the situation themselves.

This level already requires an automatised approach for formatting delivery in the best and fastest way for recommendation use.

Level 4 - Analytical Recommendations: This is the analytical level that includes higher personalisation formatting, and it requires not only automatised solutions but also artificial intelligence aspects such as machine learning. It has two sub-levels:

- Level 4a - Basic Analytical Recommendations;
- Level 4b - Analytical Progressive Recommendations.

Level 4a - Basic Analytical Recommendations: It includes issuing recommendations to the individual based on their personal performance in working with digital materials, their feedback and more analysis through the tool's machine learning option, using the performance and collaboration of all users.

Level 4b - Analytical Progressive Recommendations: in addition to level 4a support, it is adding additional tools for analysis of user performance - eye movement recording, EEG and others.

The automatised tool for support and easier use of level 3 and for delivery of level 4 recommendations have been developed. Latest prototype with new technical solution is in beginning of user testing phase.

Results, Conclusions and Recommendations

Based on long-term research and by taking into consideration a user-centred approach methodology for digital text document formatting with appropriate typographical parameters has been developed. It contains general suggestions and four-level recommendations for different user types and access levels and recommendation types, variety and personalisation levels, user-centred approach and additional feature possibilities.

All recommendations are based on literature research and previous studies. All developed recommendations are adaptable and adjustable by individual needs and preferences.

The methodology is supplemented with the automatised app prototype for faster and easier recommendation use for document formatting and for higher level recommendation possible use to provide a more individualised user-centred approach. In the current app prototype, version 3, level 1, and level 2 recommendations have been already implemented.

Authors should supplement Level 3 and level 4 recommendations with additional information for general use and implement it in the app.

The authors plan to share methodologies with education providers in Latvia in autumn 2022, thus raising awareness and increasing more appropriate digital material creation and document formatting.

In future, all recommendations included in the methodology should have approbation via experimental and user testing. The authors started an experimental recommendation testing with voluntary respondents by using an eye movement tracking device in the summer of 2022. The authors plan to start recommendation user testing with university students via the developed app in the autumn/winter of 2022.

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The link between workplace bullying and quality of sleep

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Abstract

The research objective of this study was to determine the incidence of workplace bullying among teachers and to determine the relationship between quality of sleep and bullying in the workplace in the Czech Republic. The survey was designed as quantitative research. A questionnaire battery was used, consisting of the questionnaires NAQ-R (Negative Acts Questionnaire – Revised), evaluating the prevalence and forms of workplace bullying, and the Pittsburgh Sleep Quality Index (PSQI), assessing sleep quality. The research sample consisted of 103 teachers from the Olomouc Region. Their average age was 42.23 years (ME 42; SD 11.03), and the average length of employment in the current position was 14.8 years. The results of the survey point to the existence of a significant relationship between victims of workplace bullying and the quality of sleep. Long term victimisation in the workplace leads to sleep problems, in the form of disturbed sleep and awakening problems, as well as poor quality of sleep.

Keywords: Workplace bullying, sleep quality, teachers

1. Introduction

Workplace bullying is long-term systematic coercion associated with hostile and unethical communication, and an absence of moral scruples on the part of the assailant. Initially individual attacks may appear to be harmless and chance occurrences on first impressions, but when a comprehensive view is taken this concerns a premeditated phenomenon, which jeopardises the health of the victim. Workplace bullying represents a serious form of harassment, which is an extreme type of social stressor within the framework of the working environment (Zapf, 1999). The definition according to Leymann presents such behaviour as hostile manifestations of aggression in the workplace, in which an employee is systematically exposed to animosity on the part of one or more individuals,



and accordingly experiences feelings of helplessness and fear of being excluded from the collective (Leymann, 1996, p. 168). This phenomenon is viewed somewhat differently by Einarsen et al. (Einarsen, Hoel, Zapf, & Cooper, 2011, p. 22), according to whom this concerns harassment, vilification or social exclusion of the employee, or a negative influence on his or her work.

Workplace bullying has its own characteristic features which distinguish it from other forms of violence in the workplace or from regular conflicts which are a component of everyday life.

- Repeated, negative acts of interpersonal aggression.
- Duration of at least 6 months.
- Asymmetry of power between the mobber and the victim of workplace bullying.

In other words, individual attacks are long-term and sustained, and are directed against a specific individual. Attacks are made regularly; they tend to be repeated and the victim is constantly exposed to pressures and stressful situations which occur in the workplace. The individual manifestations of workplace bullying may be highly refined and subtle, indirect and covert, and it is therefore very difficult not only for colleagues, but in the initial phases of mobbing also for the victims themselves, to distinguish that this may concern unethical conduct. This is therefore a serious problem and phenomenon in which a violation of social norms takes place, in connection with a curtailment of fundamental human rights, with consequences for the victim and his or her personality. As a result, the whole process of workplace bullying is highly dangerous and can have devastating impacts both upon the victim of bullying and on the entire organisation, and even on the witnesses to the mobbing, who have been exposed to a similar climate of the team (Zapf, & Gross, 2001, Nielsen & Einarsen, 2012).

Workplace bullying causes long-term and serious problems for the victim. Numerous studies have documented that the victims of bullying are exposed to long-term stress, which leads to an increase in anxiety, depression, despondency, insomnia, mood disorders, post-traumatic stress disorder and even suicide attempts. The victim also suffers from a loss of job satisfaction, which is manifested in frequent absenteeism, fluctuations in terms of a deterioration of the victim's performance and motivation to work (Leymann, 1996; Cakirpaloglu et al, 2017; Niedl, 1996). According to the research conducted by Čech (2011), who mapped the consequences of bullying in teachers at elementary schools, the results of examinations mainly point to consequences affecting the teacher's person, primarily on the level of psychological problems (which may be of a long-term character), an impairment of physical health, eroded social relationships, loss of motivation to work in education and other serious consequences threatening the personality of the teacher and impacting upon the quality of his or her work. This aggressive form of interpersonal behaviour also has impacts on the organisation itself. Bullying in the workplace is manifested above all in a disrupted dynamic of the collective, a deterioration of the quality of team co-operation and communication, a loss of motivation in colleagues, employee dissatisfaction with the climate of the working collective, and a high employee turnover (Čech, 2011).

2. Method

The research objective of this study was to determine the incidence of workplace bullying among teachers and to determine the relationship between quality of sleep and workplace bullying in the Czech Republic. Another objective was to assess the quality of sleep among teachers.

H1: A significant, positive relationship exists between the degree of workplace bullying and the global score of sleep quality.

H2: A bullied teacher will report poorer sleep quality than non-bullied teachers according to the global sleep quality score.

Research group

The study comprised 103 teachers living in the Olomouc Region, Czech Republic. Their average age was 48.6 years (ME 49; SD 10.98), and the average length of employment in the current position was 15.23 years. The inclusion criteria were age over 18 years, length of employment over one year, and consent to participation in the study. In terms of the type of school facility, 73 respondents worked in elementary schools and 30 individuals were secondary school teachers.



Within the framework of the actual research investigation, psycho-diagnostic methods were used for the purpose of the self-diagnosis and realisation of the research objective.

In order to identify the prevalence and forms of workplace bullying, the Negative Acts Questionnaire-Revised was used (referred to as NAQ-R), which includes a total of 23 items (Einarsen, Hoel, & Notelaers 2009). This questionnaire can be applied individually or in groups. The advantage of the NAQ-R questionnaire is time effectiveness and an opportunity to measure two complementary aspects of mobbing, i.e. behavioural and self-evaluation. The behavioural measurement criterion forms the basis of items 1 to 22 of the NAQ-R and focuses on selected manifestations of negative behaviour in the workplace. A specific feature of these items is that their formulations do not include any indication that they measure mobbing. The responses are indicated on a five-point Likert scale, suggesting the frequency of bullying behaviour, i.e. how often the respondents have encountered this type of behaviour during the past six months. While the behavioural criterion is included in the first 22 items, the 23rd item focuses on self-evaluation measurement. The respondents are asked to describe their own experience or perception concerning whether they feel themselves to be victims of mobbing according to the theoretical definition specified in the introductory part in item 23. In this respect, meta-analytical studies have confirmed that estimates of the prevalence of workplace bullying based on self-evaluation are usually lower than estimates based on behavioural measurement (Agervold, 2007; Nielsen, Matthiesen, & Einarsen, 2010). In the present research, the method of double translation was used to ensure the content quality of the NAQ-R questionnaire. The English version of the NAQ-R questionnaire was translated to Czech and then back into English. The translation of the questionnaire and its application in the research was approved in advance by the authors of the questionnaire. Individual versions of the translation were compared with respect to language and cultural differences. Cronbach's alpha for 22 items of the Czech version of the NAQ-R questionnaire achieved $\alpha = 0.94$; this confirms a high degree of reliability of this method, and the fact that it can be reliably used for measuring mobbing also by means of a smaller number of items.

To assess sleep quality, the PSQI was used. A Czech version of the standardised questionnaire was obtained from and used with the permission of the University of Pittsburgh's Office of Technology Management. In addition to the use of the PSQI, the standardised PSQI instrument (Buysse et al., 1989) includes 19 items. It is a self-reported questionnaire for the subjective assessment of sleep quality and quantity over a period of 30 days. The questionnaire was developed with the following goals: (1) to provide a reliable, valid and standardised measure of sleep quality, (2) to identify individuals with good vs. poor sleep quality, (3) to provide a clear index that may be used for interpretation and assessment, and (4) to identify sleep-disturbing factors. The reliability of the PSQI as measured with Cronbach's alpha is 0.83 (Buysse et al., 1989). The PSQI contains 19 self-rated questions, as well as 5 additional questions rated by the bed partner or roommate. The latter questions are used for clinical information only, therefore they are not included in the global score. The 19 self-rated items are combined into seven component scores ranging from 0 (no difficulty) to 3 (severe difficulty). The components are subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication and daytime dysfunction. These seven component scores are totalled to produce a global score ranging from 0 to 21. The higher the global score, the poorer the quality of sleep. A score greater than 5 is suggestive of impaired sleep quality (Buysse et al., 1989).

The survey itself was conducted in the Olomouc Region in May 2022. The data collection was conducted electronically using Google forms, which met the methodological and research criteria of online research relevance (for example a high degree of security, archiving and encoding during data transfer, access via generated password). Participation in the research study was voluntary, and anonymity of the respondents during the data collection was ensured.

Statistical analysis

In the first stage, the data was transformed into an xls format compatible with MS Excel 2013, which can easily handle data exported from the electronic questionnaire. During the second stage, the data was formally and logically checked. Further data processing was performed using the STATISTICA programme, version 13



(StatSoft, 2013). An analysis of the results distribution confirmed normal data distribution; for this reason, a parametric statistical approach was selected, specifically descriptive statistics, Pearson correlation and Student t-tests. The tests were conducted at a 5% level of significance.

3. Results

The following section presents the results of our study. Workplace bullying was experienced by 27.2% of respondents ($n = 28$) according to Leymann's criterion (1 act of bullying over the last 6 months), and by 16.5% of respondents ($n = 17$) according to Leymann's rigorous criterion – 2 or more acts of bullying over the last 6 months. The PSQI was used to assess the quality of sleep. The authors of the questionnaire suggest that the cut-off point for sleep quality should be set at 5. Scores higher than five indicate poorer sleep quality. Our results suggest that 68 % ($n=70$) of the monitored teachers report poorer sleep quality. Only 32% ($n=30$) are enjoying good quality sleep during the night.

The table 1 presents the descriptive statistics of the full sample of teachers regarding the mean values, the SD and the minimal and maximum achieved values.

Table 1. Descriptive statistics

Variables	N	Mean	Median	Min.	Max.	SS
Age	103	48.66	49	23	66	10.98
Length of teaching experience:	103	22.46	24	1	43	12.60
Length of employment in current position	103	15.23	15	1	42	11.78
Workplace bullying	103	34.52	31	22	79	12.46
Sleep latency	103	0.72	1	0	3	0.84
Habitual sleep efficiency	103	2.06	2	0	3	0.97
Sleep duration	103	0.78	1	0	3	0.85
Sleep disturbance	103	1.28	1	0	3	0.56
Subjective sleep quality	103	0.89	1	0	3	0.69
Sleep medication	103	0.18	0	0	3	0.66
Daytime dysfunction	103	1.55	1	0	5	0.86
Global Sleep quality	103	7.49	7	1	20	3.75

The correlation coefficient calculation (see table 2) demonstrated a statistically significant relationship between workplace bullying and some of the sleep quality variables of the PSQI tool. A statistically significant positive relationship was found between workplace bullying and subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, daytime dysfunction and the total score of sleep quality. Based on these findings, we accept the hypothesis **H1** (A significant, positive relationship exists between the degree of workplace bullying and the total score of sleep quality).



Table 2. Pearson correlation coefficient of Workplace bullying, Length of experience and sleep quality components in cohort of teachers

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Age (1)	1	.84 *	.57 *	- .03	.04	.24 *	.09	.08	.12	.22 *	.04	.18
Length of teaching experience (2)	.84 *	1	.69 *	- .05	.08	.21 *	.05	.18	.14	.18	.08	.19 *
Length of employment in current position (3)	.57 *	.69 *	1	.01	.04	.11	.04	.20 *	.11	.20 *	.23 *	.19
Workplace bullying (4)	- .03	- .05	.01	1	.23 *	.02	.25 *	.17	.30 *	- .02	.22 *	.25 *
Sleep latency (5)	.04	.08	.04	.23 *	1	.23 *	.36 *	.40 *	.58 *	.15	.33 *	.64 *
Habitual sleep efficiency (6)	.24 *	.21 *	.11	.02	.23 *	1	.67 *	.26 *	.48 *	.25 *	.22 *	.69 *
Sleep duration (7)	.09	.05	.04	.25 *	.36 *	.67 *	1	.32 *	.58 *	.35 *	.40 *	.79 *
Sleep disturbance (8)	.08	.18	.20 *	.17	.40 *	.26 *	.32 *	1	.44 *	.40 *	.30 *	.61 *
Subjective sleep quality (9)	.12	.14	.11	.30 *	.58 *	.48 *	.58 *	.44 *	1	.31 *	.53 *	.82 *
Sleep medication (10)	.22 *	.18	.20 *	- .02	.15	.25 *	.35 *	.40 *	.31 *	1	.29 *	.54 *
Daytime dysfunction (11)	.04	.08	.23 *	.22 *	.33 *	.22 *	.40 *	.30 *	.53 *	.29 *	1	.65 *
Global Sleep quality (12)	.18	.19 *	.19	.25 *	.64 *	.69 *	.79 *	.61 *	.82 *	.54 *	.65 *	1

*Correlation is significant at the .05 level.

Table 2 shows differences in quality of sleep between the group of bullied teachers compared to non-bullied teachers. A statistically significant difference was found within the dimension of sleep duration. A comparison of the mean values indicates that bullied teachers sleep fewer hours than non-bullied teachers. Teachers who were exposed to workplace bullying over the last six months reported lower levels of overall sleep quality compared to the non-bullied group of teachers. At the same time, we also found a significant difference in the dimension of day dysfunction due to drowsiness and the total score of quality of sleep. To conclude, our study indicated that significant differences exist regarding the quality of sleep between bullied and non-bullied teachers, in which the experience of workplace bullying with a duration of more than six months has a significant impact on the sleep quality of the victims, who report fewer hours of sleep and a decrease of their sleep quality, which affects the daily routines of the victims. Therefore, based on our findings we can accept the hypothesis **H2: A bullied teachers will report poorer sleep quality than non-bullied teachers according to the global sleep quality score.**



Table 3. Differences in sleep quality between the group of bullied and non- bullied teachers

Variables	Mean victim	Mean Non- victim	SV	p- value	Valid victim	Valid Non- victim	SD Victim	SD Non- Victim
Sleep latency	1.00	0.63	101	0.05	27	76	1.00	0.76
Habitual sleep efficiency	2.00	2.09	101	0.67	27	76	1.07	0.94
Sleep duration	1.14	0.65	101	0.01	27	76	1.09	0.72
Sleep disturbance	1.44	1.22	101	0.08	27	76	0.64	0.53
Subjective sleep quality	1.22	0.77	101	0.00	27	76	0.75	0.64
Sleep medication	0.22	0.17	101	0.73	27	76	0.69	0.66
Daytime dysfunction	1.92	1.42	101	0.00	27	76	0.78	0.85
Global sleep quality	8.96	6.97	101	0.01	27	76	4.51	3.32

Hotelling T²=28.7291 F_(8,94)=3.3422 ; p=.00207

4. Results, Recommendations and Conclusions

The main objective of this study was to determine the incidence of workplace bullying among teachers, and to determine the relationship between quality of sleep and bullying in the workplace in the Czech Republic. Another objective was to assess the quality of sleep among teachers. According to our results, workplace bullying was experienced by 27.2% of respondents (n = 28) according to Leymann's criterion (1 act of bullying over the last 6 months), and by 16.5% of respondents (n = 17) according to Leymann's rigorous criterion – 2 or more acts of bullying over the last 6 months. Our results are higher than some studies conducted among teachers in the Czech Republic. The estimate of the overall prevalence of mobbing in the Czech Republic is 7.79% (Çakirpaloglu et al., 2017), while in the group of academic staff in Czech universities the prevalence is 7.9% (Záborská & Květoň, 2014). A unique research study on workplace bullying was conducted among elementary school teachers. The study applied stringent criteria, and reported a bullying prevalence of 5.8% among teachers in the academic year of 2008/2009 (Čech, 2011). The second aim was to determine the quality of sleep among teachers. Our results suggest that 68 % (n=70) of the monitored teachers report poorer sleep quality. Only 32% (n=30) are enjoying good quality sleep during the night. Our main goal was to determine the relationship between workplace bullying and sleep quality. Our results demonstrated a statistically significant relationship between workplace bullying and some of the sleep quality variables of the PSQI tool. A statistically significant positive relationship was found between workplace bullying and subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, daytime dysfunction and the total score of sleep quality. In other words, teachers who are exposed to a higher incidence of negative and unethical behaviour in the workplace experience lower quality of sleep in the monitored variables. There was a particular interest in determining whether there are any differences in sleep quality between bullied and non-bullied teachers. A statistically significant difference was found within the dimension of sleep duration. A comparison of the mean values indicates that bullied teachers sleep fewer hours than non-bullied teachers. Teachers who were exposed to workplace bullying over the last six months reported lower levels of overall sleep quality compared to the non-bullied group of teachers. At the same time, we found a significant difference in the dimension of day dysfunction due to drowsiness and the total score of quality of sleep. To conclude, our study indicated that significant differences exist regarding the quality of sleep between bullied and non-bullied teachers, in which the experience of workplace bullying with a duration of more than six months has a significant impact on the sleep quality of the victims, who report fewer and a decrease of their sleep quality, which affects the daily routines of the victims.

Analogous results have also been produced in other studies. Based on a research investigation, Magee (2015) stated that the group of mobbed subjects experienced markedly worse quality of sleep than the group of non-mobbed probands. These findings are in accordance with further studies (Sun et al., 2017; Zhang et al., 2018) which describe a significant negative correlation between bullying and sleep quality.



The present findings have important practical implications. Workplace bullying and poor sleep quality sleep are common issues in the workplace, which can affect individual and organisational outcomes (Nielsen and Einarsen, 2012). Therefore, it's up to the work organisation itself to develop effective strategies in order to reduce the occurrence of negative behaviour in the workplace and improve outcomes such as sleep quality and better mental health. Of course, the presented study is not flawless, and the authors would like to mention some limitations: The cut-off points are based on the US data due to the absence of Czech population standards, thus the Czech cut-off points may be different. The results may be biased due to the low number of male respondents included in the sample. Further research is required, with a more representative sample (respondents from other regions).

The internet as an instrument for relevant data collection has certain limitations, which need to be considered in the interpretation of the results. Some limitations are also caused by the selection of the questionnaire instrument for the purpose of researching a complex and sensitive phenomenon such as workplace bullying. Although the Negative Acts Questionnaire (NAQ-R) has satisfactory psychometric features, the method of questioning is not able to discern the motivational, emotional and other mental processes of the main actors of bullying at the workplace.

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Investigation of tourism students' perceptions of recreational shoppers according to demographic variables

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Abstract

Recreational shopping is among the activities that individuals participate in their leisure time to increase their well-being. Recreational shopping also reveals the willingness of individuals to spend. The recreational shopper identity is stated as a dimension of the self-concept of the individual, in which the consumer defines himself/herself in terms of recreational shopping. Recreational shopper is evaluated in three groups as aversive, shopaholics and regular shopper. Those who avoid shopping are the group that strongly refuses to associate recreational shopping with themselves, and shopaholics are the group that strongly sees recreational shopping as a part of their identity. Normal shoppers, on the other hand, do not define themselves as neither negative nor positive about recreational shopping. While shopaholics are mostly men, shopaholics are mostly women. Recreational shoppers report that they shopped without economic considerations. When compared to economic shoppers, recreational shoppers are reported to buy what they want even though they do not need it, engage in unplanned shopping, spare more time, and have an idea of what to buy before going to the store. The aim of the study is to determine the differences in the recreational shopper perceptions of tourism students according to demographic variables. For this aim were reached 357 tourism students from 17 cities in Turkey. The Recreational Shopper Identity Scale was used to collect data. In data analysis, parametric tests (t-test and ANOVA) were applied as well as descriptive statistics. As a result of the data analysis, there was no difference in the recreational shopping tendencies of the research participants according to age, class, income status and departments; and there was a differentiation according to gender and marital status.

Keywords: Recreational shopper identity, recreational shopping, recreation.

1. Introduction

Recreation is generally defined as “any activity performed individually or collectively for the purpose of entertainment, pleasure and satisfaction in which individuals can freely choose between alternatives during their spare time” (Yüncü, 2013). In terms of individuals in today's conditions, recreation can be defined as any activity that individuals participate in to increase their well-being in all the time periods they allocate for themselves (in business or non-work time). In addition to the instant sense of pleasure that participation in recreational activities will give to the individual, the transformation of the activity into a lifestyle by performing the activity with a sense of voluntariness and desire requires a certain formal and informal education process and provides important contributions to the preservation of a sustainable well-being. Recreational activities may have different characteristics and importance for individuals in every age group or profession. Individual readiness level, perspective on life, differences in perceiving events cause changes in the interpersonal importance of recreational activities (Yurcu, 2017). Recreation is important for the new generation to develop skills and to know themselves,



to create an effective rest and renewal opportunity for the adult generation who are drowning and tired among the daily hustle and bustle, and to create a peaceful social environment for the older generation (Orel&Yavuz, 2003). Pretty et al. (2005) stated that individuals who participate in physical activity in green areas have an improvement in their physical and psychological well-being, as well as an increase in their self-esteem. Coleman and Iso-Ahola (1993) stated that the benefits of participation in leisure activities for individuals are that the friendship shared in the activities provides an effective relief for people when dealing with the excesses of daily life stress, and that the perceptions of freedom, control, competence and intrinsic motivation that form the basis of many leisure experiences encourage self-determination.

The changing social and economic structure has caused a change in the social needs of individuals, and shopping centers have turned into new recreation centers in order to meet the needs of individuals and to increase their well-being. Baudrillard (1997) emphasized that shopping centers are trying to transform themselves into places that are preferred by everyone, with activities that can appeal to all family members (Aktaş, 2011). Altınay and Bilgimöz (2015) emphasize that recreation is a combination of psychological activities rather than functionality, although it is focused on pleasure that makes individuals happy. They also state the shopping that provides pleasure to relax individuals as recreational shopping. They define recreational shopping as shopping that individuals do to relax their soul, whether it is necessary or not, rather than their own needs or obligations. Argan (2007) emphasized that shopping centers try to offer all alternatives that may be necessary for leisure time, and thus make consumers willing to spend money by making monetary sacrifices in order to obtain more leisure time. Avello et al., (2011) stated that individuals who enjoy shopping at the mall are more willing to shop and make more profitable purchases.

In line with the relevant literature, the aim of the study is to determine the differences in the recreational shopper perceptions of tourism students according to demographic variables. In addition to the contribution of the obtained results to the relevant literature, it will reveal the tourism students' perceptions of shopping from leisure activities.

Leisure and Recreation

Leisure comes from the Latin word “licere” meaning “to be free”. Leisure time is generally defined as the time left after work, exemption from obligations or after social duties are completed (Torkildsen, 1999: 73). Aykan and Özçelik (2020) define the concept of leisure time as the time consumed for an activity that an individual does/will do by using his/her free will and providing his/her own inner satisfaction without being forced by someone else. Dumazedier (1967:55) free time; stated that it has three functions as relaxation, entertainment and self-development. Stebbins (2012) states eight principles for the empty concept of individuals, which he describes as “homo otiosus”.

1. Leisure is an activity that is done without the coercion of another person,
2. Leisure time is based on activities that the participant wants to do,
3. The concept of leisure is time spent away from unpleasant compulsions,
4. Leisure is a social institution,
5. Leisure has its own geographic space,
6. Leisure provides a foundation for work/life balance,
7. Leisure is related to what a person does in his free time,
8. Leisure creates a big and wide image in the world. With the transition to the information age, the importance of leisure time has increased even more.

Recreation comes from the Latin word “recreatio” meaning “renewal of health”. Recreation is seen as activities that renew individuals for work (Torkildsen, 1999:48). Recreation is activities that are characterized by specialization, achievement, personal worth, pleasure and vitality and strengthen individuals' positive self-perceptions (Gray & Pelegrino, 1973). Recreation includes many activities such as sports, games, fine arts, music, hobbies, travel or social activities that individuals choose freely and without any obligation (Kraus, 1998). According to Torkildsen (1999), the factors affecting participation in recreational activities can be grouped under three main headings. These are: personal, social and situational and opportunity factors. Considering personal factors, factors such as age and life cycle, education, and gender significantly affect the participation of the individual in recreational activities. However, social factors include income, social class and social climate. Finally, opportunity factors consist of available resources and services, political policies, and accessibility.

Recreational Shopping

Recreational shopping is described as pleasure-oriented in the first studies in the literature (Bäckström, 2007:145). In further studies, it is defined as “leisure time activity” (Bellenger et al., 1980; Ohanian&Tashchian, 1992). Belleger et al. (1997), in their study on the motivations of shopping mall regulars, determined the customers as



economic shopper and recreational shopper. Recreational shoppers are people who enjoy shopping as a leisure activity (Bellenger & Korgaonkar, 1980). Economic shoppers, on the other hand, are individuals who approach shopping centers in terms of saving time or money and do not like shopping activities or have neutral emotions. Although recreational shoppers are mostly women, they shop more instinctively and are more interested in store features than economic shoppers. However, they are more inclined to shop unplanned and generally continue shopping even after the purchase (Bellenger & Korgaonkar, 1980). Recreational shoppers shop for non-economic reasons such as self-satisfaction, being informed about new trends, communicating with individuals with the same interests, status and authority. Moreover, shopping is an opportunity that helps to deviate from the routine of daily life. Therefore, it represents a form of recreation (Tauber, 1972). Prus and Dawson (1991) similarly identified shoppers as recreational shoppers and duty shoppers. Prus and Dawson (1991) defined individuals' recreational shopping orientations as "interesting, enjoyable, entertaining and leisure time activities". When shopping is experienced as a recreational activity, consumers include themselves and their products in their shopping environments with their self-concept (with emotional stimulation while browsing products and shopping for gifts) by socializing with their friends and/or filling their spare time. However, they find the buying process fun and exciting. On the other hand, consumers who see shopping as a duty are faced with undesirable uncertainty (lack of product information, salesperson assistance) and they are bored with routine shopping or slow shopping with someone else rather than shopping at their own pace. Lunt and Livingstone (1992) identified five groups as a result of their research. One of these five groups are "leisure shoppers" who view shopping as enjoyable. Leisure shoppers are more youthful than other shopping groups. At the same time, these individuals do not have children or have very few children. However, they have more debts and less savings than other shopping groups. Leisure shoppers view their possessions as luxury, and it's easy for this group of shopper to get into debt. They see themselves as having control over the organization of their lives and are satisfied with their standard of living – economically – as well as having debts (Lunt & Livingstone, 1992). Recreational shoppers are often inclined to purchase items to reward themselves or others. Moreover, they do not care about the price of the product when considering the economy. Recreational shoppers enjoy activities that belong to the shopping experience, such as window-shopping (Lunt & Livingstone, 1992). Regarding demographic characteristics, recreational shoppers consist of high social class women (Gillett, 1970: 45). Bellenger and Korgaonkar (1980) revealed that white-collar women and their family members perform recreational shopping more frequently than blue-collar individuals. Moreover, from the point of view of other recreational activities, recreational shoppers enjoy walking in nature more than cooking, compared to economic shoppers. Recreational shoppers, considering the quality and variety of products, prefer shopping centers to discount stores. Shopping and consumption behaviors contain recreational harmonies such as symbolic product meaning, hedonic responses, diversity, aesthetics, creativity and play (Holbrook & Hirschman, 1982). In a study examining the behavioral characteristics of recreational shoppers, it was concluded that recreational shoppers are more likely to give word of mouth shopping advice than economic shoppers. However, recreational shoppers tend to agree on product prices and have a more positive attitude towards advertisements than economic shoppers. Even though recreational shoppers tend to bargain, they tend to be quality-oriented. Their quality orientation shows that they use more coupons and follow discounted sales from advertisements compared to economic shoppers. It should be emphasized that the recreational shopper is not a cheap shopper. In fact, they demand atmosphere and service compatible with prestigious stores (Williams et al., 1985).

Definitions on recreational shopping focused more on experiential and hedonic values in subsequent studies (Backström, 1996). Hedonic shopping value is defined more subjectively and personally with the dimensions of intrinsic motivation, perceived freedom, fun and escape than its opposite, utilitarian shopping value (Babin et al., 1994; Falk & Campbell, 1997; Jones, 1999). Guiry (1999) also emphasizes the social value of shopping. Recreational shopping has also been associated with socialization, peer group attraction, and contact with friends (Tauber, 1972).

Recreational Shopper Identification

Guiry and Lutz (2000) made a great contribution to the literature with the scale they developed to determine the identity of the recreational shopper, emphasizing that recreational shopping should not be explained simply through shopping pleasure. The recreational shopper identity is a dimension of the self-concept of the individual, in which the consumer defines himself/herself in terms of recreational shopping. Guiry et al. (2006) identified three levels of groups as aversive, shopper, and normal shoppers, according to the level of individuals' inclusion of shopping in their self. Shoppers are the group that strongly rejects associating recreational shopping with themselves, while shopaholics are the group that strongly sees recreational shopping as a part of their identity. For regular shoppers, recreational shopping has no place in self-defining either negatively or positively. While shopaholics are predominantly men, shopaholics are mostly women, and they are both younger and less educated



than shopaholics. Hawkins et al. (2009) in their study examining the antecedents of recreational shopping identity, found that fashion clothing inclusion is a precursor to recreational shopper identity. In the research conducted on the Australian Y generation, it was found that materialism and gender affect fashion clothing commitment, and moreover, the increase in the tendency of materialism in individuals is directly proportional to the increase in fashion clothing commitment. It has been determined that Australian Y-Generation women are more associated with fashion clothing products than men. Moreover, the increase in fashion clothing inclusion is directly proportional to the increase in the level of recreational shopper identity. At the same time, the research reveals that there is an important and direct relationship between materialism and recreational shopper identity. Karande and Merchant (2012) took the recreational shopper identity research to another level and determined that the effect of individuals' time orientations (past, present and future) on their planning orientations (impulsivity and prudence) directly affects their recreational shopping identity and shopping behaviors.

2. Method

Quantitative method was used in this research, which was conducted to determine the differences in the recreational shopper perceptions of tourism students according to demographic variables. As the application area of the research, associate and undergraduate tourism students in Turkey were selected. In the study, convenience sampling method, which is one of the convenience sampling methods, was determined in the sample selection. At 95% confidence level, 357 participants from 17 provinces were reached. The data were collected in 2021-2022 (November, December, January, February) by survey technique. In order to determine the recreational shopper perceptions of tourism students, the Recreational shopper identity scale, which consists of 8 expressions used by Guiry and Lutz (2000), was used. The scale is a 5-point Likert scale as (1) Strongly Disagree, (2) Disagree, (3) Undecided, (4) Agree, (5) Strongly Agree. The questionnaire created to collect research data consists of two parts. In the first part, demographic variables (age, gender, marital status, income status, department, class) were used, and in the second part, the Recreational Shopper Identity Scale was used. The research hypotheses were formed as follows;

H1: There is a statistically significant difference between the recreational shopping perceptions of tourism students and gender.

H2: There is a statistically significant difference between the recreational shopper perceptions of tourism students and marital status.

H3: There is a statistically significant difference between the recreational shopper perceptions of tourism students and ages.

H4: There is a statistically significant difference between the recreational shopper perceptions of tourism students and income status.

H5: There is a statistically significant difference between the recreational shopping perceptions of tourism students and classes.

H6: There is a statistically significant difference between the recreational shopper perceptions of tourism students and departments.

Analysis

In order to determine whether the data are normally distributed in multivariate analyzes, Kolmogorov-Smirnov test was performed and it was seen that the data had normal distribution as a result of this test. Parametric tests (t-test, ANOVA) and descriptive statistics (frequency, percentage, arithmetic mean, standard deviation) were preferred because the data obtained showed normal distribution. Statistical analysis package program was used in data analysis.

3. Findings

Validity and Reliability Findings

In the general validity and reliability analysis of the scale used in the research, the Cronbach Alpha coefficient was 0.87. This value shows that the scale has a high level of reliability for research.

Demographic Variables

59.9% of the research participants are women, 40.1% are men, 96.4% are single, the majority (67.2%) are between the ages of 20-29, 53.2% are between 1000 TL and 5000 TL they have income. In addition, 50.7% of the participants were 1st grade, 20.8% 2nd grade, 7.3% 3rd grade, 11.2% 4th grade, 42% Gastronomy and Culinary Arts 30% of them are Recreation Management, 16.5% are Tourism Management, 11.5% are Tourism Guidance students.



Table 1. Participants' Profile ($n = 357$)

Variables		f	%
Gender	Female	214	59.9
	Male	143	40.1
Marital Status	Single	344	96.4
	Married	13	3.6
Age	20 and below	104	29.1
	20-29	240	67.2
	30-39	7	2
	40-59	4	1.1
	60 and above	2	.6
Income Status	1000 TL and below	70	19.6
	1000TL- 5000 TL	190	53.2
	5001 TL-10000 TL	62	17.4
	10001 TL and above	35	9.8
Class	1	181	50.7
	2	110	30.8
	3	26	7.3
	4	40	11.2
Department	Recreation Management	107	30
	Tourism Guidance	41	11.5
	Tourism management	59	16.5
	Gastronomy and culinary arts	150	42
Total		357	100

Findings Related to Research Hypotheses

Findings regarding the research hypotheses are given below.

Table 2. The Difference in Perception of Recreational Shopper by Gender of Tourism Students

	N	\bar{x}	Standard Deviation	t	p
Female	214	2.591	.80927	3.147	0.002
Male	143	2.318	.79787		

According to Table 2, it is observed that women ($\bar{x}=2.591$) and men ($\bar{x}=2.318$) participating in the research have averages of perceived recreational shopper. According to the t test for the significance between the genders of tourism students and their perceptions of recreational shopper, the difference between the recreational shopper perceptions of the participants and their gender was found significant ($t=3.147$, $p<0.05$). In this case; The hypothesis of H_1 "There is a statistically significant difference between the recreational shopping perceptions of tourism students and gender" was supported.

Table 3. The Difference in Perception of Recreational Shopper by Marital Status of Tourism Students

	N	\bar{x}	Standard Deviation	t	p
Single	344	2.465	.80542	-1.952	0.052
Married	13	2.913	.97011		

According to Table 3, it is observed that single ($\bar{x}=2.465$) and married people ($\bar{x}=2.913$) participating in the research have averages of perceived recreational shopper. According to the t-test for the significance between the marital status and recreational shopper perceptions of tourism students, the difference between the recreational shopper perceptions of the participants and their marital status ($t=-1.952$, $p\leq 0.05$) was found to be significant. In



this case; The hypothesis of H_2 “There is a statistically significant difference between the recreational shopper perceptions of tourism students and marital status” was supported.

Table 4. The Difference in Recreational Shopping Perceptions of Tourism Students by Age (ANOVA)

		Sum of Squares	df	Mean Square	F	p
Perceptions of Recreational Shoppers	Between Groups	1.208	4	.302	.452	.771
	Within Groups	235.100	352	.668		
	Total	236.308	356			

According to the table, it is revealed that the recreational shopping perceptions of tourism students do not differ according to their age ($F(4;352)=.452, p>0.05$). In this case; The hypothesis H_3 “There is a statistically significant difference between the recreational shopping perceptions of tourism students and age” was not supported.

Table 5. The Difference in Perceptions of Tourism Students for Recreational Shopping by Income (ANOVA)

		Sum of Squares	df	Mean Square	F	p
Perceptions of Recreational Shoppers	Between Groups	3.958	3	1.319	2.005	.113
	Within Groups	232.350	353	.658		
	Total	236.308	356			

According to the table, it is seen that the recreational shopping perceptions of tourism students do not differ according to their income ($F(3;353)=2.005, p>0.05$). In this case; H_4 The hypothesis of “There is a statistically significant difference between tourism students' recreational shopping perceptions and income status” was not supported.

Table 6. The Difference in Recreational Shopping Perceptions of Tourism Students by Class (ANOVA)

		Sum of Squares	df	Mean Square	F	p
Perceptions of Recreational Shoppers	Between Groups	1.684	3	.561	.845	.470
	Within Groups	234.624	353	.665		
	Total	236.308	356			

According to the table, it is seen that the recreational shopping perceptions of tourism students do not differ according to their classes ($F(3;353)=.845, p>0.05$). In this case; The hypothesis of H_5 “There is a statistically significant difference between the recreational shopping perceptions of tourism students and classes” was not supported.

Table 7. The Difference in Perception of Recreational Shopping by Tourism Students by Department (ANOVA)

		Sum of Squares	df	Mean Square	F	p
Perceptions of Recreational Shoppers	Between Groups	.778	3	.259	.389	.761
	Within Groups	235.530	353	.667		
	Total	236.308	356			

According to the table, it is seen that the recreational shopping perceptions of tourism students do not differ according to their departments ($F(3;353)=.389, p>0.05$). In this case; The hypothesis of H_5 “There is a statistically significant difference between the recreational shopping perceptions of tourism students and departments” was not supported.



4. Discussion and Conclusion

Recreational shoppers shop for non-economic reasons such as self-satisfaction, being informed about new trends, communicating with individuals with the same interests, status and authority. Moreover, shopping is an opportunity that helps to deviate from the routine of daily life. Therefore, it represents a form of recreation (Tauber, 1972). Recreational shoppers enjoy activities that belong to the shopping experience, such as window shopping (Lunt & Livingstone, 1992).

In this study, it was determined that tourism students' perceptions of recreational shopper identity differ according to demographic variables. As a result of the data analysis, it was determined that the recreational shopper perceptions of the participants were the mean ($x=2.482$) according to the arithmetic mean and standard deviation values of the scale expressions. According to this finding, it was determined that the recreational shopper perceptions of tourism students were below the average. It can be stated that the reason for this is factors such as economic difficulties, not having enough free time. 59.9% of the research participants are women, 40.1% are men, 96.4% are single, the majority (67.2%) are between the ages of 20-29, 53.2% are between 1000 TL and 5000 TL they have income. In addition, 50.7% of the participants were 1st grade, 20.8% 2nd grade, 7.3% 3rd grade, 11.2% 4th grade, 42% Gastronomy and Culinary Arts 30% of them are Recreation Management, 16.5% are Tourism Management, 11.5% are Tourism Guidance students.

According to the results of the research, tourism students' perceptions of recreational shopper identity differ according to gender and marital status, age, income, class and department. According to the gender variable, the mean of women was found to be higher than that of men. In addition, it was determined that the perception of recreational shopper identity of married students was higher than that of single students. The findings obtained support previous studies (Gillet, 1970; Bellenger & Korgaonkar, 1980).

In line with the results of the research, the differences in the recreational shopper identities of tourism students, which are seen as one of the leisure time applications, have been revealed. In the recreational shopping process, where an informal learning process takes place, it is of great importance to increase the awareness of the students and to guide them. Teachings related to tourism and its education can be gained in this process as a complement to the formal learning system. In this study, only tourism students were examined, in future studies, students from different departments can be studied. In addition, different research methods can be used to obtain more data on students' shopping experiences and emotions.

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problem solving skill perceptions of middle and high school students¹

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Abstract

The purpose of this study is to determine the difference in the problem solving skill perceptions of the students in the transition from middle to high school. The sample of the research consists of 827 students from 8th and 12th grades. The "Problem Solving Inventory for Children" was used in the study. It was found that middle and high school students' problem solving skill perceptions were at a high level; male students' perceptions of problem solving skills are higher than female students' perceptions; middle school students' perceptions of problem solving skills are higher than high school students' perceptions; students' problem solving skill perceptions didn't differ significantly according to their mothers' education level; the perceptions of problem solving skill of students with a very good academic achievement level are higher than those of students with a medium level.

Keywords: Middle school, high school, students, problem solving skill.

1. Introduction

A problem is a situation of difficulty that causes physical or mental discomfort to the person, being indecisive, and having more than one solution possibility (Karasar, 2016). Chen (2008) indicated the problem as big or small difficulties and struggles encountered in daily life, working life and social interaction. Based on the definitions; In order for a situation to become a problem, there must be a difficulty, a desire to eliminate it, and a need to make an effort in this regard (Özsoy, 2007). All problems consist of two main elements: First, the problem solving is needed. The second is to decide on one of the solution options (Şahin, 2004). According to Gelbal (1991), we can see many complex situations that we encounter in our daily life as problems. While a question posed to us by our friend may be a problem that confuses us to find an answer to it, it is known that chewing gum sticking to the foot on the road can be an undesirable problem and it is desired to get rid of it (Gelbal, 1991).

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Problem solving have the purpose of finding solutions and eliminating danger (Chen, 2008). Problem solving helps students to solve similar or different problems by enabling previous knowledge to be applied in new conditions (Nurmaliyah, et al., 2021). According to Jonassen (2010), problem solving is the most genuine learning activity that students can participate in. In the problem solving process, students' self-efficacy perceptions, readiness for when to use and organize knowledge and strategies and how to monitor skills is considered important (Alcı, et al., 2010). When learning environments are designed to develop the thinking and problem-solving skills of learners, they internalize and acquire permanent knowledge by making sense of the information mentally rather than memorizing it (Başbay, 2015). For the development of problem solving skills, it is important for learners to develop their comprehension and perception skills (Deniz, 2013).

21st century skills and competencies are included in the curriculum in Turkey according to the "Turkey Qualifications Framework". One of the skills defined in the Turkey Qualifications Framework is the problem-solving skill, which has an important place among the skills required for an individual to manage his/her life successfully (Çolpan-Kuru, 2021). In the curriculum, emphasis is placed on raising learners with high problem-solving skills. Among the goals of 2023 Turkey Education vision, there is students' motivation to seek solutions to problems.

With this study, it was determined whether there was a change in the problem solving skill perceptions of the students in the transition from middle to high school, and if there was a change, in which direction. This determination study, in terms of being a product evaluation, is a needs analysis in the development of curricula. In addition, the results are important with regard to contributing studies to be carried out on the review and arrangement of activities that can improve problem solving skills in the dimension of educational situations. It was aimed with this study, to determine whether students' problem solving skill perceptions change according to their gender, school level, education level of their parents and academic achievement. Problem questions are listed below.

1. What is the level of students' problem-solving skill perceptions?
2. Do students' problem solving skill perceptions differ significantly according to their;
 - Gender
 - School level
 - Education level of their mother
 - Education level of their father
 - Academic achievement level

2. Method

In the research, quantitative research method was used. With the quantitative method, numerical values and measurements are obtained that help researchers define, predict, explain and make decisions about social patterns (Zandvanian & Daryapoor, 2013). This research, which used descriptive research approach, was carried out in accordance with the relational survey design, one of the survey models. The "Problem Solving Inventory for Children was used in the study. It consists of three factors and 24 items. The Cronbach Alpha reliability coefficient of the overall inventory was calculated as 0.80. Reliability coefficient vary between .66 and .85 for the sub-dimensions and the entire inventory.

The sample of the research consists 827 students from 8th and 12th grades. The data collected from 976 students at first, taking into account the students who could fill in missing or incorrectly. However, after examining the missing data, the forms filled without reading, and the extreme values, the remaining 827 sample group was included in the analysis. First of all, the forms of the respondents who gave different answers to the items placed between the inventory items such as "Please tick the middle option (3) for this item" were eliminated. Thus, the forms of 133 respondents were excluded. The missing and extreme values were checked for the remaining 843



forms. Standardized z-scores were obtained to eliminate forms with extreme values. Data with scores other than ± 3.00 standard deviation were excluded. After these processes, analyzes were made with the remaining 827 data. Histogram and P-P plots graphics and Kolmogorov Smirnov normality test was performed for each variable.

Table 1. Demographic Information of Students

Demographic Information	Gender	N	%
Gender	Female	468	56.6
	Male	359	43.4
Schol Level	Middle school	419	50.7
	High school	408	49.3
Mother Education Level	Not illiterate	56	6.8
	Primary	427	51.6
	Hihg school	197	23.8
	University	125	15.1
	Postgraduate	22	2.7
Father Education Level	Not illiterate	11	1.3
	Primary	261	31.6
	Hihg school	311	37.6
	University	194	23.5
	Postgraduate	50	6.0

According to Table 1, 468 (56.6%) of the students are female students and 359 (43.4%) are male students. 419 (50.7%) of the students were middle school students and 408 (49.3%) high school students.

In the current study, the Cronbach Alpha reliability coefficients of the inventory and its sub-dimensions were calculated. These calculated values are below.

Table 2. Reliability Coefficients

Confidence in Problem Solving Ability	0.845
Self-Control	0.754
Avoidance	0.663
Generally	0.865

According to Table 2, the reliability coefficients for the scales and sub-dimensions are generally high, but the Reliability coefficient for Avoidance sub-dimension is below 0.70. The same result was found when looking at the original inventory (0.66). The small number of items in the avoidance sub-dimension and the homogeneity of the sample in terms of the measured feature were stated as the reason for this result (Serin, et al., 2010).

In the analysis of data, descriptive statistics, Mann Whitney-U (MW-U test, Kruskal Wallis-H (KW-H) test and One-way ANOVA were used.

3.Findings

On this part of the paper we are presenting research findings based on sub problems.

Students' problem solving skill perception levels

Under this heading, findings questioning the level of students' problem-solving skill perceptions are included. The findings are summarized below.



Table 3. Descriptive Statistics Results on Students' Problem Solving Skill Levels

Inventory and Sub-Dimensions	N	\bar{X}	Sd	Min	Max
Overall	827	3.63	.60	1.79	4.96
Confidence in Problem Solving Ability	827	3.61	.72	1.25	5.00
Self-Control	827	3.12	.83	1.00	5.00
Avoidance	827	3.72	.81	1.00	5.00

In Table 3, it is observed that the students' mean scores of the Inventory are at a high level ($\bar{X}=3.63$). When examining according to sub-dimensions; It was seen that the mean scores were high ($\bar{X}=3.61$) for the Confidence in problem-solving ability sub-dimension, moderate ($\bar{X}=3.12$) for Self-control, and high ($\bar{X}=3.72$) for the Avoidance. In addition, the standard deviation value of the overall inventory is .60; The values of the sub-dimensions were the lowest .72 (Confidence in problem solving ability) and the highest .83 (Self-control). When the minimum and maximum values are observed, the overall scores of the inventory are in the range of 1.79-4.96, the scores of the confidence in problem solving ability sub-dimension are between 1.25-5.00, the scores of the self-control sub-dimension are in the range of 1-5, and the scores of the avoidance sub-dimension are in the range of 1-5.

Students' problem solving skill perceptions by their gender

Under this heading, the findings about whether the problem solving skill perceptions of the students differ according to their gender are given. Before the comparison, it is analyzed that the scores for the overall inventory and its dimensions did not show a normal distribution according to gender ($*p<.05$). Accordingly, the scores of male and female students for the overall inventory and its sub-dimensions were compared with the MW-U test. This findings by gender are summarized in Table 4.

Table 4. Results of the inventory and sub-dimensions score according to gender

Inventory and Sub-Dimensions	Gender	N	Mean Rank	Sum of Ranks	U	p
Overall	Female	468	394.46	184606.50	74860.500	.007*
	Male	359	439.47	157771.50		
Confidence in Problem Solving Ability	Female	468	396.66	185638.50	75892.500	.017*
	Male	359	436.60	156739.50		
Self-Control	Female	468	388.85	181982.00	72236.000	.001*
	Male	359	446.79	160396.00		
Avoidance	Female	468	416.45	194900.00	82858.000	.735
	Male	359	410.80	147478.00		

* $p<.05$

In Table 4, a significant difference is observed according to gender for the overall inventory ($U=74860.500$; $p<.05$). The scores of male students are higher than those of females. There is a significant gender difference in the dimensions of confidence in problem-solving ability ($U=75892.500$; $p<.05$) and self-control ($U=72236$; $p<.05$). While there is a significant difference in favor of male students in both dimensions; there is no significant difference in the avoidance dimension ($U=82858$; $p>.05$).

Students' problem solving skill perceptions by their school levels

Under this heading, the findings about whether students' problem solving skills differ according to school levels are included. Before the comparison, the suitability of the inventory scores to the normal distribution according to school level was examined. The scores for the overall inventory and its sub-dimensions did not show a normal distribution for middle and high school students ($*p<.05$). Accordingly, middle and high school students' scores



for the overall inventory and its sub-dimensions were compared with the MW-U test. The findings by school level are summarized below.

Table 5. Results of the inventory and sub-dimensions score according to school level

Inventory and Sub-Dimensions	School Level	N	Mean Rank	Sum of Ranks	U	<i>p</i>
Overall	Middle	419	440.43	184540.50	74401.500	.001*
	High	408	386.86	157837.50		
Confidence in Problem Solving Ability	Middle	419	446.68	187161.00	71781.000	.000*
	High	408	380.43	155217.00		
Self-Control	Middle	419	428.12	179384.00	79558.000	.084
	High	408	399.50	162994.00		
Avoidance	Middle	419	427.79	179243.50	79698.500	.092
	High	408	399.84	163134.50		

* $p < .05$

When the scores for the overall inventory are compared in Table 5, it is observed that there is a significant difference according to school level ($U=74401.500$; $p < 0.05$). The scores of middle school students were higher.

There is a significant difference in the dimension of Confidence in problem solving ability in terms of school level ($U=71781$; $p < 0.05$). This difference is in favor of middle school students. There isn't significant difference in the dimensions of Self-control ($U=79558$; $p > 0.05$) and Avoidance ($U=79698.500$; $p > 0.05$).

Students' problem solving skill perceptions by education level of their mothers

Under this heading, the findings about problem solving skill perceptions of the students according to the education level of their mothers are included. Before the comparison, the suitability of the inventory scores to the normal distribution according to their mother's education level was examined. The students' total scores on the overall inventory showed a normal distribution for their mothers' educational level, but did not show a normal distribution in terms of sub-dimensions (* $p < .05$). In this direction, the scores of the students for the overall inventory were compared with the One-Way Anova, and the scores for the sub-dimensions were compared with the KW-H test.

The findings related to the education level of students' mothers for the overall inventory are summarized in Table 6.

Table 6. Results of the overall inventory score according to students' mother education level

Inventory	Mother Education Level	N	\bar{X}	Sd	Source of Variance	Sum of Squares	df	Mean Square	F	<i>p</i>
Overall	Not illiterate	56	3.37	0.63	Between Groups	1.060	4	.265	.685	.603
	Primary	427	3.50	0.61						
	High school	197	3.49	0.65	In Groups	318.209	822	.387		
	University	125	3.46	0.60						
	Postgraduate	22	3.44	0.58	Total	319.269	826			

In Table 6, the overall problem solving skill scores did not differ significantly according to the education level of students' mothers ($F=.685$; $p > 0.05$).

The findings about the education level of students' mothers for sub-dimensions of the inventory are summarized in Table 7.



Table 7. Results of sub-dimensions of the inventory according to students' mother education level

Sub-Dimensions of the Inventory	Mother Education Level	N	Mean Rank	df	X ²	p
Confidence in Problem Solving Ability	Not illiterate	56	383.92	4	2.515	.642
	Primary	427	414.49			
	High school	197	431.14			
	University	125	404.56			
	Postgraduate	22	381.25			
Self-Control	Not illiterate	56	349.10	4	4.640	.326
	Primary	427	422.03			
	High school	197	414.40			
	University	125	415.66			
	Postgraduate	22	410.27			
Avoidance	Not illiterate	56	413.80	4	.841	.933
	Primary	427	421.03			
	High school	197	405.23			
	University	125	404.58			
	Postgraduate	22	410.11			

Considering the sub-dimensions of the inventory in Table 7, there are not significant differences related to sub-dimensions of Confidence in problem solving ability ($X^2=2.515$; $p>0.05$), Self-control ($X^2=4.640$; $p>0.05$) and Avoidance ($X^2=.841$; $p>0.05$).

Students' problem solving skill perceptions by education level of their fathers

Under this heading, the findings related to problem solving skill perceptions of the students according to the education level of their fathers are included. Before the comparison, the suitability of the inventory scores to the normal distribution according to students' father education level was examined.

Table 8. The scores of the inventory and its sub-dimensions according to students' father education level

Inventory and Sub-Dimensions	Father Education Level	N	Mean Rank	df	X ²	p
Overall	Not illiterate	11	464.09	4	2.913	.572
	Primary	261	397.63			
	High school	311	413.14			
	University	194	428.53			
	Postgraduate	50	437.42			
Confidence in Problem Solving Ability	Not illiterate	11	391.05	4	1.234	.873
	Primary	261	403.99			
	High school	311	422.61			
	University	194	410.76			
	Postgraduate	50	430.29			
Self-Control	Not illiterate	11	514.41	4	7.894	.096
	Primary	261	402.44			
	High school	311	398.45			
	University	194	448.30			
	Postgraduate	50	415.84			
Avoidance	Not illiterate	11	501.73	4	5.130	.274
	Primary	261	399.82			
	High school	311	406.89			
	University	194	427.97			
	Postgraduate	50	458.75			



The students' total scores on the overall inventory and sub-dimensions did not show a normal distribution for their father's educational level ($p < .05$). In this direction, the scores were compared with the KW-H test, according to their father's education level. The findings are summarized in Table 8.

In Table 8, the scores regarding the inventory and its dimensions are examined. Accordingly, there isn't significant difference between the groups in the overall inventory ($X^2=2.913$; $p>0.05$), Confidence in problem solving ability ($X^2=1.234$; $p>0.05$), Self-control ($X^2=7.894$; $p>0.05$) and Avoidance ($X^2=5.130$; $p>0.05$).

Students' problem solving skill perceptions by education level of their academic achievement

Under this heading, the findings related to the problem solving skill perceptions of the students according to their academic achievement are included. Before the comparison, the suitability of the inventory scores to the normal distribution according to students' academic achievement was examined. The students' total scores on the overall inventory and sub-dimensions did not show a normal distribution for their academic achievement level ($p < .05$). In this direction, the scores were compared with the KW-H test, related to their academic achievement level.

The findings related to the comparison of the scores for the inventory in academic achievement level are summarized in Table 9.

Table 9. Results of the scores of the inventory and its sub-dimensions according to students' academic achievement level

Inventory and Sub-Dimensions	Academic Achievement Level	N	Mean Rank	df	X^2	p	Difference
Overall	Very good	580	436.00	3	20.241	.000*	Very good > Middle
	Good	138	388.26				
	Middle	95	331.86				
	Pass	14	313.54				
	Weak	-	-				
Confidence in Problem Solving Ability	Very good	580	423.67	3	7.758	.051	
	Good	138	417.37				
	Middle	95	366.33				
	Pass	14	303.64				
	Weak	-	-				
Self-Control	Very good	580	439.14	3	23.369	.000*	Very good > Good
	Good	138	366.32				
	Middle	95	331.39				Very good > Middle
	Pass	14	403.25				
	Weak	-	-				
Avoidance	Very good	580	432.54	3	15.447	.001*	Very good > Middle
	Good	138	392.91				
	Middle	95	350.30				Very good > Pass
	Pass	14	285.93				
	Weak	-	436.00				

* $p < .05$

In Table 9, the scores regarding the overall inventory differ significantly according to their academic achievement levels ($X^2=20.241$; $p < .05$). Group comparisons were used to determine which groups the difference was in. It has been determined that the scores of students with very good academic achievement are higher than those of moderate students.



When the dimensions are examined, it is observed that there isn't significant difference between the groups in the dimension of Confidence in problem solving ability ($X^2=7.758$; $p>0.05$). There is a significant difference between the groups in the sub-dimensions of Self-control ($X^2=23.369$; $p<0.05$) and Avoidance ($X^2=15.447$; $p<0.05$). When examining which groups differ in the Self-control dimension, the scores of students with very good academic achievement were higher than those of good and moderate students. When the differentiation between the groups in the Avoidance sub-dimension is examined, it has been observed that the scores of the students with very good academic success are higher than intermediate and pass.

Results, Conclusions and Recommendations

It was found that middle and high school students' problem solving skill perceptions were at a high level. In the studies conducted, perception levels of students were high in line with the current study (Koç, 2014; Koçoğlu & Kanadlı, 2019). Yıldırım et al. (2011) conducted that students have problem-solving skill perceptions close to good. In addition, in the dimensions of Confidence in Problem Solving Ability and Avoidance, students' perceptions are at a high level. In the self-control sub-dimension, students' perceptions are at moderate level. Accordingly, it can be said that students' belief and confidence that they can solve the problem and their tendency to avoid problem-solving activities are high. It can be said that they have a medium level of perception in controlling themselves in the problem-solving process. In the study conducted by Koç (2014), it was detected that elementary school students had a high level of confidence in problem solving ability, a medium level of self-control and a high level of problem-solving skill perceptions in avoidance sub-dimension.

In general, male students' perceptions of problem solving skills are higher than female students' perceptions. In addition, in the dimensions of confidence in problem-solving ability and self-control, male students' problem-solving skill perception levels are higher than that of female students. In the avoidance dimension, the perceptions of the students didn't differ significantly according to gender. Parallel to the results of the research, studies in which the problem solving skill perceptions of students differed according to gender were found in the literature (Durualp, 2014; Korkut, 2002; Melikoğlu, 2020; Öztürk, 2017). It is seen that this differentiation according to the gender of the students is in favor of male students in some studies (Korkut, 2002; Melikoğlu, 2020) and in favor of female students in others (Durualp, 2014; Öztürk, 2017). Contrary to the current study, some researchers concluded that the problem-solving skill perceptions of students do not differ in terms of gender in their studies (Bedel & Özdemir, 2021; Çağatay, 2020; Eyvaz, 2017; Koçoğlu & Kanadlı, 2019). Koç (2014) concluded that there is a significant gender difference in the dimensions of Confidence in Problem Solving Ability, Self-Control and Avoidance in his study with primary school students. It can be said that the results regarding the sub-dimensions of confidence in problem-solving ability and self-control are similar to the current research findings. Accordingly, it can be stated that male students believe and trust more than female students that they will find a solution when they encounter a problem, and they can control their emotions and behaviors in this process. The tendency of male and female students to avoid problem solving activities is similar. Obtaining different results as a result of research suggests that a definite judgment cannot be made about the relationship between gender and problem solving skill perceptions.

In general, middle school students' perceptions of problem solving skills are higher than high school students' perceptions. In the sub-dimension of confidence in problem solving ability, perceptions of middle school students are higher. In the self-control and avoidance sub-dimensions, the perceptions of the students did not differ significantly according to the school level. In the research conducted by Melikoğlu (2020) with 7th and 8th grade students, similar results were obtained with the current research. Perceptions of 7th grade students on problem solving skill perceptions were found to be higher than 8th grade students. Çağatay (2020), on the other hand, in his study with middle school students, concluded that students' problem-solving skill perceptions do not differ in terms of grade level. Again, Koçoğlu and Kanadlı (2019) stated that there isn't a significant difference between the perceived problem solving skills of the 7th and 8th grade students regarding mathematics and science disciplines and their grade levels. In the study of Yıldırım et al. (2011) it was concluded that the problem solving skill perceptions of the eleventh grade students were lower than the perceptions of the lower grade students and



differed significantly. Similar to the research results in Koç's (2014) study, a significant difference was found in the dimension of confidence in problem solving ability in terms of grade level. Accordingly, it was concluded that the perceptions of the sixth grade students were higher than the eighth grade students. According to this finding of the present study, it can be said that middle school students believe and trust more than high school students that they will find a solution when they encounter a problem. In the present study, middle and high school students have similar characteristics in terms of their tendency to avoid problem-solving activities and controlling their emotions and behaviors in the problem-solving process.

Students' problem solving skill perceptions didn't differ significantly according to their mothers' education level. The studies of Çağatay (2020) and Yıldırım et al. (2011) are in line with the current research results. No significant difference was found in the dimensions in the study. In the same direction, Çanakçı and Özdemir (2015) concluded that students' problem-solving attitudes do not differ according to their mothers' education level. Similarly, students' perceptions did not differ significantly according to the education level of their fathers. No significant difference was found in the sub-dimensions. The results of the research show parallelism with the result of Çağatay's (2020) study with middle school students that the problem solving skills of the students do not differ according to the education level of their father. In the same direction, Çanakçı and Özdemir (2015) concluded that students' problem-solving attitudes do not differ according to their fathers' education level. It is seen that the students whose fathers are illiterate and graduate of primary school, high school, university and postgraduate have similar characteristics in terms of problem solving skill perceptions. The studies of Yıldırım et al. (2011) revealed that, contrary to the current research findings, the problem solving skills of students differ according to the educational level of their father. It can be stated that students have similar characteristics in terms of producing a solution to the problem, their tendency to avoid problem-solving activities, and controlling their emotions and behaviors during the problem-solving process.

In general, the perceptions of problem solving skill of students with a very good academic achievement level are higher than those of students with a medium level. In the self-control sub-dimension, the problem solving skill perceptions of students with very good academic achievement levels are higher than the perceptions of students with good and medium levels. In the avoidance sub-dimension, perceptions of the students with very good academic achievement levels are higher than the perceptions of the students whose level is medium and pass. In the sub-dimension of confidence in problem solving ability, the perceptions of the students did not differ significantly according to their academic achievement levels. Eyvaz (2017), in parallel with the research finding, concluded that students' problem solving skills differ significantly in terms of their academic achievement. Acar et al. (2020) similarly found that as students' general grades increase, their problem solving skills increase. Yıldırım et al.'s (2011) study with high school students is in line with the current research results; revealed that students' problem solving skills differ significantly according to their school success.

Some suggestions can be made according to findings. Educational activities encourage problem solving, especially inquiry, problem-based and project-based learning methods can be included in high school in order to protect and develop perceptions in middle school. Based on the result that students' problem solving skill perceptions differ significantly in favor of male students in terms of gender, in-depth interviews can be conducted with female students to determine the details in these areas. The same study can be applied to different grade levels except middle and high school students. In addition, longitudinal studies can be done from primary school to university.

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Diversity management at schools: A valuable gem or a problematic challenge?

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Abstract

The aim of the research is to reveal the benefits, drawbacks and difficulties experienced in the diversity management in schools according to school administrators. This study is conducted as qualitative research and the phenomenology model is used. The sample of the study is determined with the maximum variety method. A semi-structured interview form is used as the data collection tool. The findings are gathered under two main themes: perspective on diversity and effects of diversity. The school administrators' perspectives on diversity consist of the types of diversity in schools, diversities that school administrators prefer to have and not to have in schools. The effects of diversities on the school are grouped as positive effects and negative effects. The positive effects of diversities within the school are mainly increased productivity, cultural interaction and transfer of experience. The negative effects of diversities in school are generation conflicts, lack of communication and ideological conflicts.

Keywords: Diversity management, benefits, difficulties, school administration

Introduction

Today, the rapid changes affect the profiles of people in organizations. Schools are one of the organizations where individuals with differences in demographic, cultural and individual characteristics work. These differences in organizations are one of the most important issues that managers should deal with and manage well. Diversity management, if applied well, provides important benefits such as high efficiency, rich perspectives, problem-solving skills for individuals and especially organizations. When the managers cannot manage the differences, various problems and difficulties may arise in the organizations.

Globalization has caused significant and rapid changes in demographic, social, economic and technological structures. These changes affect organizations. The workforce in today's organizations consists of individuals and groups with differences. As a challenging issue, organizations have to deal with workforce disparities. The structure of organizations' workforces have changed because of cultural, legal and some demographic factors like multiculturalism, declining birth rates, globalization, equality initiatives and they have become more diverse than in the past (Christian, Porter, & Moffitt, 2006). Organizations now have a heterogeneous workforce with differences in many aspects, rather than a homogeneous workforce as in the past, and they are trying to manage this workforce effectively.

Due to changes in the economy and business structures, organizations need to carefully deal with the problems brought by differences within the organization to grow and make profits. For organizations that consist of individuals and groups with differences to adapt quickly and be effective, they must manage differences effectively and benefit from these differences at the highest level. If the managers are aware of the differences within the organization, they will be able to evaluate them well and use them for the benefit of the organization. The success and competitiveness of an organization depends on its ability to embrace diversity and use it beneficially.



Organizations reap many benefits when they actively evaluate the way they deal with workplace diversity issues and when they develop and implement diversity plans. These can be listed as higher adaptability, wider service area, diversity of perspectives and more effective implementation (Greenberg, 2012).

Despite all the benefits of workplace diversity, it can sometimes create serious problems for organizations. Some of the difficulties that arise in the management of diversity are communication barriers, resistance to change, having different beliefs, different understanding of professional etiquette, discrimination, generation gap, disability (Goel, 2018). As in other organizations, educational organizations, namely schools, have employees with different demographic, social, cultural and individual characteristics. These employees need to be well managed in line with both organizational and individual purposes.

Organizations today have more employees with diversities than in the past. While organizations try to increase diversity within themselves, manage a heterogeneous workforce, ensure that individuals with different values and belief systems are compatible with each other, and fight discrimination, they try to meet the demands of the state and society to implement laws against discrimination, to provide jobs to minority and disadvantaged groups and to integrate them (Groschl, 2011). It is not enough to have a diverse workforce or to hire individuals with diversity. After individuals with diversities take place in the organization, managers need to create an environment that will not prevent these individuals from working together (Capowski, 1996).

The management of diversity is not to eliminate the differences that individuals have, but to use them to create a rich and exciting life experience. Schools reflect a large part of society that has doubts and fears about differences. School administrators also need to take steps to use diversity to improve learning and teaching activities because school administrators have a key role to organize and implement equality and the management of diversity (Ngema, 2009).

The effect of diversities is higher in organizations with high interpersonal interaction than in organizations based on production (McMahon, 2011). Since schools are among the organizations with high interpersonal communication and interaction, the impact of diversities within the school is high and the management of diversities is of great importance. In addition to the partial effect of the employees in the management of diversities, managers play the leading role and the main responsibility lies with the managers (Kurtuluş, 2014). With this research, it has been tried to determine the benefits and problems created by the diversities in the school environment for the organization and individuals. It is thought that the results to be obtained will contribute to the literature and the processes of school administrators to manage diversities. The aim of the research is to reveal the benefits and drawbacks of diversities in school according to school administrators. For this purpose, answers to the following questions were sought in the study:

- What is the perspective on diversities in school?
- What are the benefits of diversities within the school?
- What are the drawbacks of diversities within the school?

The concept of diversity is defined as "the state of being different, difference, otherness" in the dictionary of the Turkish Language Institution, and "the feature that distinguishes every natural, social and conscious event and phenomenon from all others" in the field of philosophy (TDK, 2022). Diversity is also defined as accepting, understanding, valuing and appreciating differences between people in terms of age, gender, class, race, ethnicity, physical and mental ability, sexual orientation and religion (Esty, Griffin & Hirsch, 1995).

Diversity includes both the way that people perceive themselves and the way that they perceive others. These perceptions affect their interactions. In fact, diversity includes a series of applications for the features that distinguish people from each other (Patrick & Kumar, 2012):

- To understand and appreciate the interdependence of humanity, cultures and the natural environment,



- To show mutual respect for qualifications and experiences different from our own,
- To understand that diversity includes not only ways of being but also ways of knowing,
- To recognize that personal, cultural and institutionalized discrimination creates and maintains privileges for some, and creates and maintains disadvantages for others,
- To build alliances across diversities so that we can work together to eliminate all forms of discrimination.

Organizations now have employees with different characteristics rather than a homogeneous workforce consisting of only one type of individuals. The existence of a diverse workforce in an organization shows that there is a heterogeneous organizational structure with different characteristics such as gender, race and ethnicity (Buckingham, 2010). Employees with diversity are those who do not conform to the "normal" stereotype. These employee diversities include almost all aspects of people's differentiation, such as education and sexual orientation, and also the more visible ones such as gender, ethnicity, and disability (Booth, Robson, & Welham, 2005). Diversity is about learning from others who are not the same as us, respecting everyone, creating workplace environments and practices that encourage learning from others and take advantage of different perspectives (Armache, 2012). Hazard (2004) defines workplace diversity as a wide range of differences that affect how people interact and achieve business results. An organization that has employees with different elements and qualities shows the characteristics of workplace diversity. These different elements include the beliefs, values and actions of employees that vary according to gender, ethnicity, age, lifestyle and physical abilities (Foma, 2014).

Diversity management emerged in the United States in the mid-1990s (Boxenbaum, 2006). It can be defined as a planned, systematic and comprehensive management process for the development of an organizational environment in which all employees, with their similarities and differences, can contribute to the strategic and competitive advantages of the organization and no one is excluded (Thomas, 1996). The concept of diversity emerges as an important issue due to the changing attitudes, as well as the increase in the proportion of women and minorities in organizations. While people who were "different" in the past accepted to be assimilated to advance in the workplace, people now emphasize the features that make them different and do not want to put their differences aside. For this reason, managers need to learn how to manage employees with differences in their organizations, as they no longer must deal with difference alone but with non-assimilated differences (Thomas, 1991).

Managers face the challenges of diversity. They must deal with everyday problems that arise when employees in the organization speak different languages, come from different cultures, adopt different values or have completely different life experiences. They must deal with the problems that arise when a working group is formed for people who are different from themselves and from each other in terms of race, gender, age, ethnicity, sexual orientation, religion, family status and place of birth. Otherwise, the organization will be negatively affected (Sutanto, 2009). The success and competitiveness of an organization depends on its ability to accept diversity and use it for its purposes. When workplace diversity is managed properly, this will result in benefits for both employers and employees. If diversity management is implemented well, success will emerge within the organization. The results that may arise as a result of good management of diversities can be listed as follows (Overmyer Day, 1995):

- Increased personal effectiveness and interpersonal communication among employees,
- Responding to social and demographic changes,
- Decreased problems and quick resolution of disputes,
- Fairness and equality climate,
- More productivity with complex tasks,
- Increased sales, revenues and profits.

Managing diversity effectively creates a competitive advantage for organizations and contributes to the organization. These contributions can be listed as lower cost, improved employee attitudes, improved hiring processes, increased growth, market share and profit, increased creativity and innovation, better problem-solving



skills and productivity (Sinding & Waldstrom, 2014). Similarly, Cox and Blake (2013) grouped the advantages of diversity management for the organization under six headings as cost, resource acquisition, marketing, creativity, problem solving and organizational flexibility.

In addition to the benefits that diversities provide for organizations, some troubles and difficulties within the organization can also be caused by diversities. Increasing levels of interpersonal conflicts, lack of communication, increase in stress levels and slowing down of decision-making processes are some of the problems arising from diversities (Neck, Smith, & Godwin, 1997). When not properly managed, the management of diversity can easily become a loss for everyone involved. This situation may lead to a decrease in the values of employees who are perceived as culturally different, reverse discrimination against the majority group, hopelessness, re-emergence of stereotypes and exposure to legal risks. However, if managed effectively, diversity management can create a “win-win” situation for both the organization and the employees (Von Bergen, Soper, & Foster, 2002).

Diversities within the organization can be seen as a double-edged sword. It is necessary to create innovation and creative solutions, but it can cause conflict and change. While diversity or heterogeneity increases the pool of information that is important for fulfilling tasks within the organization, too much heterogeneity can make it difficult to communicate and coordinate among organizational members, as people often prefer to be with people who are similar to them (Sinding & Waldstrom, 2014). Basically, there are six barriers to managing diversity: Desire to protect the self, discussions on diversity initiatives, inability to reconcile results with diversity management, confidence in reactive learning strategies, defensive habits and memory deficits (James & Wooten, 2001). Managing workplace diversity can directly affect diversity awareness and job satisfaction and is an issue that all managers should consider when managing employees. By managing workplace diversity and being aware of job satisfaction, employee and organization can have a symbiotic relationship (Buckingham, 2010).

Method

This study was conducted as qualitative research. Silverman (2020) defined qualitative studies as research that reveals the experiences of individuals and stated that they help us understand what is important to individuals. In this study, phenomenology model was used because it was aimed to reveal the benefits and drawbacks of diversities in school according to school administrators. Phenomenology is defined as an approach to understanding the hidden meanings and essences of an experience (Grbich, 2012).

The universe of the study consists of school administrators working in public schools in Gebze district of Kocaeli province in the 2020-2021 academic year. The sample of the study was determined with the maximum variety of purposive sampling methods. With this method, a small sample is created, and the diversity of the participants is reflected at the maximum level (Yıldırım & Şimşek, 2008). The criteria for determining school administrators are the number of teachers in their schools and the fact that they work in different school types. The data regarding the sampling are given in Table 1.

Table 1. Demographic characteristics of sample

Pseudonym	Education Level	Seniority	School Type	Number of Teachers in the School
Ahmet	Master's Degree	13	Primary School	6
Kemal	Master's Degree	14	Primary School	52
Recep	Bachelor's Degree	21	Secondary School	20
Okan	Master's Degree	11	Imam-Hatip Secondary School	6
Mehmet	Master's Degree	17	Vocational and Technical Anatolian High School	83
Fatih	Bachelor's Degree	22	Anatolian High School	44



In this study, a semi-structured interview form prepared by the researcher was used as a data collection tool. In phenomenological studies, interviews are generally used as a data collection tool (Yıldırım & Şimşek, 2008). In this study, the data were collected by the researcher's interviews with the participants. The interview questions each school administrator are as follows:

- What do you think is the diversity management?
- What kind of diversities do you think there are among the teachers in your school?
- What are the diversities you prefer to have in your school?
- What are the diversities you prefer to not have in your school?
- What are the positive effects of the diversities in your school?
- What are the negative effects of diversities in your school?
- What are the problems caused by the diversities among teachers in your school?

The data obtained from the interviews were analysed with content analysis. Each participant was given a pseudonym such as Ahmet and Hasan. By using these pseudonyms in direct quotations, it was ensured that the participants were anonymous.

Findings

The findings of the study were gathered under two main themes in line with the sub-purposes of the research: perspective on diversities and the effects of diversities.

Perspective of School Administrators on Diversities

The school administrators' perspectives on the diversities in their schools are grouped under three sub-themes. These are the types of diversities found in their schools, the diversities that school administrators prefer to have and not to have in their schools.

Table 2. Themes, sub-themes and codes for school administrators' perspectives on diversities

Theme	Sub-Theme	Code
Perspective on diversities	Types of diversity	Gender
		Age
		Union
		Ideology
		Belief
		Ethnicity
		Socio-economic level
		Experience
		Marital status
	Diversities that are preferred to have	Experience
		Ideology
		Seniority
		Gender
	Diversities that are preferred not to have	Education levels
		Union
		Political view
		Work discipline
		Motivation



School administrators answered the question “*What do you think is the management of diversities?*” as managing the teachers in their schools effectively by giving importance to the different characteristics they have. School principal Okan defined diversity management as “*It is to apply a management style by considering the diversities of individuals, respecting their diversities in some way, seeing the diversities as richness and in this sense taking their diversities into account.*” and school principal Kemal defined as “*The management of diversities is the effective organization of these diversities that they bring to the institution in terms of language, religion, gender and ethnicity.*”. School principal Fatih said that the diversities that teachers have are also important and emphasized that “*People have different characteristics. So, in fact, this is very important in management. That is to respect people's differences.*”.

To the question of what the diversities of teachers in their schools are, school administrators answered as gender, age, union, ideology, belief, ethnicity, socio-economic level, experience and marital status. The diversities most noted by school administrators are gender and age.

School administrators answered the question “*What are the diversities you prefer to have in your school?*” as experience, ideology, seniority, gender, education level and physical characteristics. School principal Ahmet said “*I think it's a good thing to have different experiences at school, for example.*” and expressed his preference for diversities in experience. School principal Mehmet said, “*The balanced distribution of the number of female and male teachers is very good. Therefore, it must be distributed equally in a school.*” and the school principal Kemal said “*There are only 5 men among the teachers I have mentioned. In this sense, I think it will offer a healthier school climate in terms of an equal distribution and diversity.*”. In their statements, they stated their preferences for gender diversity to be present in their schools. Examples of other codes are as follows: School principal Kemal “*I wish there was a difference in terms of education levels.*”, school principal Okan “*Obviously it would be good to have people from different ideologies to have more creativity.*”, school principal Mehmet “*Actually, they employ disabled teachers recently. I think they are very effective. We currently have teachers with disabilities. This is also good; it creates an awareness.*”

The diversities that school administrators prefer not to have in their schools are union, political view, work discipline and motivation. The school principal Ahmet said “*The most important diversity for me that I don't want to have is the difference in their motivation. Working in an environment where there are differences between teachers or employees with low life energy and people trying to do something with high life energy, you get tired there.*” and stated that he did not prefer motivation differences. The school principal Okan, said “*I frankly do not think that union or political views make a very positive contribution to the management of differences.*” and the school principal, Recep said “*I think it's better if they all look at the same direction. Otherwise, union grouping begins.*”, and they stated that they did not prefer union differences in their schools.

Effects of Diversities within Schools

In terms of school administrators, the effects of diversities on the school are grouped under two sub-themes. These are positive effects and negative effects.



Table 3. Themes, sub-themes and codes for the effects of diversities within the school according to school administrators

Theme	Sub-Theme	Code
Effects of diversities	Positive effects	Increase in efficiency
		Cultural interaction
		Experience transfer
		Being a role model
		Gaining a different perspective
	Negative effects	Generational conflicts
		Lack of communication
		Union opposition
		Ideological conflicts
		Groupings by gender
		Groupings by socio-economic

According to the interviewed school administrators, the positive effects of the diversities within the school are increased productivity, cultural interaction, transfer of experience, being a role model and gaining a different perspective. School principal Ahmet said, *“If these diversities do not create separation, if a nutritional environment is formed due to diversities, if an ecosystem is formed, this turns into productivity.”* and stated that the diversities provide an increase in efficiency within the school. The school principal Okan, said, *“The coexistence of people from different cultures affects other people's perspectives on those cultures.”* and expressed cultural interaction. Regarding teachers being role models for each other at school, school principal Mehmet said, *“We have many young teachers and few married teachers, but these are better role models for young people and their approach to children is different.”*

When we look at the negative effects of diversities in school from the point of view of school administrators, we encounter generation conflicts, lack of communication, union opposition, ideological conflicts, groupings based on gender and socio-economic groupings. School principal Okan said, *“We have not seen such a serious negative part of the diversities until now.”* and school principal Fatih said *“The diversities do not affect negatively.”* And they stated that the diversities in their schools did not have a negative effect.

Results, Conclusions and Recommendations

The views of school administrators on the management of diversity are discussed under two headings, "School Administrators' Perspective on Diversities" and "Effects of Diversities in Schools".

Perspective of School Administrators on Diversities

When the answers given by the school administrators to the question about the management of diversity were examined, the school administrators answered that the management of diversity is being aware of the different characteristics that people have and management of them effectively. According to school administrators, diversities are a richness for their schools, and it is seen that they are aware of diversities the teachers have. Similarly, Memduhoğlu (2011) also concluded that school administrators see the diversity of employees as a wealth, respect employees with diversities, and take employee diversities into consideration when managing schools. Diversities consist of the first dimension, which includes features such as age, gender, ethnicity, and the second dimension, which includes features such as religion, culture, lifestyle, experience, and way of thinking (Mazur, 2010). School administrators are also aware of the characteristics of teachers that can be observed from the outside in the first dimension and their characteristics in the second dimension, which can be described as under the iceberg. From this point of view, it can be concluded that school administrators know teachers more closely and can observe their diversities.



School administrators prefer to have teachers from different gender and age in their schools. Having a single gender density is not a desired situation by school administrators. In particular, the administrators of schools with a high number of male or female teachers state that an equal gender distribution will have a positive effect on their school and work environment. In addition, the age difference is one of the diversities that school administrators want to have. School administrators prefer to work with a group of teachers with an age difference rather than teachers with close age groups. According to school administrators, the presence of teachers from different generations and age differences in the school also creates a difference among teachers in terms of seniority and experience. This enables teachers of different seniority to transfer experience to each other on the subjects they have knowledge of and contributes to the development of teachers. Another diversity preferred by school administrators is to have teachers with different levels of education. Although this result is not similar to the result of the study of Dastane and Eshegbe (2015) that education has no significant effect on diversities, it is important to have teachers who have completed their master's or doctorate education in terms of giving each other a different perspective and making a positive contribution to the school. School administrators also prefer teachers with different ideologies to be present in the school environment. Working together with teachers from different ideologies, perspectives and worldviews is seen as wealth by school administrators. In this way, intercultural interaction occurs between teachers and different perspectives are gained. Similarly, in her study, Ordu (2016) concluded that if diversities are seen as richness, different opinions are accepted, and discrimination disappears. The presence of teachers with different physical characteristics in the school environment is a diversity preferred by school administrators. The presence of disabled teachers in the school is considered important by school administrators to raise awareness of disabled people in all individuals in the organization.

Considering the diversities that school administrators prefer not to have in their schools, diversities in union, political views, work discipline and motivation are undesirable diversities by school administrators. The school administrators do not want the diversities in union and political views among the teachers on the grounds that they do not contribute positively to the work environment and cause groupings within the school. It is preferred by school administrators that teachers with different working disciplines and motivation levels are not in their schools in the context of individual characteristics. According to school administrators, teachers with low work discipline and motivation negatively affect other teachers in the school and reduce their efficiency.

Effects of Diversities within Schools

According to school administrators, diversities have positive and negative effects within the school. In terms of the positive effects, school administrators describe the presence of teachers with diversities as an increase in productivity. Experience transfer occurs with the interaction of teachers with different individual characteristics. As a result, teachers of different ages become role models for each other and there is an increase in efficiency in the school. Similarly, Gentile (1994) stated that diversities enable individual and organizational learning within the organization. Teachers with different cultural values can introduce their own culture and learn about other cultures. This enables individuals to gain a different perspective within the school.

When the negative effects of diversities within the school are examined, generation conflicts, lack of communication, union opposition, ideological conflicts, groupings based on gender and socio-economic groupings are seen by school administrators. If there are teachers from different age groups in the school, generation conflicts occur between these individuals and groupings occur within the school based on gender. Due to the different ideological and political views of the teachers, ideological conflicts, oppositions based on unions and groupings occur. In addition, school administrators also stated that there are groupings among teachers who are at different socio-economic levels and have different lifestyles. Similar to the result of this study, Richard et al. (2003) showed that the negative effects of diversities are decreased interaction between group members, increased task conflict and poor performance.



In the context of the findings and discussion obtained in the study, the following suggestions were presented to the practitioners:

1. Employee structures in schools should be structured to include diversities in terms of gender and age.
2. By providing school administrators and teachers with in-service training on diversity, it should be ensured that the positive contribution of diversity to the school is increased, and its negative effects are minimized.
3. Considering the diversities in their schools, school administrators should prepare plans to effectively manage the diversities.
4. School administrators should ensure that employees overcome stereotypes and prejudices towards each other by demonstrating inclusive leadership and increasing openness and communication among employees.

As in every research, there are some assumptions and limitations in this research. As the assumptions of the research, it is thought that the sample used in the research represents the universe, the measurement tool is qualified to answer the problem, and the answers given by the participants in the research reflect their real thoughts. The research is limited to the answers to the interview questions of school administrators working in public schools in Kocaeli province Gebze in the 2020-2021 academic year. In future research, different research methods (quantitative, mixed) can be used to determine the positive and negative effects of diversities on the school and the difficulties that school administrators experience in managing diversities. Research can also be conducted in a wider universe or in higher education institutions.

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Parents' expectations in integration of Syrian students under temporary protection in Türkiye into the Turkish Education System

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Abstract

The aim of the study is to examine and reveal what the parents' expectations for school are in the integration of Syrian students who are under temporary protection into the Turkish education system. The research was conducted with phenomenology design, one of the qualitative research methods. The study group consists of 15 parents under temporary protection, 12 women and 3 men with Syrian students in schools in Korfez district of Kocaeli province within the 2020-2021 academic year. The data was obtained with a semi-structured interview form and analysed with content analysis by dividing it into themes and sub-themes. According to the results, a total of 5 themes and sub-themes of these themes were found. In the theme of “expectations from the school administration”, the results were the presence of an interpreter in meetings and interviews, non-discrimination against Syrian parents and students at school, opening Turkish course for Syrian parents, having Arabic lesson for the students, providing financial support to families under temporary protection. In the theme of “expectations from teachers”, more frequent communication with parents via an interpreter, non-discrimination among students, making home visits, being patient and tolerant were results coming to the forefront. As a result of these analyses, it has been found that Syrian parents experienced prejudices, discrimination, exclusion, financial problems, limited participation in events and meetings, problems caused by language and communication problem in the education process in the school and the necessary recommendations has been presented.

Keywords: Syrians, parents' expectations, teacher, school administration, migration

Introduction

In 2010 in Tunisia, the protests of the people started against the regimes of the countries they lived in, which was called the Arab Spring. One of the countries most affected by this mobility was Syria. Even after ten years' temporary stability has been achieved in many countries affected by the Arab Spring, but the civil war in Syria still continues. Migration is undoubtedly one of the most important results of the war. Having the longest land border with Syria and being a transit country on the way to Europe are the main reasons why Turkey has been the most affected country by the Syrian war and received the most immigrants. (Akçay, 2019: 153-156).

The primary reaction to migration wave from Syria was to establish refugee camps and shelters for their settlements in our cities on the Syrian border. As of the date of September 16, 2020, the number of Syrians with temporary protected status in 7 temporary settlement centers in 5 different cities is 59,877. In addition, a great number of Syrians with temporary protected status, 3,559,041, live in various provinces of our country (Directorate General of Migration Management, 2020). With the beginning of accommodating nearly four million Syrians in our country, many problems have emerged. The adaptation of this large group of people with different languages to the host society and their acceptance by the host society are clearly the biggest problems in this situation. It definitely causes various problems.



According to data in 2019, 680,000 of the immigrant children from Syria is of school age. As a result of some agreements in order to increase the enrollment rate and not to lose a generation, in 2016 the PİKTES Project was started in our country. Employing approximately 5 thousand teachers in 26 cities, the integration of the immigrant children has been eased into the Turkish education system (UNICEF, 2019). (UNICEF, 2019). It seems that Syrian students can only reach the target in education by carrying out a high level coordination among school, students and parents. When the literature is examined, although from the perspective of school and students, there are many studies about the integration of Syrian students into the Turkish education system, parent-centered studies are rarely encountered. This study is important in terms of reviewing the educational problems of the immigrant Syrian children with temporary protected status from the perspective of parents.

The school stakeholders and parents should hold the compatible expectations for the children. Expectations may differ depending on the structure of the society. Teachers are expected to treat equally to students, to be patient and tolerant towards differences, to produce solutions for problems, to teach morals well, to help children to be successful. When parents have high expectations from the school and when they are not fulfilled, adverse outcomes may occur. Determining mutual expectations and goals can eliminate these adverse outcomes. In addition, the high expectations of parents from the school will give teachers and administrators opportunity to constantly improve themselves and follow innovations (Akbulut, 2013: 14-19). The aim of this research is to examine and reveal the parents' expectations from the school through the integration of Syrian children with temporary protected status in our country into the Turkish education system. For this purpose, answers will be sought for the following questions:

1. What are the parents' expectations from the school management in course of Syrian students' integration into the Turkish Education System?
2. What are the parents' expectations from teachers in course of Syrian students' integration into the Turkish Education System?

Methods

Research Design

In this study, phenomenological research was used, which is one of the qualitative research designs. "The phenomenological research focuses on phenomena that we are aware of but do not have an in-depth and detailed understanding of." (Yıldırım & Şimşek, 2016: 69).

Study Participants

The study participants of the research; the parents of 15 Syrian students, 12 females and 3 males, who continue their education in 2 primary schools and 1 secondary school in the academic year 2020-2021 in Körfez District of Kocaeli city.



Demographic Information of participants are shown in Table 1.

Table 1. Demographic variables about participants

Participants	Gender	Year of Birth	City of Origin	Number of Children
V1	Woman	1989	Aleppo	3
V2	Woman	1994	Aleppo	4
V3	Woman	1993	Ayn Al Arab	3
V4	Woman	1994	Homs	4
V5	Woman	1991	Aleppo	4
V6	Woman	1984	Damascus	6
V7	Woman	1986	Azaz	6
V8	Woman	1993	Homs	5
V9	Woman	1992	Homs	3
V10	Woman	1990	Idlip	4
V11	Woman	1992	Homs	3
V12	Man	1978	Homs	3
V13	Man	1988	Homs	4
V14	Woman	1981	Aleppo	7
V15	Man	1980	Afrin	3

Data Collection Instruments

As the data collection tool of the study, a semi-structured interview form was used. In the interview form the following questions were included:

1. What are your expectations from the school management? What would you suggest and expect the school management should? What do you expect the school management shouldn't do?
2. What are your expectations from teachers? What would you suggest teachers should do? What do you expect they shouldn't do?

Data Collection

To collect the research data a semi-structured interview form was used and an arranged interview was realized with the participants. Before starting the interview, the parents were informed about what rules would be followed about the confidentiality and research ethics rules. The face-to-face interviews were conducted with 15 participants. Before questions being asked, a short briefing was given about the purpose and subject of the research to relieve the participants. First, the participants were asked about how they came to Turkey, the cities they came from, the year of birth, education level, and the number of children. Face-to-face interviews were audio-recorded with the consent of the participant in order not to lose the study data and to prevent data loss. The interviews lasted for 25-40 minutes on average and lasted for a total of 450 minutes. Interviews were conducted by the researcher himself, a translator and a PIKTES teacher.

Data Analysis

The data obtained from the study was interpreted with content analysis method. In content analysis the obtained data are conceptualized and logically organized, and then themes are generated to explain the concepts (Yıldırım ve Şimşek, 2016 s.227). With the help of the data obtained from the content analysis, indicators were determined and then they were divided into themes and sub-themes.

Findings

Findings Regarding Parents' Expectations from School Management

The table below shows the data on the theme of parents' expectations from school management.



Tablo 2. Parents' expectations from school management in course of Syrian students' integration into the Turkish Education System

Sub-themes	Categories	Participant Codes
Personal Expectations	Preventing discrimination against Syrian parents at parent meetings	V1,V5
	Avoiding generalization about Syrian parents and students in meetings	V1,V5,V10
	Providing an interpreter in all parents' meetings at school	V1,V5,V6,V9
	Having a constant available interpreter for Syrian parents at school	V3, V13
Expectations in Educational Dimension	A joint meeting with Syrian and Turkish parents to solve incompatibilities between the parents	V1,V5,V6,V11,V13
	Preventing discrimination against Syrian parents and students at school	V4,V7,V11
	Organizing school trips for parents and students	V9
	Teachers' company while parents pick their children up after school	V6
	Continuity of Turkish language courses	V3
	Lessons for Arabic language for Syrian students at school	V1,V2,V3,V5,V8,V10,V1
	Turkish language courses for Syrian parents	V2,V4,V7,V10,V11,V12, V14,V15
	Courses (chess, computer, etc.) for students at school	V3,V7,V9
	More lesson hours for English language	V3, V15
	Cultural school trips and activities	V4,V14
	Competitions among students at school	V7
Financial Expectations	Providing Syrian students with tablet computer during the distance education	V6,V8,V9,V14,V15 V6,V8,V15
	Financial support from school to Syrian parents	V10
	Scholarship support to Syrian children from school	V4
	No financial request from impoverished Syrian parents	

The analysis of the data obtained according to Table 5, the theme 'parents' expectations from the school management' consists of sub-themes, 'personal expectations, expectations in educational dimension, and financial expectations'.

The categories specified by the parents under the sub-theme 'Personal Expectations' are; Preventing discrimination against Syrian parents at parent meetings, avoiding generalization about Syrian parents and students in school meetings, providing an interpreter at all parents' meetings at school, having a constant available interpreter for Syrian parents at school, A joint meeting with Syrian and Turkish parents to solve incompatibilities between the parents, preventing discrimination against Syrian parents and students at school, organizing school trips for parents and students, teachers' company while parents pick their children up after school, continuity of Turkish language courses. Some of the direct views belonging to the parents on this issue are given below.

I think that Syrian parents are discriminated in parent meetings. The problem faced by any Syrian child is treated as if all Syrians have it, I feel very sorry for this. My first expectation from the administrators is to warn the teachers not to make such generalizations at the parent meetings. My second expectation is that there should be an interpreter for the Syrian parents at the family union meetings or informative training meetings at the school. Because we can't understand anything and we feel left out. You accuse us of not taking care of our children however we don't understand you because of the language problem between us. My third request is that the school administration please hold a meeting with Turkish parents and explain that Syrians did not come here with pleasure but escaped from the war, that they are here by necessity, not all Syrians are filthy, and that the incompatibility seen in a Syrian does not apply to all Syrians. Perhaps such a meeting will reduce the prejudices against us a little. (V1).

The categories specified by the parents under the sub-theme 'Expectations in the Education Dimension' are:



Having Arabic lessons for Syrian students at school, opening Turkish courses for Syrian parents, chess, computers, etc. for students at school. opening courses, increasing English class hours, having cultural trips and activities at school, organizing competitions among students at school. Some of the direct views belonging to the parents on this issue are given below..

My biggest expectation from the school administration is to open a Turkish course for adults at school. Because we need Turkish very much at school, in the market, in the hospital. When we can't explain our problem, we come and take our child from school to help us, and our child falls behind in his lessons. I am very sorry about this. If a Turkish course for adults is opened, please do not allow the children of the women participating in the course to attend the course. We can't understand anything from the children's voice.

In the content of Sub-theme of Financial Demands which are defined by parents, the categories reached are; Providing tablets to Syrian students during the distance education process, Schools' support to Syrian families for Financial Matters, scholarship from school management for Syrian students, schools' not demanding anything from Syrian parents who are not well off. Some of the parents' direct views on this matter are given below:

There has been a lot of demand for materials and food in the kindergarten. I haven't had any problems at this school, but in the previous school where I lived before, I couldn't meet the teacher's demands and the school was telling me that the child was under my responsibility, we can't afford anything. Kindergarten education is very important for our children to learn language. For this reason, in all provinces and schools, as in this school, our children should be educated in kindergartens, without making any financial demands from those who are in financial difficulties like us. (V4).

When we look at the parents' statements about the “parents' demands from the school administration in the integration of Syrian students into the Turkish education system”, the need of a Turkish language course for Syrian parents is the highest demand from the school administration. An Arabic interpreter being present in the school meetings for translation and other business about other school affairs will eliminate the incompatibilities between the Syrian parents and the Turkish parents. This demand resulted in the fact that the Syrian parents can not express themselves comfortably and explain their problems at school meetings in general. It has been concluded that among the financial demands which has been expressed mostly by parents is the need of tablets for Syrian students during the period of “distance learning” and an Arabic course for them at school.

Research Results Regarding Parents' Demands from Teachers

The results regarding the theme of parents' demands from teachers are presented in table 3. The theme of “Parents' Demands from teachers” has sub-themes as demand for attitudes towards their children, demands regarding education matters.

In the content of sub-theme of the Expectations for their Children which are specified by the parents, the categories are ‘teacher's frequent communication with Syrian parents, the school's support as for the presence of an interpreter at school and parent's meetings, teacher's not doing discrimination towards Syrian students in the classroom, teacher's visiting Syrian students at home’. Ensuring Turkish students to be patient and tolerant towards Syrian students, guidance for students to choose professions according to their interest, teachers' not making distinction towards nationality, the need for the activities which are organised by school counsellors to eliminate the bad effects of war. Some of the direct views of parents on this matter has been presented below:

I wish the teacher would make home visits, I would appreciate it. Nowadays home -visits are not possible due to the Corona but after the Corona is over, I hope the teachers will organise home visits. (V9).

The teacher keeps on saying that my child is Syrian. I wish he/she didn't do that Because my child is afraid, she thinks her friends will not play with her anymore (dişil). The teacher really cares about my child, but I would be happier if only she did not constantly make distinction toward nationality. (V11)



Table 3. Parents' expectations from teachers in integration of Syrian students into the Turkish Education System

Sub-themes	Categories	Participant Codes
Expectations for Their Children	Communicating with Syrian parents more frequently	V1,V5,V8,V11,V15
	Interpreter support for Syrian parents in parent meetings and individual interviews	V1,V8,V11
	Preventing discrimination against Syrian students at school	V2,V4,V8,V11,V15
	Paying more attention to Syrian students	V3, V6
	Visiting Syrian students at their house	V9,V12,V13,V14
	Ensuring that Turkish students are patient and tolerant of Syrian students	V2,V6,V11
	Enabling students to choose professions according to their dreams	V7
	Preventing national discrimination	V11
	Activities organized by the school counselor that will make the students forget the war	V14
Expectations in Educational Dimension	Teacher's encouragement and support for the students	V3,V9
	Having a private tutor at the school who takes care of Syrian students	V7,V10
	Having intermittent practice exams and competitions for students	V7,V13
	Preventing teachers from shouting to Syrian students	V4,V15
	Asking children questions according to their level	V8
	Giving students homeworks to memorize	V7
	Teaching slowly in distance learning	V11

The categories specified by the parents under the sub-theme 'Expectations in Educational Dimension' are; Teacher's encouragement and support for the students, having a private tutor at the school who takes care of Syrian students, having intermittent practice exams and competitions for students, preventing teachers from shouting to Syrian students, asking children questions according to their level, giving students homeworks to memorize teaching slowly in distance learning. Some of the direct views belonging to the parents on this issue are given below:

I would be very glad if their teachers gave the children assessments in the style of a trial exam and held competitions even every two weeks. Both children and parents can see their progress. The teacher can give memorization assignments. Thus, the memory of our children expands (v7).

When we look at the parents' statements regarding the expectations of the parents from the teachers in the integration of Syrian students into the Turkish education system, it has been noted that Syrian parents mostly pointed out the needs for teacher's not making discrimination towards Syrian students and parents, making more frequent contact with them and organising home visits.

The parents stated that they could not help their children because they could not fully comprehend Turkish and could not read and write in Turkish so and they could not help their children with homework given by the teacher and in other education processes.

Conclusion, Discussion and Suggestions

Of all the Expectations of Syrian parents In the integration of Syrian students into the Turkish education system, the first and most prominent of the parents' personal expectations from the school administration is to hold a joint meeting with the Syrian and Turkish parents in order to eliminate the incompatibilities that emerged between the parents. At this meeting, the school administration has been asked to state that Syrian parents and students had to come here by fleeing from the war, that not all parents are problematic, so they should behave responsibly and conscientiously, and be tolerant and patient.

If the meetings are organised in this way, conflicts can be resolved. The second demand is that an interpreter needs to be present at all meetings held at school for parents. The Syrian parents who attended the meetings held



at the school pointed out that they do not understand anything from the meetings because there is no interpreter and thus the meetings are not efficient for them. In this case they are expecting an school-subsidized interpreter for this problem. This can be prevented by providing support from relevant institutions and organizations at the meetings. The third demand is not to generalize Syrian students and parents in the meetings. It is requested to prevent the problem encountered in any Syrian parent or child from being portrayed as if it exists in all Syrian students and parents. Fourth, no more discrimination against Syrian parents in parent meetings. It is expected from the school administration to prevent Turkish parents from calling them as “Syrians” while speaking of their problems at the meetings, thus making them feel that they are refugees in most matters. The fifth demand is that there ought to be a permanent interpreter for Syrians at the school. The fifth expectation is that the school administration ought to have a permanent interpreter present at school meetings for Syrians to represent them.

They claimed that they have language problems not only in meetings but also every time they come to school, that’s why there should be a permanent interpreter to prevent this. Another expectation is that there ought to be no discrimination against Syrian students and parents at school. Expectations that are not overemphasized are as stated here; there ought to be school tours for parents, students that the child should be taken from school by his/her parents after school, and the Turkish language courses offered should be continuous.

In the integration of Syrian students into the Turkish education system, the first expectation of parents from the school administration in terms of education is to open a Turkish course for Syrian parents. It has been seen that learning Turkish is a necessity for them not only at school but also in their daily lives, so it would be beneficial to open Turkish courses. The second expectation of parents from the school administration is teaching Arabic for Syrian students at school. Due to the fact that their children are illiterate in their own language, unable to communicate in written form with their relatives, and that they will have difficulties when they return to their countries, it has been concluded that an Arabic language course should be opened.

In the integration of Syrian students into the Turkish education system, the prominent expression of the financial expectations of the parents from the school administration is the provision of tablet for Syrian students during the distance learning process. Parents stated that their children were in a difficult situation during the distance learning process, they could not buy tablets due to financial insufficiency, and in families with a large number of children, only one child could attend classes, so it has been seen that this problem could be solved by providing tablet for the children. Their second expectation is to provide financial aid to Syrian parents from the school. They asked the school to provide clothing, supplies and financial aid. Other expectations are to provide scholarship support to Syrian children at school and not to demand anything from parents who are in poor economic condition.

In the research conducted by Yüzgeç (2008), the expectations of administrators to be respectful to people, to provide a healthy and clean school environment, to have high school security measures, to organize meetings to inform parents, are similar to the results of our study. In the research conducted by Ayaydın ve Katılmış (2017), most of the parents found that the solution of disciplinary problems in schools should not be violence and that it was necessary to communicate with the students and their families in solving the problems related to students with behavioral problems. It was concluded that communication is important in solving problems. The views on children with communication and behavioral problems are similar to our study.

In the study conducted by Yüce (2018), it was concluded that the most important factor affecting the adaptation of Syrian students to school, based on the views of the administrators, is language. It has been observed that students who have difficulties in communicating with their peers due to language problems have difficulty in adapting. It was seen that the efforts of the school administration and the teacher to accept the student facilitated the adaptation process. It has also been seen that courses to be opened for families to learn Turkish are necessary. It has been concluded that the social activities carried out at the school facilitate the adaptation of Syrian students



to the school. The prominent views in the research are similar to our study, such as communication problems, opening Turkish courses for families, and social activities. The research conducted by Olgun (2019), on the other hand, based on the views of parents, it was revealed that they had problems with the supply of materials and participation in events, they did not attend meetings because they did not understand what was being said, they could not communicate. In the study conducted by Olgun (2019), it was revealed that, based on the opinions of the parents, they had problems in providing materials and participating in the activities, they did not attend the meetings because they could not understand what was said and could not communicate. It was concluded that Syrian students and parents were discriminated against and they could not come to an agreement because there was no interpreter in the interviews with the administrators. Among the prominent results of the related research, the material supply, the problem of translators, and the discrimination results are in line with the study.

In the research conducted by Yapıcı (2019), based on the views of the families, there has been reached such results about school management as; they have a school policy and attitude as being fair and equal towards all students, finding solutions to problems related to school management, establishing good relations with students and helping them, and asking for the parents' opinions in the decision-making process and facilitating their school affairs. The research result about the school management's being fair and free from discrimination is similar to our study.

In an other research conducted by Kılıç and Yıldız in 2020, the results support our study as; Parental expectations regarding school facilities about school's organisation of social-sports-artistic activities, , always keeping the school clean and being environmentalist, organising weekend courses to support students'school lectures.

Unlike other researches, this research has categories as; having an interpreter present at meetings and in school permanently organisation of a general meeting at school to solve the conflicts between Turkish and Syrian parents, including Arabic lesson to school the curriculum, providing students with tablets for distance learning.

The reason for the need of a permanent interpreter at the school especially at meetings is that the Syrian families can't speak and understand Turkish so they can not communicate. If we examine the researches related with "Parental Demands", it is noted that there have been conducted a few researches about Syrian parents. The school teachers and managers who work in the districts heavily populated by Syrians living under temporary legal protection have stated that there have been conducted many researches about Syrian students however up till now, the views of the parents were rarely taken.

Research results regarding the expectations of parents from educators in the integration process of Syrian students into the Turkish Education System were grouped in two sub-themes as the expectations for their children and the expectations related with the educational dimension.

In the integration process of Syrian students into the Turkish education system, the most-mentioned expectation stated is that the teachers should make frequent communication with parents. It can be said that it would be beneficial for parents to be informed about students' progress in school courses, their children's low marks and weakness, and to be contacted immediately when their children have a problem.

Another expectation that has been put forward is that the teacher should not make discrimination between Turkish and Syrian students in the classroom. Some expectations have been brought forward as teachers' treating equal Turkish and Syrian students not to make any ethnic discrimination in the classroom. The third one is the teachers' home visits to Syrian parents. It was concluded that it would be very nice of the teachers to see the conditions in which Syrian students live, and added that students used to be visited at home in former times, but these home visits were ceased due to the precautions in Covid-19 period. Fourth, the need for an interpreter to be



present for Syrian parents in general and parental meetings. They pointed out that they need be an interpreter in order to understand the subject-matter of class meetings better, to express themselves. Meeting this need may increase Syrian parents' interest in school. Fifth, Turkish students be patient and tolerant towards Syrian students. Another expectation that has been rarely expressed is that the teacher would be more interested in Syrian students, guiding them to professions according to their dreams, interest and needs, not to make discrimination between students' nationalities, and organising activities for Syrian students in order to eliminate the trams of war that would make them forget about bad memories.

In the integration of Syrian students into the Turkish education system, parents' expectations from teachers in terms of education and training are the teacher's encouragement and support for students, the presence of a private teacher who takes care of Syrian students, the practice exams and competitions for students from time to time, and the teacher not shouting at Syrian students in the classroom. Teachers were expected to be aware of the slow perception of Syrian students due to language problems and to encourage them by dealing with them one-on-one, to support them without hurting them. Rarely expressed were the categories of asking children questions according to their level, giving memorized assignments to children, and teaching the lesson slowly in distance learning.

In the research conducted by Yüzgeç (2008), it was seen (found out) that the expectations of parents from teachers are that students come to school with pleasure, that they can communicate when they need and that they make home visits. It was seen that the results that came out were consistent with this research. In the research conducted by Dülger (2015), the prominent suggestion in the expectations of the parents from the teachers is that they have good relations with the parents and make visits to the parents, and It has been seen that it is similar to this research. In the study conducted by Ayaydın and Katmış (2017), parents emphasized that teachers' fulfillment of their responsibilities regarding education varies from person to person. The statements of the parents that the teachers should be friendly towards the students, that they should observe the students with interest and inform the parents about their children and that they should establish good relations with the students are similar to this research.

In the research conducted by Kılıç and Yıldız (2020), the results of the expectations regarding teachers to be more and more interested in children, to have intelligence games, activities and competitions are similar to this research. Similarly, in the research conducted by Kubilay (2020), it is implied that teachers act with prejudice against students under Temporary Protection. Some families stated that the teacher was interested in the students one by one. The most frequently mentioned issue by the families is the communication barrier with the teacher, since the families do not speak Turkish. The parents expressed that they expected the teacher to have a more understanding and embracing attitude. Similar results were also found in this study.

Unlike other ones, in this research, we have reached such results as the need for an interpreter to be present at meetings for Syrian parents, ensuring that Turkish students be patient and tolerant towards Syrian students, organising activities for students in order to forget the bad memories of war, the need for a private teacher who has special time for Syrian students at school, and teaching class more slowly for Syrian students to comprehend, not handing out memorization home works.

In the category of interpreter support for Syrian parents in general and parental meetings; They have pointed out that they couldn't understand most of the things that the teacher has said, they couldn't benefit from what the teacher's told about at the meetings in the case of their children's needs and how much they have progressed in education. It was concluded that the need for an interpreter would prevent these cases at meetings. In the category of ensuring Turkish students to be patient and tolerant towards Syrian students, it has been stated that Turkish students do not allow Syrian students to play with them, because Syrian students have difficulty in



speaking and understanding Turkish, they have difficulty in communicating with their school friends so they want teachers to warn students about being patient and tolerant towards them.

In the category of teacher's organisation of activities in order to make the students forget the bad effects of the war, they have stated that the psychology of Syrian students was deteriorated due to their migration from their countries because of war, they wanted the counselor to organise activities that would make them forget those bad days. In the category of telling lectures much slower during "distance learning", they stated that since the Syrian students could not fully understand the Turkish language, they could not keep up with the teacher and follow the activities in the lessons thus they had difficulty in understanding the lesson, so they had to be taught slowly.

Suggestions

- In order to prevent ethnic discrimination and to create an institution where various cultures can live together, the school administration can organize conferences on migration and coexistence by experts in their fields.
- In order to solve communication problems with Syrian parents and students, it can be ensured that Arabic-speaking interpreters are available in the provinces and districts or in schools with a large number of foreign students, and that they can be accessed when necessary.
- Activities such as excursions, tea events, nature walks can be organized in order to strengthen the communication between parents and to strengthen the bonds between them.
- Long-term Turkish language courses can be opened in order to eliminate the difficulties that Syrian parents experience in communication in social life and at school.
- Arabic language courses can be opened for Syrian students at school.
- It can be ensured that teachers communicate more with Syrian parents, with the support of an interpreter, or with other Syrian parents who speak Turkish.
- In order to see the living conditions of Syrian parents and to get to know them closely, home visits can be organized by teachers.
- In order to eliminate the prejudices of Turkish students and parents against Syrian parents and students, cooperative activities can be organized by teachers.
- Due to the low level of Turkish perception of Syrian students in distance learning applied during the pandemic period, teachers should teach on online lessons more slowly and ask questions according to the level of Syrian students.
- Teachers can work on absenteeism to encourage and support Syrian students to go to school.
- In order to solve the problem of interpreters in schools, it can be ensured that at least one of the cleaning and security personnel assigned to schools by İŞKUR is a Syrian national and speaks Turkish.
- In order for Syrian students to eliminate the communication problem and get used to the culture they live in, they can undergo preparatory training, and then go to classes suitable for their development, which can reduce adaptation problems.
- In order to prevent the negative attitudes of Turkish and Syrian students towards each other, activities with the theme of discrimination and coexistence can be organized by the school counselling service.
- In order to contribute to Syrian students' learning Turkish, peer support can be provided by assigning a Turkish student for each Syrian student.
- In order to provide intercultural interaction and fusion, elements of Syrian and Turkish cultures can be exhibited.
- In order to empathize with Syrian parents, Turkish parents can watch short films, theatrical activities that explain the difficult processes experienced by Syrian parents.
- This research is limited only to the Körfez district of Kocaeli province. A more general or different provincial-district research can be done. Depending on the environment, parents' expectations may vary. A comparative study can be carried out by taking the expectations of parents in more than one school



where there are more Syrian students. A study can be conducted in which Turkish parents are included with Syrian parents.

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The communicative approach in English language classes: Are teachers and coursebooks communicative or not?

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Abstract

For many years, communicative language teaching (CLT) has been one of the most effective methods in second language and foreign language teaching. Based on this idea, this study takes the ideas and practices of English teachers on the Communicative Language Teaching Approach into account and examines the effects of communicative practices of teachers during their educational activities. The objective of this study is to reveal how much a course book is written with the communicative approach. In the present study the "Descriptive Approach" was used. The study data was obtained from Istanbul Aydın University, School of Foreign Languages, teachers who teach first grades. A questionnaire consisting of eight questions on how effective teachers can use communication-oriented language teaching methods and techniques during the teaching process was employed to obtain the data. As a result of the questionnaire, together with the analysis of the data obtained, it is seen that although participants adopt a positive attitude towards communicative language instruction for teaching staff, they do not use this approach fully effectively. It appears that the course books are generally written in the communicative approach, but the students are unable to transfer the classroom practices into real life. So it is seen that the book is considered as non-communicative and does not reflect real life. These findings support the contention that instructors are adopting the communicative approach in practice as it is given in the textbooks but the students are unable to communicate in real life since this knowledge is not put to use neither in class nor outside the class.

Keywords: Education, descriptive approach, communicative language teaching, communicative approach, authentic materials

1. Introduction

In English Language Teaching world The Communicative Approach- plays an important role as a result of needs of learners for communication in a foreign language. Communicative Language Teaching is a very popular method, and it is used in foreign language classrooms to teach learners how to communicate effectively.

Communicative approach motivates learners for self-development and self-improvement. Accordingly, it seeks to interest learners to accumulate and expand their knowledge and experience where they are expected to use their language in a natural way outside the class, for example: during the visit to English speaking countries, during the reception of foreign guests etc. Communicative competence in English language usage leads to increased motivation in learners and encourage better communication. People speak to influence behavior, thoughts and feelings of the other people. It means that it is possible to teach communication only at the expense of the involvement of students into different activities by modeling real life situations of communication on the basis of systematization of a language material. The language materials in English Language classes are designed within the principles of Communicative Language Teaching and the learners are supposed to choose independently the language units for the expression of their thoughts which can only be achieved through later.

According to Worsnop (1994), Hart (1998), most English language teachers have received a considerable independence in the choice of teaching techniques and methods, creative judgment of the contents and the ways of implementation of the program requirements recently. However, this freedom imposes the obligations of the profound knowledge of English language teaching theory, flexible possession of a methodical arsenal of methods, forms and tutorials depending on a studied material, features of learners, and the textbooks used only when a teacher possesses these requirements, it is possible to speak of his or her pedagogical maturity, and, therefore, of the creative approach to be chosen.



The communicative approach in English language teaching is represented as the most effective of all the existing approaches. The key points in this approach are stated by Freeman (2011) as :

- to lay the foundation for the English language skills as a means of communication;
- to enable learners to make use of the language in a real content (authentic materials);
- to accustom learners to consider a foreign language not as an object of study, but a vehicle for classroom communication;
- to establish situations likely to promote communication (D.L. Freeman, 2011, pp. 120-121)

Although Communicative Language Teaching is accepted trend today, the teachers can not achieve success in communicative approach in English Language Classes. In Turkey primary and students Secondary School students are exposed to total 992 hours of English study, they cannot achieve communication in the Target Language effectively.

In the sphere of professional activity, a lot of things depend on the abilities to realize oneself through communication:

to establish business relations; to come into contact and leave it; to report and explain the thoughts and assumptions; to understand the colleagues, heads and subordinates should possess a high level of communicative competence which would allow using the language freely for the implementation of the current tasks, future advance and level of achievements.

English Language Teachers are not expected to teach native language like communication in the foreign language but still they are expected to encourage the learners to make one of the foreign language (English) properly according to the life like situations created in class. However, it should be noted that speaking process takes place successfully only against personal interest of a learner in the course of teaching. Traditionally, the English language teaching focused on reading, understanding and translation of special texts, and also studying the problems of syntax of scientific style which required a teacher centered approach to Language Teaching. The modern teaching approach on the other hand, puts the emphasis on the learner and it is more learner centered. While analyzing course books, we see they generally use the same exercises most of them in grammar items and reading, writing exercises. Speaking and listening exercises cover less space and time than the others. They do not use real communicative activities. We cannot see real communication in it. The course book used in ELT should also be designed in accordance with the CLT approach. In the Communicative Language Teaching, learners have an opportunity of free expression of the thoughts and feelings during communication, however in the course book, learners are not encouraged to do so until later stages.

In order to achieve the desired goal and to check the hypothesis, it is necessary to answer the following research questions:

- 1) Do communicative method materials (coursebooks) lead to a real communication in English Language Classes ?
- 2) Do teachers use CLT method in their classes, if yes, do they create real communication?

2. Method

The present research is descriptive study. It was conducted on the basis of the primary and secondary research sources. It is supposed to provide me an opportunity to come up with appropriate information, which is relevant and authentic. It is a research approach in which various methods to collect relevant data are integrated. The primary source of data collection is the literary survey about the research topic. The secondary source of data collection is the teachers' methods & coursebook. The primary source of data collection is questionnaires. Questionnaires are given to the teachers and collected later at an agreed date. According to Beiske (2002), questionnaire covers large population at once, as it is distributed to different participants and should be collected later depending on the willingness of the respondents to address the question. Being standardized, questionnaires are more objective and the data collected from questionnaire are easy to analyze. Due to the familiarity with this method, respondents are not anxious. It is cost-effective, and resistant to bias, providing the questions are well crafted. The major problem with questionnaires is that there is a tendency of respondents to forget vital information. They may answer the questions superficially when the question is long; there is no room for explanation in case respondents misinterpret the questions.



3. Findings

In order to foster my hypothesis towards the use of communicative approach, teachers were given a questionnaire that is mainly based on descriptive research and with mainly a closed ended question types.

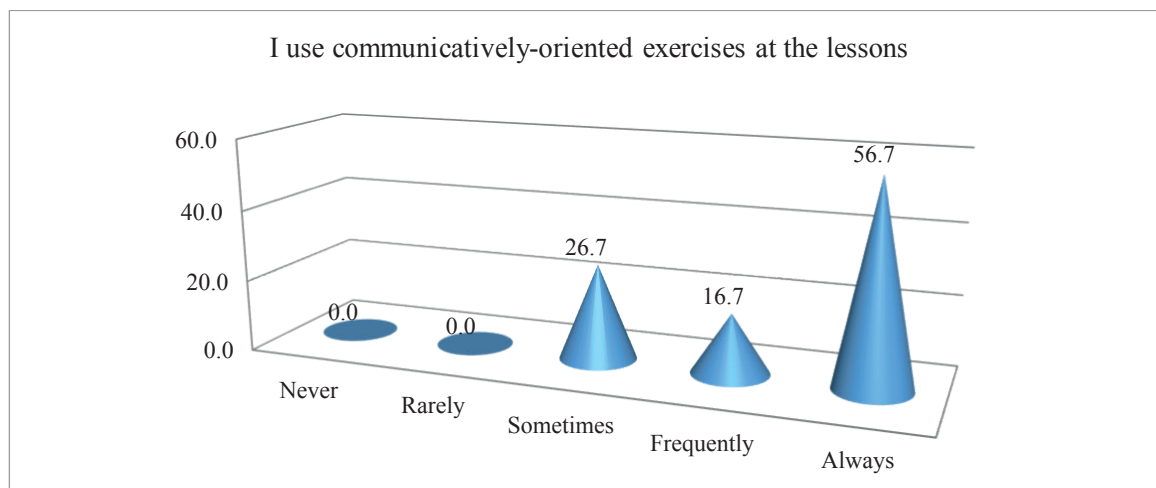


Figure 1. I use communicatively-oriented exercises at the lessons

In that question teachers were asked to answer whether they use communicative-based exercises at lessons or not. As shown in the graph 56.7 % of teachers replied with always and 26,7% replied with “sometimes”. Teacher said that he rarely or never uses communicative based activities during the lesson. Yes but just follows the text book which has communicative exercises & The students do them because it is an English lesson like a geography lesson. They do not transfer this knowledge into their real life communication in English, because grammar is emphasised more. They believe that the teacher will ask the grammar items in the exam so they put the importance to grammar rather than communication.

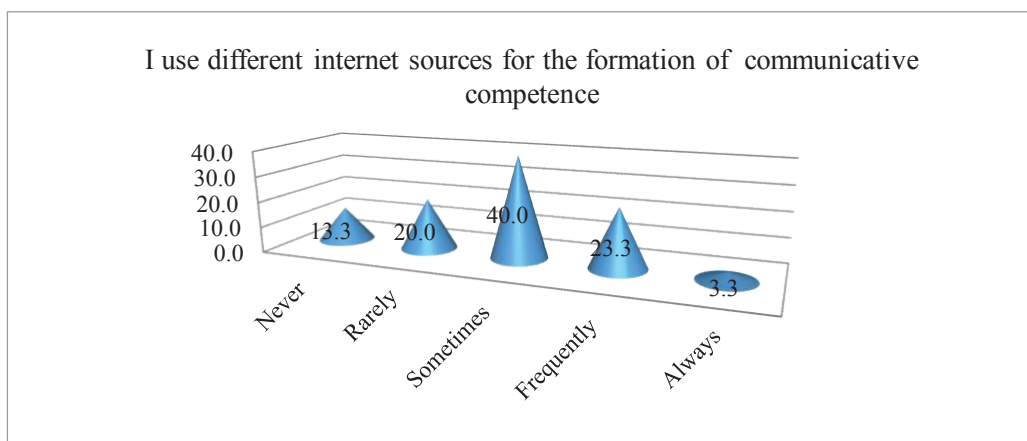


Figure 2. I use different internet sources for the formation of communicative competence



The graph shows that teachers don't use internet resources always to build on the communicative competence of their learners. The rate, as the figure shows, is really low 3,3 %. While 40% of the teachers sometimes use internet resources, 20 % rarely use them. Also, what we notice here in the graph is that there are some teachers who never use internet resources as the graph shows with a 13.3% which is considerable at some extent.

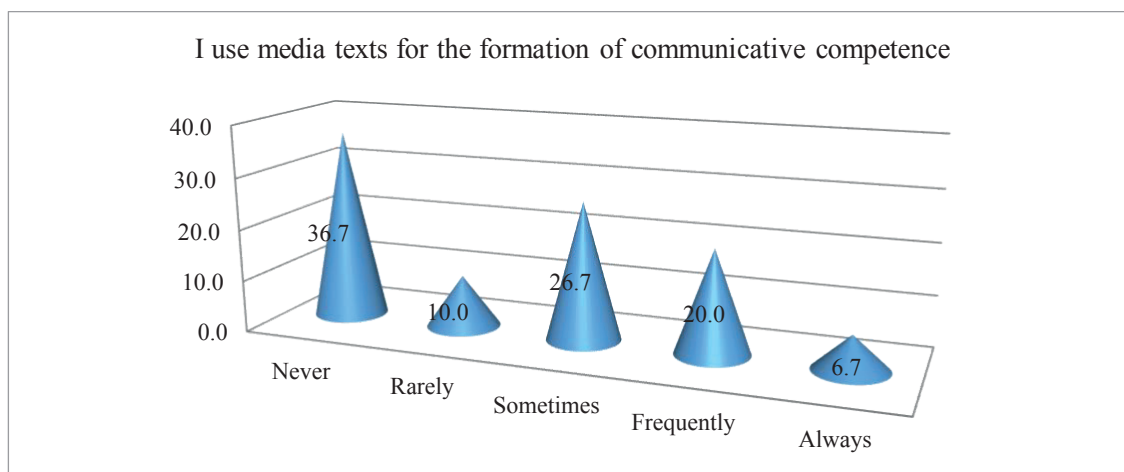


Figure 3. I use media texts for the formation of communicative competence

The graph shows that most teachers never use media texts to foster the communicative competence of their students with a rate of 36.7%. While just 6.7% very frequently use this kind of resources in their lessons.

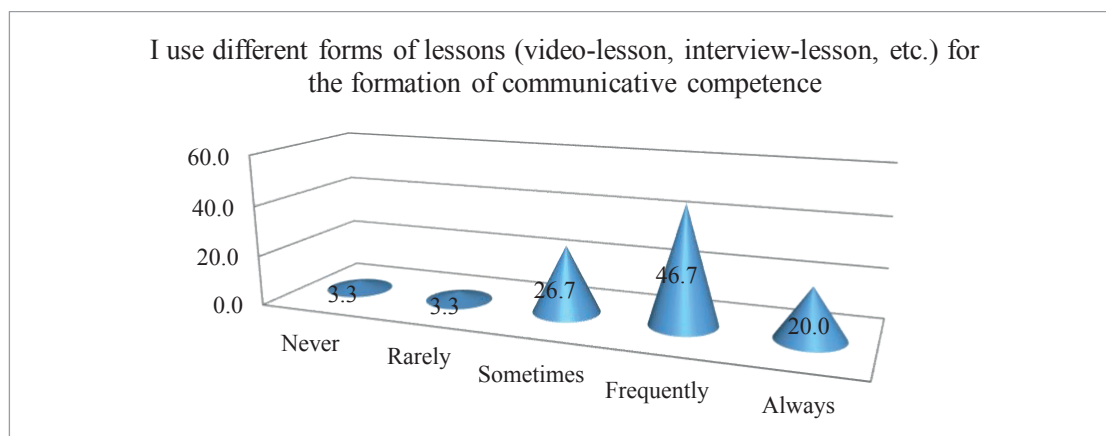


Figure 4. I use different forms of lessons (video-lesson, interview-lesson, etc.) for the formation of communicative competence

The table depicts the extent of the use of different lesson forms, ranging from video lessons, excursion lesson, etc. What is clear from that graph is that teachers use different forms of lessons frequently with a rate of 46.7%.

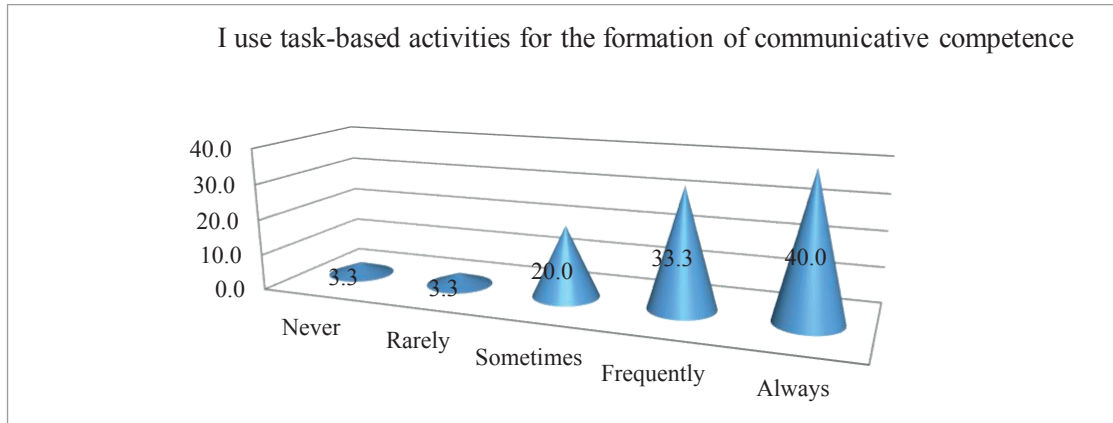


Figure 5. I use task-based activities for the formation of communicative competence

Teachers were asked in that question to reflect on the usability of task-based activities during their lessons. The result shows that teachers resort to task based activities but with different frequencies. Thus, 40% replied very frequently, while 33% replied with frequently, whereas just 20% replied with sometimes.

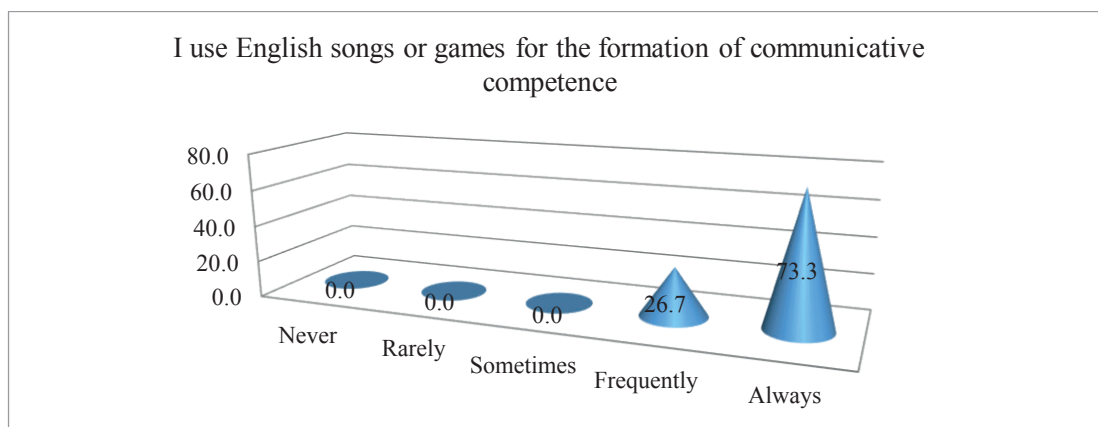


Figure 6. I use English songs or games for the formation of communicative competence

The use of English songs is very useful and has a crucial importance communicative approach. Consequently were asked to reply whether they use this tool in their lessons. You see from the table that 73.3 use English songs very frequently which means that almost a great deal of teachers resort to that tool to scaffold their lessons.

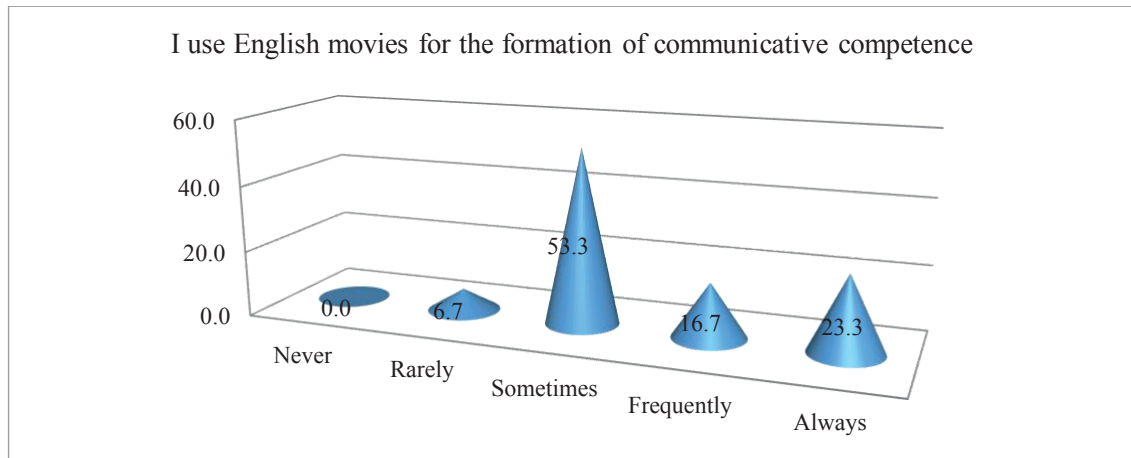


Figure 7. I use English movies for the formation of communicative competence

Teachers don't use English movies in their lessons very often but they resort to it sometimes. That idea is reflected on the graph where teachers sometimes use English movies with a rate of 53.3%. However, there is a considerable deal of teachers who use movies very frequently with a rate of 23.3%.

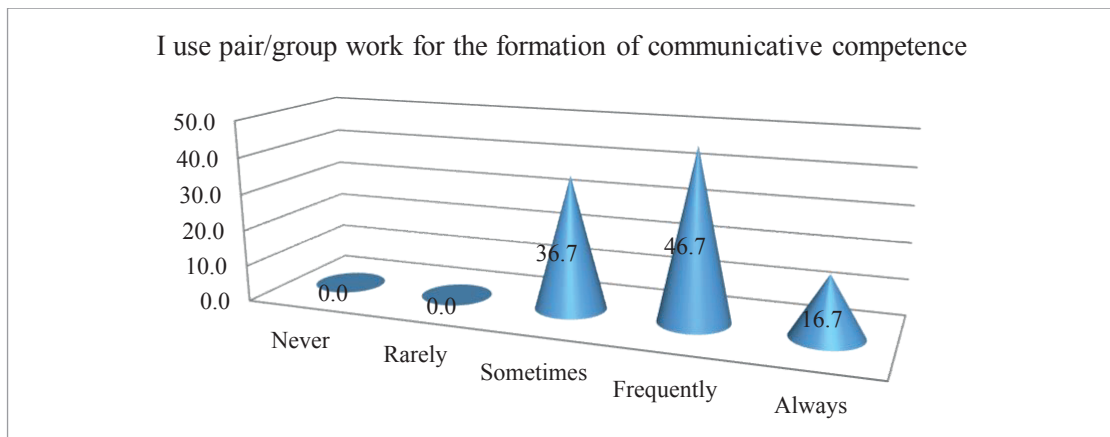


Figure 8. I use pair/group work for the formation of communicative competence

The last question of the questionnaire was trying to seek the extent in which teachers use pair group to strengthen their communicate goals within a given lesson. Almost half of the teachers use this kind of grouping in their lessons with a rate of 46.7% of teachers who replied with "frequently". While no teacher answered that he or she never uses pair group in their lessons.

1.1. Course Books

There are several different kinds of course book evaluation models which show different phases on the course book evaluation. Accordingly, definite checklists have been advanced to carry out as guidelines in evaluating the course books. According to Hutchinson & Waters (1987), course book evaluation process is given in four major steps:

1. Defining criteria
2. Subjective analysis
3. Objective analysis



4. Matching

Course book evaluation has different model according to Breen & Candlin's (1987)

1. What the aims and content of the materials are
2. What they require learners to do
3. What they require the teacher to do
4. What function they have as a classroom resource. (Breen & Candlin, 1987:13)
5. learner needs and interest
6. learner approaches to language learning
7. the teaching / learning process in your classroom (Breen & Candlin, 1987:18).

Grant (1990) gives a checklist called the 'CATALYST' test is applied. The eight letters in the word CATALYST refer to the criteria used for the initial evaluation of the material;

Communicative? Is the coursebook communicative? Will the students be able to use the language to communicate as a result of using the book?

Aims? Does it fit in with our aims and objectives?

Teachable? Does the course seem teachable? Does it seem reasonably easy to use, well organized, easy to find your way around?

Available Add-ons? Are there any useful 'add-ons', additional materials such as teacher's books, tapes, workbooks, etc? If so, are they available?

Level? Does the level seem about right?

Your impression? What is your overall impression of the course?

Student interest? Are your students likely to find the book interesting?

Tried and tested? Has the course been tried and tested in real classrooms?

Where? By whom? What were the results? How do you know? (Grant, 1990:120)

The following criteria are selected by applying three important researchers' views, Hutchinson and Waters, Breen and Candlin and Grant. As their criteria are the most suitable ones to evaluate course books. The main objective of choosing the following criteria is being the most suitable ones to check whether a course book is communicative or not. The course book was evaluated according to criteria put forward for this study;

1. Language content
 - a) Is the language content suitable for the level of students?
 - b) Is the language content suitable for the interest of this group of students?
 - c) How communicative is it?
2. Design and organization
 - a) Is the course book designed for communicative purposes?
 - b) How communicative is it?
3. Language skills
 - a) Is the course book designed with the purpose to improve the language skills?
 - b) How communicative are they?
4. Exercises and activities
 - a) What are the purposes of exercises and activities?
 - b) How communicative are they?

1.2. Course book analysis

The coursebook contains 12 units. Each of the units follow a format consisting of the following sections:

Vocabulary---presents unusual vocabulary

Listening---presents tasks that develop specific information

Grammar ---presents tasks to help students notice grammar usage and provides fill in gap activities

Scenario--- presents tasks to help students, this part includes matching activity, listening, pronunciation and grammar

Speaking--- provides communication but it is not real life communication.

Reading---provides both a model and a reason to read and write.



The usage of suitable materials in language is one of the most significant factor that defines the quality of the lesson. Because of the need to be able to communicate in the target language – English-, the amount of teaching materials involving textbooks and additional sources increases. The text book analyzed in this study is Language Leader Elementary level- by Longman. The book aims to teach general and partly academic English used by universities. Mainly, it does not focus on all fundamental communicative aspects. However, in this study, after reviewing the book with the frame work of communicative approach, we will concentrate on the weakness of each skill in terms of communicativeness. In general terms, the language content is suitable for the level of students. Their language level differs due to their background. In this respect, students' language achievement varies. Language covers most of the students' knowledge. The reading part is not suitable for the students' level. Reading offers too much information and too many details, in contrast with the need of students who are not familiar with basic communication elements. In accordance with the elementary level too many words are being introduced. Because of personality and cultural differences, students' interests differ. The reading and writing passages do not satisfy the students' interests. Moreover, the study skills part uses a very high level that makes students being uninterested. The books' topics cannot be used in daily life communication. Also, the book follows useless descriptions that do not stimulate debate and discussion. As a result the course book does not include motivating and informative texts which can develop reading and listening skills. For this reason, the book is not suitable for learners who would like to express their ideas and improve their communicative skills. Another finding leads us to the idea that the book has a traditional reading, listening and writing design. The real communication purpose is missing. The book designs do not enable group working. It is more individual based. The transmitted information does not satisfy communication. Two other findings support the idea that the course book does not focus enough on listening skills and not at least, does not have a variety of practice to develop speaking skills.

4.Results, Conclusions and Recommendations

The study was conducted to measure of the use of communicative approach by teachers in their lessons, whereby teachers were given questionnaires to fill, and were also observed with a critical eye. The use of communicative approach by both teachers and coursebooks seems to lack a deeper understanding on how a communicative approach based lessons should be crafted. This fact is evident from different results I have taken from the different research tools. While observing the teachers, most of them resort to Presentation, practice, and production method, which is a variation of audio-lingual method.

Unlike the results of questionnaires which indicates that teachers are aware of the importance of the communicative approach and its efficacy in the learning process. This fact implies that there is a gap between the theory of communicative approach and its application in the classes. This implies that teachers couldn't bring these theories into the ground of practice which may have flawed and sometimes hindering their teaching goals. Also, another insights that I have taken from the results is the fact that teachers who want to apply communicative approach within their classes seem to be book-bounded and cannot adapt the materials they have to fit their students' needs and interests. Other times, they have a tendency to skip the productive skills that play an important role in the communicative approach.

In this study, we reveal that English Language teachers use communicative approach in theory, however, in practice, learners can not use the language outside of the class communicatively. We also try to prove the insufficiency of communicative English Course book that are, in fact, not communicative in terms of transferring the knowledge that is given by teachers during teaching and learning process.

According to the result of the questionnaire, which consists of eight questions as in the following;

- 1: I use communicatively-oriented exercises during the lessons
Answer %56.7 always
- 2: I use different internet sources for the formation of communicative competence
Answer %3.3 always
- 3: I use media texts for the formation of communicative competence
Answer %6.7 always



4: I use different forms of lessons (video-lesson, excursion lesson, interview-lesson, etc.) for the formation of communicative competence

Answer %20 always

5: I use task-based activities for the formation of communicative competence

Answer %40 always

6: I use English songs or games for the formation of communicative competence

Answer %73.3 always

7: I use English movies for the formation of communicative competence

Answer %23.3 always

8: I use pair / group work for the formation of communicative competence

Answer %16.7 always

According to Gettinger, Elliott, and Kratochwill (1992), effective teaching methods facilitate both individual expression and social development. Actions mentioned below illustrate this notion:

Following the children's lead, teachers comment on their activities, similar to the behavioral strategy of attending. When new materials or activities are introduced, they are presented as options, ones in which the children have a choice to participate. Cooperation and getting along with others are facilitated through guided reasoning and modeling. Generally, teachers fulfill a supportive, nurturing role, providing an emotionally safe environment, one in which children feel secure and competent enough to explore and learn through playing (Gettinger et al., 1992, pp.12-13). The origins of CLT are to be found in the mid-1960s, when British applied linguist began to question the theoretical assumptions of traditional approaches Richards and Rodgers,(1986, p.64). From a methodological perspective, in contrast to traditional or grammar based approaches, CLT highlights communicative events rather than grammatical forms via learners' social interactions. In that sense, according to Segolowitz and Lightbown (1999), "CLT methodologies emphasize genuine communication, that is, communication based on a real desire by the learner to understand and communicate meanings" (p.54).

Furthermore, Rodgers (2001) pointed out that "the most salient feature of the CLT classroom is its realistic use of the English language; both the activities employed and the materials used aim to be as authentic as possible" (p.3). Moreover, Meskill and Anthony (2005) also stated that within the CLT framework language is best learned through the active negotiation of meaning (p.90).

Brown's (2007 : 241) four characteristics as a definition of CLT:

1. Classroom goals are focused on all of the components of CC and not restricted to grammatical or linguistic competence.
2. Language techniques are designed to engage learners in the pragmatic, authentic, functional use of language for meaningful purposes. Organizational language forms are not the central focus but rather aspects of language that enable the learner to accomplish those purposes.
3. Fluency and accuracy are seen as complementary principles underlying communicative techniques. At times fluency may have to take on more importance than accuracy in order to keep learners meaningfully engaged in language use.
4. In the communicative classroom, students ultimately have to use the language, productively and receptively, in unrehearsed contexts.

Nunan (1991) there are five common characteristics of CLT;

- 1- An emphasis on learning to communicate through interaction in the target language;
- 2- The introduction of authentic texts into the learning situation;
- 3- The provision of opportunities for learners to focus, not only on language but also on the learning process itself;
- 4- An enhancement of the learner's own personal experiences as important contributing elements to classroom learning;
- 5- An attempt to link classroom language learning to language activation outside the classroom (p. 279).

Rodgers (2001), CLT classrooms aim at a broad set of principles below as:

- 1- Learners learn a language via communication.



- 2- Authentic and purposeful communication should be the goal of classroom activities.
- 3- Fluency should be the important side of communication.
- 4- Communication comprises the integration of different language skills.
- 5- Learning is creative, constructive and procedural, and comprises trial and error (p.1).

The 1970's were marked by the emergence of the communicative approach; the main objective inside this approach is to teach a person to communicate; to teach him to speak. According to this approach, it is possible to teach a person, in the so-called natural conditions - natural, first of all, from the point of view of a common sense.

In addition, a new contingent of students - the pragmatists considering a foreign language, first of all, as a means of communications - was the main reason for it. They needed not deep, system studying of language, which was offered by the traditional academic programs, but the opportunity to put the received knowledge into practice immediately. Thus, it appeared that the people, studying language for communication, simply do not own modern informal conversation and have no idea about the speech etiquette. Generally, at real communication they felt absolutely helpless. It also served as the main push for the improvement of the elements of teaching, which were not aimed at the speech development - communicative.

In fact, communicative is not an integral system technique. It represents a set of methods, urged to teach effective communication in the language environment. The majority of them were used at lessons earlier. One of its main methods is the imitation of the real life situations, urged to stimulate students to active speaking. The subjects should be burning, connected with an everyday life of students. Unlike the classical methods, the basis of which includes repetition and storing, on the occupations which are carried out by a communicative technique, the course of a lesson depends on students - their answers, reactions, etc.

Shows that teachers tend to use communicative approach in classroom, however, learners can not use the target language, they have learnt, outside of the classroom, in real life. Within this content, most of teachers could not design communicative activities besides they were in a dilemma about how and when to use CLT practices. This is one of the main reason why students can not transfer the language from classroom to the real life situations.

As to course book, we can see that they generally use the same exercises most of them in grammar item, reading and writing facilities. In this respect, speaking and listening activities cover less space than the others. Therefore, as teachers, we can say that course books do not use real and transferable communicative activities and exercises. For example, the listening and speaking sections of the book designed for the sake of presenting tasks that develop specific information which is not related to the real life communication. In respect to speaking section, the book just provides communication, however it is not real life aspects. Moreover, in the book, the listening and speaking parts are less than reading, grammar and vocabulary parts.

In terms of grammar and reading activities in the book, reading sections include too much details and information in contrast the need of learners who are not familiar with basic communication elements. Although the students' level is elementary, the level of the reading activities are not suitable to comprehend for them. Grammar activities in the book, in fact, present tasks to help learners notice grammar usage and provides to fill in gap activities. However, as teachers, we can say that the appointed grammar activities may prevent real life communication.

In conclusion, the result of this research reveals that teachers and course book, in fact, use the CLT approach to teach the target language. However, either teachers or book do not use authentic materials as students can not communicate efficiently.



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Reflective teaching perception of EFL teachers who applied reflective teaching tools in their class

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Plagiarsim Rate= %18 (iThenticate)

Abstract

Reflective teaching, which has gained popularity and reattracted scholarly interest recently, can help practitioners of education gain new insights into their own practices by questioning their underlying assumptions, habits and perspectives and taking broader societal and political implications of their teaching. Grounded in a mixed method embedded design, the current study was carried out to explore (1) overall levels of reflection of the participants, (2) whether certain variables (gender, degree, experience, certification and department) have an influence on the participants' levels of reflection, (3) how reflection takes place, (4) what tools of reflection are employed by the participant. For the current study, the quantitative data was collected through the Reflective Teaching Questionnaire developed by Larrivee (2008). The questionnaire was administered to 100 instructors employed in the foreign languages departments of eight foundation universities in Turkey. The data obtained were analyzed using SPSS (26) for Windows. The qualitative study followed the quantitative phase and was carried out with the participation of 10 instructors in one of the foundation universities. The qualitative data were collected through the semi-structured individual interviews and content-analyzed by the researchers manually. The findings revealed that the participants' perception of their reflection levels were positive. The results indicated that the majority of the participants reflected on their teaching pedagogically or critically, though in many cases the variables of the study did not seem to significantly affect their levels of reflection. The qualitative findings also indicate that reflection takes place before, during or after teaching, and diverse reflection tools are used by the participants. There seem to be some contextual factors inhibiting or enabling reflection such as strict curriculum, workload, work environment and flexibility. When both the qualitative and quantitative data are considered together, we can claim that the participants' perception of their reflective practices are positive, but it is also clear from the results that reflection does not happen in a systematic and organized way. Finally, it is noteworthy to state that the reflection levels seem to be dependent most on individual factors and choices, regarding that such variables as degree, experience, certification and experience often did not significantly impact reflection levels. To conclude, the present study contributes modest insights into reflective teaching practices in higher education ELT/EFL settings. Acknowledging the positive implications of reflection, the findings of the study related to how reflection takes place and what tools are used can help both researchers and practitioners in the field understand reflective teaching better.

1. Introduction

Teachers are the highest priorities of education system since teaching is a demanding multi-faceted profession that places considerable demands on teachers in that they are expected to act efficiently while living up to high standards because the expected role identities are central to the beliefs, assumptions, values, and practices that guide their actions both inside and outside the classroom. When they engage in reflective practice, they have the opportunity to examine their relations with students, underlying values and abilities as well as their success and failure in a realistic context (Farrell, 2018). All teaching occurs based on an ideology; the significance or consequences of an educational activity cannot be understood if the power distribution and structure in the wider society is neglected (Zeichner, 1981). Thus, teachers need to consider the factors interplaying with their teaching practices both inside and outside the classroom environment.

Reflective teaching, a popular concept in the community of education, is one of the most popular traditions in teacher training (Hellison, 1993; Gore 1993). The term was first defined by Dewey in 1930s as a proactive and ongoing examination of beliefs and practices with insights into their origins and their impacts (Stanley, 1998). According to Dewey (1933), the purpose of reflective practice is to change teachers' actions and decisions and to explore how it affects the outcomes of those decisions. Since it first came on the stage, it has evolved a lot. However, it is still very effective and will continue to be popular because reflection enables a support and guidance framework that can provide its practitioners with a lifelong learning system. In addition, it has become a recurrent strategy and tool in contemporary teaching settings that supports and enlightens teachers in their practice. Some researchers have also noted that practicing reflection is critical for educators and reflective teaching strategies are attached great importance for instruction and learning (Brookfield, 1998; Scanlan et al., 2002; Schön, 1983).

On the levels of reflection, Larrivee (2008) outlines that there are three distinct levels of reflection in the literature: *"(a) an initial level focused on teaching functions, actions or skills, generally considering teaching episodes as isolated events; (b) a more advanced level considering the theory and rationale for current practice; and (c) a higher order where teachers examine the ethical, social and political consequences of their teaching, grappling with the ultimate purposes of schooling."* (Larrivee, 2008, p. 342).

The author also based her four-level reflection assessment tool on these three widely recognized levels of reflection. While the quantitative findings of the study indicated that the participants' mean scores in pedagogical and critical reflection levels were higher, the qualitative findings seem to indicate that what the participants did for the purpose of reflecting was more related to surface reflection. This gap and difference may suggest that teachers may be regarding their reflective practices more positively than they indeed are. It can also be claimed that they may not be informed about the theoretical framework and interpret the concepts individually based on their own understandings. Therefore, reflection on reflective thinking and teaching can be offered as a solution as it may allow teachers to better evaluate their reflective teaching skills.

Scholarly interest in reflective teaching has grown considerably over decades, and the topic itself has become an indispensable part of research focusing on ways to improve teaching and student learning. In line with the increasing interest in reflective teaching by researchers and practitioners, it has also been the focus of many studies in the Turkish context partially because of innovations in language learning and growing demand for it. When all the changes and trends are taken together, the efficiency of educational activities directed at improving teaching and learning in ELT/EFL contexts, reflective teaching could be regarded as an important asset that can contribute positively to overall quality of language education, which can justify further research into the topic. In addition, the literature review also addresses that there are still gaps requiring empirical evidence.

The principal aim of this research is to evaluate the reflection levels of the participating instructors and to find out what reflective teaching tools they use in their teaching practice. Specifically, the following research questions guide the current study:

1. Is the teaching experience (tenure) of the participants a factor affecting their levels of reflective teaching?
2. Is the gender of the participants a factor affecting their reflective teaching?
3. Does the education background of the participants have any impact on the teaching level?
4. Do the participants use reflective teaching tools in their classes?



5. What tools do the participants employ when reflecting upon their teaching practices?
6. What is the participants' perception of their own reflection?
7. How does reflection take place?

2. Methodology

The current study is carried out to investigate the level of reflection that Turkish instructors indulge in at the language preparatory schools of various foundation universities in Turkey, to examine the reflection tools employed by these instructors, and to provide insights into how reflection takes place. Issues such as language teachers' perceptions of reflective teaching and their awareness of reflective teaching tools as well as teaching processes and the quality of education have arisen as prominent areas of research in recent years in the ESL/EFL field. It is justified that the investigation of reflective teaching practices in foreign language teaching settings at Turkish universities may provide valuable insights into the topic and contribute to the literature. Additionally, Turkish higher education context also presents a unique setting in that it is one of the few settings where students receive intensive language education. We will specifically investigate the participants' level of reflection and possible variance in reflection levels based on several variables. We utilized both quantitative and qualitative research methods to present a more detailed understanding of a research problem (Creswell & Creswell, 2017).

2.1 Participants

There were 100 instructors randomly selected from eight different higher education institutions in Turkey. As for the qualitative phase, the participants were selected using convenience sampling and maximum variation sampling methods. The participants of the qualitative study were 10 instructors from one of the foundation universities in the quantitative study and these participants were also selected from those who participated in the quantitative study.

Table 1 illustrates the background of the participants.

Table 1. The Distribution of the Participants and Their Characteristics

		<i>N</i>	<i>Percent</i>
Field	*ELT	52	52,0%
	*ELL	28	28,0%
	Translation department	9	9,0%
	Other	11	11,0%
Gender	Male	35	35,0%
	Female	65	65,0%
Degree	BA	51	51,0%
	MA	45	45,0%
	PhD	4	4,0%
Delta	No	92	92,0%
	Yes	8	8,0%
Celta	No	80	80,0%
	Yes	20	20,0%

*ELT: English Language teaching; ELL: English Language and Literature

2.2 Instruments and Procedure

After formulating the research questions, we searched the related literature for a suitable questionnaire about reflective teaching. We decided that the questionnaire developed and validated by Larrivee (2008) was the most appropriate to assess the reflection level. There were 53 items on a five-point Likert-scale ranging from 1 (never) to 5 (often) was used to measure the levels at which teachers reflected on their practice. This instrument encompasses four levels: pre-reflection (items 1-14), surface reflection (items 15-26), pedagogical reflection (items 27-39), and critical reflection (items 40-53). After getting the approvals of Larrivee and the ethical



committee of our institution, we administered the questionnaire in the first term of the academic year of 2018-2019. Then we analyzed the obtained quantitative data statistically using SPSS Version 26. In qualitative phase, the data were collected through semi-structured interview questions prepared by the researcher under the supervision of her advisor.

3. Data Analysis

3.1 Reflection Levels

Pre-reflection level: At this level, teachers do not seem to adapt their teaching style to students' feedback or classroom situations. As their low pre-reflection levels indicates, the participants do not seem to question the situations as they arise, but they simply react automatically. As for the gender effect, the mean score of the male teachers are higher than that of the female teachers ($\bar{X}=2.09$ and $\bar{X}=1.73$ respectively). This may indicate that the male participants have higher pre-reflection levels when compared to the female participants. When the departments that the participants graduated from are considered, the differences are not substantial though those graduating from ELL departments have relatively lower pre-reflection levels. Similarly, the mean scores of the participants based on their years of experience do not vary substantially in the pre-reflection levels. This might be an interesting finding considering the previous literature indicating that novice teachers may find it more difficult to reflect on their classes. Finally, the data analysis also reveals that the mean scores of the participants in the pre-reflection stage are quite similar in terms of the last degree received and certification held.

Surface reflection level: A surface level of reflection occurs when teachers set out with predetermined goals that they wish to achieve and then select methods and strategies to accomplish them. We have found that the average reflection mean scores of the surface reflection levels of the participants in terms of all variables are higher than those of pre-reflection levels, which may indicate that the participants are more occupied with surface reflection. When the mean scores are analyzed independently based on the variables, it is evident that the male participants' mean score is higher than that of the female teachers. According to the departments they graduated from, the participants who completed the Translation department had the highest surface reflection level. Then, respectively, the graduates of English language teaching department follow the graduates of the English literature department. The lowest level of reflection was observed among the participants from other departments. However, the mean scores are quite close suggesting that the gender and department variables may not significantly affect surface reflection levels of the participants. When the surface reflection levels of the participants are examined based on their years of experience, the surface reflection level is the highest for 0-5 years ($\bar{X}=2.77$). Then, this is followed by the participants with 6-10 years of experience ($\bar{X}=2.55$). The teachers with 11 years and above experience have the lowest surface reflection level ($\bar{X}=2.42$). We can conclude that the surface reflection level scores decrease as the experience increases. These findings can be interpreted in two ways. First, reflection increases over time when the participants have more years of experience when the existing literature are taken into consideration. However, a better understanding of the finding can be possible when higher levels of reflection mean scores are examined. If the participants' mean scores of pedagogical and critical reflection levels are increasing with years of experience, then experience plays a significant and positive role in achieving higher levels of reflection.

The participants with the highest means for the surface reflection level are those who hold a master's degree and who completed their undergraduate degree follow this. The lowest mean score is by those who have a doctorate. When the surface reflection level is examined for teachers with Celta and Delta certificates ($n=28$), they seem to be slightly less reflective than the others are.

Pedagogical reflection level: More in-depth reflection takes place at the pedagogical level. Here, teachers apply theoretical understanding of teaching methods to their intended goals. To do this, they consider the connections between their theory of teaching and their practice in the classroom. When the means of the pedagogical reflection levels of the participants seem to be higher than all other levels; the lowest mean was 4.10 for the gender effect. The participants of the study are reflecting on their practices at pedagogical level. Regarding the importance of



reflection on teaching and learning and its contributions, their high mean scores of pedagogical reflection are promising.

When the variables are concerned, female teachers have more pedagogical reflection level ($\bar{X}=4.33$) compared to that of the male participants ($\bar{X}=4.10$). When the departments that all the teachers graduated from are examined, it was found that the means of both the graduates from both English Language and Teaching and other departments were high, having the highest pedagogical reflection level ($\bar{X}=4.31$), which is followed by the English Language and Literature department ($\bar{X}=4.20$) and graduates of translation department respectively ($\bar{X}=3.98$). When the years of experience of both male and female teachers were examined, it was found that the highest means were for those having between 0 and 5 years of experience, followed by 6-10, and the lowest reflective level is 11 years and over. The highest score among the participants for the pedagogical reflection level section is for those with a Ph. D degree, and the lowest score is for the instructors with an MA degree. For the Celta and Delta certificate holders, they seem to have less pedagogical reflection when compared to the other groups.

Critical reflection level: Critical reflection is the most insightful level of reflection. At this level, teachers consider ethical and social issues that may be at play within the classroom. In the questionnaire, it is the highest possible reflection level. When we look at the gender factor, we see that the female participants have more critical reflection level ($\bar{X}=4.05$) than the male ones ($\bar{X}=3.95$). For the degree variable, the graduates of other departments had the highest pedagogical reflection level, which was followed by the English Language and Teaching department, English Language and Literature and Translation departments.

When the experience of both the male and female teachers are examined, it is seen that the highest means are for those having between 6 and 10 years of experience, followed by those teaching for 11 years and over, and the lowest reflective level is 0-5 years' experience. Although there does not seem to be a linear order of reflection for those teaching more than 11 years and 6-10 years, the least experienced ones have the lowest means for critical reflection. This may indicate that experience affects the critical reflection levels. The same pattern has also been observed for the surface reflection and the pedagogical reflection levels.

The participants with the highest mean scores for this level are those with a Ph.D. degree. This is followed by that of those having undergraduate degrees. The master's degree holders have the lowest mean scores. The critical reflection level of the teachers with Celta and Delta certificates do not seem to be higher than the other participants. This is also an interesting finding as these certificates are supposed to contribute to the overall quality of teaching, yet it seems that they do not increase reflection.

3.2 Comparing Reflection Levels

The Reflective Teaching Questionnaire is a 53-item scale consisting of four levels (Pre-reflection, surface reflection, pedagogical reflection and critical reflection). It is a five-point Likert Scale (5= often, 4= usually, 3= sometimes, 2= rarely, and 1= never). Basing on the corresponding items out of 5.0, we calculated the means of each level. Then, the variables of the research are represented by each level. The distribution of each level was tested for normality by using One Sample Kolmogorov-Smirnov Test, and it was seen that all variables were normally distributed. So, parametric tests were used for comparisons.

In the following tables, the participants' properties are compared based on their mean scores in four reflection levels. If the property has two categories, the independent samples t-test is used. If there more categories, One-Way ANOVA is used for comparisons. Therefore, appropriate analytical tests were conducted, and the results are presented.



Table 2. The Distribution of the Participants' Departments

		<i>N</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>F</i>	<i>p</i>
Pre reflection	ELT	52	1,91	0,57	0,977	0,407
	ELL	28	1,70	0,42		
	Translation	9	1,91	0,59		
	Other	11	1,90	0,53		
	Total	100	1,85	0,53		
Surface reflection	ELT	52	2,52	0,61	1,034	0,381
	ELL	28	2,55	0,52		
	Translation	9	2,87	0,39		
	Other	11	2,50	0,61		
	Total	100	2,56	0,57		
Pedagogical reflection	ELT	52	4,31	0,52	1,266	0,290
	ELL	28	4,20	0,45		
	Translation	9	3,98	0,39		
	Other	11	4,31	0,53		
	Total	100	4,25	0,49		
Critical reflection	ELT	52	4,03	0,52	1,392	0,250
	ELL	28	3,99	0,39		
	Translation	9	3,75	0,41		
	Other	11	4,19	0,59		
	Total	100	4,01	0,48		

According to One-Way ANOVA results in Table 2, there is not a statistically significant difference between the participants' mean scores of four reflection levels as *p* values are greater than 0,05. Therefore, the findings indicate that department is not an effective factor on reflection levels.

In Table 3, the participants' mean scores in four reflection levels are shown in terms of the variable gender.

Table 3. The Distribution of the Participants' Gender

	<i>Gender</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>t</i>	<i>p</i>
Pre reflection	Male	35	2,09	0,63	3,384	0,001
	Female	65	1,73	0,43		
Surface reflection	Male	35	2,65	0,65	1,253	0,213
	Female	65	2,50	0,52		
Pedagogical reflection	Male	35	4,10	0,56	-2,324	0,022
	Female	65	4,33	0,44		
Critical reflection	Male	35	3,95	0,50	-0,994	0,322
	Female	65	4,05	0,49		

There is a significant difference between the male and female participants in terms of the mean scores of pre reflection ($t=3,384$; $p=0,001<0,05$), indicating the higher pre-reflection level of the male participants. Another significant difference has been observed in pedagogical reflection level ($t=2,324$; $p=0,022<0,05$), meaning that the females' pedagogical reflection level is higher than that of the male participants.

In Table 4, reflection levels are compared based on the degree of the participants.



Table 4. The Distribution of the Participants' Degree

		<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>F</i>	<i>p</i>
Pre reflection	BA	51	1,77	0,57	1,391	0,254
	MA	45	1,95	0,49		
	PhD	4	1,77	0,28		
	Total	100	1,85	0,53		
Surface reflection	BA	51	2,51	0,63	0,519	0,596
	MA	45	2,62	0,51		
	PhD	4	2,43	0,18		
	Total	100	2,56	0,57		
Pedagogical reflection	BA	51	4,32	0,50	1,324	0,271
	MA	45	4,16	0,49		
	PhD	4	4,38	0,43		
	Total	100	4,25	0,49		
Critical reflection	BA	51	4,08	0,51	1,546	0,218
	MA	45	3,92	0,44		
	PhD	4	4,14	0,63		
	Total	100	4,01	0,49		

According to One-Way ANOVA results in Table 4, there is not a statistically significant difference between the participants' mean scores of four reflection levels in terms of the last degree obtained. Therefore, the findings indicate that degree is not an effective factor on reflection levels.

In Table 5, the participants' mean scores were compared in terms of having/not having Delta certificate.

Table 5. The Distribution of Participants' Delta Certificate

	<i>Delta</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>t</i>	<i>p</i>
Pre reflection	No	92	1,84	0,53	-0,516	0,607
	Yes	8	1,95	0,65		
Surface reflection	No	92	2,56	0,56	0,347	0,730
	Yes	8	2,49	0,69		
Pedagogical reflection	No	92	4,25	0,50	0,232	0,817
	Yes	8	4,21	0,43		
Critical reflection	No	92	4,03	0,49	1,480	0,142
	Yes	8	3,77	0,50		

According to the independent sample t-test results in Table 5, there is not a statistically significant difference between the participants' mean scores of four reflection levels in terms of having a Delta certificate, which suggests that having a Delta certificate is not an effective factor on the reflection levels of the participants.

In Table 6, the mean scores of the participants holding a Delta certificate and those of the ones that do not have this certificate are compared.

Table 6. The Distribution of the Participants' Celta Certificate

	<i>Celta</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>t</i>	<i>p</i>
Pre reflection	No	80	1,85	0,47	-0,212	0,833
	Yes	20	1,88	0,76		
Surface reflection	No	80	2,57	0,53	0,643	0,522
	Yes	20	2,48	0,70		
Pedagogical reflection	No	80	4,27	0,45	0,849	0,398
	Yes	20	4,17	0,64		
Critical reflection	No	80	4,06	0,46	1,808	0,074
	Yes	20	3,84	0,57		



There is not a statistically significant difference between the participants' mean scores of four reflection levels in terms of having a Celta certificate, which indicates that having a Celta certificate is not an effective factor on the reflection.

To see the relationship between participants' experience and reflection levels, one-Way ANOVA is used and the results are given in Table 7.

Table 7. The Distribution of the Participants' Experience

		<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>F</i>	<i>p</i>
Pre reflection	0-5	27	1,84	0,37	0,985	0,377
	6-10	29	1,96	0,64		
	11 +	44	1,79	0,54		
	Total	100	1,85	0,53		
Surface reflection	0-5	27	2,77	0,42	3,281	0,042
	6-10	29	2,55	0,60		
	11 +	44	2,43	0,60		
	Total	100	2,56	0,57		
Pedagogical reflection	0-5	27	4,29	0,44	0,099	0,906
	6-10	29	4,25	0,48		
	11 +	44	4,23	0,54		
	Total	100	4,25	0,49		
Critical reflection	0-5	27	3,97	0,40	0,595	0,553
	6-10	29	4,10	0,49		
	11 +	44	3,98	0,54		
	Total	100	4,01	0,49		

The only significant difference is observed in surface reflection level in terms of experience ($p=0,042<0,05$). When the experience is increasing, surface reflection is decreasing. When all the results of the quantitative analysis are considered, it seems that reflection levels of the participants do not show significant variance in terms of the majority of the variables. The only differences observed in the mean scores of the participants are in terms of gender and experience though these variables are only effective in certain reflection levels. Other variables including degree, certification and department graduated from do not seem to play a significant role in the participants' levels of reflection. These findings of the current study are interesting in that as one can assume that these variables may indeed contribute to higher levels of reflection. For example, graduates of ELT department are provided with more courses and have more opportunities to practice teaching compared to those from other departments that only receive an intensive program to be certified teachers. Similarly, certifications such as Celta and Delta are valid internationally and are gaining popularity in Turkish contexts for a while. However, it seems that they do not increase reflective teaching levels. Finally, post graduate education in the forms of master's degree and PhD can help practitioners of education gain new insights into their teaching experience and are expected to contribute positively to reflective teaching practices. However, the findings of the current study show that postgraduate education does not necessarily increase reflection levels, which raises important questions and areas, open to further research.

4. Discussions and Conclusion

This descriptive study aimed at revealing the participants' perceptions of their levels of reflection based on the typology in the questionnaire (pre-reflection, surface reflection, pedagogical reflection and critical reflection), assessing the interplay of certain variables (gender, experience, degree, department and certification with these levels of reflection), and finding out what reflection tools are used by the participants while they reflect on their practices. The findings have revealed that their perception of reflection levels is positive and that they reflect on



their teaching practices pedagogically and critically. The variables examined did not significantly affect the participants' levels of reflection except for gender and experience, which also do not affect the participants' levels of reflection at all four reflection levels. The qualitative analysis conducted, on the other hand, informed us that reflection took place in three different ways: reflection before teaching, reflection during teaching and reflection after teaching. This being the case, the findings indicate that there does not seem to be a pattern; that is, not all the participants reflect on their teaching in a systematic and organized way.

Our findings seem to be compatible with the earlier studies on reflective teaching in Turkey. For example, Tok and Dolapçioğlu (2013) found in their study that their participants interpreted learner-centered instruction as one of the reflective teaching practices. In that study, the participants highlighted the needs of the students and implementation of various activities based on these. The current study also made it clear that student needs and multiple intelligence types of the student were taken into consideration and classroom activities, materials and methodologies were designed accordingly. While the learning outcomes in the official curriculum were taken-for-granted, the outcomes were achieved through different means that are compatible with and cater to student needs. Student needs and different learning styles were particularly taken into consideration in reflection before teaching and reflection during teaching stages.

The findings of the current study contribute to the literature in several ways. First, there is still need for further research into teachers' definition and perception of reflection as their insights are specifically noteworthy to achieve a better understanding of reflectivity in ELT settings. Valdez, Navera, and Esteron (2018) found in their research that reflection was defined as being learner-centered, and it was mostly carried out by the instructors to facilitate learning and to evaluate themselves. They also identified several contextual factors inhibiting reflection including workload. The findings of the current study also identified certain inhibiting and enabling factors and thus contributed to the existing literature with its findings.

Several studies observed a positive correlation between teachers' assessment literacy and their level of reflection (Ashraf & Zolfaghari, 2018). Based on the findings of these studies, increased assessment literacy leads to higher levels of reflection. The findings of the current study showed that the participants' reflection was to a large extent limited to in-class experience. The relative insufficiency of focus on assessment can be a factor interplaying with the level of reflection, though more research is needed to confirm this modest proposition.

D. Schön (1938) indicates that reflection involves reflection-in-action and reflection-on-action, the former of which refers to reflection during teaching and the latter stands for reflection after teaching. Thompson and Pascal (2012) complements the missing aspect suggesting reflection-for-action (Soodmand Afshar & Farahani, 2018), which is the equivalent for pre-teaching reflection in the current study. The compatibility of the findings of the current research with those in the literature is noteworthy. The current study, in that sense, shows a similar pattern in Turkish ELT setting. In the current study, reflection before teaching was mostly related to teacher preparation that shows itself as material and methodology selection and general readiness for classes. Reflection during teaching, on the other hand, was quite dynamic, immediate and to-the-point to relate teaching with student needs and experience. However, reflection after teaching seems to be done not regularly and superficially.

The current study also revealed that the participants used different reflection tools. The findings indicate that the student feedback is the most common reflection tool utilized by the participants although the participants also make use of various other reflection tools such as peer observations, video recording, teaching diaries, and retrospective thinking. It seems that student feedback is often valued over other types of reflection tools, especially as immediate reflection during teaching, perhaps due to its dynamic nature.

In another study, Marzban and Ashraafi (2016) found a positive relationship between higher degree and level of reflection and suggested that higher academic degrees influenced reflection. Contrary to the findings of their study,



the current study did not yield any such relationship. It is an interesting finding that postgraduate education did not significantly influence the participants' level of reflection. While the current study can only provide modest suggestions with its limited scope, it can also be suggested that postgraduate programs may have more emphasis on reflective teaching both theoretically and in practice and encourage practitioners to implement their academic skills, backgrounds and gains into their teaching practices. To this end, action research can yield fruitful outcomes.

Implications and Suggestions for Future Researchers and Practitioners

The current study has certain implications for both researchers and practitioners as well as decision makers and program designers. First, it showed that reflection take place in three ways: reflection before classes, reflection during teaching and reflection after teaching. As the data obtained are qualitative and limited in scope, further research can be carried out as large-scale quantitative studies that can produce generalizable results and test whether the modest findings of the current study are shared at large. Furthermore, the quantitative findings of the study also produced interesting findings indicating that the variables tested in this study did not have a significant effect on the participants' levels of reflection, except for the few interacting with the participants' reflection at different levels. Other researchers can investigate these and other variables through comparative studies and experimental ones, and test whether such variables as gender, degree, tenure etc. play a role in levels of reflection. Further research is needed to have a more holistic understanding of reflection. The findings of the current study showed that reflection often occurred individually, which suggest that individual preferences of teachers about their reflection might be more effective in their levels of reflection and selection of reflective tools.

Another area that calls for further research may be the effectiveness of reflection and reflection tools on student achievement and learning outcomes. While it was clear from the findings of the current study that the participants had positive perceptions of their levels of reflection, to what extent it contributes to student learning is a fundamental question that needs to be tested. Therefore, future researchers can also investigate the potential relationship between reflective teaching and student outcomes through experimental research designs. Based on the previous literature on reflective teaching and the findings of the current study, further research can be directed at large-scale quantitative studies that are intended to measure the levels of reflection in higher education level ELT/EFL settings. Future studies can also be designed as single and multiple case studies in institutions reputable for their language education and investigate teacher reflectivity and provide insights into their stories.

Finally, although the findings of the current study indicated that degree was not so effective a variable interplaying with the participants' levels of reflection, postgraduate education in ELT context is thought to have important implications for reflective teaching. Therefore, reflective teaching can be given more emphasis while designing postgraduate courses, which can help educators build bridges between their academic studies and courses and their classroom practices.

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Examination of sports faculty students' levels of subjective and mental well-being in terms of various variables

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Abstract

The study aims to determine the mental well-being and subjective well-being of Kocaeli University Faculty of Sports students' behavior of doing and not doing sports, their effects on their academic success, and the effect of sports on mood. It was prepared to investigate whether this effect differs according to gender, age, education, and marital status variables. The sample group of the study consists of 103 female students and 98 male students total of 201 university students who wished to participate voluntarily. Data were collected and randomized by using the survey method, and obtained in the research were analyzed through the SPSS program. Mann-Whitney test analysis from non-parametric tests was used for the data. Mental Well-Being Scale and Subjective Well-Being Scale relational screening models were used in the evaluation. A significant difference was found between mental well-being and subjective well-being in the state of doing sports.

Keywords: Subjective well-being, mental well-being, state of doing sports, university students.

1. Introduction

Well-being refers to a person's hedonic experience of feeling good and to the eudaimonic experience of fulfillment and purpose. It has become standard to distinguish theories of well-being as either hedonist theories, desire theories, or objective list theories. Subjective and mental well-being, which are the sub-dimensions of positive psychology, which is very important in our personal lives with the concept of the pandemic, also have the same importance for university students. From a study that started 8 weeks after the first case was mentioned in Turkey, it was concluded that physical activity should be included in guidelines as an integrative approach to pandemic management (Ozdemir et al., 2020).

In addition to the studies examining the components of physical activity, subjective well-being, and mental well-being in university students (Marconcin, 2022), which showed that there was no difference in the severity of the activity, a high level of physical activity was significantly associated with low anxiety, while a moderate or high level of physical activity is significantly associated with a reduction in depression after adjusting for confounding demographic factors (Xiang, 2020). It is important to examine the positive and negative effects of "any bodily movement" on increased skeletal muscle contraction, energy expenditure above the basal level, and the effects on life satisfaction and happiness. Among the specific research questions that guided this study, "Do you think that doing sports has a positive effect on academic achievement?"

What do you think are the positive effects of doing sports on academic success? is located. Physical activity has a positive effect on our mental health (Zalewska, 2021). One study found that reductions in mental health and increases in perceived stress were not associated with changes in PA. (Savage et. Al., 2020)

This study is a descriptive study to determine the subjective well-being and mental well-being of sports faculty students. The model of the study was determined as the causal comparison model. The universe of the study consists of students who studied at Kocaeli University Sports Faculty in the 2018-2019 academic year.



The sample group of the study consists of 201 university students who were selected by the randomized method and voluntarily. To obtain the research data, the Subjective Well-Being Scale developed by Tuzgöl (2005), the "Subjective Well-Being Scale" developed by Özen (2005), and the 37-item Subjective Well-Being Scale developed by Tennant et al. The Warwick-Edinburgh Mental Well-Being Scale, consisting of 14 items, was used. This study examines the effects of mental well-being and subjective well-being on the behavior of doing and not doing sports in Kocaeli University students. It was prepared to investigate whether this effect differs according to gender, age, and faculty variables. The study consists of data collected from a total of 201 students, 103 female students, and 98 male students, prepared by using the questionnaire method. The data obtained in the research were analyzed through the SPSS program. In the analysis process, after the interpretation of demographic characteristics.

Mann Whitney U scales were made. The aim is to determine subjective and mental well-being levels for Kocaeli University Sports Science Faculty students'. In addition, it is to evaluate whether their state of doing sports according to well-being. The main problem statement of the research is to examine the subjective well-being and mental well-being levels of the students of the faculty of sports sciences studying at Kocaeli University in terms of doing sports and different variables. Examination of Sport Faculty Students' Levels of Subjective and Mental Wellbeing in Terms of Various Variables that affect their academic success and profile of mood. When we examine the approaches to well-being, we first encounter the "multidimensionality" similarity. The importance of the mind in human health, rather than the traditional understanding of health, in which it is considered important only to eliminate physical discomfort, has been the subject of evaluation by approaches. While evaluating the concepts of body and mind, privatization has been made such as physical, social, and emotional areas that affect one's life. Among the students of the Faculty of Sport Sciences, the state of well-being differs according to the status of doing and not doing sports. The main problem statement of the research is to examine the subjective well-being and mental well-being levels of the students of the faculty of sports sciences studying at Kocaeli University in terms of doing sports and different variables. In a holistic understanding of sports evaluating and determining which variables are effective. In addition, it is aimed to contribute to the studies to be carried out for the development of sports science students by revealing the well-being perceptions that are in the academic education period. Is there any difference in terms of whether there is a doing sport participate in students' academic education period? Sport and physical activity were often restricted during the pandemic due to the closing of sports clubs and sports facilities as well as the interdiction to train with other athletes during the lockdown periods. Furthermore, physical activity did play an important role in the handling of the pandemic. It was shown that patients with COVID-19, who were in general inactive, had a greater risk for hospitalization, intensive care unit admission, and death (Sallis et al., 2021).

2. Method

This study has a descriptive survey method. In line with the aim of the research, 201 students of Kocaeli University Sports Science Faculty students were informed about the research, which formed the research universe in the academic year 2018-2019. Scales were applied to 103 female and 78 male students who participated in the study voluntarily.

Data collection tools

Information Survey: a questionnaire was created and applied to determine the socio-demographic situation, marriage status, and age. Also, specific questions for the status of doing sports, the reason for doing sports, the positive contribution of doing sports has a positive effect on your academic success and the effect of your sport on your mood which is thought to affect the perception of the well-being of sport faculty students in the light of the literature.

The "Warwick-Edinburgh Mental Well-Being Scale"; improved by Tennant et al., consisting of 14 items, was used. The validity of reliability for Turkey was made by Keldal (2015). WEMIOS is a five-point Likert-type scale whose highest score ranges from 70 to Strongly Disagree (1) and Strongly Agree (5) to 14 points. The Cronbach



Alpha coefficient of the scale was found .89. The test-retest reliability of the scale was made on 124 people. As a result of these tests performed within a one-week time interval, the correlation coefficient was found to be .83 (Keldal, 2015).

The "Subjective Well-Being Scale"; consisting of 37 items, developed by Tuzgöl Dost, was used to understand the positive-negative moods and the judgments about the variables affecting the life satisfaction of the students. Subjective Well-Being Scale 5-point Likert type, the scores were given to the items are between 1 and 5. It consists of 22 positive and 15 negative statements. The negatively worded items (1, 3, 5, 9, 12, 16, 17, 20, 22, 25, 28, 30, 31, 33 and 36) were scored by reversing. The highest score is 185, indicating good subjective well-being, and the lowest score is 37 (Özen, 2005). The Cronbach Alpha reliability coefficient was .93. has been found (Dost, 2005).

Analysis of the Data

Since the data was analyzed in the SPSS 21.00, the Mann-Whitney U test was used because it has not showed normal distribution and the questions asked in the information survey were more than two groups used. The significance level was taken as 0.007 and 0,005.

3. Findings

This prospective study examined the changes in mental well-being, and subjective well-being according to doing sports behaviors in Kocaeli university sports science faculty. The key findings were that measures impaired mental wellbeing, subjective well-being, and physical activity.

Table 1. Percentage distributions of the age range of the participants according to their status of doing sports

Do you do sports?	Age	Frequency	Percent
Yes	13-17	3	2,3
	18-22	59	45,7
	23-27	35	27,1
	28-32	9	7,0
	33 and above	23	17,8
	Total	129	100,0
No	13-17	2	2,8
	18-22	36	50,0
	23-27	29	40,3
	28-32	3	4,2
	33 and above	2	2,8
	Total	72	100,0

In Table 1, students' sports status are given percentages of their age range. 48.8% of the students participating in the research are male and 51,2% are female participants. 83,1% 167 single 16,9% 34 married. 83,1% of the participants are single, and 16,9% of 34 are married. The population consists of students studying at Kocaeli University Faculty of Sports Sciences in the 2018-2019 academic year, who participated voluntarily after being informed about the research. Monthly income and education level were not questioned as all of the participants were students of the Sports Science Faculty. The group with the highest percentage among students who do sports 18-22 age range was 45,7%, the same as the group who don't do sports.



Table 2. Percentage Distributions of Sports Status According to Various Variables

Variables		n	%
Do you do sports?	Yes	129	64,2
	No	72	34,8
Total		201	100,0
Do you think doing sports has a positive effect on your academic success?	Yes	41	20,4
	No	160	79,6
Total		201	100,0
Do you like the effect of your sport on your mood?	Yes	154	91,4
	No	14	8,3
	Other	32	18,9
Total		201	100,0

Table 2 examined; 64,2% of students do sports, 34,8% of students do not. Examination of the effects of doing sports on students' mood and a positive effect on their academic success, a rate of 79,6% think doing sports has not had a positive effect. 91,4% indicate doing sport affects students' mood.

Table 3. Percentage Distributions of Sports Status According to Various Variables

Variables		n	%
Reason for doing sports	Licensed athlete	40	31,0
	Individual reason	12	9,3
	Health	32	24,8
	Body building	9	7,0
	Network	1	,8
	Competition	4	3,1
	Hobby	25	19,4
	Other	6	4,7
Total		129	100,0
The positive contribution of doing sports	Self-confidence	55	42,6
	Relaxation	46	35,7
	Studying effectively	3	2,3
	Other	19	14,7
Total		123	93,5

In Table 3 the participants ' sports status was examined; Reasons for participants to do sports were; Licensed athlete, Individual reason, health, bodybuilding, and other reasons. 31% the highest percentage was about that the participants are licensed athletes. The second highest reason was to stay healthy and live a healthy life. Reasons for doing sport were found for bodybuilding, creating networks, competition, hobby, and other reasons.

In the analysis, we determined positive contributions of doing sports for participants like 42,6% self-confidence, 35,7% relaxation, 2,3% studying effectively, and 14,7% other.



Table 4. Descriptive Statistics of Well-being According to Sports Status

Do you do sports?		n	Mean	Std. Deviation
Yes	Mental well-being	129	55,6357	11,98693
	Subjective well-being	well-129	119,1163	17,55288
No	Mental well-being	72	50,5556	13,44042
	Subjective well-being	well-72	110,4028	24,60142

In Table 4, it was found that the average mental well-being scores of those who do sports are higher than the average of those who do not. Likewise, it was found that the subjective well-being average of those who do sports is higher than the average of those who cannot.

Table 5. Non-parametric Test Results

Do you do sports?	Mental well-being	Subjective well-being
Mann-Whitney U	3545,000	3574,500
Wilcoxon W	6173,000	6202,500
Z	-2,781	-2,705
Asymp. Sig. (2-tailed)	,005	,007

In table 5, the main results presented briefly among the students of the Faculty of Sport Sciences, the state of well-being differs according to the status of doing and not doing sports.

4. Results, Conclusions and Recommendations

According to the status of doing sports, physical activity has a significant effect as a result of subjective and mental well-being. The state of well-being differs according to the status of doing sports.

A high level of physical activity is significantly associated with low anxiety, while a moderate or high level of physical activity is significantly associated with reduced depression after adjusting for confounding demographic factors (Xiang, 2020).

It is important to examine the effects of positive and negative affect, life satisfaction, and happiness of studies on “any bodily movement”, increased skeletal muscle contraction, energy expenditure above basal level”.

Şahin et al. (2012) investigated the effect of being hopeful and finding meaning in life on subjective well-being through 285 university students. According to the results of the study, the sub-dimensions of the individual's subjective well-being, being hopeful, and finding meaning in life were significantly explained. Differentiation was also determined at the grade level.

Holahan, Holahan, Chen, and Li (2019) found that self-reported leisure-time PA was associated with higher levels of life satisfaction at 8-year follow-up (Ku et al., 2016).

It can be done to explain the causal relationships between SWB and MWB and physical activity with controlled designs with different variables in future research. Students saw self-confidence, a positive attitude towards life, and pleasures of life as important elements of subjective well-being. It was determined that there was no difference in subjective well-being in terms of gender (Margitics and Pauwlik, 2008). A significant relationship was found between the psychological well-being and happiness of students in sports faculties (Gönener et al 2017).



Lopez et al. (2013) found that positive emotions, life satisfaction, and general health were positively related to mental well-being in their study conducted with a university sample. In a sample of high school students, McKay and Andretta (2017) found that mental well-being was positively associated with health and negatively associated with anxiety.

Gürkan and Gür (2019) concluded that men have higher mental well-being than women. In addition to studies examining the components of physical activity and Subjective Well-Being and Mental Well-Being in university students, there is no difference in the intensity of the activity (Marconcin, 2022).

Looking at the percentiles, it is stated that the effect on mood is considered more effective than the effect on academic achievement.

Therefore, it is important to provide sports activities opportunities to students. In further research, depth and qualitative interviews can be realized with university students on how sports activities will affect academic success and well-being.

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Digitalization in accounting: Changing processes

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Abstract

This article researches the ability of accounting to innovate/adapt to digital technologies, especially when the operating system depends on the state. The transformation of accounting from the traditional process to digital innovation presents many opportunities and challenges. It is important to understand the impact of this technological advance on the accounting profession and on its professionals, and also what are the new skills needed.

Interviews were conducted with these professionals to understand the impact of these advances on their daily lives. A social network analysis of the CA groups was conducted. This research contributes to the theoretical body of the evolution of accounting and information systems. Accounting is part of this process but there are contradictions: (1) facilitation of digital media and AI is a real challenge; information doesn't circulate among the various state bodies; (2) preparation of the CA's; (3) the State as the receiver of digitalization/information processes.

Keywords: Digitalisation accounting, generic skills, accounting education, professional accounting, sustainability accounting.

1.Introduction

Society is constantly evolving and accounting has accompanied this evolution over time, as can be seen since the publication in 1494 by Luca Pacioli of his book Everything about Arithmetic, Geometry, and Proportion, com with a section related to accounting and the double-entry method (double between book-keeping (Burns & Givens, 1978; Chatfield, 1974). This evolution includes the advance of technologies that have transformed the accounting profession, notably with the emergence and development of computers and increasingly sophisticated accounting and analysis software, and artificial intelligence will probably have the most profound impact on accounting. These advances in digital technology are rapidly changing the way we register, store, and manage data and how we provide other accounting services (Polimeni & Burke, 2021). Thus, the differences between an accounting record



and a computer message are almost non-existent. The advent of the Internet and e-commerce has not only continued, but accelerated this trend. (Spilnyk et al., 2022).

When the history of accounting is taken into consideration, it can be seen that the greatest steps in the development of accounting have been taken in the digital age. In this context, it would not be wrong to classify accounting as "before the digital age" and "after the digital age". The major development in accounting up to the beginning of the industrial revolutions before digitalization was the introduction of the double-entry method. However, after the 1900s, the technological developments that occurred continuously after the industrial revolution brought many innovations to accounting (Esmeray & Esmeray, 2020).

Several authors have studied the issues of accounting development in the context of digital transformations (Bhimani & Willcocks, 2014; da Silva Santos *et al.*, 2022; Deshmukh, 2006; Esmeray & Esmeray, 2020; Maria José Angélico *et al.*, 2022; Polimeni & Burke, 2021; Shawnie *et al.*, 2020; Spilnyk *et al.*, 2022; Suthira, 2021). It is necessary to create a digital culture in accounting professionals, in order to motivate employees to deal with all this new emerging technology, since the limitations may bring obstacles to the performance of tasks; the storage of data; the integration of information in certain digital platforms (Suthira, 2021).

Digital technology is reshaping the global economy and changing the face of today's workplace. Advanced information technology allows organizations to have data in real time (Burritt & Christ, 2016). Digitalization is creating new perspectives on accountants' profile and in the profession. The relation in power is changing among peers: Internet of Things, Blockchain, Big Data, Cloud Computing, Artificial Intelligence and Robotics introduced a velocity in business never seen (Spilnyk et al., 2022). Accounting professionals need to develop skills to participate in or even lead automation efforts within organizations (Kokina *et al.*, 2021). Kokina *et al.* (2021:153) further states that the acquisition of these skills should be prepared in accounting schools, where future professionals are prepared. Future professionals entering the accounting profession must have technology-related skills. Many aspects about the future are still unclear and could certainly lead to the disappearance of many jobs, but at the same time it will allow many new opportunities not only for recent graduates, but also for those who are eager to develop new skills. (Shawnie et al., 2020; Tsiligiris & Bowyer, 2021)

Digitalization and new technologies bring with them accelerated changes in many areas, and especially in those where the use of technology is indispensable. Sustainability and digitalization present themselves to our society as indispensable forces, enhancing and transforming economic life in all activities (Klymenko et al., 2021).

Terms such as: pervasive and ubiquitous computing, personal and ubiquitous computing; mobile computing; edge computing and physical computing aren't new. However, knowledge about these terms, at a global level, is poorly perceived. In 1988, Mark Weiser pointed out the fact that when professions use technologies without the real awareness of how they influence the daily work, which is a correct use of technologies. *"The most profound technologies are those that disappear. They interweave into the fabric of everyday life until they become indistinguishable"* (Weiser, 1993). Technology is a part of our lives. The way it is used is widely discussed. There are concerns regarding the preservation of human values and ethical aspects.

This article researches the ability of accounting to innovate and adapt to digital technologies and the solutions related to those technologies, especially when the operating system depends on the state/government. The transformation of accounting from the traditional process to digital innovation presents many opportunities and challenges for an increasingly digital world, and where sustainability is still an emerging area of high awareness. It becomes important to understand the impact of this technological advance on the accounting profession and accounting professionals, and to understand what kind of new skills are needed by Certified Accountants (CA).

Accountants are required to rapidly adapt and transform in regards to business practice and processes, without abandoning the rules and principles of accounting. The profession faces numerous challenges in the age of



digitalization. The main ones can be systematized as follows: the use of Big Data in accounting and reporting, Cloud Computing and continuous accounting, Artificial Intelligence, and Blockchain (Moore & Felo, 2022).

Digitalization brings a major transformation in socio-economic processes. New technologies will change the way we do business, work and live, and will influence all stakeholders: authorities/government, companies and citizens/people. For public authorities, there are changes in the way they interact with citizens and use digital technologies as part of modernization strategies to create public value (Vasilescu et al., 2020).

Changes in technology and digitalization will have a significant impact on the profession in the years to come. The requirement for timely information influences how accountants do the next job role may be, for both employer and employee. The workplace is in a constant transition, computers do technical tasks, the profile of the accountant changed. The abundance of new data sources creates opportunities and challenges for the accountant (Tiron-Tudor & Deliu, 2021).

The use of different digital technologies (namely cloud technologies and digital platforms for communication and document transfer) has allowed companies to change their strategies and business model to operate fully online and bring more accessibility and agility in accounting services to the customer segment that the company operates with (Sordi Schiavi et al., 2020).

Accordingly with a study issued by the Association of Chartered Certified Accountants, referred as ACCA, the top five factor that will have most impact on careers in the professions are: technology innovations, increased need for up-skilling; growing regulatory pressures; changing organisational structures and functions and data opportunities for businesses (ACCA, 2020, p. 13).

The accountant has a wide range of functions in organisations, namely: bookkeeper; financial accountant; controller or management accountant; business data analyst; treasurer and risk manager; financial systems and process manager (Leitner-Hanetseder et al., 2021; Tiron-Tudor & Deliu, 2021).

A single person cannot perform all these functions simultaneously. Nevertheless, today's accountants do it by mainly using artificial intelligence and robotics technologies in most of the accounting and management support software available in some organizations.

The role of accountant become more important due to the development of technologies and their introduction in government tax department where the data is gathered and crossed in order to detect fraud and lack of information from companies. Accountant is nowadays the responsible for give the information for taxes control in real time. The constant up-skilling to the profession is a hard task. The training is not always available and promoted by organizations and accountants have to grow in various levels: fiscal, reporting, financial, risk control and others. Accounting literacy is increasingly important in the training of qualified professionals in various areas and levels of education, despite the fact that there is still a lack of training at this level, particularly in Portugal (Rodrigues, 2022). Evolution is running at an exponential level and changes in accounting are moving towards daily reporting; differences in how to prepare business and strategic plans; implementation of digital accounting and online accounting; the outsourcing of accounting to distant countries; demands for accounting responses to various government departments (Shawnie et al., 2020)

When the accounting and document checking tasks that have traditionally been done by artificial intelligence, professionals can focus on adding more value to their clients, which will reduce both the cost and time spent on the given tasks. This automation of regular accounting processes will lead to accountants being able to concentrate on more specific tasks. (Shawnie et al., 2020)

During the last two decades, there has been an increase in government policies regarding the use of digital technologies, and their integration and deployment for government and other institutions through digital platforms.



Policies are found at all levels of government, including the European Union from an information society perspective (Sundberg, 2019).

As an advanced form of e-government innovation, digitization has been identified as an initiative to reform the internal activities of public administration in order to promote efficiency and integration with citizens and businesses. In the Portuguese case, the government has every interest, and has made efforts to have all accounting and fiscal documentation integrated by electronic means (see, as an example for individuals, the case of the e-invoice and all expenses made at a private level, in order to make available the IRS with automatic filling out; and in the case of companies, also the monthly e-invoice, which allows the integration in the accounting programs of purchases and sales recorded during a certain period). Although there are still delays on the part of the central administration in making this data available to companies in the Tax Authority system (finance), the availability of elements, the sites are still working. The big problem arises when accounting professionals interact with state websites, where they can be inoperable several times a day. Note that, due to the fiscal calendar, that accumulates several tasks in the same month and some repeated information for several state agencies, the affluence to these sites is high, causing problems in sending the information. No less worrying are the successive requests for postponement of deadlines for submission of accounting and tax documentation, namely personal income tax (IRS), corporate income tax (IRC), value added tax (VAT), simplified business information (IES single report (RU), withholding tax reporting template, namely independent and property (MOD 10), monthly remuneration declaration (DMR), etc. The Order of Certified Accountants is also intervening with the Finance Department to postpone deadlines and/or adjust the tax calendar, due to the various constraints.

For all the pressure made to file tax returns, with the inoperability of the sites, are also often the despair of the accounting professionals, entering into situations of stress, discouragement, burnout, and even giving up and abandoning the profession. There are several accounting Facebook groups that serve as inter-help among accounting professionals, namely doubts about certain topics or day-to-day issues, but essentially a lot of venting about these situations of inoperability of the sites (Finance and Social Security). We were also able to see that in order for them to fulfil their tax obligations, they need to work well, more than the eight hours a day, and often they even need to work during the weekend. The venting continues and they refer to accounting as a fast-wearing profession. It was also unanimously mentioned that the state, with digitalization, has transferred many obligations and jobs that were done by state employees, to the taxpayers' side.

The problem present in this article is the ability of accounting to innovate and adapt to digital technologies and the solutions related to those technologies, especially when the operating system depends on the government.

The questions to answer in order to find a solution for this problem are:

- 1 - How have accountants been updating themselves in the face of technological developments in their profession?
- 2 - Has the digitalisation of accounting made the daily work of accounting professionals easier?
- 3 - Have communication platforms provided by the Government changing in line with the digitalisation of accounting?

2.Method

Accounting professionals responded to the survey created for the purposes of this study. The main goal is to understand the impact of technological advances in their job in a daily basis.

To gather previous information to support the creation of the questions for the survey, we made an analysis on the social networks of certified accountants' groups. A debate was launched in order to have a clarification by those professionals regarding: constant changes in legislation; lack of support by government taxes departments; technologies at disposal for the profession and difficulties on the use of the government tax software.

The script of the survey has two sections, the first related with the sample characterization (9) and the second the "impact and technological advancement in the profession" (7), with 16 questions.

For the purpose of this study, the survey was conducted to a specific group of 19 accountants, through interviews.



3. Findings

The sample is characterized mainly by women (68,4%), the range of ages between [34;44] and [45; 55] years hold, presents 63,1% of the respondents. Around 57,8% has work experience with more than 16 years in accounting. About 94,7% are certified accountants from the north of the country, mainly Porto and only 42% are employees, the remaining 58% have their own accounting company.

Table 1. Sample characterization

Questions	Total
Gender	13
Age	12
Region	19
Certified Accountant	18
Years of Experience	14
Employee	8

Regarding the technological impact on the profession, the majority of the professionals agreed with the assumption that technological advancements and digital transformation are very important for the accounting profession. As far for the impact on their daily life, almost the total of the professionals agreed that technology has a significant impact. However, the number of hours raised mainly due to the constant changes in legislation and the need to up skilling their knowledge regarding the digital platforms made available by the government tax entity.

Table 2. Technological impact – yes or no scale questions

Questions	%
Do you consider technological advancement and digital transformation important for the accounting field?	100
In your role as an accounting professional, do you feel the pressure of technological advancement and digital transformation to provide faster answers?	100

Considering the responses to the questions “Do you consider the impact of technological advancement on your daily life” and the scale use, “Not important; Important; Very Important”, 78,9% consider important and the other 21,1% consider it “very important”.

Table 3. Technological impact – Likert scale questions

Questions	%
As an accounting professional, how do you consider the impact of technological advancement on your day-to-day life?	78,9
Does this technological advance allow you to work fewer or longer hours?	89,4

As far for the question “the amount of work hours has raised” the total of professionals responded affirmatively.

Table 4. Digital platforms from government

Questions	%
Social security entity	100
Tax entity	100
Statistical government department	0,02
Others - Bank	42,1

Monthly, certified accountants have to send a complex and detailed information regarding fiscal reporting. This fiscal reporting covers information related to employees and payments of social security contributions; payment of taxes such as corporate income tax and value added tax; detailed information on company inventories; among



others. This information given to different state entities makes the accountant's work difficult, having to adapt the information taken from the software used to report on the different digital platforms provided by the government. To the question, "Please indicate the main recipients of information you usually work with?" the answers were equally divided in: social security system; tax entity and statistical department, with a percentage of 100% for the first two and bank with 42,1%.

The opinion regarding to the question "Are the reception of the digital elements and statements by the recipients of the information adequate?" is negative. Professionals point out the difficulties on providing the information for the different government entities due to the lack of homogenization of existing information systems.

4.Results, Conclusions and Recommendations

Digital transformation is transforming everyday life and the way we interact and conduct business. This radical shift in the 'view of things' was accentuated after 2020 with the pandemic crisis generated by Covid 19. With the world almost paralyzed by this virus, information and computerization has made changes in the technology of all sectors, including accounting. It is normal that, also for accounting, this is a new stage of modernization and development.

The process of digitization being that of making processes more adapted to the context of use, thus making them more flexible and responsive, with large storage, multiple copies, and rapid transmission of electronic documents at lower cost and greater speed (Fichman et al., 2014), involves converting traditional paper-based bureaucratic processes to electronic platforms (Janssen & Esteve, 2013) in order to promote efficiency and effectiveness (Irani et al., 2008), helping to promote democracy, transparency and accountability, and freedom (Falk et al., 2017). This digitalization should be a way of modernizing the public sector in the process of simplification through the standardization of activities to increase efficiency and reduce response time with its stakeholders, in this case, the accounting professionals.

The use of artificial intelligence present in most accounting and management software used in the profession enhances the speed in which information is available. It is essential that the professional in this area have the training for the analysis of information, using Big Data Analysis technologies.

Accounting evolves and follows the progress of society and the business world, where the evolution of technologies is a constant, especially in the last decade. On the one hand, digital transformation in accounting is affirmed as necessary and as an important tool for managing information systems, but on the other hand, there is a constant inoperability of information systems and reception of information by the State, where websites are often inoperable or under maintenance on critical dates for the submission of tax returns. Repeated information is also requested from various state agencies, to companies that, not being the certified accountant's (CA's) responsibility, it is to these professionals that companies appeal. There are also successive requests for postponements of deadlines and adjustments to the tax calendar, with a generalized discontent and weariness of the CA's.

Theoretical and conceptual research of the accounting system in the new environment is fundamental for the development of the profession.

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Phonetic phenomena in the speech of the Northwestern Gaelic

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Abstract

This work was carried out in the field" and was developed in the beautiful cities of Shkodër and Ulcinj. Our research work aims to highlight the phonetic and dialectal elements of the two countries mentioned above. During the interview, the respondents had the task of narrating an event from their life for 3-5 minutes. Our research corpus is one hundred respondents.

The study of Albanian dialects, as it is said, is in the beginning and in progress, therefore this for the history of the Albanian language is of great benefit, for the announcements of the recognition of old written documents and for their linguistic sources as a whole. Respondents are divided according to sociolinguistic categories such as age, gender, education. The interviewees correspond mostly with higher education. The respondents were divided into three age groups: Young age; 7-18 years (including both sexes), Middle age; 19-50 and old age; 51-80. From this paper we will derive mostly sufficient results.

Key words: Study, varieties, dialectology, phonetics, Shkodër, Ulcinj

1. Introduction

In this paper, the speech of Shkodra and Ulcinj will be treated. The main elements that we will highlight are the dialectal elements. Our research was carried out in the field, with the realization of surveys we also encountered difficulties, especially in the city of Ulcinj, where we met many tourists and speakers of the Montenegrin language.

The northwestern dialects of Albanian stretch from Plava and Gucia in the north to Mat in the south, from Tivari and Ulqini in the west to Nikaj - Mërtur and Pukë in the east. Outside the current political borders of RSH, this group of dialects includes the dialects of Plava, Gucia, Triepsh, Gruda, Trobain, Koja, Fundna, Tuzi, Kraja and its Highlands, Shestani, of Ana e Mali, of Ulcinj with surroundings and of old Tivar with surroundings which enter the Black Mountain. Hoti, Gruda, Triepshi, Kelmendi, Shkreli, Kastrati together are called Malësi e Madhe. Below the Great Highlands and to the north of the city of Shkodra lie the Rranzat e Mbishkodra, which includes Buza e Ujit, Kupliku, Grizhja, Lohja, Reçi, Rrjollë. Malësia e Madhe and Rranzat are together called the area of Mbishkodra or Mbishkodra. To the east of them lie Shala, Shoshi and Pulti, which together are called Dukagjin. Below them lie Postriba, Shllaku and Temali. To the south

of the city of Shkodra is Nënshkodra, which includes Bregu i Buna, Bregu i Drini and Zadrime (Beci, 1995:9).

Albanians in Montenegro, considering the reality and their past, can be defined as "Two parts of a whole".

This determination has its basis in the fact that during their history, as a result of the balance of forces, they were separated from the Albanian whole. Their geographical extension in Montenegro along the border with Albania and on the border with Kosovo, from Ulcinj to Rozhaj, proves this. They can be defined as two parts of a whole, because they were initially separated by unjust historical decisions from their Albanian trunk, that is, from the whole. Also, as a result of the anti-Albanian policy, until the last ten years, especially, they were forced to move especially to the United States of America. Therefore, they are currently divided into two parts, one in their ethnic lands in Montenegro and the other part in the diaspora (Shabani, 2007:11).

2. Methodology

This paper presents a full explanation of the various methodological issues used in the collection and treatment of data in the study. The methodology of the work is quantitative - deductive. Our work was carried out from the recordings of the interviewees in the city of Shkodra and in the city of Ulcinj, and we are based on the books of the authors who dealt with this issue such as: Beci, Shabani, Gjinari and Shkurtaj. In total, we have 100 interviews, and the interviewees were divided according to sociolinguistic criteria.

The dialectal elements of the speech of Shkodra and Ulcinj

In the speech of the northern sub-dialect of Greek, the vowel /e/ is pronounced more openly, for example (véna / fémēn), while the unstressed /ë-ja/ is not pronounced even in the final syllable that is closed by a dissonant consonant: babs - babēs, thast - thasets, while in this position it is next to a sonant consonant, it is pronounced open /e/ e.g. i amel, baben, most of the words of this subdialect do not have the pair of palatal consonant phonemes q.gj; while in Northern Greek, the transition of the phoneme /h/ to the phoneme /f/ is a phoneme change, which occurs regularly when the phoneme /h/ comes before the phoneme /t/, for example (cold - cold) (Gjinari, Shkurtaj 2003: 159).

In Northwestern Greek the old diphthongs ae and oe have given a closed front /a/ and a labialized closed /e/, e.g. njoe: ngee, nge / ti m ae < thae, the.

The groups kl and gl gave respectively /ki/ and /gi/ (kiumesh - milk, giuni - knee).

The group /fsh/ is simplified to /sh/ šijse – broom, munish – silk.

The vowel a: is used long.

All these elements were shown in the interviews we conducted with the respondents.

Literary language and dialects as long as they live will be connected and in certain evolving dialectal relations (Durmishi, 2013:387). There are many theoretical treatments for language as a socio-cultural phenomenon, for standard language and its relationship with dialects. According to A. Marashi (2011:11), Albanian has very lively and very active dialects. Dialectic currents and colloquial speech are natural currents that can nourish and vitalize the literary norm.

Even a brief overview of studies in these linguistic areas would take too much space. From the studies so far, it can be said that of the two forms of the standard language, the most exposed and most sensitive to the pressures of dialects is the spoken form, especially the colloquial discourse. Unlike the spheres of phonetics and morphology that have a defined and fixed inventory and system, the spheres of lexis and syntax always remain more open to the action of dialects even in the written norm because these two spheres have more stylistic layers, which need functional variants, and there are constructions and synonymous words that need to be enriched from time to time

(Hudson, 2002:25). In the field of linguistic studies on idiolect, many debates label language as more personal than social, creating the "conflict": Idiolect versus Sociolect. The language used by the individual is defined as the individual dialect, the original way of using the language during the illocutionary act (Louwrence, 2004 :6).

3. Findings

The most numerous changes at the individual level have been encountered in the vocabulary used according to interests and activities and the pronunciation of words and various expressions, which was influenced by the administrative environment that belongs to each speaker, as well as by the social situation. In case of changing situations, the speaker changes the linguistic register by e adapt the discourse depending on the situation. The phenomenon of register switching (known in sociolinguistics as register switching) affects phonology, syntax, lexis and pre-linguistic elements of the individual (Rentel & DeStefano, 2004:333).

Table 1. The use of some dialect words by the interviewees in Shkodër and Ulcinj.

<i>Dialectal words</i>	<i>Standard</i>	<i>Country</i>
A po ka lezet, a po ta kona	A po të pëlqen	Ulqin
Lulishte	Parku	Shkodër
Thethi	Sheshi	Shkodër
Itash (tani) shk	Tani	Shkodër
Nadja	Mëngjesi	Shkodër – Ulqin
Diftu	Tregu	Ulqin – Shkodër
Fritig	Grill	Shkodër
Pedonale	Rrugicë	Shkodër
Izet	Njëzet	Shkodër
Nji ashtu	Ashtu	Shkodër – Ulqin
Ulë shkallët	Zbrit shkallëve	Shkodër – Ulqin
Përshnetje	Përsëndetje	Shkodër – Ulqin
Ulë qantën në karrigë	Vendose qantën në karrigë	Ulqin
Kërri	Makina	Shkodër
I ngjyem	I lyer	Shkodër
Ke:n	Qenë	Shkodër – Ulqin
Kam fillu me nxan	Kam filuar të mësoj	Ulqin
Lasha	Laja	Ulqin
Nej	Qëndroj	Ulqin
Shiftar	Shqiptar	Ulqin
Ket e kam	Këtë e kam	Ulqin
Tashti – I tash	Tani	Shkodër – Ulqin
Qishtu	Kështu	Shkodër – Ulqin

Duli	Doli	Shkodër – Ulqin
Pilqim	Pëlqim	Shkodër – Ulqin
Ariz	Oriz	Shkodër – Ulqin
Mren	Mbrenda	Shkodër – Ulqin
Ni fije	Pak	Shkodër – Ulqin
Kasavet	Kujdes	Shkodër – Ulqin
Kastan	Enkas	Shkodër – Ulqin
Kojshi	Fqinjë	Shkodër – Ulqin
Hallk	Njerëz	Shkodër – Ulqin
Nur	Hije e bukur	Shkodër – Ulqin
Perri	E bukur	Shkodër – Ulqin
Taksirat	Fat i keq	Shkodër – Ulqin
Zylyf	Tufë flokësh	Shkodër – Ulqin
Nalla	Papuçe me take derrase dhe me llastik	Shkodër – Ulqin
Xhevap	Përgjigje	Shkodër – Ulqin
Pullaz	Çati	Shkodër – Ulqin
Sheher	Qendër	Shkodër – Ulqin

Do you like it, park, Square, now, BREAKFAST, markets, Grill, Alley, Twenty, so, Go down the, stairs, Greetings ,Put the bag on the chair, car, Painted, been, I started learning, wash, Stay, ALBANIA,

I have this, now, so, Left, CONSENT, RICE, within, slightly, Careful, specially, NEIGHBORS, People

Nice shade, Beautiful, Bad luck, Bunch of hair, Slippers with pig heels and laces, answer, roof, center.

All these words were used by speakers of Northwestern Greek, words which have undergone phonetic changes. Communicating in a common language has many advantages: we communicate better and this facilitates social relations by avoiding linguistic and cultural misunderstandings and helps unify the educational system. The standard language not only gives us a strong national identity, but also gives us a strong position in world framework. The standard language is also necessary because it documents an asset that future generations will inherit.

The language standard is a special variant of the national language of a linguistic community, which has a higher status than other variants. The standard language embodies the strict implementation of the norms, as well as the phonetic, lexical, grammatical rules of the Albanian language, which are mandatory for all speakers, regardless of the environment: academic circles, politics, media and elsewhere (Chrystal, 1969 :64). The standard rate has played a leading role in the language development process, however it is premature to think that compulsory or secondary education is enough for the standard to be mastered by the people (Lloshi, 2001:150). Standard language, in addition to many features, especially linguistic, shared with other forms of language, is characterized by some features, which make it function as a separate system and as a special form of language (Dodi, 2004:28).

The literary standard of pronunciation has two aspects (Çerkezi, Billa, 2013 :310): First, it deals with the phonemic composition of words, it determines the phonemic composition that is normative, considering another phonemic composition as wrong.

4. Results & Conclusion

The Shkodra dialect can be considered a dialect of the Gege dialect as special, because it preserves the Albanian puro words. In comparison with the Albanians of Montenegro who use bilingualism including Albanian and Montenegrin. What we have noticed is that most of the Montenegrin Albanians have their surnames followed by the suffix -vic, for example Osmaovic, Abazovic, and this is a consequence of Montenegrin politics.

Dialects are different forms that the same linguistic mixture of a community has taken over time in different territories. Dialects are the result of the development of a language in previous formations of society before the formation of the nation. Dialects are historical categories, they were born under certain conditions of the development of society and from time to time they have undergone changes.

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Ways of integrative study of folklore

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Abstract

As it is known, the teaching of folklore in secondary schools and universities, the use of new teaching materials in literature lessons, the use of innovations and technologies in the training of literature teachers, active / interactive work methods in teaching fiction application, from tradition to modernity and the publication of articles on such topical issues are of great importance in the renewal of the science of teaching methods of literature in accordance with modern requirements. The article explores the history and ways of teaching folklore. For this, the experience of recent times has been studied and researched. The history of folklore can—and should—be written as a history of ideology. The article covers the theoretical foundations of Azerbaijani children's folklore, origin, ways of creation, history of collection, publication and research, classification, poetics of lyrical, epic, dramatic genres, idea-content, mother songs (layla, oxhama, dilachma), children's songs (düzgü, sanama, winding, bitterness), riddles, delusions, tales, specific features of games and performances are analyzed systematically for the first time.

The teaching of folklore in secondary and higher education is extremely important. Because it is possible to call folklore memory literature. Folklore texts, which have been passed down from memory to memory and polished to this day, greatly facilitate the achievement of quality results in teaching and learning. Contact with folklore allows children to be connected to the living language of the people with indestructible wires, to get acquainted with the possibilities of the native language, as well as all spheres of life. All the knowledge of the people is fully reflected in folklore. Therefore, folk literature is the most successful tool in explaining to children the identity of this nation. Other important reasons for emphasizing folklore texts in educational work are ease of pronunciation, playful rhythm and harmony, beauty of sound, children's inability to remain indifferent to it, and ease of memorization of the text.

Key words: Teaching of folklore, secondary schools and universities, history, ideology

1. Introduction

We conducted research on the textbooks "Azerbaijani language" for primary school students of modern secondary schools from the point of view of nationality. Our goal in the study was to determine the level of use of Azerbaijani folklore texts in books. It is known to each of today's scientists from their own experience that the core part of the teaching of the mother tongue in the primary education we went through consisted mainly of national folklore texts. This is not without reason. It is known to each of today's scientists from their own experience that the core part of the teaching of the mother tongue in the primary education we went through consisted mainly of national folklore texts. This is not without reason.

Folklore can also be called memory literature. Folklore texts, which have been passed down from memory to memory and polished to this day, greatly facilitate the achievement of quality results in teaching and learning. Contact with folklore allows children to be connected to the living language of the people with indestructible wires, to get acquainted with the possibilities of the native language, as well as all spheres of life. All the knowledge of the people is fully reflected in folklore. Therefore, folk literature is the most successful tool in explaining to children the identity of this nation. Other important reasons for emphasizing folklore texts in educational work are ease of pronunciation, playful rhythm and harmony, beauty of sound, children's inability to remain indifferent to it, and ease of memorization of the text. Folklore is a lucky example of creativity in this sense. Because he lives and is remembered only on the principle of love and voluntariness. One of the reasons for the success of this literature is its primacy in memory and thinking. From the first day of birth,



everyone begins to come in contact with folklore with the lullabies they hear, and then with similarities, counts during recitation, truths, and so on. In this way, this sound becomes the yeast of the soul and permeates its spirituality. So, this is everyone's native literature.

Our analysis is mainly based on the first grade textbook "Azerbaijani language" (Ismayilov R., Abdullayeva S., Orujova G., Jafarova D. Azerbaijani language. Textbook for the 1st grade of secondary schools (2016), p. 160) and the ideas expressed here are about that textbook. The book consists of seven chapters. Although the names of the sections are not given in the table of contents, they are mentioned in the textbook as appropriate. We do not find examples of national folklore in the headlines as the main topic. But it cannot be said that Azerbaijani folklore was not used here. A riddle on pages 60, 78 and 140 of the textbook, a bayat for copying on page 105, fathers on pages 64, 73, 89, 133, 146, 157 words are given. However, they are given as an adjunct to the main topic in order to carry out certain operations within the framework of the study.

The sixth section of the textbook is called "In the world of fairy tales". The first text given here is Nabi Khazri's poem "My grandmother tells a story". The section also includes a part of Reyhan Yusufgizi's "Little Prince" from "Aysu", Habiba Zeynalova's "How many colors of a rooster" and Zahid Khalil's "Mirror" stories, Mrs. Alibeyli's "Where are you going tonight", Nabi Khazri's "Why doesn't it overflow"? Poems "Rabbit" and Zahid Khalil's "Account", Chingiz Tagizade's "Old grandmother's trick", Vladimir Suteyev's "Tree - a cure for all ills" stories, none of which is a folklore text - a fairy tale. However, this section also contains texts related to folklore genres. Let's look at these texts from the point of view of nationality: "Striped nose" (legend), "Why a cat washes after eating" (Lithuanian fairy tale), "How a dog and a man became friends" (Mordovian folk tale), "Why there is no moon dress" (Serbian fairy tale), "The Bear and the Peasant" (Russian folk tale), "The polite rabbit" (Mexican fairy tale), "The bear and the rabbit" (representation).

At the beginning of the textbook there is a work on drawing. The theme presented here is the Russian folk tale "Radish". In the section "In the world of fairy tales" there is also work on the picture. The idea expressed in the subject is as follows: the boy is asleep, he falls into the world of fairy tales in his sleep. The picture depicts the heroes of a fairy tale that the boy saw in a dream. These tales are: "Radish" (Russian), "Puss in Boots" (French), "Gogol" (Russian), "Dwarf" (Azerbaijan), "Tik-tik khanum" (Azerbaijan), "Shangulum, Shungulum, Mangulum" (Azerbaijan) tales. On the same page, a piece of the fairy tale "Red Riding Hood" (French) is given to copy on his face with a manuscript.

Other tales in the book: "Ayoga" (nanay tale) and "Whose hands are more beautiful" (Indian folk tale) are given in the seventh section - "What is good, what is bad".

This is a textbook "Azerbaijani language" for a first-grader studying in his native language. The 4th grade textbook "Azerbaijani language" contains very valuable words of national leader Heydar Aliyev. However, the saying "The future progress of society will depend on what and how we teach our youth" applies more to the one who teaches and composes the textbook than to the one who learns it. This statement can be given as an epigraph to the book at the beginning of the first grade textbook, as it reflects the main purpose and goal of teaching. At the same time, another aphorism of the great leader was given: "It is the language of each nation that lives and develops its nationality and moral values." So why do we give so much space to foreign texts in national education to teach this language? What is the need to teach a six-year-old child studying the subtleties of the Azerbaijani language through Lithuanian, Mordovian, Mexican, Serbian, Russian, nanay, Indian fairy tales, which are not translated into our language at such a high level? Why there is not a single Azerbaijani folk tale? Why Azerbaijani fairy tales such as "The Dwarf", "Malikmammad", "Beautiful Fatma", "The Tale of the Rooster" did not work here? After all, Azerbaijani folklore texts are an invaluable source in mastering the richness and sweetness of the native language. It is easier to instill national and moral values in children with examples of oral folk literature, to raise citizens in the spirit of the Azerbaijani ideology.

The first thing that came to mind during these researches was the book "Gifts for children" compiled for children by the prominent Azerbaijani Educator F. Kocharli. Most of this book consists of folklore texts. A closer look at the book reveals that it is a very valuable resource for preschool and primary education. Explaining the purpose and goal of compiling the book, F. Kocharli said that the nation, which loves its history, livelihood, homeland and language, "keeps its folklore as a valuable investment by concentrating it with perfect



pleasure and attention, and the first education of its children begins with teaching them." (Azərbaycan klassik uşaq ədəbiyyatı antologiyası. 1998:67) Apparently, a deep national spirit prevails in these views. The author attaches great importance to our nation, folklore, homeland, language, and emphasizes the idea of starting educational work with children with folklore.

"Kitabi-turki" (M.Sh.Vazeh, (1852), "Vatan dili" (A.O.Chernyayevsky, (1882), "Basiratul-etfal" (R.Afendiyev, (1901), "Children's glasses" (A.Shaig, (1910), "Turkish alphabet and the first reading" (M.Mahmudbeyov, (1918), "Turkish reading" (R.Afendiyev, (1918), "National reading" (A.Shaig, (1919) and other textbooks was. In this and other textbooks we have not mentioned, we see that along with examples of written literature with moral and didactic content, emphasis is placed on examples of folklore.

A.O. Chernyayevsky's textbook "Vatan Dili" played a role in the creation of most of the above-mentioned materials. The book based on the textbook "Rodnoe slovo" by the famous Russian pedagogue K. Ushinsky includes moral and didactic works of Azerbaijani writers, as well as examples from our national folklore. Folklorist P. Afandiyev writes: "A.O. Chernyayevsky acted as a collector, trying to include proverbs, riddles, misconceptions, tales and anecdotes in the book. It is interesting to tell children about natural phenomena, wildlife, household items. Along with the information, there are proverbs, parables and riddles on the subject. " In the book "Gifts for children" after most of the texts there are proverbs and riddles on the subject, names of forest trees, bushes, grasses, flowers, misconceptions and so on. It is stated that they serve to increase the child's vocabulary, to get acquainted with the richness of the native language, as well as the world around him. For example, the following folklore texts are given after the tale of the Rooster and the King:

Example:

Without a rooster, it will not open in the morning.

Riddle:

I called out loud,
Voiced from the village,
Mouth made of bone,
Bearded meat.

(Azərbaycan şifahi xalq ədəbiyyatına dair tədqiqatlar, 1961-1977: 65).

At the end of the book, the riddles are answered. The fact that the principles of compilation are very similar allows us to say that F. Kocharli prepared this book on the basis of the principles of the textbook "Vatan Dili", which he highly values.

Everyone knows from folk pedagogy that children's folklore plays a key role in training and education. This is evidenced by the fact that the first professional pedagogues of Azerbaijan mentioned above approached this literature as a source in the educational process, and considered it the shortest way for the physical and mental development of children and adolescents, the formation of their spirituality on a national basis. It is important to keep in mind the age psychology, interests and perceptions of children when preparing funds for the learning process. This is strictly observed in the examples of folk art, and for this reason these texts are grouped under the name of children's folklore.

Folklorist R.Gafarli classified the genres of Azerbaijani children's folklore by types as follows (Azərbaycan klassik uşaq ədəbiyyatı antologiyası. 1998:67):

1. Lyric types: lament, imitation, recitation, teaching and children's songs (correct, counting, kissing, biting, twisting, calling and appeals);
2. Epic types: riddles, riddles and children's tales;
3. Dramatic genres: children's games and performances.

As you can see, our folklore has enough material both for children to tell and for them to perform. Regardless of whether it is performed by an adult or a child, the examples given under this name are of interest to the child, at a level that they will understand and enjoy. The small size of the selected texts is also important. Children want to see the result faster, so they do not like large texts at first sight. Linguist T.Hajiyev shows that the



language of children's literature is characterized by extreme simplicity and complete comprehensibility of the vocabulary. Didactic elements are widely used in this language, simple, clear, instructive wisdoms, proverbs and parables are often used. Examples of children's folklore have a special role in their comprehensive development. Illusions are one of the most successful means of polishing pronunciation. More agile repetition of the same and similar sounds are also fun exercises to overcome the obstacles that arise during pronunciation. Tales are of exceptional importance in the development of artistic imagination and the formation of the ability to listen. Easily memorized texts to strengthen the ability to memorize - counting, correctness, rhymes, proverbs to form logical thinking and moral behavior, riddles for acquaintance with the world and agility of thought, games for physical development, etc. The use of genres is the shortest way to the goal in this area.

The textbook does not indicate to which people the legend of "Striped Nose" belongs. There are many animals, birds and plants that a six-year-old child knows and loves from everyday life, and poems and stories about them are more interesting and memorable for children. However, we do not have a nose in this line. In the methodical manual for the first class, the following riddle is given to introduce the nose more closely:

A small animal
He walks in the woods.
Your back too
Decorate with five stripes (Qafarlı, 2013:345).

We did not find a single text about the nose in the riddle books compiled by V.Khuluflu, H.Zeynalli, N.Seyidov and other folklorists.

Why should we try so hard to inculcate an animal that is not related to people's lives in the minds of children? Instead, wouldn't it be possible to give any text about the horse, which has a special place in the life of the Azerbaijani people, and ask questions about it? At this time, people's heroes Koroglu, to introduce the names of the fugitive Nabi's horses, horse riddles, proverbs, songs and so on. genres could also be used. It would also be possible to teach the concepts of a saddled horse, a slave, to give information about famous horse breeds, Karabakh horses. Or shouldn't we give two counter words or two holawars instead of "striped nose"?

The "Methodological manual for teachers" compiled in connection with the teaching of the first grade textbook "Azerbaijani language" is richer in terms of material. It is true that the teacher does this work with children, and it is very good. But the student does not see these texts. After all, the role of eye memory in perception and memory is great. On the other hand, children prepare lessons at home - with their parents. The textbook is not enough to answer the child's questions. In this case, the issue of the child's additional work with the teacher to do homework comes up in the family. Inadequate textbooks also cause many social problems in the family. (Wilson W. A. (1988), p. 56)

It is not necessary to repeat the same topics in textbooks of all times. But the important thing is to wait for the main line, the basic principle. It mainly consists of the following (Stahl, 1989:56):

1. Formation of attention in children;
2. Speech development;
3. Strengthening memory;
4. Aesthetic education;
5. Ability to draw mental conclusions;
6. Ability to correctly assess what is happening around, etc.

Another important condition in the selection of texts is to convey to students all the richness of the native language, as well as easy comprehension and memory of the texts, beautiful sound, educational theme, serves to form a worldview and spirituality. In this case, the child can prepare lessons for a short time and with enthusiasm, be in a good mood, do not feel heavy, do not have a negative attitude to education, there are no problems between parents and children in the family, the need for new knowledge. So, one of the sources of a happy school life is the availability of funds suitable for the child's age and interests. In the words of F. Kocharli, "to make the heart happy is a service in itself."



2. Methods

Comparative, theoretical analysis and generalization; qualitative empirical methods: observation, interview). Comparison methods were used. Two main requirements have been met for the effective comparison: it is appropriate to compare only those events that have an objective commonality, and the comparison of objects was carried out on the basis of important indicators. Application of special technical devices and measuring units of the quantitative indicators of the research object with the measurement method was carried out. The experimental method was used for hypothesis testing in scientific research or scientific research of causal relationships between phenomena.

3. Results, Conclusions and Recommendations

Folklore plays a key role in transmitting our historical roots to the younger generation. Epics, proverbs, tales, riddles, bayats, etc. from our folklore examples. The educational aspects that they can give while being taught are instilled in young people.

When we look at the history of our folklore, we can say how ancient and rich it is. When teaching students about folklore, I tell them about the relevance of the topic and encourage them to be careful about issues that resonate over time. I say that in the future, when teaching this type of topics, they must touch on the educational aspects. In particular, the epics are, as we know, the greatest example of folklore.

The events and facts in the sagas are given in more detail than in other examples of folklore. The heroes of the saga are selfless, fight for the interests of the people and defend free love. All these issues must be taken into account when teaching the age of the student. Taking into account the age level of students in primary school, our epics are given not in full, but in short pieces. Thus, in the third grade textbook, the part "Revenge of the Supreme Man" from the epos "Koroglu" and the part "Gypsy Shepherd" from the epos "Kitabi-Dada Gorgud" are taught to students. If visual aids are used in the teaching of these subjects, we will have better results. For example, as a visual aid, we can bring saga books to students. After school, we can watch movies, plays, or short videos with the help of technology in the classroom. Using such visuals will help them to remember the subject well.

One of the main requirements of the time is to use technology. A lesson taught in this way becomes more interesting and memorable. At the same time, using the "role-playing" method, students can master the topic on roles. Using these methods requires a high level of creativity from the teacher. The teacher must be creative as well as impart knowledge. More attention is paid to the teaching of riddles in primary school. Riddles are taught from the first grade. Teaching riddles not only allows children to have a full idea of the sign, quality, shape and content of the object, but also creates the basis for mental development and the ability to think clearly. Unlike epics, riddles can be taught in a more entertaining way. Given that puzzles are given more space in the primary grades, students are younger and more interested in the game, we need to build our teaching using more fun methods. In particular, we can teach students puzzles, as well as other examples of folklore, using role-playing games and various fun methods. (Richmond W. E. Introduction (1983), p. 67)

Proverbs and parables are more closely connected with the life and work of the people. Form is a small, wide-ranging genre. Proverbs and parables summarize the wisdom of the people, the wisdom of the people, the results of the trials and experiments that the people have gained over the centuries. Therefore, proverbs and parables are used in spoken language to make expressions more vivid, accurate, and effective. This ancient genre of folklore is taught from elementary school. Along with theoretical information about proverbs and parables, examples with different content are taught. As is well known, proverbs cannot be equated with proverbs, no matter how close they are to each other in terms of conciseness and depth of meaning. When we teach, the difference between proverbs and parables must be communicated to the students. As we teach more, we should try to get students to imagine what they are reading. For this, the students' impressions of paintings and wildlife play a key role. Because there are many examples of nature in our folklore, and as students read, their vivid imagery will help them to remember well. Recently, the tendency of our people to study their national treasures, roots and own our national values has significantly increased in our republic. For this



purpose, fairy tales, epics, bayats, proverbs and parables, misconceptions, lailas, etc., reflecting the national consciousness and dignity. There are ample opportunities for detailed teaching of examples in schools. By giving colorful examples of folklore in textbooks, students learn about the past, history, traditions and language of our people, as well as enrich their vocabulary and create favorable conditions for speech development. Teaching folklore also has a positive effect on students' ability to communicate, to express their views on the world around them, and to develop oral communication in general.

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Development trends of environmental education

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Abstract

The article reflects the consequences of environmental problems and ways to restore them. The need for environmental education arose from the need to provide a favorable environment for human life. The quality of the environment, health - determines the basic human right and the main goal of the development of civilization. Without the natural basis necessary for human existence and development, all social issues lose their significance. Therefore, environmental education should not be limited to the education system, but should become a key part of it. If literature and history are necessary for the acquisition of cultural values, natural science is necessary for the acquisition of natural laws, environmental education is for a form of true human attitude to nature, for the acquisition of specific socio-natural laws and norms of behavior. Thus, human existence and development is possible in the future. Deformation of the system of ecological relations, lack of sense of responsibility for the future is the source of environmental crises. There is a consumer attitude towards nature among high school and high school graduates and the population as a whole; The demand of the population to study the environment and participate in its improvement has not developed. Therefore, the purpose of environmental education is to form a responsible attitude to nature. Ecological education means the process of continuous education, upbringing and development aimed at the formation of a common ecological culture, ecological responsibility on every inhabitant of the planet, the ecological responsibility of every inhabitant of our planet.

Keywords: Environmental education, protection, creativity, nature protection, ecological community

1. Introduction

We argue for expanding the role of theory in ecology to accelerate scientific progress, enhance the ability to address environmental challenges, foster the development of synthesis and unification, and improve the design of experiments and large-scale environmental-monitoring programs. To achieve these goals, it is essential to foster the development of what we call efficient theories, which have several key attributes. Efficient theories are grounded in first principles, are usually expressed in the language of mathematics, make few assumptions and generate a large number of predictions per free parameter, are approximate, and entail predictions that provide well-understood standards for comparison with empirical data. We contend that the development and successive refinement of efficient theories provide a solid foundation for advancing environmental science in the era of big data. Here, we define a theory as a hierarchical framework that contains clearly formulated postulates, based on a minimal set of assumptions, from which a set of predictions logically follows. Theory is inherently deductive. Advances in data stimulate theory, and new theory refines, expands, and replaces old theory, thereby correcting flaws and explaining and predicting phenomena in the domain in which they apply. As such, the evolution of a successful theory is for it to become more general, through the development of detailed models that apply the theory to a wider class of phenomena.

The research aim of all science is to cover the greatest number of empirical facts by logical deduction from the smallest number of hypotheses or axioms (Albert Einstein). The richness of theories in ecology is, to some degree, illusory. As was mentioned above, several “theories” (see table S1) are actually specific hypotheses or models. Ecologists and other scientists often use the terms model and theory indistinguishably (Leijonhufvud, Ginzburg and Jensen (2004), but they are fundamentally different. Models are usually intended to increase our understanding or solve a particular problem in a particular domain (e.g., the role of nutrient additions to lake



ecosystems) or to explore the consequences of relaxing one or more assumptions of a theory (e.g., inclusion of Allee effects in metapopulation theory). “Since models are simplified, partial statements of theories, several models may belong to the same theory, designed to elucidate different aspects of it” (Leijonhufvud, 1997: 194) Some models, if they are repeatedly tested and supported, can eventually give way to a theory, but they are not theories, themselves. The discovery of new empirical statistical patterns and statistical relationships often leads to theoretical advances. However, the inductively revealed patterns do not, themselves, constitute a theory, and neither do statistical representations of data or model-fitting exercises. Some ecologists consider a statistical regression model a theoretical construct (e.g., Peters (1991), but regression fails to meet our definition of theory. Although regression can test a theory by evaluating predicted relationships among variables, it does not constitute theory in itself. Statistical analyses may lead to the creation and refinement of theory; however, theory goes further to provide understanding of the processes that give rise to the relationships, independent of the statistical fit. Notwithstanding the apparent richness of theories in ecology, there seems to be a general trend that the use and importance of theory is declining in biology as a whole (NRC (2008). Biologists appear to increasingly underappreciate the role that theory can play. The fact that so called “model organisms” are used in the majority of research in molecular biology and biomedicine implies that biologists are searching for general trends and unified principles, but there is seemingly little motivation to organize new findings into a rigorous hierarchical framework expressed in the language of mathematics. This may be, in part, because we are overwhelmed and overly impressed by the vast amount of data that can be obtained from the natural world. The era of big data, or data deluge (e.g., Bollier and Firestone (2010), has fostered the proliferation of giant databases, data mining, machine learning, and other inductive approaches. Some have suggested that theories are irrelevant in the big data era—that correlations are sufficient to build a vigorous science (Anderson, 2008). We disagree. We argue that data are fundamentally necessary and important but not sufficient; healthy productive science needs both theory and data to feed the continuous interplay between induction and deduction. No matter how much data one can obtain from social, biological, and ecological systems, the multiplicity of entities and interactions among them means that we will never be able to predict many salient features of their structures and dynamics. To discover the underlying principles, mechanisms, and organization of complex adaptive systems and to develop a quantitative, predictive, conceptual framework ultimately requires the close integration of both theory and data. Many of the theories listed in figure 1 comply with the definition of theory given above, but some theories are more efficient than others. To understand the importance of efficiency, it is instructive to revisit the remarks of the British statistician (Box, 1976), who said, “Since all models are wrong, the scientist cannot obtain a ‘correct’ one by excessive elaboration. On the contrary, following William of Occam, he should seek an economical description of natural phenomena” (Box, 1976). We claim that the same is true for evaluating alternative theories that purport to explain the same phenomena. As was pointed out by the philosopher of science Larry Laudan, the evaluation of theories is a comparative matter (Laudan, 1977), and one important criterion for comparison is efficiency. A theory is more efficient than its rivals if it can make more and better explanations and predictions with the same number of free parameters or constructs (Laudan, 1977).

Here, we describe our emerging strategy for developing efficient theories in ecology. Our strategy is not normative. Specifically, we do not imply that this is the only way to advance ecological understanding, especially under a postmodern scientific framework (Funtowicz & Ravetz, 1993), Allen T.F.H. et al. (2001). In the following discussion, it is useful to bear in mind that theory, etymologically, comes from the ancient Greek *theōria*, which means “contemplation” or “a viewing.” In that sense, a theory is a way of looking at the world and not necessarily a way of knowing how the world is. Our main claim is that efficient theories provide a particular way of looking at the world that can be particularly insightful and useful. Building efficient theories is of fundamental importance, because we think it will allow for a faster advancement of our field.

We do not suggest that all ecologists should be theoreticians. We recognize the value of pluralistic approaches. We do believe that a healthy and advancing science of ecology needs some appropriate balance between empiricists and theoreticians. Such a balanced science will not only contribute to the development of a quantitative and predictive science of ecology, it will also contribute to the application of ecological science in



addressing pressing climate, societal, and health challenges. We hope that our reflections will contribute to better understanding of the role of theory in ecology and explain why we think the development of theory in ecology is such an important pursuit.

In what follows, we provide a detailed account of what we think the salient characteristics of efficient theories are in ecology. Efficient theories should be built, as much as is possible, on first principles. First principles are the bedrock of science—that is, quantitative law-like postulates about processes underlying a given class of phenomena in the natural world with well-established validity, both theoretical and empirical (i.e., core knowledge). They are not just descriptions of observed phenomena (see Scheiner & Willig (2008)). First principles are the building blocks of efficient theories. They serve two functions. First, they allow unifying connections across the entire realm of science—for example, between ecology and chemical stoichiometry or thermodynamics. Second, their application and consequences, which are articulated by the theory, lead logically to the structure of the theory and to a priori predictions.

Efficient theories entail as few assumptions and free parameters as possible. Theories come in all guises in ecology; they differ in how many assumptions they make, how many free parameters they have, and how many predictions they make. A free parameter is a number that usually cannot be derived from the theory but whose value is required to make predictions. The best theories are those that explain or unify the greatest number of phenomena and generate the most predictions on the basis of the fewest assumptions and free parameters. If a theory needed to account for all the details of a system to yield predictions about its future behavior, gathering sufficient data to evaluate its predictions would require an inordinate amount of work. Such a theory would be inefficient and as complex as the system it was attempting to describe. Theories should yield a compressed description of the system or phenomenon under study, thereby reducing its complexity. The property of reducing complexity through theory compression is an important and often neglected attribute of good (i.e., efficient) theory. A theory does not have to be a precise, faithful description of the phenomenon under study: We should value approximations. In physics, there are many approximate theories that make approximate predictions, which are essential to the refinement of the theory and progress in our efforts to understand the nature of the phenomenon under analysis. The examples include Newtonian mechanics and Newtonian gravity, which are now thought of as approximations of special and general relativity, respectively. In turn, many physicists expect general relativity and the field theories that describe particle physics to be approximations of a more fundamental, unified theory, the details of which are the subject of ongoing research. This iterative procedure is essential for evaluating what approximate theories can and cannot explain and for exposing where we might appropriately focus new work. It is common in ecology to claim that a theory is wrong because a specific observation disagrees with the theory. However, when empirical observations deviate from theory predictions, we are alerted to the possibility that we have not taken other important processes into account.

2. The concept of ecology

Ecology is the study of the interaction between living and nonliving components of the environment (Moran, 1979). This pertains to the relationship between an organism and all aspects of its environment. Ecology is a branch of science, including human science, population, community, ecosystem and biosphere. Ecology is the study of organisms, the environment and how the organisms interact with each other and their environment. It is studied at various levels, such as organism, population, community, biosphere and ecosystem. An ecologist's primary goal is to improve their understanding of life processes, adaptations and habitats, interactions and biodiversity of organisms. Let us have a detailed look at the ecology notes provided here and explore the concept of ecology.

The main aim of ecology is to understand the distribution of biotic and abiotic factors of living things in the environment. The biotic and abiotic factors include the living and non-living factors and their interaction with the environment. Abiotic components are non-living chemical and physical factors of an ecosystem. These components could be acquired from the atmosphere, lithosphere and hydrosphere. A few examples of abiotic components include sunlight, soil, air, moisture minerals and more. Living organisms are grouped into biotic



components, whereas non-living components like sunlight, water, topography are listed under abiotic components. Ecology can be classified into different types. The different types of ecology are given below:

1. Global Ecology. It deals with interactions among earth's ecosystems, land, atmosphere and oceans. It helps to understand the large-scale interactions and their influence on the planet.
2. Landscape Ecology. It deals with the exchange of energy, materials, organisms and other products of ecosystems. Landscape ecology throws light on the role of human impacts on the landscape structures and functions.
3. Ecosystem Ecology. It deals with the entire ecosystem, including the study of living and non-living components and their relationship with the environment. This science researches how ecosystems work, their interactions, etc.
4. Community Ecology. It deals with how community structure is modified by interactions among living organisms. Ecology community is made up of two or more populations of different species living in a particular geographic area.
5. Population Ecology. It deals with factors that alter and impact the genetic composition and the size of the population of organisms. Ecologists are interested in fluctuations in the size of a population, the growth of a population and any other interactions with the population. In biology, a population can be defined as a set of individuals of the same species living in a given place at a given time. Births and immigration are the main factors that increase the population and death and emigration are the main factors that decrease the population. Population ecology examines the population distribution and density. Population density is the number of individuals in a given volume or area. This helps in determining whether a particular species is in danger or its number is to be controlled and resources to be replenished. Ecologists study many different aspects of ecosystems. One aspect that is of particular importance is population ecology. This field of study is concerned with populations and how they interact with their environment. A population is all of the individuals of the same species within an ecological community. Ecologists are interested in the growth of a population, fluctuations in population size, the spread of the population, and any other interactions with the population or between it and other populations. Ecologists may also study different groups of populations that are not located in the same area but interact at certain times throughout the year. If this group of populations are the same species and can still interbreed, they are a meta-population. Individuals within a meta-population may migrate from one population to the other, which can help stabilize the size of the overall population.
6. Organismal Ecology. Organismal ecology is the study of an individual organism's behavior, morphology, physiology, etc. in response to environmental challenges. It looks at how individual organisms interact with biotic and abiotic components. Ecologists research how organisms are adapted to these non-living and living components of their surroundings. Individual species are related to various adaptations like physiological adaptation, morphological adaptation, and behavioral adaptation.
7. Molecular Ecology. The study of ecology focuses on the production of proteins and how these proteins affect the organisms and their environment. This happens at the molecular level. DNA forms the proteins that interact with each other and the environment. These interactions give rise to some complex organisms.
8. Human Ecology. It focuses on the relationship between humans and the environment. It emphasizes the impact human beings have on the environment and gives knowledge on how we can improve ourselves for the betterment of humans and the environment. Human ecology is the study of the interactions of humans with their environments, or the study of the distribution and abundance of humans. This definition is based directly on conventional definitions of biological ecology. Ecology is usually defined as the study of interactions of organisms with their environments and each other. More pointedly, it can be defined as the study of the distribution and abundance of organisms. This definition is deceptive. It implies much more than it says explicitly because virtually everything that humans are or do (and the same goes for any species) affects their distribution and abundance. Thus, using the term "human ecology" actually expresses a broad ambition to understand human behavior (Odum & Barrett, 2005). So, it is the study of the relationships between humans and their environments is a field with a large scope and complex history. It arose out of multiple disciplines—animal biology, anthropology, geology, ecology, and sociology—in the early 1900s as scientists struggled to make



sense of the impact of humans on the man-made and natural environment and the impact of environments on the social systems of humans.

Method: comparative, critical, theoretical, empirical, statistical. Comparison methods were used. Two main requirements have been met for the effective comparison: it is appropriate to compare only those events that have an objective commonality, and the comparison of objects was carried out on the basis of important indicators. Application of special technical devices and measuring units of the quantitative indicators of the research object with the measurement method was carried out. The experimental method was used for hypothesis testing in scientific research or scientific research of causal relationships between phenomena.

3. Conclusions

Advances in science are largely due to the iterative process of induction and deduction, prediction and testing. We believe that greater recognition of the positive role of this interplay in discovery will significantly enhance scientific progress in biology—and in ecology, in particular. Fifty years ago, John Platt (1964) embraced the interplay between induction and deduction and enjoined scientists to pursue a program that he dubbed strong inference, which directly links data acquisition to well-posed hypotheses. Strong inference entails following a simple but rigorous protocol of experimental science, efficiently designed to falsify alternative hypotheses. Platt's (1964) paper had a tremendous impact on the practice of experimental science and, more recently, in modeling (e.g., Beard & Kushmerick 2009; Railsback & Grimm, 2012; Gowaty & Hubbell, 2013). A clarifying discussion of theory types and their roles in discovery, as we have attempted here, may have a similar effect on ecology. The preeminence of inductive approaches in biology—and in ecology, in particular—is reflected in the fascination with gathering information about the world, as if we were to find understanding in its accumulation. This trend is becoming even more acute in recent times because of technological breakthroughs that are providing unprecedented quantities and varieties of information about organisms, from microbes to trees, and about environments, from local to global scales. The emergence of new sub disciplines, such as bioinformatics and eco informatics, along with monumental scientific efforts currently under way, such as the sequencing of complete genomes and metagenomes and the establishment of large-scale and long-term ecological monitoring networks (e.g., the National Ecological Observatory Network), clearly represent important and valuable scientific progress. However, we believe that for such efforts to fully bear fruit, they will need to be both guided by and more directly coupled to the development of efficient theory. Data is of great importance, but without theory, we have only phenomenology and correlation, and we lose the opportunity to yoke the complexity of ecological systems using simple, quantitative principles; as was suggested by Harte (2002), we need a better integration of Newtonian and Darwinian worldviews. With efficient theories, we can harness the potential of empirical data to make more--effective progress in our discipline and provide more-informed answers to the pressing problems facing humanity, such as understanding health, disease, and dysfunction in humans. As was clearly stated by the Nobel laureate Sydney Brenner, Biological research is in crisis.... Technology gives us the tools to analyze organisms at all scales, but we are drowning in a sea of data and thirsting for some theoretical framework with which to understand it. Although many believe that more is better, history tells us that least is best. We need theory and a firm grasp on the nature of the objects we study to predict the rest (Brenner, 2012: 461).

In a similar vein, it can be said that “big data without a big theory to go with it loses much of its potency and usefulness” (West, 2013:14). Understanding biodiversity from a theoretical perspective clearly represents a formidable challenge, but we are optimistic that, by aiming at developing efficient theories, significant progress can be made. We think that efficient theories provide a solid foundation for advancing science in the big data era.

In this research, we argued for clarifying and expanding the role of theory in ecology to accelerate scientific progress, enhance our ability to address environmental challenges, and foster the development of synthesis and theory unification. We focused on the need for developing more-efficient theories in ecology and for the application of such theories to inform experimental design and large-scale environmental--monitoring programs. Our primary goal was to identify characteristics of ecological theories that lead to more-rapid



advancement. We showed that more-efficient theories tend to make fewer, simpler, and more-fundamental assumptions and generate a greater number of testable predictions per free parameter than do less-efficient theories. Finally, we argued that ecology will advance much faster if ecologists embrace efficient, approximate theories and improve on them through a process of successive refinements. The development of efficient theories, we contend, provides a robust epistemological framework to foster progress and synthesis in ecology. This research was supported by the National Center for Ecological Analysis and Synthesis, a center funded by National Science Foundation (NSF) grant no. DEB-0072909, the University of California, Santa Barbara. We also acknowledge support from the Santa Fe Institute, through NSF grant no. DEB-0628281 and projects no. ICM P05-002, no. PFB-23, and no. FONDAP 1501-0001. This article resulted from a meeting in Valparaíso, Chile, in 2006. The first draft of the manuscript came into being in early 2007 as a manifesto for ecology, which we decided to make public, with the understanding that what we say may contribute to the advancement of the field. We thank many individuals who have provided valuable comments and criticisms and attended some of the meetings in which we discussed these ideas. In particular, we thank Jayanth Banavar, John Damuth, Aurora Gaxiola, Amos Maritan, and Igor Volkov. Finally, we thank three anonymous reviewers for their insights, comments, and helpful criticisms in some key conceptual and philosophical issues, which helped us to temper and refine our thoughts about theory in ecology. Advertising, if well devised and deployed, offers healthcare providers opportunities to dramatically improve their fortunes by successfully engaging current and prospective patients, hastening exchange and building vital market share. As such, health and medical establishments must strive to develop proficiencies in using advertising, something especially important, given the competitive intensity which characterizes the health services industry. Beyond intensive study of advertising and experience gained through its deployment, healthcare providers can bolster their advertising skills and abilities by tapping into the experiences of other healthcare providers, permitting insights which might potentially be incorporated into communicative pathways. This particular account shed light on the advertising operations of Willis-Knighton Health System, supplying food forthought for the advancement of advertising acumen.

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The problem of bilingualism in education and literature

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Abstract

In modern conditions, when the functioning of a work of art ceases to be a fact of only national literary criticism, but becomes an element of the world literary process, the national context of a particular literature, the significance of certain phenomena occurring in it, is rethought, and because of this, the originality of its relations with other literatures comes to the fore. The study of the problem of bilingualism is one of the topical topics of modern scientific thought. As a literary creation, artistic bilingualism has an ancient and rich history, for example, the mutual influence and development of medieval Spanish literature with Arabic literature. The problem of artistic bilingualism has become widespread in the national literature of post-Soviet countries. First of all, this was due to the language situation on the territory of the former USSR. The study of the problem of artistic bilingualism was reflected in the works of the famous Azerbaijani and Russian writer Chingiz Huseynov in the XX-XXI centuries. The writer spoke about artistic bilingualism in his article "On the question of non-Russians" and how this problem manifested itself, attracted him in his work and also how can affect bilingual education.

Keywords: Education, bilingualism, national language, literature.

1. Introduction

Artistic bilingualism as a fact of literary creativity can be traced back to the ancient era, which is characterized by Latin Greek and Greek-Latin forms of bilingualism as evidence of the interaction and interaction of the Latin and Greek languages, literature and cultures of Rome and Greece. Many ancient philosophers and poets knew several languages. Thus, the Roman poet Quint Ennius (239-169 BC) not only spoke Greek and Latin, but also processed Greek tragedies and comedies, satires and epigrams. In the poem of the Roman poet Lucretius (about 98 – 55 BC). C.) "On the nature of things", researchers have detected quite a large number of vehicle, some of them by this time already firmly entrenched in the Latin language, the other – used by the poet in stylistic purposes. In the text "Roman history" of Appian, written in the Greek language, the influence of the Latin language. According to the French linguist Martine, the fact that Cicero was a Latin-Greek bilingual left an indelible mark in our modern dictionary. Various forms of artistic bilingualism and multilingualism are also characteristic of medieval literature. For example, the literature of medieval Spain reflects the interaction of Arabic and Romanesque languages and cultures as a consequence of the occupation of Spain by Arabs and the Arabization and Islamization of the indigenous Spanish-Roman population. Western European literature of the XVIII-early XX century is also characterized by various forms of artistic bilingualism. Many English writers and poets in his work turned to the French language. These include Oscar Wilde, C. Swinburne. and the Last poems were written also in Greek and Latin. In turn, the works of some French writers reflected the influence of the English language. So, on the pages of novels by J. Verne we find a lot of English words and expressions. P. Merime knew not only English, but also some Slavic and, in particular, translated the works of Pushkin, Gogol, Turgenev. Equally easy in French and German wrote Swedish writer Strindberg. We can recall other forms of artistic bilingualism in the Western European literature of this period: Polish-English (in the works of George Conrad), Polish French (G. Apollinaire), Franco-German (A. Chamisso), gramoteinskoe (d. hydrogenated fats), etc.

Each of the forms of literary and artistic bilingualism arises from the needs of social practice, the individuality of a writer and is a specific product of the socio-historical conditions of a certain era. For example, the existence of various forms of artistic bilingualism and multilingualism in the history of Russian literature is conditioned. The old Slavonic (Church Slavonic) language left a noticeable trace in the ancient Russian monuments of writing. Throughout the XVII – XX centuries. in Russia, there are Russian-Latin and Russian-Greek forms of artistic bilingualism represented by the works of K. Istomin, S. Medvedev, and F. Prokopovich. M. Lomonosov et al.



After the reforms of Peter, I in Russian cultural life was a significant part of the Germans, so a number of Russian Germans-writers write their works in Russian (E. Rosen, E. Huber, etc.). In the early XIX century, when German poetry led by Goethe took the leading position in European lyrics, among the Russian noble intelligentsia originated the cult of Goethe. On the one hand, the attempts of Russian poets to recreate the style of Goethe in poetry in his native language (V. Zhukovsky, V. Küchelbeck, etc.), and on the other hand, the deliberate parody of German poetry (I. Turgenev, A. Tolstoy, etc.) manifested his influence. Wide and versatile interest in Russia of the XVIII century to France, its political and cultural life, literature and language caused emergence in this period of a considerable number of the works written by the Russian authors in French. Among them are well-known to the modern reader poets (V. Trediakovsky, V. Kantemir, V. Kapnist) and less well-known (A. Shuvalov, S. Rummyantsev). Russian-French form of bilingualism reflected in the works of Russian poets such as Pushkin, M. Lermontov, F. Tyutchev, E. Baratynsky. The list of forms of bilingualism in the history of Russian literature can be continued. However, the examples already given show how rich and diverse the literary heritage of bilingual (multilingual) Russian writers is. Important for the understanding of artistic bilingualism is the concept of the situation of bilingualism in a literary text.

The situation of bilingualism in the structure of a work of art can be reflected in two ways: in the style of artistic speech and in the ideological and compositional architectonics of the work. In the first case, the situation of bilingualism is characterized by the presence in the literary text of foreign language means used for various purposes. And we are talking about foreign-language means, which at the time of creation of the work are not belonging to this language system, that is, are not borrowings. For each work of such a plan is characterized by its own situation of bilingualism (multilingualism): the use of elements of a language, quantitative and qualitative features of their use, the difference in the ways of introducing foreign language speech in the context of the work of art. In the second case, elements of other languages may not be used (or rarely used), and the situation of bilingualism is reflected in the plot-thematic structure of the work; it is characterized by the author or any of the characters of the work.

The inclusion in the text of works of elements of another language, and thus the creation of a bilingual situation, usually due to the object of artistic reflection, the laws of artistic creativity. Elements of other languages are used as artistic means to reflect the living reality with its social, religious, political, national, linguistic features. Thus, the broad and versatile interest in Russia XVIII – XIX centuries, France, its socio-political and cultural life, literature and language resulted in the fact that half the actors of the epic L. N. Tolstoy's "War and peace" speaks French, and the text of the work is full of macaronic speech. It is estimated that about 2% of "War and peace" is written in French. In turn, the France of the XVIII century showed a great interest in Russia and everything Russian.

Academician M. P. Alekseev said: "in Paris in the course was the term" russoric", denoting a tendency to everything coming from Russia, including the Russian language. Russian words and phrases, not to mention their own names and geographical names, come across in a large number of French printed sources, including fiction. In the nineteenth century a significant number of Russian words can be found in the writings and letters of A. Lamartine, A. de Vigny, V. Hugo, S. O. Sainte-Beuve, not to mention those writers who traveled to Russia or lived there and managed, in varying degrees, to get acquainted with the Russian language" (Alekseev, 1981: 5). The traditional understanding of literary bilingualism as creativity in a non-native language or two languages rests primarily on the differences caused by the process of creativity only in the language that is native to the writer, and its specificity in a non-native or two languages. These differences in the figurative form reflected is Turgenev, who claimed: "you can write only in your own language. When I write in Russian, I'm free. When I write in French, I feel constrained. When I write in English, it seems to me that I put too tight boots on my feet" [Alekseev, 1981: 12]. Of course, this lack of freedom is one of the reasons for the emergence of foreign language means in the literary text. However, most often the inclusion in the text of works of elements of another language is due to the object of artistic reflection, the laws of artistic creativity. Elements of other languages are used in the texts of works as an artistic means to reflect the living reality with its social, religious, political, national, linguistic features. The largest theorists of translation attributed translation to artistic creativity. AV. Fedorov argued that the translation of fiction "allows artistic creative tasks, requires literary skill and refers to the field of art" (Fedorov, 1958: 21). G. Gachechiladze believed that "literary translation refers to the field of artistic creativity, obeys its laws and language laws is in the same relation as the original work" (Gachechiladze, 1982: 88). In many linguistic works translation is considered as a special kind of bilingualism. B. A. Larin emphasized that "translation is the highest, namely: quite differentiated formation of bilingualism" (Larin, 1974: 6). W.N. Komissarov points out that "a distinctive feature of the translation is the participation in the process of communication of two languages, its bilingual character" (Komissarov, 1973: 31). In this regard, it should be mentioned that translation can have a significant impact on the development of the system of



a language, that is, the result of the usual consequences of bilingualism. It is well known that the development of the Russian language, especially its lexical system, was significantly influenced by translations from Western European languages. The failure of derivational means of a book of Russian folk and Church Slavonic languages has led to the fact that in the translations there are many untranslated words, and the crippled. Literary translation is, thus, one of the forms of literary interrelations between peoples, in the process of translation there is a mutual penetration and enrichment of literature, cultures and languages. These interactions give rise to the latest meanings and constantly require the reader to other, still unknown, not used and therefore non-trivial approaches that raise the mechanism of influence and the process of perception of the poetic work to a new height. In other words, in the theoretical and linguistic sense, these multidirectional and diverse interactions contribute to a significant semantic deepening of the text of the poetic work.

Certain patterns can be traced in the location of bilinguals in the text space. Often another language is the author of the work in strong positions pretext (title, epigraph) and text (start and end scenes), making the text very strong position. The presence bilingual in the subspaces of the initial text (the title, the epigraph, the first verse) and, at the same time, at the end of the work (the last verse) leads to the creation of the shape of a ring, serving to further extension and the emphasis on the role of the complex of another language. But being placed only inside the actual text of the poetic work, bilingual "tends" to undoubtedly strong positions -the beginning and the end of the stanza, as well as the right share of the poetic line, which involves it in rhyme (most often with the Russian sound complex as a second, reference rhyme element) and anjambeman (Nikolayev, 2006).

Bilingual invariably integrated into the text of a literary work as an organic, indispensable and integral component of it. By its nature, it is an undoubted metatextual component. Any of its presence in the composition of the work of literature is determined by the author's intentions and justified by the goals of stylistic, functional, aesthetic, linguistic and General cultural plans. Thus, bilingualism, which is part of the title complex and is a typical metacomponent, should be considered as the code of the work, which simultaneously contains the "solution": the inclusion of a foreign title in the poem confirms the precedent of text bilingualism as a source attribute of the text at the earliest stages of its perception (Nikolayev, 2006).

The problems of formation and integration of national consciousness and universal internationalist interests and traditions cannot be separated from the problems of bilingualism. Chingiz Huseynov did a lot to understand the problems of literary bilingualism. In his article entitled "on artistic bilingual creativity: history, theory, practice" (Huseynov, 1987: 79), he suggests that in "the question of bilingual, or rather Russian-language creativity of the national writer. we used to divide our multi-ethnic culture in the Russian and national." Fundamentally important soap Chingiz Huseynov in this article is due to the fact that the problems of bilingual art are due to interrelated circumstances: one is the development of "national" languages, literature, and the other is the growth of the meaning of the language "interethnic", Russian, on the basis of which arose as bilingual writers (CH.Aitmatov, I. drutse and others), and Russian - speaking non - Russian writers, however, to "national" literature (O. Suleimenov, T. Pulatov, M. and R. Ibragimbekov and others).

The closely interrelated phenomena deserve equal attention and understanding: one of them is the development of national languages, the other is the growing importance of the language of interethnic communication, the Russian language in the first place. At the same time, it is necessary to proceed from the fact that the Russian language has brought to life the potential of other languages of the country, accelerated their development, in which translations play a significant role. It is necessary to proceed from the fact that the Russian language has become the language of creativity of more than one generation of writers, representatives of national literature of the country, and through which the world learned about the peoples they represent. The problem of bilingualism cannot be considered without closely interrelated patterns of development of national languages and the growing importance of the language of international communication in this process. Russian language, according to the researchers, has a significant impact on the awakening of the potential opportunities of the languages of other peoples of Russia, accelerating the development of artistic culture, carried out through translation activities, and authorized translations in the national literatures. In 60-70 years, due to the growth of national literature, bilingual creativity has become a phenomenon of continuous. This is evidenced by the fact that the multinational Soviet literature has increased the number of writers who have received all-Union fame and entered the world arena as national artists of the word, being bilingual writers. Chingiz Huseynov, a well-known literary critic, doctor of Philology, shows a keen interest in the problems of bilingualism, fruitfully engaged in the study of consolidating processes in the literature of the peoples of the former USSR. His stories and novels on historical themes were originally created in Russian, and then translated by him "from Russian into native Azerbaijani". Of great interest is the experience of Chingiz Huseynov's translation work,



when the author does not strictly follow the original, but re-creates, reincarnates images and content, "adjusting" his language to the thought expression of a new language, to the attributes of national thinking, on which his characters and the plot of the original find a new life. This approach allows us to perceive the translation as an independent work, as an original prose. Huseynov himself admits that during the authorized translation he receives two equal versions, two original works in Russian and Azerbaijani languages. Evidence of this is his novel "Fatal Fatali" about the outstanding Azerbaijani poet, novelist, playwright and philosopher Mirza Fatali Akhundov: "when translating, - Huseynov notes, - it is enough to reflect the text (as in the original), when creating the original, it is necessary to identify and display the context, as well as to bring out and expand the subtext" (Huseynov, 1988: 403).

Further, the author notes: "with this, not translation, but original work, the educational and cognizable role of the work increases, involving the Azerbaijani reader in the historical reality of Russia, in the world of acting Russian figures, which are known to him insufficiently and comprehensively, and often, so to speak, in statics, individually, and not in live interaction, with what in the elements of his native language, in the context, including his history, in the context with familiar figures" (Huseynov, 1988: 403). Researchers tend to believe that each of the originals - Russian and Azerbaijani lives its own life in the national literatures of the two peoples: in Russian - as a phenomenon of Russian prose writer of Azerbaijan, Azerbaijan - as a phenomenon of Azerbaijani literature, historical romance. Bilingualism is a historical reality not only in Russia. Huseynov gives an example of the fact that the Azerbaijani poet Fuzuli was trilingual, he wrote in the middle ages. In the book, "This living phenomenon" in 1988. H. Huseynov in his translation brings the words of the poet: "I was surrounded determination, and sat, propping his cheek on his hand, he thought, and began to write poetry; sometimes in Arabic, delighting Arab Chrysostom narratives; it was easy for me, because Arabic is the language of my scientific thinking; sometimes in Turkic drove a horse on the Maidan of poetry, bringing pleasure to judges of graceful, and it wasn't difficult for me because the Turkic poetry is native to me; sometimes I strung pearls on a thread of the Persian speech, and in this garden I tasted that the soul wished" (Huseynov, 1988: 403). All this makes it possible to speak of artistic bilingualism as a way of ensuring the real and potential impact of one language on another, and at the same time, of one culture on another (borrowing), which is part of the problem of contact links.

2. Methodology.

Logical and cognitive activity of students with the guiding role of the teacher. The method is a system of consistently interrelated actions of teachers and students, ensuring the assimilation of the content of education. Methods:

1) Creative reading. The goal is to activate artistic perception. Techniques - expressive reading, commented reading, conversation, creative task, creating problematic situations. Types of students' activities - reading, memorizing, listening, making a plan.

2) Heuristic - students' search for answers to questions. Techniques - building a system of questions, tasks, creating problematic situations. Types of students' activities - selection of artistic material, retelling with elements of analysis, analysis of an episode, an image, drawing up a plan.

3) Research. The goal is to develop the ability to independently analyze a literary work. Techniques - formulation of problematic issues, formation of research tasks, compilation of a list of literature on the problem. Types of students' activities - writing a plan or a synopsis, work on a textbook, preparation of a report.

3. Result, Discussion and Conclusion.

The use of a bilingual approach in teaching literature is one of the conditions for the development of the creative component, language and communicative competence of students.

The specifics of the bilingual lesson help the teacher to solve a number of tasks:

- create a high level of motivation in the lesson;
- use a literary text (including in the original language) to develop the creative abilities of students;
- to form the speech and communicative culture of students.

The teacher organizes the student's educational activities in such a way that he does not passively perceive and absorb the text of the teaching material or the words of the teacher, but actively thinks, extracting the necessary scientific information from both sources. Therefore, the teacher is the organizer of the student's educational activities both at the lecture, and in the process of independent work, and in practical and laboratory classes. Thanks to such an organization, the student does not act as a passive consumer of information, but as an active "getter" and producer of it.



Bilingual education makes it possible to realize cultural, ethnic identities and diversity, to join national values. Thanks to such training, communication of different ethno-linguistic groups is established, additional linguistic knowledge is acquired as one of the guarantees of social mobility [Dzhurinsky, 2014: 165].

In the course of bilingual education, there is mutual influence, interpenetration, awareness of the common and specific of speakers of different languages and cultures. The child's imaginative thinking is formed in close connection with language, and bilingualism, built on comparative meanings, allows for an adequate understanding of a particular culture, and therefore, to remove interethnic contradictions. Migration numbers are increasing in the world and bilingual education will have more attention in the future as well. Educator should focus on this topic more than earlier times.

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Lessons from the COVID 19: Transformation of higher education through distance learning

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Abstract

The topic of the research is relevant because it is due to radical changes in the organization of the educational process in all universities of the country in connection with the COVID-19 pandemic. Over the past 2019-2020, 2020-2021 academic years, almost all the country's leading universities were massively forced to switch to a distance learning format using one or another electronic educational environment. Such a sharp transition to distance learning revealed many sore points of the entire education system - the system showed insufficient preparation of participants in the educational process to work in isolation. The article analyzes the perception educational disciplines as the main participants in the educational process in the context of an emergency transition to a remote learning format. Distance learning is becoming one of the main factors in reforming the educational process in universities. The strengths and weaknesses of this process are analyzed, it is concluded that in the system of modern higher education, the distance learning format can be considered a form that complements and enhances the educational and educational potential of the education received.

Keywords: Distance learning, blended learning, digitalization, COVID-19, interactive technologies

1. Introduction

Digital transformation is a rather topical trend of modern society in all spheres of the surrounding reality, including education. But to talk about any long-term forecasts and prospects, developed and successfully implemented methods and programs at the present stage is not necessary. "The society is gradually realizing the scale of the problems that arise. In recent decades, politicians and scientists have repeatedly drawn attention to the importance of improving the quality of education. All the developed countries of the world have undergone educational reforms, with funds allocated and significant efforts made to improve the performance of educational systems. And yet the education systems of developed countries fail to cope with the task of preparing people for life in the conditions of the digital revolution" (Uvarov,2019). Since the spring of 2020, the country's education system has urgently and rapidly entered the distance format, which was mainly implemented through the activation of various electronic educational systems and interactive tools. This transition not only made it possible to check the results of the digitalization of the educational process already carried out by most universities in the country, but also became a kind of regulator of the intensification of the digital transformation of education, which is one of the main requirements of the modern educational standard. It should be noted that the impact of the current state of affairs in the educational system of the country on the quality of education itself has yet to be assessed. However, even now it seems possible to study the impressions of the direct participants in the educational process - teachers and students - from the forced and "imposed" by the situation learning process within the distance education format in conditions of isolation. We believe that the urgent transition of the country's educational institutions to a remote format is a very adequate response of the entire education system to the aggressive challenge of the times. Unlike all previous reforms and modernizations, this situation is characterized by a number of features.

First, in terms of coverage, the process has spread to all levels of the functioning of the educational system. Secondly, there was practically no preparatory and test stage for such a massive transition to a remote format.



Thirdly, the entire process of transition to a new format of education was carried out in a short time and simultaneously throughout the entire educational space of the country. Here it is necessary to pay attention to the fact that in the world practice of education this form of distance learning with the use of an extensive resource of info communication means has a rather long history.

The accumulated world experience of distance education allows us to talk about the development of this process in the following areas: 1) distance learning within the global Internet system; 2) active introduction into the educational process of mobile and cloud technologies, open educational platforms that contribute to the targeted choice by the students themselves of an individual learning path, taking into account the needs and characteristics of each and, accordingly, the organization of their autonomous learning (Kukulska-Hulme,2010). It is important to note that such interactive technologies provide students with the opportunity to work and study outside the classroom at any time convenient for learning (Driver,2012), which allows you to quickly diagnose and evaluate the entire range of problematic issues in the learning process, using a mobile interactive environment as an instant feedback tool. This also makes it possible to make adjustments to the forms of its conduct during the educational process, stimulates the emergence of new forms of demonstration and presentation of educational material (video conferences, webinars created by students themselves, moblogs, etc.), and also helps to introduce new formats of interactive classes with the help of Internet applications of augmented reality and geo-location (Driver,2012). In the system of higher education of the country, for quite a long time, developments have been carried out and electronic educational resources, electronic educational courses, electronic educational methodological courses in the disciplines of the curricula of each university of various directions and the level of training of students have been actively introduced. Successful practical experience of introducing a digital format into the educational process has allowed the system of higher education in the country as a whole to quite harmoniously and painlessly switch to the format of remote learning using a whole range of electronic resources. However, at the same time, the new reality made it possible to quickly reveal a number of problems associated with various nuances of the functioning of the educational activities of an educational institution. Let us pay attention to the difficulties in the work of teachers in a remote learning format regarding the organization of teamwork, maintaining the attention of students, while it must be emphasized that the learning process itself should continue the traditions of the usual, i.e. The task of teachers in the new conditions is “to make learning interesting in a format where, in essence, your emotional and intellectual moments go asynchronously” (Kalyukov,2020). It follows from this that the existing experience in the creation, implementation and application of electronic courses, interactive educational materials, etc. turned out to be insufficient in practice in a remote format for organizing a full-fledged training format. As a result of the transition to full "remote work", significant contradictions were revealed between different approaches to design and implementation by all participants in the educational process and insufficient preparedness of teachers and students to work in this format of education. Thus, the key problem of the study concerns the identification of the main objective and subjective reasons that prevent participants in the educational process from using contact interaction in a distance learning format. The purpose of the study is to identify the key problems faced by teachers and students in the context of a complete transition to distance learning based on the experience of distance learning and the impressions of the main participants in the educational process, and to propose new models of educational forms with the full digitalization of the educational process.

Discussion of the problem

The mass transition of the domestic higher education system to a remote contact learning format using electronic interactive technologies made it possible to see not only the great possibilities of such an organization of the educational process, but also the limitations associated with it. The advantages and disadvantages of “full” distance education were written long before the onset of pandemic processes, when it was considered on the example of individual educational institutions where education was conducted only using online interaction (open educational institutions, virtual universities, etc.). However, at the moment, distance learning is turning from an alternative into a mandatory format (Bazarov,2017) of vocational education in conditions where the process of digitalization of the educational process has not been fully implemented and mastered by the practice of higher education (Tikhonova,2018). From scientific discussions about the advantages and disadvantages of using digital education, universities were forced to urgently move to a large-scale introduction of new teaching methods, regardless of the readiness of teachers and students to use Internet technologies in teaching practice (Giyasov,2020). The practical results of the research demonstrate the following: there is a tendency to reduce the factor of motivation for learning, there is a loss of intrinsic value of knowledge, the content of education and training as a whole is simplified. This state of affairs is fraught with the loss of alternative approaches to the



content of education itself. How emphasizes A.I. Rakitov, “the formalization of professional knowledge and the reduction of its diversity can, under certain conditions, have a negative impact on further on the practical activities of university graduates.” (Rakitov,2018., p.42). The process of total digitalization of all education illustrates how, on the one hand, there is a division, isolation of courses, and on the other hand, there is a rather amateurish approach to the creation of the electronic courses themselves of new disciplines, while the quality of these courses and the structural and semantic logic of the subject do not meet the requirements of higher education. In addition to “basic educational sources, a large number of games, information from social networks, open sites and applications are involved in the learning process, which can lead to a superficial study of their subject by students, its simplification and primitive vision. As a result, there is a shift in the ways of knowing the world - from theoretical understanding to direct spontaneous action, not always conscious. In the flow of spontaneous interaction with information, scientific facts and objective knowledge gradually lose their significance” (Kolesnikova,2019).

According to modern research, the “forced” format of universal online learning expects from a modern student the ability to self-learn, develop their own motivation for learning and possess the necessary skills for this. However, it should be noted that not every student is able to master the subject on his own, especially when mastering complex courses. Only 10–25% of students in the distance learning format using distance technologies complete their studies satisfactorily (Kolesnikova,2019). Many researchers state the fact that in the conditions of a complete remote learning format it is practically impossible to implement one of the main postulates of pedagogical thought - the educative, formative, developing and promoting role of the learning process itself. The process of education in education plays a very important role, because. implies the directed development of the personality of the student, the formation of emotional and value attitudes in the moral choice of the student himself in various situations; living and showing empathy in extraordinary situations and new created learning conditions based on the perception of social concepts and attitudes. In the process of distance learning communication, the upbringing of the student's morality is lost, because, unfortunately, in this format it consists only in accepting a notification about what is considered good or bad in society. As they usually say, one can know the norms of morality well and be immoral, badly brought up, a bribe-taker, a criminal (Verbitskiy,2019). The lack, and sometimes the complete absence of a live dialogue between the main participants in the educational process in a remote format of education, digital imitation of traditional "live" communication, which inseparable from a person, lead to the problem of transferring indirect, hidden, tacit knowledge (Rakitov,2018). Undoubtedly, the possibilities of modern Internet technologies are highly efficient and relieve modern students from intense mental work in search of the necessary information. This leads to the fact that students develop the habit of searching for quick answers on the Internet and, as a result, lose the skill of working with voluminous information of texts. Many specialists dealing with the issue of speech activity notice the degradation of students' speech, and with it thinking. Foreign researchers draw their attention to the fact that, in general, mobile technologies have freed us from many daily problems, but as a result, the mechanism of destruction was launched: having freed us from mental stress, artificial intelligence weakens and destroys us, as we lose the ability to think, reflect, analyze, and draw conclusions (Novakovskaya,2013). These, in our opinion, are the main problems of distance learning, which are paid attention to by domestic and foreign researchers. Undoubtedly, the possibilities of modern Internet technologies are highly efficient and relieve modern students from intense mental work in search of the necessary information. This leads to the fact that students develop the habit of searching for quick answers on the Internet and, as a result, lose the skill of working with voluminous information of texts. Many specialists dealing with the issue of speech activity notice the degradation of students' speech, and with it thinking. Foreign researchers turn their attention to the fact that, in general, mobile technologies have freed us from many daily problems, but in the end they have launched a mechanism of destruction: having freed us from mental stress, artificial intelligence weakens and destroys us, as we lose the ability to think, reflect, analyze and do conclusions (Novakovskaya,2013). These, in our opinion, are the main problems of distance learning, which are paid attention to by domestic and foreign researchers.

2. Methodology

Let's move on to consider some preliminary conclusions in the conditions of remote learning in connection with the challenge of our time - the restrictions associated with the COVID-19 virus. We were concerned about the attitude of the participants in the educational process - students and teachers - to this format of obtaining and transmitting knowledge. In the conditions of self-isolation, the educational process began to be carried out on the basis of electronic courses of disciplines and electronic educational and methodological complexes. To identify different points of view on a new form of organization of the educational process at the beginning of the



academic year 2020–2021, the author of the article conducted a survey of 250 students with experience in distance learning and mastering the main full-time programs in the humanities undergraduate studies, and 67 teachers. The identifiers by which the respondents were asked to recognize and evaluate their own readiness to switch to distance learning were taken from the materials of published studies by leading scientists (Ilchenko,2020). The questionnaire included a set of closed-ended multiple choice questions. In the distance learning format with a remote form of conducting classes, the main problems that reduce the effectiveness of classes were the technical possibility of implementing practical classes in the electron educational system, the conditions of training at the place of isolation and the level of knowledge of online services by all participants in the educational process.

3. Results

As the answers of the respondents showed, more than 80% of the student community were ready for the constant use of interactive tools in the educational process. However, the teaching staff demonstrated readiness in this matter by 35%. It was the teachers who could not immediately switch to the mass use of distance learning with remote access using electronic educational technologies. 95% of the student audience had unlimited access to a personal mobile device, but only 45% of respondents had these devices fully ensure the fulfillment of all learning tasks (lack of a webcam, broken microphones, headphones, small screen, etc.). Quite often, verbal interaction between a teacher and students depended not only on the technical condition of personal interactive tools, but also on the very quality of the Internet connection, which was rated by students and teachers as average (55%). Issues related to additional costs for organizing training turned out to be insignificant for respondents (9%), because compensated by savings on transport, meals, etc. One of the questions to which opposite answers were received from the respondents concerned social and living conditions. 90% of students continued the educational process in fairly comfortable conditions, only 10% noted that some factors prevented them from studying (telephones, the presence of household members and pets at home, music, good weather, the smell of food, etc.). The results of teachers' answers (84%) showed that it was difficult to achieve comfortable conditions for conducting classes at home, since it was necessary to combine social roles and fulfill the duties of a father / mother, etc. It was difficult to define the zone of personal and workspace. In addition, teachers had practically no opportunity to regulate working and free time (92%). In connection with the digitalization of the educational process, the question arose about the possession of digital competence by all participants in the learning process. Answering the question about the possession of this competence, 94% of students considered themselves to be confident users of Internet resources who are proficient in various means of building communication in the digital environment. More than 80% understand and use multimedia technologies and various functions in their work electronic resources. However, the reality of our time shows that the advanced possession of digital competence among the younger generation is by no means associated with the desire for education or self-education. Unfortunately, a new generation of students use interactive communication tools in most cases to games, watching videos and movies, "sticking" in social networks and chat in various instant messengers. They also use the Internet to "download something" or "buy something". Most students are constantly online and prefer to spend most of their time in a virtual format (sometimes up to 12-14 hours a day). This behavior of the younger generation is noted by many researchers and comes to the conclusion that such dependence on gadgets can negatively affect the socio-civic, cognitive and emotional development of students. Relatively less often they go to the Internet "to read something". Many students, being in an active online mode for more than six hours a day, prefer a virtual format of communication and leisure in the form of games. Internet-addicted behavior negatively affects their social, cognitive and emotional development (Pogozhina,2020). It should be noted that the very organization of the educational process in remote mode has become more laborious. The psychological and physical costs of the teaching staff in organizing and conducting practical classes online have increased. Teachers were forced to be constantly online: conduct practical classes during the schedule hours, check the performance of independent work of students, constantly be on mobile communication, consulting, preparing and presenting presentations, holding webinars, participating in meetings, etc. From this we can conclude that teachers, as the central link in the educational process, had to simultaneously combine and fulfill the roles of an educator, methodologist, organizer, mentor, moderator of the interactive electronic educational space (Agranovich,2020). As the results of the survey showed, in the format of distance learning in conditions of self-isolation, the contribution to the educational process of teachers turned out to be much more voluminous than the efforts that students show when studying new material, completing and submitting mandatory tasks on time. However, 20% of students constantly experienced a lack of time to prepare for practical classes, and 29% were unable to study theoretical material in time. For a student, the measure, the value of the effectiveness of the course is an educational achievement, an indicator, i.e., points. For a teacher, an indicator of the effectiveness of



the course is the presence of constant, contact, positive feedback. The answers of the majority of teachers in the questionnaire showed that teachers do not feel satisfaction from online classes, although the learning outcomes, according to the university's rating performance, are generally quite good - 93%. The reasons they cited as an explanation were: lack of direct feedback (76%); inability to track the emotional reaction of students (88%); lack of dialogue with the entire audience (93%). Teachers (88%) also noted the fact that in the remote format of communication with the audience, they did not have the opportunity to check what the student is doing now, what he is doing, what e-learning tools uses. It was difficult to establish the degree of independence in the performance of test and control tasks, which, in fact, did not correspond to the objectivity of evaluating learning outcomes. In the new conditions of limited space with a certain time limit, the lack of external control over the quality of assignments weakens the motivation of the student community to independently perform certain tasks. In the format of remote classes, it was practically impossible to adapt the oral form of communication between the participants of online meetings. For technical reasons, it was necessary to combine synchronous and sequential interaction, because had to regulate the number of participants, which was especially evident when conducting oral group projects (meetings, negotiations, group presentations, discussions, interviews, etc.). A full-fledged dialogue in these conditions is practically impossible. Both students (87%) and teachers (90%) noted this fact as a disadvantage. For this reason, many teachers replaced the oral content of assignments with written work, and this same type, monotonous type of work reduced the motivation of students. According to the results of the survey, 56% of students recognized the effectiveness of tasks in the oral presentation of educational material as minimal, 34% rated it as "average", but for 90% of respondents the effectiveness of written forms was "high". Despite the fact that access to electronic resources for students (more than 90%) was free, this did not serve as a reason to stimulate their cognitive activity. Positive results of the educational process are determined by its effectiveness. It is worth noting that the effectiveness depends not so much on the quality and quantity of e-learning materials, but on the needs of students in them (Borzova, 2018). The final question of the questionnaire for all respondents was: "How satisfied are you in general with the organization of the learning process in a remote format using electronic technologies?". The answer to this question showed that more than half of all students surveyed were completely satisfied with this training format - 86%, however, 35% of respondents noted not very convenient platforms and the work of electron educational system (Moodle). Only 17% of the respondents answered that they were not satisfied with the remote format of the classes. As an explanation, the latter added that this was dictated by the fact that "practical classes are not conducted in the usual way, because the teacher simply gives the task in the textbook or in the EES, and he turns off"; "teachers themselves were not always ready for such a format"; "the schedule was often not observed", etc. In general, the majority of the students surveyed were satisfied with the organization of the educational process in a remote format. The teachers were equally divided in their answers to this question. Many quickly mastered new educational technologies and almost painlessly entered the new format of the educational process. But for half of the teachers, it turned out to be quite problematic. Not everyone was able to accept such a learning format, where there was no feedback from students. There was no control over the fulfillment or independence of tasks, etc. Considering that the transitional period to this form of education was completed in within a short period of time, such a result is quite satisfactory. He showed that the university was able to respond promptly to the challenge of the surrounding reality. It is worth noting that by the beginning of the pandemic restrictions, the university was already generally ready for the transition to a distance education format, EES was quite effectively and successfully used in blended learning technology by all structural divisions of the university. In addition, the department of modern educational technologies of the university promptly developed instructions for teachers and students on mastering free platforms for conducting remote classes, participating in webinars on Google Hangouts Meet and Adobe Connect, as well as meetings on Google Meet, Zoom Meetings. Operational training of all teachers was organized and conducted. Such an approach to the organization of the educational process allowed the educational department to carry out high-quality operational control over the conduct of classes in accordance with uniform criteria and indicators. Selected digital platforms helped to make the educational process visible, to respond productively enough to the adoption of operational and tactical decisions. The Google Hangouts Meet, Adobe Connect, Zoom Meetings platforms provided the opportunity to conduct not only practical and lecture classes, but also meetings, planning meetings, video conferences. This made it possible to correct such a factor as time, i.e., each participant in the process could get to the meeting from any location. However, it was not without organizational problems. In the questionnaires, teachers noted that many classes began and ended at the wrong time right on schedule (due to objective and subjective reasons); work in a remote format was complicated by the fact that it was necessary to design each lesson more carefully, from formulating tasks to conducting knowledge control. Many teachers (83%) noted that the time to prepare one lesson increased by 2 times compared to the traditional form of conducting. The results of the survey among students and teachers



actualize the problem of the quality of optimization of the educational process, which in turn requires the search for new organizational and coordinating mechanisms to regulate the interaction between the teacher and the study group. We see one of these solutions in “reducing the number of disciplines studying simultaneously and in parallel” (Pogozhina, 2020). This can be achieved if we switch to a concentrated model of the organization of the educational process, when two or three interrelated disciplines are combined into a module and studied in parallel (Gafurov, 2020). All practical classes in a remote format were held at the webinar sites, where the teacher had to play the role of a moderator. In order to ensure that students do not have a consumer attitude to classes (as spectators), do not weaken the motivation for learning, increase attention to each block of the lesson, we propose to arouse their interest in the learning process itself and thereby encourage joint scientific and cognitive activities through a new approach to conducting practical classes based on the webinar model. In other words, the student must be able and ready not only to be a passive participant in a practical lesson in the form of online communication, but also to be able to independently design and conduct webinars, i.e., create an objectified learning outcome - an online product of professional communications. We propose to introduce into the educational process such a form of practical training as a project activity to develop a webinar on a specific topic for each student or group. This form of activity will help overcome the limitations of separate location, as will allow to combine various types of student joint activities (Bazarov, 2017).

Conclusion

The transition to a full distance learning format in 2020 accelerated, in our opinion, the virtualization of education, which caused a large-scale restructuring of the entire educational process in the education system, in which the model of contact distance learning using the university's EES and Internet technologies acted as a new factor. Such an experience of a mandatory and total transition to a distance learning format not only made it possible to create a new learning model that has great technological capabilities, but also helped to identify the most problematic issues of online learning. The most vulnerable places, as the survey showed, affect the sphere of communication between participants in the learning process, namely: the lack of "live", direct contact with each other. Therefore, the remote learning format encourages the teaching staff of universities to search for new methodological approaches and, first of all, above all, to the search for new models of effective online communication.

So, we can conclude that in the system of higher education, distance learning can be considered and applied not as the main one, but as a supplement and strengthening the traditional basic format of higher education. Despite the fact that the forecasts for a return to the previous format of organizing education are not yet clear, it is worth considering now the question of the model for organizing the educational process in the post-pandemic period.

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The teaching of English as a foreign language in preschool children

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Abstract

Lately, early childhood education centres in Mexico are implementing the teaching of English at an early age in a bilingual environment. However it is necessary to choose the didactic materials to achieve good practices of early bilingual education in the classroom, as well as the contents and the methodology to organise the teaching-learning of English in preschool. That is why the aim of the present work is to elaborate a guide of playful activities to promote the learning of English language at early ages in bilingual environments in the preschool "Jardines de Xalapa", in Xalapa, Veracruz, Mexico.

With this research we have designed a guide of play activities elaborated according to a specific age, from 5 to 6 years old, which is oriented to develop oral and listening skills, with contents of everyday life like animals, colours, numbers, school objects, parts of the house, geometric figures, parts of the body, transports and the weather.

Key words: Preschool, Teaching, Foreign Language, children

1. Introduction

The English language operates as a lingua franca in the economic, business, education, political and entertainment sectors. According to McCormick (2013), at the macro level, there is a correlation between the English language skills of the population and the economic performance of countries. The interaction between English language proficiency and gross national income per capita is a virtuous cycle, where improved English skills increase wages, thus increasing investment. Today, more than 80% of interactions globally take place in English.

Pre-school children are beginning to develop their speaking skills, so it is a good time to start introducing a foreign language, UNICEF (2014). They perceive and learn through different channels. According to Piaget (1970), the preschool stage corresponds to the pre-operational stage between 2 and 7 years. This represents a qualitative shift in thinking, because it involves the symbolic function: the child uses symbols to represent objects, places and people; he or the child can go backwards and forwards in time. This implies different systems of representation or of receiving information through different sensory channels.

Considering on the one hand that languages are a fundamental basis for a child to develop his intellect faster, and to obtain a positive stimulation which will make him more creative and intelligent and on the other hand, since the integral reform of basic education in Mexico (RIEB) gives the possibility of the optional teaching of English in pre-school we have asked ourselves: How to achieve the learning of the English language in pre-school children aged 5 to 6 years, from the Kindergarten "Jardines de Xalapa"?



Problem statement

Until now, the Mexican education system has directed the teaching of English to pupils from primary school onwards. However, in recent years, more and more early childhood education centres are introducing the teaching of English, and the trend is towards full implementation in all early childhood education centres.

According to Mayor (2000): "The first years are decisive, so today it is recognised that the pre-school stage is especially important for improving language comprehension and production"; this stage is key for the future in all the knowledge that children acquire and, especially, when it is something so far from their everyday life, such as a foreign language.

Neurolinguistics explains that the brain is predisposed to language learning when children are young, and this innate ability lasts until puberty. At this age they have a great capacity to imitate sounds and even have fun making them. Also, at this age, the brain has greater plasticity because both hemispheres control speech function. Da Silva (2010) states that plasticity is an essential requirement for language acquisition, i.e. the left hemisphere controls most aspects related to speech. Ramirez et.al. (2005) consider that both the left and right hemispheres play an important role in verbal function. Children accept a new linguistic code because they are still learning their own.

According to Salmona, (2014) knowing a second language helps children to know their own language, because they observe the differences and similarities between the two languages, and they learn to communicate better, so their self-confidence is higher.

The didactics of the teaching-learning process of English for pre-school children makes it possible to carry out the teaching task with quality. It allows to select and use materials that facilitate the development of competences and achievement indicators, to avoid routine, to reflect on the different learning strategies. Besides it avoids the improvisation that leads to disorderly and ineffective work; it allows to act with certainty on the specific needs of each group of students. González et. al. (2020), identify the teaching-learning process as the school pedagogical process which possesses essential characteristics of this, but which is distinguished by being much more systematic, planned, directed and specific; in that the teacher-student interrelationship becomes a much more direct didactic action, whose sole aim is the integral development of the personality of the learners.

Personal and non-personal components are present in the teaching-learning process. Within the personal components are the subjects involved: the teacher, the students and the group, which give the process an interactive and communicative character. Among the non-personal components are: objectives, course content, methods, means, forms of organisation and evaluation; which the educator must also master, specifying and exploiting to the maximum the educational potential offered by each of them, in order to achieve the integral formation of the learners, under the principle of education through instruction.

Among the non-personal components, methods and forms of organisation are of great importance for the fulfilment of the objectives. The appropriate selection of methods in correspondence with the objectives to be achieved and the type of teaching activity to be developed is essential for the harmonious development of the teaching-learning process.

The didactics of EFL plays a fundamental role in the teaching practice because it allows the implementation of different strategies to organise the work with the children in an adequate and coherent way, to use the didactic resources relevant to each experience, the strategies and instruments to evaluate.

Unicef (2018), says that play is an effective tool for learning and practising new knowledge, it is attractive to children and facilitates their concentration on the subject. Play is a fundamental part of learning; where they adopt fantastic and engaging roles that provide them with meaningful learning. Games keep the class interested, they increase motivation to learn the language, as children feel a real sense of achievement when they can participate in them. For children to successfully learn a language they must be exposed to potentially practising the language in a playful way, Culma, (2010).



The materials used for teaching and learning English (or any other language) must be creatively designed to encourage the development of oral and written communicative competence, both in terms of linguistic and communicative activities and in terms of skills, abilities, strategies and procedures that favour the appropriate use of oral and written English, attitudes and values that favour a certain autonomy and self-regulation of learning and self-evaluation of the teaching and learning processes.

At this stage, children absorb all the knowledge offered to them, and learn best through games, stories and songs. The material should be varied to keep children interested, as they are easily bored at this age and need to be constantly changing activities. Isaacs (2010).

According to Celce-Murcia (1979), realia are almost unlimited. The greater the number of objects incorporated by the foreign language teacher in the classroom, the greater the motivation for learning and the better the results. Real objects refer to those found in the classroom such as toys or furniture, including clothing or everyday objects. The use of real materials in the foreign language classroom offers great didactic possibilities. Berwald (1987) claims that the authenticity of these objects, together with the great variety and adaptability to any topic presented in the classroom, increases learners' motivation for the language studied and its culture.

Another important factor for the teaching of English is music, which has a much greater mnemonic power than sight according to Rohrmeier et. al (2015). In addition, music is related to joy, fun, being an innate feeling of the human being that the child already possesses. You can find an endless number of songs in English that work on different parts of children's development.

Finally, we will refer to children's literature. Children's literature acts as a mirror for children, as they identify with the characters portrayed in the stories and therefore use them to validate their place in society. Children are exposed to literature from birth since their parents tell them stories. Taking advantage of this everyday activity in the pre-school classroom, as well as establishing a direct link between real life and the foreign language class, will help to stimulate creativity in our children and broaden their vocabulary by learning about the world around them in line with Rodriguez, (2015).

Having analysed different theoretical aspects of English language teaching, we must also consider some socio-political aspects. Mexico is one of the countries with the greatest gap in English language teaching, given that 97% of public school students do not reach the basic comprehension level set by the SEP. According to a study carried out by the SEP, in 2015, 79 % of students have a total lack of knowledge of the English language and only 3.0 % meet the expected standards, thanks to additional classes. Esteban Moctezuma, head of the Ministry of Public Education (SEP) in a working session with the Commissions of Education and Constitutional Points of the Chamber of Deputies in 2019, regarding the teaching of English in the Mexican public system, said that they were working on a teaching strategy that would consist: "of platforms where the teacher directs the teaching and the child learns English without the teacher necessarily knowing how to speak it". He also clarified that: "we will continue to teach English to all normalistas who want to", but said: "we don't have time to wait for them to learn and then teach".

Language policy must be based on a proper and contextualised diagnosis. Any programme or strategy without a clear language policy, and by extension, a legal framework that guarantees its continuity, will face a similar outcome as the programmes that precede it. It is therefore important for the education authority to ensure that English language curricula and syllabuses are in place, that the necessary and appropriate educational materials are available for teaching, and that teachers are sufficiently trained to carry out the task. Hernandez (2019).

At present, it is a problem that is still latent within our society and thousands of students suffer from it due to various circumstances. This greatly affects the development of a society and it is a problem that not only has repercussions in Mexico. Mateos et. al. (2021).

While these problems are being resolved at the state level, the teachers at the centre have begun to work to design a guide that will allow us to teach English to the children who enrol at the centre.



2. Method

The scope of the research is descriptive, as a study of the characteristics of the English language learning process in children in the third year of pre-school was made. The design of this research is non-experimental since the researcher did not intentionally provoke existing situations. The study is cross-sectional, as data were collected at a single point in time in order to describe the variables and analyse them at a given moment in time. In order to find out the teachers' opinions about the teaching of English to 3rd grade students at the "Jardines de Xalapa" school, an open interview was carried out.

3. Findings

For the analysis of the answers provided by the teachers, they were organised into categories.

Table 1. Categories of English teaching

Importance of English language learning in pre-schools
Ability of a 5 year child to learn the English language
Type and characteristics of teaching materials for English language learning
Implementation of English language learning in pre-school, considering time, objective, assessment, content and strategies.

With respect to the category of "Importance of learning English in preschool", the teachers expressed that it is important because it allows the acquisition of two languages and can be used as a tool for learning; contrasting with the theory, Fleta (2006) highlights that it is better to introduce English at an early age, as they are exposed to another culture and it can influence their vision of the world around them and their way of thinking.

According to the category of "Ability of a 5-year-old child to learn English", the teachers argued that they can learn English, as children at this stage have a great capacity for cognitive development and because from an early age it is much easier to learn pronunciation and writing. Considering Mayor's theory (2000), the pre-school stage is fundamental for improving language comprehension and production; this stage is key for the future in all the knowledge that children acquire, and even more so when it is something as far away from their everyday life as a foreign language.

As for the category "Type and characteristics of the didactic material for learning English", the teachers consider that learning styles should be included, and that the materials should be visual and concrete: songs, pictures, images, objects that they can touch and experiment with their five senses... As can be seen, the teachers refer to didactic materials that allow them to manipulate and feel through their sensory system. As Seaton (1982) says, the use of real materials in the foreign language classroom offers great didactic possibilities.

In the category "Implementation of English language learning in pre-school, considering time, objective, evaluation, content and strategies", the kindergarten teachers consider that thirty minutes a day is enough to learn English language; as well as taking into account the learning styles (visual, auditory, kinaesthetic), also giving support to parents with some guidance, a CD with songs and games. Richards, Theodore and Rodgers (2014), propose a set of methods for foreign language learning, from these we want to highlight based on the results obtained that communicative teaching and total physical response will have a great presence in our proposed guide.

To conclude the interpretation of the data offered by the teachers of the kindergarten "Jardines de Xalapa", we can deduce that they agree with the inclusion of English in the curriculum of the children of the third year of pre-school, they consider that it is important to learn the language from an early age for a better acquisition of the language, as well as to use real objects that are in the classroom, which are seen and manipulated day by day, so learning with the things of daily life, it is easier for them to recognise a new word in English. Also by making use of what they like most, play, they find it more interesting and will always want to put it into practice.

Next, we started to develop a guide containing play activities for learning English for children in the third year of pre-school. The objective of the play activities guide is to design a didactic material that favours the learning of the English language in the pre-school level of the kindergarten "Jardines de Xalapa".



The selected contents are related to the daily life of the children. In table 2 you can find all the topics included.

Table 2. All Topics Included the Research

Animals - Bodyparts - Transports-
House - Fruits - Numbers -
Colors - Sports - Feelings and emotions -
Family - School

The proposed activities have a playful approach, taking into account that these are pre-school children who, in addition to learning through auditory and visual channels, can learn by playing. The proposed activities require resources that are available in the classroom or can easily be brought from home, such as colours, crayons, cardboard, magazines, newspapers, scissors. The guide is composed of fifty-four playful exercises, which contain images where the child has the facility to relate word-picture. Each topic has five activities in which each one has several easy-to-understand instructions. At the end of each topic there are games with rewards, which will motivate the child to continue learning English. A song is also proposed to learn about the same topic, leaving the link to the song so that it can be found on YouTube. Parents will be provided with a guide with the songs that are worked on in the classroom so that they can use them at home and so that the pupils can continue practising English outside the classroom.

4. Results, Conclusions and Recommendations

Authors such as Penfield and Roberts (1959) or Lenneberg (1967) speak of early childhood as the critical period for beginning the process of second language learning at the same time as mother tongue acquisition. Studies show that if children come in contact with the second language in a natural, stable and continuous way, from birth to about three years of age, it is acquired simultaneously with the mother tongue and, in general, if the process is continued in the following stages of development, the chances of mastering the second language are higher than if the child has not been exposed to the language. Taking into account the need for didactic material for teaching English at pre-school level, a guide of playful activities was designed to facilitate the teaching by the teacher and the learning acquired by the pupil, for which 54 playful activities are proposed, where the group teacher can impart the topics provided without major difficulty; The guide is divided into different themes, which are used in everyday life, such as the weather, numbers, means of transport, colours, the family, fruit and vegetables, parts of the house, school and sports.

The purpose of this guide is to familiarise the pupils with the English language, orally and, why not, also in writing; having already provided teachers with this working tool, the aim is for the teacher to make children and parents aware of the importance of teaching a second language at an early age. The play activity guide was designed with the children's ages in mind, using materials that are readily available, and contains visual images and internet links that lead children to listen to songs outside the classroom. At all times we have followed the contributions of Jean Piaget's psychogenetic theory, since intellectual development begins at birth and continues throughout their lives. We are currently making a selection of children's stories in English to be evaluated by the teachers at the school in order to choose those that best fit the curriculum and design a set of didactic activities to be included in the guide

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Comparison of education systems of Türkiye, Estonia and Japan

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Abstract

The aim of the research is to compare the education systems of Turkey, Estonia and Japan with the determined parameters and to reveal the similarities and differences. The research was modeled using document analysis, one of the qualitative research methods. In addition, the official websites of the relevant education ministries of the countries and the sources on other international education content websites were also used in the collection of data. According to the findings obtained as a result of the research, it has been seen that Estonia and Japan keep their education systems above politics, and that their teacher selection, training, appointment and development systems are effective. In addition, the autonomy of teachers and the flexibility of curricula are also seen as separate differences. It can be stated that the education systems of the three countries discussed in the research are centralized, compulsory education periods, holidays and kindergarten are not compulsory.

Keywords: Comparative education, Japanese education system, Estonian education system, Turkey education system

1. Introduction

As a requirement of the dynamics of the century we are in, we are under the influence of globalization and the information age. Now, the borders between countries have begun to disappear gradually and thanks to technological developments, everyone from one end of the world to the other has become aware of each other. The resulting change has affected everything from A to Z, bringing with it transformations. Of course, education-teaching processes have also been affected, and they have experienced changes and transformations in their structural and functional processes.

Countries have become easier to compare their education systems with other countries thanks to the development of information technologies. While these comparisons can be made more easily in developed countries. It has been found to be much more difficult in developing or third world countries. In this context, it shows us that the development of countries is also related to the development of education systems. Çolak (2010) stated that education, as an investment in people, is a tool that determines the level of development of countries, and therefore, education is the most important element of closing the welfare gap of developing countries with developed countries.

Naturally, every country wants its society to be ahead in many fields such as economic, social, cultural, scientific and health. It implements and controls the reforms and regulations necessary to achieve this development and change. Education is seen as the most important element in this sense. This is why, when the countries considered as developed are examined, it is seen that their education systems are also effective and developed. Studies have shown that an increase in the level of education also increases the quality of society. For this reason, societies that desire sustainable development first strengthen their education systems. In this way, it is desired to provide an overall development. The rapid progress and development of civilizations and societies that have succeeded in increasing the quality of education can be shown as the best example of this.



Because the education system in modern society has been established and developed to fulfill the political, economic, political, social, cultural and moral functions expected of it. Undoubtedly, what is expected to play a leading role in realizing the expectations from the education system is the effective fulfillment of the identity and role of the teacher determined by the system (Ünal, 2011). Teacher; Professional activities are the basic building blocks that enable the planning, organization and execution of group activities aimed at improving students' knowledge, skills and attitudes, as envisaged in educational programs.

One of the most comprehensive exams showing the education quality of countries at the international level is the Program for International Student Assessment (PISA) organized by the Organization for European Economic Cooperation and Development (OECD). The PISA exam is an exam that is held every three years and only includes 15-year-olds. In the exam, students solve questions from three basic competence areas: reading, mathematics and science. The main purpose of the PISA exam is to measure students' ability to use the knowledge and skills they learned at school in daily life. In addition, in order to get to know students better, it aims to determine what their learning desires are, to increase their performance in lessons and to make learning environments more effective. For this purpose, the PISA exam, which started as a project designed in 1997, is to obtain national and international comparable data in order to enable countries to improve their education policies and outputs. Turkey participated in the PISA survey, which started to be implemented worldwide in 2000, for the first time in 2003.

Table 1. Number of countries participating in the PISA exam by year

	2000	2003	2006	2009	2012	2015	2018
Number of Countries Participating in the Exam	43	41	57	65	65	70	79

NOTE: Since the 2021 PISA exam results were not announced, they could not be presented in Table 1.

When Table 1 is examined, the number of participating countries increases every year. This is an indication that the international validity of the PISA exam is increasing every year. Because countries can compare their own education systems and students with the education systems of other countries thanks to the PISA exam. For this reason, according to PISA reports, some countries may even make radical changes in their education systems, if necessary.

The aim of this research is to compare the education systems of countries such as Japan and Estonia, which were successful in the 2015 and 2018 PISA exams, with the Turkish education system. While comparing, evaluation was made by considering three basic parameters. These parameters are;

1. Comparison of the general structures of the countries
2. Comparison of the structure of education systems of countries
3. Comparison of countries' teacher training, selection and appointment policies

With these parameters, it is beneficial to increase the quality and functioning of the Turkish education system with the help of the results obtained by looking at the education systems of the countries in general and in particular. In addition, it is to create a sustainable dynamism by providing a critical pedagogical perspective to education systems.



2. Method

A qualitative method was followed in the design of the research. Qualitative researches are researches that enable to collect more detailed information about a subject and make more in-depth comments (Seggie & Bayyurt, 2015; Kırıl, 2020). In addition, one of the most effective research designs in dealing with a subject with the interpretive paradigm is accepted as qualitative research methods (Glasne, 2015). As it is known, data in qualitative research is collected through observation, interviews and documents (Berg & Lune, 2015). In the research, document analysis method was used to collect data. Document analysis is a method that enables the examination and interpretation of data in order to make sense of the subject to be researched, to create an understanding about the subject, and to develop empirical knowledge (Corbin & Strauss, 2008).

The reports of the results of the 2015 and 2018 PISA exams, scientific studies about these exams, websites and reports of the authorized institutions of Estonia, Japan and Turkey were included in the research. The results obtained by analyzing these records and documents are presented in the findings section. The results obtained by analyzing these records and documents according to the above-mentioned parameters are presented in the findings section.

3. Findings

The interests and findings obtained by making a general comparison of Turkey, Japan and Estonia, which are primarily discussed in the research, are presented in Table 2.

Table 2. General comparison of the countries covered in the research

	Japan	Estonia	Türkiye
Population	125.960.000	1.329.000	83.614.362
Population density	334/km ²	29/km ²	109/km ²
Gdp per capita	44.570 \$	39.850 \$	9.043 \$
Area	377.973 km ²	45.100 km ²	783.562 km ²
Capital	Tokyo	Tallinn	Ankara
Language	Japanese	Estonian	Türkçe
Average human lifespan	84,2 year	78,5 year	78,6 year

When the data in Table 2 are analyzed, it is seen that Japan (\$44,570) and Estonia (\$39,850), which are successful in terms of education systems, are also in a much stronger position economically compared to Turkey (\$9,043). Information and findings regarding the structure of the education system, among the parameters discussed in the research, are presented in Table 3.

Table 3. Comparison of the education systems of the countries covered in the research

	Japan	Estonia	Türkiye
Pre-school	Not mandatory	Not mandatory	Not mandatory
Education system	6+3+3	3+6+3	4+4+4
Compulsory education	9 years (6+3)	9 years (3+6)	12 years (4+4+4)
Number of school days	200 days	175 days	180 days
Total number of holidays	40 days	100 days	105 days

When the information and findings in Table 3 are examined, it is seen that the longest period of compulsory education (12 years) and the number of school holidays are in Turkey. The longest number of school days was seen in Japan (200 days).



When the information and findings related to teacher training and appointment policies, which are among the parameters discussed in the research, are examined;

In Japan, teachers are identified by three types of certificates. The first of these certificates is the public certificate. A teacher with a general certificate is someone who has graduated from a teaching license. Another certificate is defined as a private certificate. This certificate is given to people who do not have a teaching certificate, but have attended the courses opened and received the necessary training. Finally, the third certificate is defined as the temporary certificate. This certificate can be explained as a teaching assistant certificate. Persons with this certificate can be appointed only if there is no one who does not have a general certificate. In order to become a teacher, teacher candidates take an exam that includes general culture, field and profession information, which is held three times a year. Candidates who are successful in this exam take the interview and practice exam as well as this exam. Candidates who are also successful in this exam are taken to the internship program that lasts for six months and the candidates who successfully complete this process are appointed as principal teachers.

In Estonia, when the teacher training and appointment policy is examined, it is seen that it has a choose first, then train policy. According to this policy, teacher candidates are selected according to the two-stage conditions determined before they enter the university. The first of these stages is academic success in high school. In the second stage, candidates are interviewed in groups and their discussion, communication and cooperation skills are examined. Candidate teachers who are deemed sufficient at these stages can enroll in the faculty of education. Afterwards, teacher candidates who complete the effective programs of education faculties complete their master's degrees to specialize in their field. As the school principals, the person responsible for the recruitment of teachers, the appropriate teacher for the school is appointed. The school principal is fully authorized and responsible for the appointment.

In Türkiye, when the teacher training and appointment policy is examined, we see that the first train, then choose policy is implemented. A ranking is made under the name of "Public Personnel Selection Examination (KPSS)" from this pool, which is formed after training is given to everyone who wants to be a teacher, according to an exam result. Then, the selection is made with an interview system whose format is not fully standardized. The responsible and authorized unit for the appointment of teachers is the Ministry of National Education (MEB). There is no requirement for a master's degree in the appointment of teacher candidates.

4. Results, Conclusions and Recommendations

At the international level, countries rely on PISA results to compare education systems and student qualifications. Japan and Estonia, the two countries covered in the research, are quite successful in this sense, according to PISA results. Unfortunately, in this sense, Turkey has not even been able to catch up with the OECD average in any PISA result since 2003.

While comparing countries with each other in the research, the first of the parameters considered is education systems and structure. According to the information and findings obtained as a result of the research, it has been seen that the longest compulsory education period among the three countries is in Turkey, and the compulsory education is the same in the education systems of Japan and Estonia. In this context, it can be said that the quality of the education system is not related to the compulsory education period, but the content and practices that are important. Although the Japanese education system is exam-oriented like Turkey, it has been observed that there is practice-based and functional education in the Japanese education system (Takayama, 2010). In addition to these, in accordance with the structure of the education system in Japan, education is focused on production and based on cultural transfer (Park, 2013).



When the Estonian education system is examined, it is seen that it is not in an exam-based structure like the education systems of Japan and Turkey. In the Estonian education system, students are mostly directed to vocational high schools. In these vocational high schools, students are prepared for life as professionals at an early age. Students with high academic success go to general high schools to prepare for university (Lees, 2016; Kiilu, 2011). However, most of the students go to vocational high schools.

Teacher training and appointment policies of Japan, Estonia and Turkey, which are discussed in the research, were examined. Accordingly, Japan's teacher training policy is based on three certificates: general, special and transitional. The general certificate is a certificate awarded to those receiving teacher training in undergraduate degrees and practices. A special certificate is a certificate given only to those who do not have a teacher's certificate, but who want to teach, as a result of the training given afterwards. The provisional certificate is defined as the assistant teacher certificate. This certificate can only be used if general certified persons are not found or cannot apply. In order for teacher candidates to be appointed as teachers, they have to take one of the exams that are held three times a year, covering general culture, field and professional knowledge, and get the required score. Afterwards, successful candidates are taken to the interview and practice exam. Candidates who successfully pass this stage are then included in a six-month internship program (Kitagawa & Oba, 2010). Teachers who successfully pass all these stages are appointed.

When the teacher training policy in Estonia is examined, it is seen that it has a very different structure from that of Japan and Turkey. Estonia's teacher selection policy can be described as "select and train". First of all, those who want to become a teacher have to get a certain score from the centrally held exam. Afterwards, the candidates go through a pre-selection by applying according to their high school success score. Students who pass the pre-selection are taken to individual and group interviews to determine their suitability to become a teacher. At this stage, the candidate is interviewed by the commission and evaluated by measuring cognitive skills such as communication, cooperation and discussion, as well as psychological and personality traits (Kiilu, 2011; Saar, 2008). Eligible candidates are taken to a practice-oriented teacher education formation. Then, branches other than preschool teachers start graduate education after undergraduate education (Eisenschmidt, 2011). Pre-service teachers who successfully complete this process can start working in a school they have agreed directly without taking any central or regional exams.

When the teacher training and appointment policy in Turkey is examined, it is seen that the "train and choose" model is applied. In accordance with the structure of this model, the selection pool is increased by increasing the number of candidates who want to become a teacher. For this purpose, graduates of various faculties, as well as the many graduates of education faculties, are given the right to become a teacher candidate through a two-semester program called pedagogical formation. The teacher candidate pool created in this way is ranked on the basis of branch by taking the exam, which is defined as KPSS and organized once a year. Pre-service teachers in a certain order are selected with an interview system that has not been standardized and still creates controversy. The appointment of the candidate who has passed all the stages is made centrally by the Ministry of National Education. However, even the teachers who have passed through these stages we have mentioned say that it is not possible to become a qualified teacher with this system.

As a result, when the education systems and teacher training and appointment policies of Japan and Estonia, which are considered in the research and which are successful in the PISA exam, are compared with Turkey, it is seen that there are obvious systemic differences. It has been seen that the main driving factor behind the success of Japan and Estonia is the fact that the education programs are focused on practice and gaining experience, in addition to the qualified and equipped teacher staff they have achieved as a result of teacher training, selection and appointment policies. In order for the Turkish education system to achieve the desired success, the teacher first needs radical changes that will increase the quality and equipment of the teacher. In addition, it is thought that the



current teacher training, selection and appointment policy should be abandoned. The "Train and Select" model has proven to be non-functional, and a replacement with the "Choose and Train" model may be considered.

Based on the findings obtained as a result of the research, the following recommendations were developed.

- In the research, only Japan and Estonia countries and Turkey were compared. The same research can be done by considering different countries.
- In this study, the countries that were compared were discussed only in terms of education systems, teacher training and appointment policies. It can be examined by considering the same countries according to different parameters.
- Policy makers can restructure their policies in Turkey by addressing the teacher training, selection and appointment policies of countries that have been successful according to PISA. For this, healthy results can be obtained under the consultancy of a scientific committee consisting of experts in the relevant subject area.

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On some aspects of motivation in teaching in Albania and Kosovo

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Abstract

Over the past few decades, people have learned much about faith, value, motivating purpose, and how they developed. The aim is to provide theoretical perspective and opportunities to display the current summary of studies on the development of motivating values, goals, and achievements.

In the case of motivation, the study seeks to define self-esteem as an essential factor in increasing self-efficacy and the ability to overcome challenges of the time. Thus, we have used several methods in the paper, such as analysis, interviews, data description, and comparative methods. The survey method provided data from different schools in Albania and Kosovo. The study has quantitative-qualitative nature leading to acceptable conclusions. This study shows that elements of motivation are related to learning, combining its use, values, and the importance of completing the activity. Motivate can be intertwined within the learning structure for organizing, testing, and evaluating student involvement and the strategies used.

Keywords: Teaching, motivation, self-esteem, psycho-pedagogy, self-efficacy

1. Introduction

The current educational climate through standardized test scores as the primary method for determining an effective learning environment emphasizes school accountability. The state and local education policy requires increased accountability and professionalism in schools, among teachers and parents, to increase the level of knowledge and student achievement, based, among other things, "on standardized testing, starting from grade third" (Downer, Booren, Lima, Luckner, & Pianta, 2010). Hamre & Pianta (2006) assert that solid student-teacher relationships "offer a unique entry point for educators working to improve the social and learning environments of schools and classrooms" (Hamre & Pianta, 2006). Based on the format of constructivism as a learning theory, students in the classroom should see the learning environment as, "a mini-society, a community of students engaged in an activity, discussion, interpretation, justification, and reflection" (Fosnot, 2013). The primary idea of constructivist education is the development of the network of interpersonal relationships that dominate the school experience in the education and formation of students.

Cognitive development mediates through the linguistic dialogue between the teacher and the student to achieve the organization of thought in the students based on their internal mental function. Many researchers of psychology and pedagogy look at and evaluate tests as possible ways to determine the level of knowledge among students, encouraging logic towards the formation of new concepts.



As early as 1938, Dewey would write that, *"teachers are agents through which knowledge and skills are communicated and rules of conduct enforced"* and as such, they have to know how to *"use the environment to bring out from them everything they have to contribute to building valuable educational experiences"* (Dewey, 1938).

For the qualified reader, an appealing hypothesis is presented on the motivation of students in the process of training and civic education: Motivation influences higher achievements towards success and stimulates the increase of personal self-efficacy, self-esteem, and self-confidence (Titrek et al, 2018) by individual competencies boost and the desire for assessment in the learning environment.

This complex psychological concept guides teachers in explaining some interesting questions, which create spaces for research and the use of arguments in support of it:

1. *What are the salient psychological elements that influence the increase in student motivation in facing challenges in the learning process to achieve success?*
2. *How much do they influence the increase of self-efficacy, personal competencies, and other factors helping the school, social, and family environment?*
3. *How capable are the students in increasing the level of self-esteem and self-confidence to face the challenges in the learning process concerning the positive or negative influences of the environment in classes, family, and community?*
4. *What are students taught in school beyond the curriculum's requirements, and what is the social side of school?*
5. *What can be the new approaches for teachers and the family in improving the situation at school, with traditionalism and contemporary standards, to create the basic concept of today's innovations as the future's school?*

Modern Albanian pedagogy oriented at this time towards new scientific discoveries, informatization, technology and nanotechnology, intelligence technology, biotechnology, robotics, and artificial intelligence, are bringing to attention the unwavering thinking of the new century, named the era of digital technologies and deep knowledge about life. Stable teacher-student relationships create safe environments of trust, motivating them in the learning process. When students feel exposed to positive emotional stimuli, *"they are better able to reproduce the information they receive in the learning process"* (Nielson & Lorber, 2009).

The relationship begins at the moment of classroom organization, how the teacher physically constructs the placement of students in the classroom. *"Classroom structures, rules, routines, and activities convey a sense of community and continuity for students. All teachers are aware of the importance of creating classroom environments that have structures in place that ensures student safety, encourage positive behavior and ensure the flow of classroom activities in ways that minimize distractions and disruptions"* (Murray & Pianta, 2009).

In curriculum implementation methodology, methodical classroom management is perhaps the most essential aspect of teaching. *"The classroom environment takes into account elements such as institutional culture, the level of teaching, the physical and social climate, the nature of the classroom, which affects whether students are motivated to communicate with their teachers"* (Mayers, 2012).

The social-emotional climate created by teachers with the students offers opportunities to see themselves as capable, worthy, and safe classroom members, adapting to three specific dimensions. These dimensions include the ability to develop relationships with teachers, the level of engagement in learning, and the structure and general



order of the classroom provided by the teacher. They create psychological and pedagogical relationships, increasing the level of motivation and self-esteem among students.

In support of the importance of motivation, theories of various psychologists have been used. Martin (2007), defined motivation, *"as potential energy towards achievements"* (Martin, 2007). Covington treats self-worth with the same seriousness. In the role of self-efficacy and expectation, Zimmerman's theory (1995) was used; Bandura (1986); Eccles (1983). Based on the theory of Erik Erikson in the social context, the student decides for himself whether the efforts for self-perception and self-esteem will be in crisis, or manageable by him, this is related to the theory of self-worth and self-efficacy of Bandura (1986), Eccles (1983) and Covington (1997; 1992). Martin & Marsh emphasize the fear of failure, reiterating Erikson's theory on defining self-esteem as a crisis.

In the students' challenges in the teaching process, their encouragement supports the role of the teacher and the parent. The theory about the impact of the teacher's role has been efficient, according to Marsh (Marsh, 2003). Regarding the role and commitment of parents, the Deci & Ryan theory (2001) gives support (Deci, 2001). The above-mentioned theoretical models, intertwined with Erikson's basic model, aim to increase the influence of psycho-pedagogical factors in promoting students' motivation for high learning achievements.

The Scope of The Problem

In the scientific study activity in Albanian Pedagogy, numerous publications and studies are present, which in the last three decades have brought qualitative components to the necessary connection of the national experience with the international one. The need for studies to penetrate the essence of Albanian education is a new approach, dictated by the laws and necessities of educational reform as a process of change in development.

In today's conditions, without first recognizing the internal contradictions of the educational system in Albania and Kosovo. We cannot penetrate the internal oppositions and differences to claim the system identity in psychopedagogy. Willingness and a lot of work are needed, leaving aside individualities and deepening the study thought to serve the basic philosophy of the growing values of Albanian education.

In this case, the study specificity of the publication is evaluated, which coherently offers a psycho-pedagogical dimension that appears as a new approach to improving the teaching methodology, with an impact on the content of the educational curriculum in the educational system in Albania and Kosovo.

In Albania, the pre-university education system is developed according to the 5+4+3 scheme. (Report: Reform of SAPU in Albania-2014). With the same scheme, the current system of pre-university education in the Republic of Kosovo, (5+4+3), preschool education (nursery, kindergarten, pre-primary classes), primary education (five classes), lower secondary education, (11- 15 years old), upper secondary education (15-18 years old). (MEST, APU RK-2011 Curriculum Framework).

The treatment of methodical elements that form the basis of teaching and learning is the most qualitative phenomenon of the essence of Albanian education, which we cannot understand and reconstruct without knowing its philosophical bases. In addition to traditionalism, the Albanian school was influenced by eastern (Russian) and western (French, Italian, German, Austrian, American) philosophical currents, which have oriented it towards modernity and contemporary developments. That coincides with the stage of development of stimulating ideas toward a society educated in civilized values.

In the Republic of Kosovo, through the Strategic Plan for Pre-University Education 2017-2021, efforts have been made to overcome the challenges, being oriented with the main objective, *"quality assurance, as one of the weakest points of pre-university education"* (Aliu, 2017).

The majority of teachers recognize the importance of the relationships that students build with teachers, to achieve positive results in the educational learning process. The goal of these studies is to deal with cases and situations



that require and impose advanced strategies and new approaches in the teaching process, toward teacher-student interaction in the learning environment. Students need teachers to build strong interpersonal relationships with them, focusing on their strengths while maintaining high and realistic expectations for success. They are based on respect, trust, care, and cohesion. According to Ravitch (2010), *"the purpose of education is not to produce higher test scores, but to educate children to become responsible people with developed minds and good character"* (Ravitch, 2011).

Comparisons of situations and interviews in the Albania-Kosovo space have allowed the identification of distinguishing and common elements in educational experiences and practices on the way of thinking of teachers and students. Downey (2008) states that *"teachers need to know how to infuse their daily classroom work with interactions and instructional strategies that research has proven can make a positive difference in the lives of students who are at risk of learning failure"* (Downey, 2010). The study results are practices in nature, which include the characteristic similarities of the most useful teaching strategies in the educational system. Using rich literature and test results in the opinion of the school, family, and community, valuable evidence has been provided, which points out the current level of student-teacher relations. They still need more research work, for more cognitive empirical evidence in the building elements of student-teacher relationships. The integration of teachers in this study process would serve the step-by-step improvement of teaching programs, as a good basis for the education and formation of new teachers.

"Without goals, the student's results become random and without criteria. However, intentions alone are not enough. If the student does not achieve the defined learning objectives (even when the lack of success and failures do not depend and are not in the hands of the teacher), then it cannot be said that the teacher's work has been truly effective" (Woolfolk, 2011).

The current basis of psychological and pedagogic studies is broadly oriented to the methodology of building teacher-student relationships. New strategies, as the need of the hour, will contribute to the increase in the quality of learning through the better treatment of the action of psycho-pedagogical elements in the learning process. It is the new approaches that promote motivation and self-motivation, safety and self-assurance, inclusion and inclusiveness, organization and self-organization, and other categories, which create the harmony of the change process.

"Critical thinking is a sophisticated way of thinking. It happens in cases where something is thought of in which not only older students can be involved. Young children are fully capable of engaging in developmentally appropriate levels of sophisticated thinking. They are willingly involved in tasks to solve complicated problems and show high levels of thinking in making decisions" (Musai, 2014).

For many researchers, the belief has been created that, *"it will be up to educators to guide policymakers and the public on what they need to develop for a productive learning process today"* (Hammond, 2006). This way of studying leads to the construction of stronger mutual relationships, based on specific and empirical evidence of how they work. Their identification is related to teacher-student interactions, especially in the teaching process. An important factor in this treatment is *"the faith that teachers have in their students, as important factors in achievement"* (Pianta, Paro, Payne, Cox, & Bradley, 2002).

2. Method

"Motivation is the great driving force, the energy that makes teenagers move towards the conclusions and results they want to achieve at school, relying on motivation they try to understand the behavior they display every day" (Pajares & Urdan, 2002). The learning motivation of students is seen as the most important psychological concept of education. Also, *"it has become the focus of numerous studies about education from 1982 to 2012"* (Pajares & Urdan, 2002).



For this purpose, we have used several methods in the paper such as analysis, interviews, description of data, and comparative methods. The survey method provided data from different schools in Albania and Kosovo. The work takes a quantitative-qualitative nature with a concrete approach, leading to acceptable conclusions. The quantitative side of scientific research is used to increase the strength of the argument. The evaluation of the forms of positivism recommended by different researchers has coherently realized the theoretical paradigms, accompanied by sufficient amounts of tables and diagrams, which constitute the practical part of the study. The methods of studies, and case observations, which showed general characteristics of the psycho-social phenomenon, have come in handy. The qualitative method has increased the validity of psycho-pedagogical concepts, giving them the tangible naturalness of life with scientific discipline.

Based on this assessment, the motivation of students in teaching has become the main psychological approach. The study aims to perceive the educational achievements of students in direct relation to other psychological elements, which operate in the family and community with a strong influence on behavior and motivation in the classroom. The test carried out with 200 high school students in the cities of Durrës and Prishtina, 50 teachers and 50 parents, is presented as a quantitative study, based on the questionnaire method, as standardized questionnaire models: *"Rosenberg self-assessment questionnaire, motivation instrument"* (Vallerand, et al., 1992)

The study in the psychological aspect aims to determine the relationships that work between internal and external motivation, learning achievements, and the role of self-efficacy of teachers and parents for the success of students in school. In terms of motivation, the study seeks to determine self-esteem, as the main factor in increasing self-efficacy and the ability to face the challenges of the time.

3. Findings

The results of the studies show that students learn from all types of models, including teachers, even though there are differences in teaching experience, age, and other characteristics. They combine and evaluate effective information from different sources, obtaining positive results and teachers' support. The age of participants in this study was between 15-18 years old, from the 10th to the 12th grade of high school. Of 100 students from the *"Naim Frashëri"* school and 100 from the *"Gjergj Kastrioti"* school, the sample of surveyed students had this demographic profile: 134 (75%) of them belonged to the female gender and 25% to the male gender. 13.6% of them are 14-15 years old; 60.8% of them 16-17; 25.6% of them are 18-19 years old. The age of the surveyed teachers varied: 32% of the 25-35 age group; 34% of the 36-45 age group; 26% of the 46-55 age group and 8% of the 56-65 age group. Among them, 70% were teachers and 30% were parents. Parents surveyed; 66% were women and 56% of them belonged to the age group of 35-45 years.

From the 200 students in both high schools, it turns out that their composition was 134 girls and 66 boys, so the ratio was 2:1 in favor of girls. The mass absence of boys at this age in school gives the alarm about the greater possibility of their abandonment by them, who at this age, for various reasons, may turn to the labor market, or emigrate without finishing school medium. This indicator draws attention to a more in-depth study on a regional and national scale, to evidence the causes that lead to this phenomenon and the consequences expected from it.

The participants for this study are students and teachers of ninth grades in Pristina and the city of Durrës. To participate in this study, the selected students are from *"E Gjëlber"* Middle and Lower Primary School, *"Asim Vokshi"* Middle and Lower Primary School, and *"Emin Duraku"* Middle and Lower Primary School from Pristina, students from *"Gjergj Kastrioti Skënderbeu"* and *"Naim Frashëri"* high schools in Durrës. The survey was conducted with 253+250 students from three schools who were selected from grades 9-12. Their subject included both sexes.



Out of 500 students interviewed (280 girls and 220 boys), in *"internal motivation towards achievement"* there is a significant difference in girls of the age group of 16-17 years, who on average have a high level of motivation towards achievement. Only 9.6% of the students surveyed reflect high levels of internal motivation toward achievement.

Table 1. Effects of motivation by age group

Age	Frequency	Percentage	Valid Percent	Cumulative Percent
14 – 15	68	13. 6	13. 6	13. 6
16 – 17	304	60. 8	60. 8	74. 4
18 – 19	128	25. 6	25. 6	100. 0
Total	500	100. 0	100. 0	

Stimulation in intrinsic motivation yields interesting data. Girls occupy a higher percentage, especially girls in the age group of 16 - 17 years, while the age group of 18 - 19 years does not reflect findings with significant changes. This age group reflects lower (below average) levels of intrinsic motivation, to feel stimulated. Intelligent students can change positively in growth if they achieve a high degree of self-understanding of their abilities. *"Suddenly we realized that skill had two meanings, not one: a fixed skill that had to be tested and a variable skill that could be developed through learning"*(Dweck, 2017).

Table 2. Internal motivation increases the level of intelligence in students

Age	Frequency	Percentage	Valid Percent	Cumulative Percent
5 – 15	62	12.4	12.4	12.4
16 – 25	354	70.8	70.8	83.2
26 – 35	84	16.8	16.8	100. 0
Total	500	100. 0	100. 0	

Of 200 boys and girls interviewed in the two gymnasiums of the city of Durrës, to the question, *"Do you feel like teenagers or adults"*, in the total of answers, 147 students, or 73% of them feel teenagers, 46 students, or 24. 5 % of them consider themselves adults and 2.5% of them are not pronounced. Another interesting phenomenon is seen in this evaluation. Almost double the answers of boys about what girls think, express that they feel grown-up.

Table 3. Internal motivation promotes achievement in the learning process

Age	Frequency	Percentage	Valid Percent	Cumulative Percent
5 – 15	160	32. 0	32. 0	32. 0
16 – 25	296	59. 2	59. 2	91. 2
26 – 35	44	8. 8	8. 8	100. 0
Total	500	100. 0	100. 0	

Learners oriented to the learning process have less chance of failure. They try to avoid it. Especially among students in grades 7-12, the trend of this encourages and motivates academic progress. From a sociological perspective, facilitating interpersonal relationships keeps students committed to the process of education and learning.



Table 4. Stimulation of internal motivation in students

Age	Frequency	Percentage	Valid Percent	Cumulative Percent
5 – 15	180	36.0	36.0	36.0
16 – 25	320	64.0	64.0	100.0
Total	500	100.0	100.0	

In 200 boys and girls interviewed in two gymnasiums in the city of Durrës, to the question, *"Do you feel afraid in front of your teachers?"*, 40 students or 20% of them feel afraid, while 149 student or 75% of them do not feel this fear. Only 8 students refuse to answer this question. The student, *"who is motivated by the belief that all his effort is worth the career and why he is again driven by other external factors, has a sense of internal development of autonomy"*. (Eric Erickson, 1959:119).

The field of educational psychology is strongly related to teaching and learning. It is also intertwined with the psychological elements of motivation, intelligence, memory, cognition, intellectual development, and appreciation. Theoretical concepts highlight phenomena related to cognition, learning, and individual development. *"Motivation is predominantly related to the cognitive perspective and this process is embedded within the individual mental structure"*. (Larson, 2009).

In 200 boys and girls interviewed in two gymnasiums in the city of Durrës, to the question, *"Do you manage to benefit from the explanation in class, over 50% of the teaching topic"*, 148 students, or 74% of them, answered positively to this question, 45 students, or 22% of them, think that they do not reach this level of specialization, while 7 students, or 15% of them, do not agree to answer this question. Positivity in assessment is related to the degree of student motivation in the lesson. Many who answer positively to the question have realized that getting the most out of the lesson saves time and increases the level of teaching preparation.

Table 5. Gender - age, internal motivation towards higher achievements

			Age			Total
Internal motivation towards			14-15	16-17	18-19	
Arrival						
5-15	Age	Female	4	48	20	72
		Male	15	57	16	88
		Total	19	105	36	160
16-25	Gender	Female	31	121	34	186
		Male	18	52	40	110
		Total	49	173	74	296
26-35	Gender	Female		10	12	22
		Male		16	6	22
		Total		26	18	44
Total	Gender	Female	35	179	66	280
		Male	33	125	62	220
		Total	68	304	128	500



In the survey of about 500 students with 3 age groups, the high percentage of students where over 65% agreed to appear is positive. The largest number of respondents includes the age group of 16-17 years, who are divided into 60% girls and 40% boys. The results of the table above show that students feel internally motivated for positive achievements. Girls reflect this more than boys, where 70% of them declare. Likewise, the third age group, which is about the last year of high school, reflects the highest degree of identity, personality, and intrinsic motivation. In 200 boys and girls interviewed in two gymnasiums in the city of Durrës, to the question, *"How do you have a relationship with your teachers"*, 99 students, or 49% of them, think that they are *"enough"* good; 48 students or 24% of them think that they are *"good"* and 54 students or 26% of them think that they are *"very good"*. These data evidence the presence of a *"cold climate"* in teacher-student relations, where only ¼ of the judge that they are *"very good"*. This is a subtle problem that affects change.

Table 6. How much can you influence to make the school a safer place?

Assessment percentage	Frequency	Percentage	Valid percentage	Cumulative
Little	5	10. 0	10. 0	10. 0
Quite a little	19	38. 0	38. 0	48. 0
Neutral	22	44. 0	44. 0	92. 0
A lot	4	8. 0	8. 0	100. 0
Total	50	100. 0	100. 0	

Girls are more positive in their answers. Based on sociological explanations, *"men and women differ from each other in their emotionality and especially in the way they express their affective experiences"*(Wigfield & Schiefele, 1998).

In 200 boys and girls interviewed in two gymnasiums in the city of Durrës, to the question, *"Do you feel safe in the environment inside the school"*? 150 students, or 75% of them, expressed in favor of this question, while 43 students or 24 % of them are phobic about the time spent at school. Only 1% of students do not want to answer this question. At the same time, the students were asked about the fact that *"How does the presence of a policeman at the school door make them feel"*. Only 64% of the students this presence causes them a good feeling, 31% of the students a bad feeling, and 5% of them do not see anything special in this phenomenon. The question; *"Do you feel afraid of possible violence inside the school"*, 75% of students feel safe, while 25% of them feel afraid of the possibility of violence in the classroom or school environment.

In this matter, teachers will be faced with unchanged or hardly changeable mentalities. In the psychological context, students must be motivated to test themselves. In 200 boys and girls interviewed in two gymnasiums in the city of Durrës, to the question, *"Do you go to school willingly, or do you value it as an obligation that must be fulfilled"*, 145 students, or 74% of them, value the desire to continue school, while 36 students, or 12% of them, think that they are forced to go to school. Only 14 students, or 2% of them, refuse to answer this question. Considering that the test was conducted without selection of classes, within the age group of 15 - 18 years, the statistics brought to light an interesting fact.

Finding 1: The content category relied on essential components of building trust with students, managing behavior through consistent procedures, and creating consequences for behavior together, enhancing effective teacher-student interaction. They are determinants of emotional support, which includes a positive classroom climate and effective behavior management. Each student becomes an important part of the learning environment, enabling the functioning of the student's intelligence at school, through the quality of the social relationship developed in the classroom environment.



Finding 2: Classroom configuration with appropriate visuals creates appropriate movement patterns, organizing the physical space in the classroom to minimize the amount of time lost during the learning process, to move students from one work environment to another.

Finding 3: Constructing teachers' interactive behaviors according to the impressions they create of students. It is valued as an important part of the teacher's work - the dialogue of relations with students as an essential component of the third contextual category: Interactive behaviors of teachers. Observations in the classrooms serve as evidence, to support the goal of the relationship between teachers and students in the process of imparting knowledge. The interaction between them allows the successful construction of knowledge.

Finding 4: Learning development. The teacher must constantly look for ways to attract students and motivate them toward successful learning. He must be able to identify students with difficulty and be close to them. The essential components of this finding support this reasoning, arguing that monitoring, motivating students and their interests, and active listening, are ways to motivate them.

4. Results, Conclusions, and Recommendations

According to motivation theory, an individual's choice, persistence, and performance can be explained by their belief in themselves, and how capable they are of succeeding. Positive expectancy directly influences achievement, performance, and persistence. Classrooms are social places, where the nature and success of social interaction have an impact on motivation and achievement. Goals in the learning process as psychological alternatives interact in two important components: *Social goals and future goals*. Goal setting is an important cognitive process that affects the increase of motivation in classes.

The statement can be illustrated with students, who set goals or have been recommended learning objectives by teachers. They experience a sense of self-efficacy to achieve them, committing to increase the impact of their performance on achieving goals.

The goals offer 4 (four) student typologies:

- Success-oriented learners and slow to avoid failure;
- Directed pupils maximally in both directions;
- Driven learners less by success and more by avoiding failure;
- Driven students minimally in both directions.

As students work on the assigned task, they may be required to engage in other activities in achieving the objectives. They can participate in counseling sessions; a repeat of information for knowledge; effort and persistence.

Allowing and enabling students to design their own goals increases involvement in the process. Oriented motivation shows how involved the student is in the learning process and the display of his presentation in the learning process. By feeling the satisfaction of achievement, students will become more successful. This is the essence and unique strength of the study. Tests, completed documents, educational environment, interviews, and observations, dictated the rational research method with a qualitative approach.

Teachers are an inexhaustible source of enriching ideas and valuable materials that they prepare and use with their students. Perhaps they feel disappointed by the effectiveness of the methods used in the classroom, which they often encounter as models in seminars or conferences, or which are discussed in various writings for teachers. Recommended by "experts", they should work, but difficulties are present when learning in classrooms. The following rules help teachers avoid mistrust when using new strategies with their students.



Firstly, what students learn is more important than what strategy is recommended to be used. Not all teaching methods may work well in the learning process. Make sure your teaching strategy aligns with your learning goals.

Secondly, it is the student's thought process that matters, not the particular method used in the classroom. The fanatical pursuit of the same methodical strategies does not guarantee success every time. If students "pretend to learn", the methods do not lead to achievements.

Thirdly, everything that harmonizes the students' interests with the teacher's goals must be arranged. Although methodological strategies in the classroom are all "important", it is the way of thinking that changes attitude that matter.

The findings in these studies have resulted in the conclusion that; motivation, proper self-esteem, and self-efficacy, leading to high levels of academic achievement and teacher-parent cooperation and promote proper motivation by orienting students, not only toward self-esteem and positive expectations towards themselves but also toward the expectations that others (parents), teachers and society) have towards them.

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Digital education: A Portuguese high school example

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Abstract

Professional digital training for teachers is increasingly important, as digital resources and media are becoming an integral part of pedagogy and didactics in the classroom. The combination of traditional learning with digital environments raises important questions in didactics. This study aims to explore a pilot project implemented in a secondary school in Porto, where the two types of teaching (traditional and digital) co-inhabit in the classroom on a daily basis. It is important to investigate the effects of technologies on the relationship between teacher and student in the classroom. The study is based on classroom action research. Results indicated that: (1) teachers do not have the necessary digital skills; (2) schools must change the pedagogies in use and; (3) students need humanistic, communication and interpersonal skills. The ultimate goal is to understand how social school networks like this one, contribute to the formation of human and interpersonal skills.

Keywords: Digital education, digital environments, soft skills, human relations, emotional literacy.

1. Introduction

In light of the many major changes in adolescents' lives resulting from digital applications and the significant role these play in their lives, and since school is a place where they spend many hours, this study examined a perspective on how the digital environment is integrated into school life.

Professional digital training for teachers is increasingly important, as digital resources and media are becoming an integral part of pedagogy and didactics in the classroom. Traditional learning in the classroom is an essential factor in the transmission of knowledge. The interaction and dynamics that are established in the classroom are fundamental in the learning and personal development of the student. Consequently, the combination of traditional learning with digital environments raises important questions in didactics and pedagogy that should be the subject of analysis and reflection.

Education for artificial and digital citizenship is the path to follow alongside with the implementation of digital environment in high school educational systems.

The Committee of Ministers of Education of the Member States of the Council of Europe approved a declaration entitled "Citizenship Education in the digital era" (Council of Europe, 2019), in which it is emphasized that technological advances have had a "profound impact on our lives, our society, our economy, our educational systems and, equally, on our freedom of expression and our possibility to participate as citizens".

The declaration reiterates the importance of providing governance directions for AI-related processes that are based on "principles of fundamental human values, fairness and that stipulate that AI actors must respect the rule of law, human rights and democratic values throughout the life cycle of the AI system" (Council of Europe, 2019).



This study aims to explore a pilot project implemented in a secondary school in Porto, which uses both traditional and digital teaching and learning. That is, the two types of teaching co-inhabit in the classroom on a daily basis.

The choice of initiating educational experiences involving the experimentation of robots in classrooms, starting from pre-school, is a phenomenon that is constantly increasing at an international level (Papastergiou, 2009; Hava, 2021). In parallel, in recent years, there has been an increase in the number of researchers investigating the impact of robots (especially social robots) with respect to a plurality of skills that can be invoked in both teachers and students who participate, for example, in educational robotics experiences (Warren, 2008).

In a recent article, Cheng, Su, and Chen (2018) identified three major potentials with respect to the use of robots in education (Chiang, 2014). First, robots have a number of features that make them particularly functional in supporting pupils' acquisition of knowledge and skills (Wang, 2006; Wong, 2020). For instance, the ability to reproduce and perform repetitive tasks in a precise manner, flexibility, interactivity, and humanoid appearance (including body movement) are all elements that can foster effective teaching-learning processes (Shopova, 2014). Secondly, robots can facilitate learning by providing students with playful activities and hands-on experiences through which an engaging, attractive and interactive learning environment can be created (Wang, 2007). Robots, according to investigations reported by Cheng *et al.* (2018), are becoming an effective tool with which to improve student motivation and learning performance. Thirdly, robots can foster the development of 21st century learning skills such as those related to science, technology, engineering and mathematics (STEM) education. (Hodges, 2004; Kim, 2004) 9, 10. Indeed, STEM education enables students to increase their motivation, active participation and problem-solving skills.

According to Alimisis and Kynigos (2009), robotics experiences in education can be placed within at least two macro-categories. The first interprets robotics as a learning object (Toprac, 2011). These are educational activities where robotics represents a subject of study and where the teaching-learning experiences that are proposed aim to design a learning environment that actively involves students in solving authentic problems, focusing on robotics-related topics such as robot construction, robot programming and artificial intelligence (AI). The second category interprets robotics as a learning tool. Robotics, in this sense, is proposed as a tool to support interdisciplinary teaching-learning processes usually based on STEM-related projects (Chen, 2020; Leoste, 2019).

The experiences of robotics in schools, therefore, have particularly developed within certain disciplines (the hard sciences), are only impacting on certain age groups (and thus on certain school levels and types of educational pathways), and are aimed at developing those 21st century skills that are considered a priority and aligned with current and future economic and market needs. As Fridin (Tuna, 2019) points out, robotics technology has recently become a fashionable tool that has spread specially to middle and high schools.

Robotics can also be successfully employed - together with AI - in the education of pre-school children. At this school level, robots used for educational purposes can act as intelligent teaching aids, teachers or assistants to carry out teaching activities (Xeftaris, 2019). However, the introduction of robots could also pose risks (Riedmann, 2022). To what extent do we want our children's education to be delegated to machines, and social robots in particular?

In order to cope with (possible) technocratic drifts whereby the robot can (potentially) replace the role of the teacher, it is important to recognize both teachers and children as active actors in the construction and design of a teaching-learning experience that is also mediated by the use of the robot. The direction that we consider the most interesting to pursue here is the one indicated by Papert (1994), for whom the computer and the machines represent only a didactic mediator that can be placed at the service of the student and the teacher to construct/design/implement a plurality of activities.

Drawing on Yang and Zone (2020) (Su, 2022), early childhood education has long recognized and agreed on the benefits of using constructivist methodologies to help children learn by doing, manipulating materials, or engaging in enquiry activities conducted through playful experiences (Karademir Coşkun, 2020). In particular, according to these authors, the design of robotics experiences in preschool should consider children and teachers as active participants in a process of ideation and design (Jung, 2018). Unfortunately, most initial education programs aimed at professionals working in early childhood do not prepare teachers in the field of technology, nor do they offer a vision in which teachers see themselves as designers. The risk is therefore that of interpreting the role of teachers (and children) as mere consumers of an educational experience in which the robot is experimented with in a school



space without even having previously identified the aims and objectives and potential benefits of this type of activity (Li, 2020).

Liu and Kromer (2020) also point out that new generations of learners are exposed to AI from an early age and it therefore becomes a priority to introduce AI education into schools' curricula. It can contribute greatly to the development of children's creativity, collaboration, understanding and other skills (Liu, 2022; Liu et al., 2022). At the same time, as other authors point out, children's perception and understanding of AI is affected by a number of variables, including: socio-cultural background, personal experiences, the way parents talk to their children about technology, etc. (Roberts, 2021; Liu, 2019).

A pilot project called "Digital ecosystem of the educational community that allows having a private school network, where only teachers, students and users of the school ecosystem interact" is the case study in discussion in this article.

This project intends to provide a unique digital ecosystem where teachers, students, direction and school community can interact. The goal of this unique and innovator project is to gather in one digital platform the services and tools provided in distinct communication platforms.

This ecosystem allows that in a single platform, students and teachers have the permanent possibility to:

- a) publish information targeted at the school as a whole;
- b) can communicate easily and comment and respond immediately (even via mobile phone);
- c) both teacher and student have a private working environment - document management.

The main innovation of this digital environment lies in the fact that, simultaneously, in the physical and face-to-face classroom, physical and digital environments coexist. This makes it possible for teachers and students to have all the material at their disposal during the lesson and for collaborative work to be one of the essential aspects to be implemented in the classroom so that the student leaves his "digital communication safe place" and, in the digital environment, shares his knowledge.

The bases on the modelling of this project are: Social Innovative Paradigm; Ubiquitous Learning; Training for Life in Society; Organizational Logic; Professional Tools; Completeness; Timeliness; Inclusion and Security.

A social innovative paradigm relies on collaborative networks and digital sovereignty.

The ubiquitous learning in the sense that a learner-centered approach is fundamental combined with a distributed cognition among the intervenient.

The awareness of the need to up skilling through live to achieve a systemic vision, agility in sustained decision making, focus on results, collaborative work autonomy and responsibility, adaptability and ethics and information security.

The organizational logic is based on a: private system, endogenous management, systemic coverage, procedural logic, and permanent interaction.

2. Methods

Based on classroom action research, the design used was the model developed by Kemmis and Taggart, consisting of four components: planning, action, monitoring, and reflection. In addition, this research required the use of observation and interviews for data collection and a descriptive-quantitative analysis of the obtained data.

In this pilot project are present the groups that constitute the school organization (from the direction, to the library, to the theatre group, etc...) to the dynamic groups, which are the "disciplines" and the environment in which teachers and students share classes. This digital environment allows teachers to publish the classes (in advance), works, videos, books, and other elements of study. Students, in the same environment also, publish, pose questions and comment on teachers' publications – this constitutes the classroom environment.

From the classroom environment, both students and teachers also talk through instant messaging, chat, make phone calls, video calls and even video conferences (when you are at home sick for example).

Both teacher and student have a private working environment - document management - where they build their lessons and supporting documents; the notebooks and class and work notes; and share them in the "classroom environment", while students forward their notebooks and work to the teacher. Whenever there is a change to a lesson that has already been published, teacher changes the summary or inserts a new support document for the lesson for example, it is automatically updated and neither the teacher nor the student has to worry about it anymore. The same happens in the case of notebooks, in every class the students open the notebook and take their



notes, automatically, and forwarding only once to the teacher, it is always updated at the time and day when it is accessed by the teacher.

Case study: pilot project in an 8th grade of a Portuguese high school class. This class has 20 students and 13 teachers. Among teachers and directors, 13 had training. The subjects under analysis were languages – English and French –, math, geography, physical education, history, arts, citizenship and development, nature sciences, Portuguese, and informatics.

At the beginning of the school year, teachers began to have training every week in this platform. The teachers' training is an integrated part of this pilot-project. Teachers were trained throughout the school year, so that they were able to use this platform in their classes. The main goal of this weekly training is to provide teachers with the technical skills to enable them to appropriate and become involved in this digital-based ecosystem.

The digital tools that support this platform (digital workspace, unified communications, document and process management) are a facilitator of the teaching and learning process, ensuring the inclusion of the School Social Network for all agents involved (Principals, Teachers, Students, Parents, Administrative and Educational Assistants). This digital ecosystem is also characterized by the treatment of all information in an integrated way, thus allowing access at all times and from anywhere to all the agents involved.

After the training, teachers are able to:

- manage the school social network (events; publications; news; albums of activities carried out);
- manage the status of their communications;
- use the four channels of unified communication (chat, email, phone call and video conference calls);
- manage the Class channel (publications; conversations within the Class channel);
- use the "meeting room" to hold classes at distance;
- use meeting scheduling to manage their day-to-day work;
- manage the private work network (document management);
- manage the document management folders;
- manage their Discipline's folder (Lessons and documents that constitute the Lessons by "themes" of the program);
- create "Class" files; link the documents that constitute each Class to that file, and share the "Class" file with the Class in the school social network;
- create forms for questionnaires, tests, sheets, assignments (among others) with total or partial automatic correction;
- send sheets, worksheets (among others) to students and proceed to their correction;
- give feedback to students;
- importing contents from the interactive whiteboard and the ceramics board into the platform;
- evaluating students' digital notebooks; ...

During the school year of 2021/22, a consultant supported both teachers and students on the ground for the implementation of the pilot project. The goal was, right from the beginning of the lessons, to create all "lessons" already on the platform and work on it with the students of this class.

The pilot project was well accepted by teachers and students, and from the beginning, they have started to use it in every day classes.

3. Findings

Based on classroom action, research findings were achieved through three means: during the classroom functioning, alongside with the teachers' training and with an intermediate report.

During classes functioning, observation and intervention of the researcher allowed us to gather information regarding students' motivation while using this digital environment. Their engagement, motivation, questioning to the teachers on the chat, the maintenance of their notebooks for each discipline and their performance in each lesson, assessed by teachers increased.

The possibility to have a digital notebook where a student can do every entry at the classroom and, then, at home, can do its maintenance, was the crucial innovation perceived by students. On the other hand, the possibility for the teachers to have permanently the notebooks actualized by students, and the fact that teachers assess them giving students permanent feedback, allow engaging both students and teachers in a systematic way.

The availability of a digital portfolio where tests, contents, videos, chats, quizzes, activities, and notebooks, are in a single digital document is the most remarkable aspect of this project.



The fact that at the classroom, during classes, teachers launch an activity through this platform to all students, and project the “common space” for all students, raised the interest of students in comment, and do better and show what they are capable of.

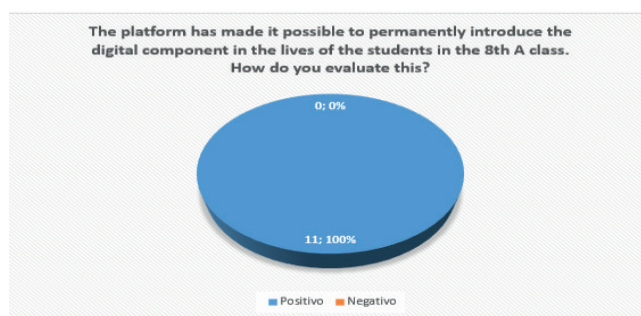
From the several classes where observation was conducted, in a specific one where students were asked to do a collaborative work, at the English subject, about the Queens’ Jubilee. The activity proposed consisted on put students work simultaneously on the same document. The 20 students were divided in groups of 5 each, and, each student had to do a page of the document – a power point, with five pages, about the Queens’ Jubilee. During 45 minutes students were working with the assistance of the researcher and the teacher. At the end of the activity, they’ve presented to each other their presentation and a debate was made at the end.

The remarkable participation and engagement of students and teachers in this collaborative work, where they apply technologies they know, in activities where they must put in practice their knowledge is outstanding. Their smiles, theirs engagement, their proud of belonging to something different with the technologies they use every day was really “an aspect that remained as the best experience of these months of accompanying these students and teachers in this school” (researcher involved).

The launch of a small survey was conducted in April of 2022 in order to know how teachers perceived the use of this digital platform.

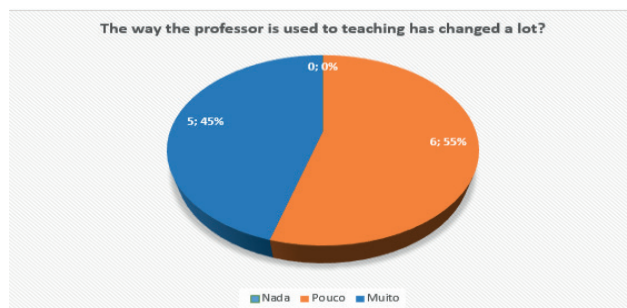
Regarding the question “The platform has made it possible to permanently introduce the digital component in the lives of the students in the 8th A class. How do you evaluate this?” all the teachers agreed.

Figure 1 – Digital components in students’ lives



The introduction of a digital platform where everything is made, such as: classes preparation and assessment, summary, planning, among other bureaucratic aspects was a positive point for the use of this platform by the teachers.

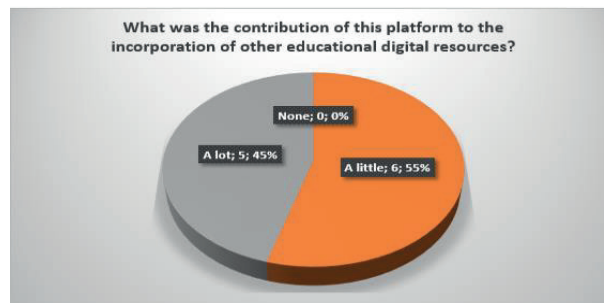
Figure 2 – Changes in teachers’ attitude



Regarding the question of “What was the contribution of this platform to the incorporation of other educational digital resources” teachers were divided, 55% responded “a lot” and 55% “a little”. The use of interactive charts, Zebra software and its combination with the Platform was randomly done during the academic year, only when some teachers asked for it. The main goal in this academic year, with the pilot 8th grade students and teachers was to train and implement the Project. It was not an easy task due to several constraints encountered.



Figure 3 – Contribution of the platform



4. Results, Conclusions and Recommendations

The main goal of this project is to provide each educational community with a private technology-based ecosystem and endogenous management of all its activity, inducing the respective digital and collaborative space. A very important aspect for both teachers and students is the fact that this platform allows them to keep a complete portfolio from one school year to the next.

The results obtained during the academic year where researchers were training, supporting and observing both teachers, directors and students, allows concluding that there are advantages on the use of this Ecosystem, namely:

- being digital, greatly motivates students, makes the class more dynamic and interactive;
- increases mutual help between students;
- improves the teacher/student relationship insofar as this dynamic and dialogue on the platform and the joint discovery of the same narrows the relationship between the two;
- access at any time to all the classes and the notebook, works, tests, etc.;
- being able to prepare lessons at home and schedule the sharing/publishing of the week for example;
- students can access their lessons, notebooks and assignments over and over again to study;
- students learn to type on a keyboard, type text on a word processor, in excel, in power point, among other tools;
- students learn to do collaborative work (they are all working on the same document at the same time, wherever they are);
- they can even communicate with each other at home by chat, phone call or video conference.

Results indicated that: (1) teachers do not have the necessary digital skills; (2) schools must change the pedagogies in use and; (3) students need humanistic, communication and interpersonal skills. Conclusions show that students, teachers and school managers are eager to exploit this pilot model to achieve better results. We conclude that further comparative studies of digital learning are needed. The ultimate goal is to reflect on digital environments in school as a pedagogical tool and the teaching of human and interpersonal skills along with the training of digital skills. As recommendations we found that the internet network has to be strong and fast, students and teachers have to have equipment at home and at school, students are even more connected and being diverted from personal contact with their classmates and at school. The digital media and the isolation of children since young ages has brought up several discussions among academics in the field of education and psychology. This project intends to change this, allowing students to communicate with the supervision of teachers and experts on psychology, allowing, that way, a secure relation among peers.

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Group dynamics and creativity: A case of experimentation with young adults

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Abstract

Modern society demands innovativeness and creativity. Few studies have examined group dynamics' influence on individuals' creativity. This study explores creativity in group settings and how the gender of participants influences group dynamics and the creative process by observing specific behaviors, including *Social Interaction* and *Play*, *Creative Action*, and *Creative Thinking*. In groups of three, thirty participants (20 - 25 years) were asked to create Mosaics representing a "learning community" using LEGO dots. Relationships between group dynamics and creativity, creative thinking and creative action, gender of participants and their orientation to creativity and group dynamics were explored. Results showed positive relationships between group processes, creative thinking, and creative actions: the more intense the group dynamics were, the less the creativity. Female participants were more oriented to the creative task; male participants were more oriented to group dynamics. Further investigation on the relationship between creativity and cultural stereotypes on gender roles is needed.

Keywords: Group dynamics, creative thinking, creative action, social interaction, gender infusion

1. Introduction

Modern society requires people to be flexible and develop innovative solutions to unexpected situations. It is, therefore, necessary to develop creativity not only in children but also in adults. Creativity refers to the "Interaction among aptitude, process, and the environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context" (Kaufman et al., 2008). It is the complex human capacity to produce novel ideas, generate new solutions, and express oneself uniquely (Abraham 2016). "A creative individual regularly solves problems, fashions products, or defines new questions in a domain in a way that is initially considered novel but that ultimately becomes accepted in a particular cultural setting" (Gardner, 2006). The conceptual definitions of creativity revolve around originality and appropriateness in particular contexts. However, there have been numerous disagreements and discontent over the definition and the assessment of creativity: this is mainly due to the immeasurability of the two variables as they depend on the evaluative context and the perceiver (Adarves-yorno et al., 2006).

Ordinarily, only groundbreaking scientific discoveries and outstanding works of art by novelists, visual artists, and poets are readily associated with the concept of creativity. Nevertheless, the potential to be creative exists within each person. Variability in both the amount and the type of creativity produced over a lifetime and the capacity to be creative is evident in nearly all aspects of daily human life, such as choice and decision making, planning and



organization, and even language and communication (Abraham 2016; Andreassen & Ramchandran 2012; Nakano et al., 2021). Until recently, most studies on creativity have focused on the individual creator's minds, methods, and motivations. Creativity has been seen as a trait of some individuals, which is measurable by paper and pencil tests, with group creativity as anomalous; or simply at a sum of the capacities of the individual group members (Gardner 2006).

It is essential to analyze creativity through social contexts for various reasons, including the definitional requirement that a creative idea must be perceived as valuable by others and that group effort often results in an increased output of new information and knowledge. Individuals derive their identities from their membership in certain social groups, and social identity and shared group membership are significant determinants of an individual's willingness to engage with others. The nature of a person's relationship to their group influences the perceptions and people's responses to creations and attempted innovations. For instance, "if a product is perceived to be associated with an in-group or its creator is perceived to be an in-group member, it is more likely to be approached and regarded favorably than it is when it comes from an out-group" (Gardner, 1993). In his book, Gardner argues that "indeed, the knowledge that one will be judged on some criterion of "creativity" or "originality" tends to narrow the scope of what one can produce (leading to products that are then judged as relatively conventional); in contrast, the absence of an evaluation seems to liberate creativity." He reiterates that creative solutions occur more often when individuals are intrinsically motivated to engage in an activity rather than extrinsically driven.

According to Malaguzzi, "the most favorable situation for creativity seems to be an interpersonal exchange, with the negotiation of conflicts and comparison of ideas and actions being the decisive elements" (Edwards et al., 2011). Nonetheless, due to the creative personalities and individual differences, group members' characteristics affect how people interact with each other cognitively and interpersonally. For instance, different problem-solving styles can make group creativity easier or more difficult. While groups can promote creativity through the combined experiences, expertise, and resources of multiple individuals pursuing a common goal, certain conditions can lead to narrow thinking, leading to a reduced quality of creativity. Personal attributes interact with situational variables to influence creativity in groups. Natural team interactions hinder creativity. Studies on creativity have revealed that creativity is not a spontaneous process but is the intersection of an individual's creativity-relevant skills, domain-relevant skills, and motivation (Kurtzberg & Amabile 2001). Thus, it is important to examine how this creative process and ideas are influenced by the presence of other people in group settings.

All children undergo an extensive period of exploration of their environment. This period is an opportunity to discover the physical, social, and personal worlds, which becomes a background for further learnings and models for later exploratory behaviors, including probing phenomena that have never before been conceptualized. Those children who have sufficient capacity to explore fully accumulate an invaluable capital of creativity which they can draw in later in life. On the other hand, those children restrained from such discovering activities have a significantly reduced chance of developing their creative abilities in the future (Gardner 1993). As individuals develop into adulthood, they strive to form a sense of identity and belonging, sometimes making them afraid to act or think until they know what their peers are thinking. There is the wish to create, make, build and try in various contexts, but sometimes feelings of inferiority may predominate. In group settings, this may work against the individual's creative drive. The young individual tends to seek group acceptance and validation through conformity. Additionally, the more acceptable a group member feels to other group members, the more capable they will be of risking getting deeper and intimate, gaining a more fulfilling involvement.

Problem Statement

Empirical studies on the creative ability among children and adults are inconclusive and inconsistent regarding gender differences. Nearly half indicated no significant differences between males and females, and the other half indicated mixed findings, with an average of superior creative abilities in females (Abraham, 2016; Nakano et al., 2021). Although aspects of creativity differ in men and women, it is not due to gender but the influence of cultural and environmental factors that determine the behaviors of each gender. The gender influence would also depend on the type of creativity being assessed, such as verbal, visual, or spatial tests. Most theories have analyzed gender differences in creativity related to socio-cultural, environmental, and neuro-scientific grounds (Nakano et al., 2021). Limited scientific studies have examined group dynamics' influence on individuals' *creativity*. Furthermore, research on creativity has rested squarely on the individual's cognitive processing, individual differences, and the



effects of the external environment on the individual. Relatively little consideration has been given to the creative ideas generated by the groups instead of one mind (Kurtzberg & Amabile 2001). Consequently, this study was generated to explore creativity in group settings and identify how the gender of group participants influences the group dynamics and the creative process.

Resnick (2007) concluded that the creative process is not limited by age and can be observed not only in childhood. He proposed the "kindergarten approach to learning", which is suited to the needs of the 21st century. It allows learners to develop the creative-thinking skills essential in today's society. Resnick believes that the "kindergarten approach to learning" is needed to help people of all ages develop the creative capacities needed to thrive in today's rapidly changing society." Following this idea, the idea to construct the same workshop used in a previous study with children for young adults and explore the relevance of the specific behaviors studied in the workshop with children was born. In the previous study, the research team observed children's creative process in groups of 3-4. The children were 6 to 12 years old and were all accompanied by their parents. They were asked to create Mosaics representing their ideas of a "learning community" by using LEGO dots (Komarova et al., 2022). While they created, they expressed different social and collaborative behaviors. Repetitive behaviors of children were identified and classified as shown in Table 1.

Table 1. Behaviors classification.

Behavioral signal	Variables
A child Stacks LEGO dots on the base	Creative action
A child Unstacks the LEGO Dots	
A child chooses the color of mosaic	Creative Thinking
A child Looks design of the other children	
A child searches for the dot on the floor	Distracting action
Peers help to put the mosaic on the base	Group Work
A mother helps to put dots on the base	
A child talks with the mother	Group Conversation
A child talks with peers	
A child Talks With 'Atelierista'	
A child plays with LEGO dots	Play

Objectives of the Study.

This study explored regular social interactions between three young adults during the creative activity with LEGO. The study's objective was to explore the relevance of the specific behaviors observed in the previous experiment with children to the creative process of young adults. The researchers agreed to use the same variables identified in children and focused on the behavioral signals observed during the group dynamics in the creative process with LEGO mosaic. Specifically, the focus was on social interaction, a dynamic, changing sequence of social actions between individuals or groups (Zhou et al. 2020). There are four types of social interactions: accidental, repeated, regular, and regulated (Argyle, 2017). In social interaction, the focus was on verbal communication: intrapersonal communication, interpersonal communication, small group communication, and non-verbal communication like body movement, postures, and gestures (Cafaro et al., 2016; Banasik-Jemiłniak et al., 2022).

Each type of communication specification was also defined based on the appearance of the speech and body movements. Firstly, in verbal communication, our goal was to explore/observe the dynamics of the speech, the type of communication during the young adult interaction, and the order of the speech. For example, there was a focus on intrapersonal communications where the participants talked to themselves. In interpersonal communication, the focus was on the transmission of information that occurred between three people without using language. For example, behavior signals such as interpersonal communication were observed, where young adults talk with one another, and small group communication.



Secondly, in non-verbal communication, the positions of the young adults while relating to the other participants were observed, the distance between them, and how it changed during the activity. For example, body movement and postures such as turning around to ask for help in an ongoing activity.

Finally, the scale of appropriate behaviors of the categories detected during the same activity with LEGOs carried out with the children was defined. Such behaviors were operationalized into two sets of categories. The first included variables relating to group dynamics: Social Interaction and Play. The second included variables relating to the creative task: Creative Action and Creative Thinking. The research questions focused on: (1) the relationship between group dynamics and creativity; (2) the relationship between creative thinking and creative action; (3) the relationship between the gender of participants and their orientation to creativity and group dynamics.

Research Questions

The following specific questions were explored:

1. What is the relationship between group dynamics and creativity?
 - a. *What is the relationship between group dynamics and creative thinking?*
 - b. *What is the relationship between group dynamics and creative action?*
2. What is the relationship between creative thinking and creative action?
3. What is the relationship between the gender of participants and their orientation to creativity or group dynamics?

Hypotheses of The Study

The following hypotheses were set for the study:

H1. The more intense the group dynamics, the higher the creativity level will be displayed. (The more the group engages in its dynamics -team building, having fun, socializing, leading- the better the group will perform in its creative task).

H2. Creative thinking and creative action are positively correlated (the more creative thinking, the more creative action).

H3. Male participants will be more oriented to the task (creative), while female participants will be more oriented to group dynamics (men are more task-oriented than women, who are culturally process-oriented).

Description of Experiment

An exploratory sequential mixed-methods design was used to investigate the group dynamics and creativity of the participants during the creative task (Berman, 2017). Within this framework, an initial preliminary study formed the basis for the follow-up design of the experiment. The qualitative study was built on a statistical analysis of observations of participants (Wolfe, 2000). More detailed discussions between the observers were conducted to gain in-depth insights into the behavior signals of participants in the LEGO experiment (Parlitz et al., 1996). The experiment took place in the research laboratory Scintillae in Loris Malaguzzi International Center, Reggio Children Foundation. Since experimenting in a research laboratory requires a meticulous design approach and a bureaucratic approval process, it was necessary to conduct a preliminary study. The pilot phase included two sessions, each consisting of three participants. The objectives of the pilot phase were: (1) to organize and test observation settings; (2) to develop the questionnaire; (3) to identify the observation report technique.

Participants and Configuration of The Experimental Group

The study was conducted among 30 participants aged between 20 and 25 who attended university after completing a bachelor's degree. The sample size was based on guidance from Miles and Huberman (1984) and Hillman and Radel (2018). They were divided into groups of 3 depending on their gender. There were two pilot phase groups, as described previously, and eight experimental groups. The experimental groups were: two groups consisting of three girls; two groups consisting of two girls and one boy; two groups consisting of two boys and one girl; two groups consisting of three boys.

Ethical Considerations

The Doctoral Program in Reggio Childhood Studies provided ethical approval of the experiment. Since all sessions were video and audio recorded, the participants were asked to sign an informed consent before the beginning of the creative tasks. It explained the recorded material usage and assured them of privacy and confidentiality by the



University of Modena and Reggio Emilia and the Foundation Reggio Children, the two institutional partners in the Doctoral Program. The data was stored in the principal investigator's OneDrive (linked with the institutional account of the university). The participants also signed an agreement that clearly explained the experiment to participate in the experiment voluntarily.

2. Materials and Procedures

Eight sessions of the same experiment were performed. All sessions were carried out in 5 days. The three moderators observed one group at a time. The experiments lasted between 37-56 minutes, with the variation in time reflecting the creative task participants had to share. The average group session included a 5-minute introduction, 30 minutes of creative activity, and 5 minutes of a self-administration questionnaire. The creative task for the young adults was similar to that conducted with children. The tasks were: (a) collaborate in groups of three people using LEGO Dots; (b) reproduce what an educating community is for them with the LEGO Dots.

At the end of the activity, they were asked to fill in a questionnaire titled: "quality of collaboration with colleagues in the Scintillae Laboratory." The experiments were conducted in Italian, and the translation was done by one of the observers at the analysis stage.

3. Data Analysis and Results

A qualitative analysis of each experiment session was performed, and then the results of all sessions were compared. The structure of the analysis was based on three main phases. In the first phase, the behavior categories of young adults were defined using a scale related to the previous experiment on the children (Popescu 2014). In the second phase, the qualitative data were transformed into quantitative data using the Observational Coding System (Hawes et al., 2013). The percentages of represented behavior signals were calculated for each participant and group (Srňka & Koeszegi, 2007; Kuckartz & Rädiker, 2019). In the third phase, the behavioral variables of the participants and the groups were compared (Staffa & Zurakowski, 2020; Troendle et al., 2012).

Phase 1: Definition of Behavioral Categories of Young Adults

After the two preliminary sessions, the observers discussed and agreed on the form of representation of behaviors. Each observer observed and transcribed the behavior signals of the 24 participants in 8 experimental groups, marked a classification of all observed behavior signals, and allocated them into variables for quantitative data analysis. The process of identifying the variables consisted of: (1) what does the behavior signal mean? (2) How can they group the variable? (3) Do behavior signals of young adults during the creative task represent the same variables defined previously?

The results of this analysis are represented in Table 2. Contrary to the findings with children, the table of young adults does not present group conversation. This may be because verbal communication in children is minimal compared to adults; thus, it could be distinguished into a separate group. Due to verbal communication, adults construct group processes (Vygotsky, 2006; Piaget, 1995). Contrary to young children's speech, adult speech is socialized. Adapted information, criticism and derision, questions and answers, and argumentations are typical forms of socialized speech and language (Gerosa et al., 2006).

Table 2. Behaviors classification.

Behavioral signal	Variables
One or more group members perform an action related to using LEGO dots to produce the mosaic group work.	Creative action
All communications revealing the creativity/innovation/experimentation process.	Creative Thinking
Distraction is a phenomenon of moving away from the task and the dynamics of group work. For example, when the participant changes their objective and is no longer referred to as a creative action	Distracting action
All actions and communications aimed at establishing and maintaining relations functional to the group.	Group Work



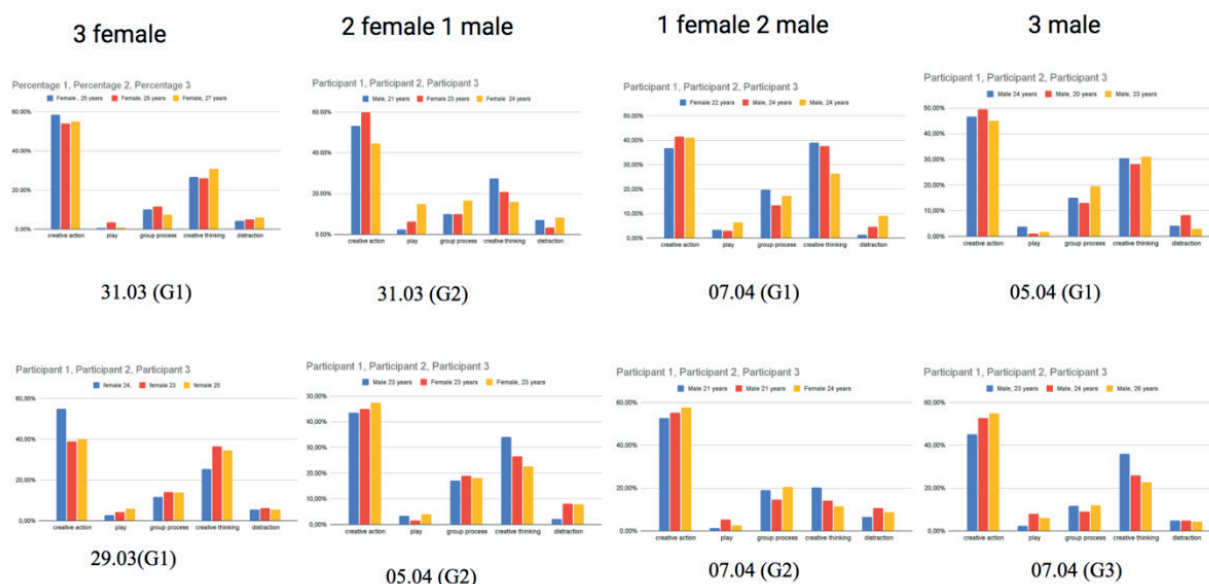
Actions and behaviors aimed at playing with
created work or efforts to play with the LEGO Dots.

Play

Phase 2: Statistical Representation of Qualitative Data

In the second phase, a statistical representation of the behavioral signals observed by the three observers was done. Five corresponding numbers were used to represent the five variables: creative action (1), play (2), group process (3), creative thinking (4), and distraction (5). For each session, a three-page excel document was created, and the three observers inserted their observations for each participant in the eight sessions. To proceed with quantitative analysis and get the median, each observer assigned corresponding numbers to the behavior signals of each participant. Here, the total count of each observed behavior was represented and calculated. The observers unified the final repeated number of each behavior signal of each participant by finding the median. The medians of the five variables for each participant were then converted into percentages. The results are presented in Figure 1. The median of the three observations represents dynamics during the creative task of each participant in the group. Each collar bar represents in percent behavior signals performed by each participant, including creative action, play, game process, creative thinking, and destruction.

Figure 1. Comparison of the groups based on the gender of participants.



Note. A. All participants; B. Median of the female participants with the gender of other participants

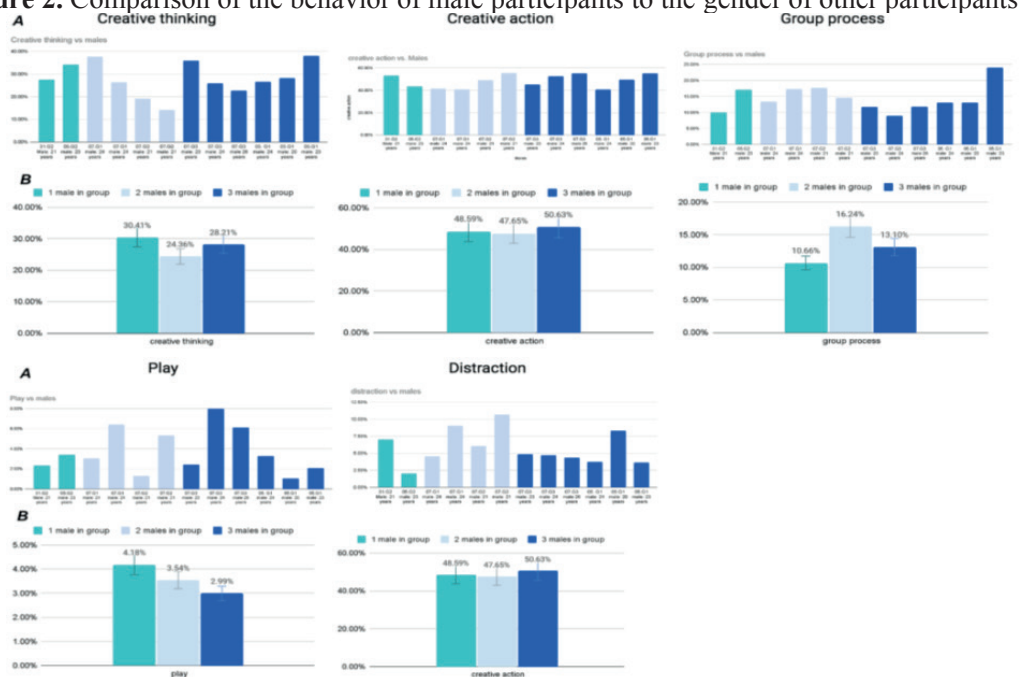
Figure 2 shows the comparison of behaviors of the male participants to the gender of the participants. Creative thinking behavior signals were performed more times by male participants in groups with two female participants in the group (30.41 %). On creative action, male participants performed higher in the group composed of only males (50.63%). In the group process, male participants scored higher in groups with one female (16.74%). The play behavior signals were higher in groups with one female (4.18%). Also, groups with one female were more distracted (7.69%).

Figure 3 compares the behavior of the female participants with the gender of the participants. Creative thinking behavior signals were performed more times in groups that included only female participants (31.06%). The creative action of females was higher in only females groups (57.14%). Females scored higher in play in groups with two male participants (20%). The distraction action was higher when only female participants did the creative task together (5.45%).

This division approach helped in phase 3, where variables of the groups depending on their gender were compared.



Figure 2. Comparison of the behavior of male participants to the gender of other participants



Note. A. All participants; B. Median of the male participants to the gender of other participants

Figure 3. Comparison of the behavior of the female participants with the gender of other participants.



Note. A. All participants; B. Median of the female participants with the gender of other participants

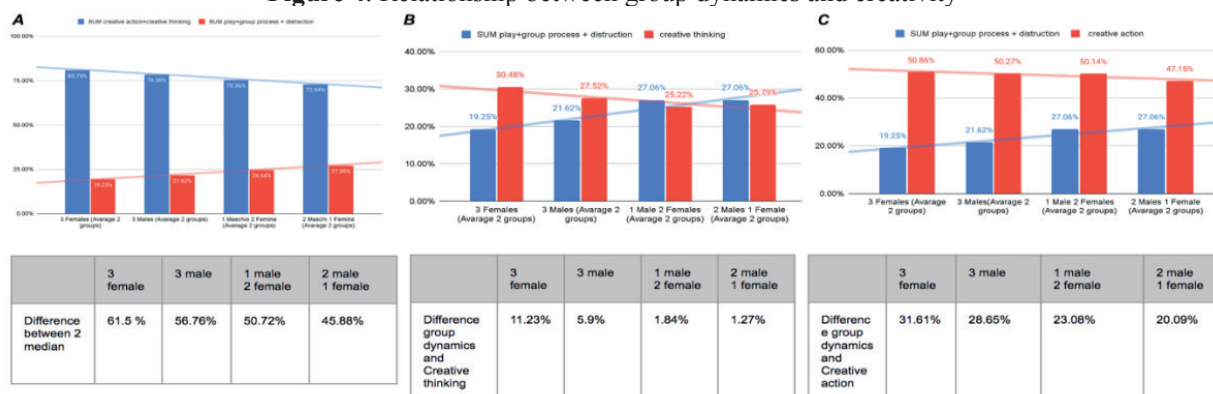


Phase 3: Statistical Analysis of The Data

To analyze the results, the categories defined previously were grouped. Specifically: (1) group dynamics is made of group process, play, and distraction, and (2) creativity is made of creative thinking and creative action. To process the results of the two homology groups (i.e. only females, only males, two females and one male, one male and two females), we used the mean of the two median values.

Figure 4(A) shows that the more intense the group dynamics, the lower the levels of creativity displayed. This means that the more the group attention was on the group dynamics, such as team building, having fun, socializing, and leading, the lower the group performed in its creative task. Figure 4(B) shows that group dynamics negatively correlate with creative thinking. If group dynamics were growing, the creative thinking became lesser. Figure 4(C) shows a negative correlation between group dynamics and creative action. If the group dynamics were growing, the creative action was performed less.

Figure 4. Relationship between group dynamics and creativity



Note. A. Relationship between the SUM of creative process & creative action and the SUM of group action & play & distraction; B. Relation between the SUM of group action & play & distraction and creative thinking; C. Relation between the SUM of group actions, play & distraction, and creative action

Figure 5 shows a positive relationship between creative action and creativity. The table below the figure elaborates on the difference. The higher the levels of creative thinking, the more creative action.

Figure 5. Relation between creative action and creativity.

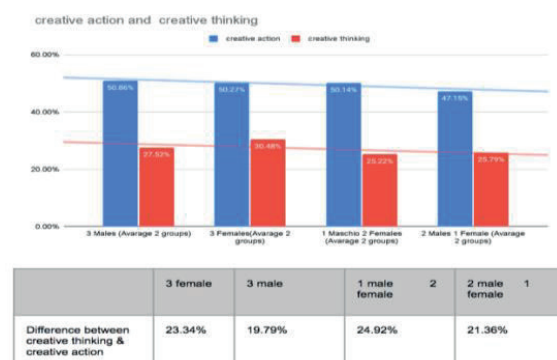


Figure 6. Relation between the gender of participants and their orientation to creativity or group dynamic.

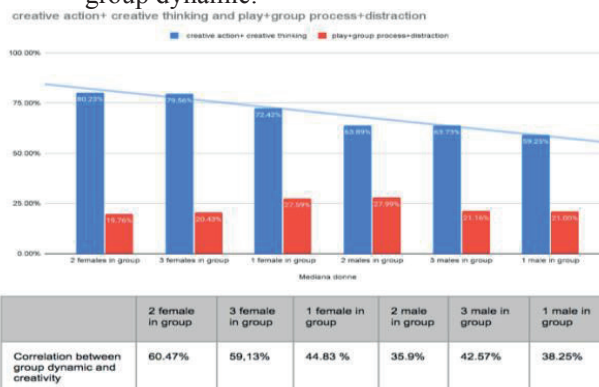


Figure 7 shows the relationship between the gender of participants and their orientation to creativity and group dynamics. The graph shows that the creative action of females was higher compared with male-only groups (57.14%). Group process was presented better by females in group with two males (20%). Therefore, female



participants were more oriented to the creative task, while male participants were more oriented to group dynamics. Women were more task-oriented, and men were more process-oriented.

4. Discussion and Conclusion

This paper aimed to explore how group dynamics influence creativity among young adults aged 20-25 through a mosaic-related experiment with the LEGO dots. The study also focused on the role of gender on the creativity of groups. This section discusses the findings of this experiment compared to existing literature, grouping them by the original research questions (1-3).

4.1. Relationship Between Group Dynamics and Creativity.

An extensive literature has focused on factors influencing individual creativity with a narrow focus on how individuals tasked to work together generate creative output. However, there is evidence that personal attributes interact with situational variables to affect group creativity (Slayton et al., 2019). This experiment indicated a negative correlation between group dynamics and creativity, rejecting hypothesis 1. This means that the more the group attention was on the group dynamics, such as team building, having fun, socializing, and leading, the lower the group performed in its creative task. This result could be interpreted as a loss of focus or diversion from the primary task, which reduces the time allocated to perform the creative task.

There is evidence that interpersonal relationships are essential in group creativity, and a collaborative environment increases the creative output. Furthermore, group members must be able to connect and coordinate with each other to effectively work as a team (Slayton et al., 2019). Therefore, high levels of group dynamics may increase the time taken to perform a given task within the allocated time, reducing the productivity of the creative task. There is a need to investigate this relationship further by comparing groups of people who are familiar with each other and groups who are not. Additionally, group dynamics may influence creativity by constraining divergent thinking due to factors such as self perception where group members self-sensor and also choose not to share their creative ideas with the group (Meyer & Plucker, 2022)

4.2. Relationship Between Creative Thinking and Creative Action.

The findings of this study were that there was a positive correlation between creative thinking and creative action, supporting hypothesis 2 of this study. The higher the levels of creative thinking, the higher the creative action. This result is also evident from the outcome of groups of females only, who scored highly in both creative thinking and creative action. High levels of creative thinking mean that the individuals spend more time figuring out the means of accomplishing the task, thus increasing the productivity of creative action. It also allows for the individuals to reflect more on the task at hand and the process of creation. Creative thinking is one of the major processes of the creative process. It is an important competency that must be possessed to help individuals make decisions (Fitrianawati et al., 2020; Glaveanu et al., 2013). These findings correspond to previous studies that have found a positive relationship between the two. For example, Meitiyani et al. (2020) argued that creative thinking allows students to investigate the problems at hand and leads them to identifying and considering the most appropriate actions to take. This enhances their problem solving skills and also their creativity.

4.3. Relationship Between the Gender of Participants and Their Orientation to Creativity or Group Dynamics.

The hypothesis that male participants would be more oriented to the creative task whereas female participants would be more oriented to group dynamics was rejected. The assumption was that men are more task-oriented than women, who are culturally process-oriented. Out of necessity, women have established their attention to behaviors, attributes and feelings to compensate for their social subordination position (Berson et al., 1995; Halpern et al., 1996). On the contrary, the study's results indicated that females were more oriented to the creative task while males were more oriented to group dynamics.

Females displayed higher levels of creative thinking behaviors than male participants. As mentioned in the beginning, there have been inconsistencies in findings on gender differences in creativity across several studies. These differences in creativity could have been due to varying issues ranging from intrinsic to extrinsic factors such as the motivation of the individuals and environmental issues that cannot be disregarded (Abraham, 2021). As Meyer and Plucker (2022) emphasise, demographic diversities do not influence group creativity but the factors such a diversity of abilities and perspectives have an influence. Another issue could be due to the sense of



belongingness in the groups. As previous studies have argued, belongingness and identity with a certain group increases the likelihood of participating in such creative tasks in group settings (Adarves-Yorno et al., 2006).

5. Recommendations

The objective of the study was for the participants to complete the creative task and clearly, it motivated the participants. It would be important to analyse what behavior signals that the group performed but that did not contribute to the achieving the objective. Furthermore, it would be important to compare the behavioral signals observed in this study with technological instruments to perform creativity.

The research team is currently analyzing the observation process that led to detecting specific behavioral variables. In the future, there is a need to optimize the observation form and propose a technological solution such as an application that could simplify the observer's work. Ways to standardize the observation of group dynamics in connection to creative settings and tasks are under examination and will be the object of a future paper.

Limitations of The Study

One of the limitations of this study is that it did not analyze the result of the creative tasks. The focus was more on the behavioral cues and not the end product. Future studies should define more strategic ways of analyzing creative results in such experiments to achieve a better comparable analysis. Another limitation of this study is that there was no control group to determine whether the presence of observers had an influence to the group behaviors or performance of the creative task (Paulus, 2022). Finally, although the current study stemmed from a previous experiment with children, there was no comparison made on the behavior signals between the two. Such a comparison would be relevant to explore further the differences between the two groups.

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Through the positive discipline lens: Primary school teachers' busy agenda

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Abstract

In primary school years, classroom management mostly occupies the agenda of teachers working at this level. Teacher-child communication, behavior patterns that children bring to school from their homes, and the order that teachers want to establish in their classrooms are knitted by crossing wicker ropes. Classroom management includes all the actions that teachers take to create an effective and safe learning environment. When the relevant literature is examined, various models related to classroom management are encountered. Based on the principle that the communication between the teacher and the child is the basis of effective classroom management, it is necessary to examine the quality of teachers' approaches, attitudes and behaviors towards children from the teachers' own perspective. In this context, the evaluation of educational environments from the perspective of the concepts of positive psychology has gained importance in recent years. In this study, the main aim is to examine the discipline understanding of kindergarten, primary school and English teachers working at the primary education level in the lens of classroom management. In the second stage, it is aimed to examine the problems they experience while communicating with children in depth. Sequential explanatory design of mixed method research was used in this study. Kindergarten, primary school and English teachers (N=105) working in public schools in Istanbul, selected by random sampling, constitute the sample of the research. Teachers' thoughts on positive discipline were collected through a questionnaire consisting of open-ended questions. The findings obtained from the teachers' questionnaire responses led the researchers to conduct semi-structured interviews in order to obtain in-depth information about the subject. For this purpose, interviews were conducted with 10 teachers who were randomly selected from the sample group. According to the survey results, "disruption" in primary classes was on the top of the problems' list teachers reported. In the semi-structured interviews, presenters asked the real cases in the teachers' classes and disruption scenarios. In the analysis of the qualitative data, descriptive analysis was used. All teachers interviewed, regardless of branch, stated that they faced similar problem behaviors in their classrooms.

Keywords: Teachers, positive discipline, classroom management, primary education

1. Introduction

Seligman (2011) describes the positive psychology as "the scientific study that constitutes the pleasant life, the engaged life and the meaningful life." (Ackerman, 2018). Positive psychology focuses on positive experiences, positive states and traits. Primary teacher of any subject needs to possess these feelings to enable their pupils to enjoy the entire education at school. Teacher motivation arises from job satisfaction and the fulfillment of psychological needs. It is closely related to classroom dynamics which in return has an impact on student motivation. It effects the interpersonal relationships between teachers and learners. Positive Psychology, specifically in language teaching derives from the «HUMANISTIC» approaches of Abraham Maslow's (1908-1970) «hierarchy of needs» like physical, social esteem and self actualization; Jerome Bruner's (1915-2016) «constructivist theory» and Getrude Moskowitz's (1978) «Caring and sharing». In 1970s and 1980s humanistic approaches took a holistic view of the learner, combining cognition and affect and the learner is treated in some sense as a 'whole person'.

Positive discipline is interrelated with the positive psychology of the teacher and has been described as increasing success by responding to psychological and academic needs of children. Positive discipline is building students' sense of community, preparing them for successful living, and increasing their academic achievement (Stepp G., 2011,



Stepp G. A., 2011, Dreikurs, 1974, Nelson j. l., 2007). Discipline is not punishment. It is teaching students to impose limits on themselves. Democratic teachers provide firm guidance and leadership. They allow students to have a say in establishing rules and consequences. There is no punishment or reward.

Students' positive engagement fosters ownership. negative emotions on the other hand, lead to cognitive/ or physical stress (Puchta, 2017). Tests, doing homework, classroom activities, pair work or group work, text book, intensive or extensive reading, parent or teacher attitudes, school atmosphere and many other factors might cause stress which might end up with misbehaviour. Using positive discipline means more than teaching students about life skills. It also means creating a whole new school environment where misbehaviour is almost diminished. With positive discipline, teachers have a chance of creating an atmosphere where students know they count, the discipline is positive, they encounter positive engagement, and students and parents are included in problem solving. The most important issue over here is to train empowered teachers who possess self efficacy, autonomy and growth mindset. Empowered teachers develop students' ownership over their learning and they can encourage their students to become creative and critical thinkers. Such teachers are able to develop the most effective classroom management techniques.

Teachers should develop caring, supportive relationships with and among students, organize and implement instruction in ways that optimize students' access to learning if they wish to have a better classroom management. They need to take non- confrontational approach and not start with things that are going wrong but start with good ones. They need to create informal chat chats and remind the students that they are doing well. They need to create a positive and safe environment in their classes. They need to spare time for learner training on learning styles and strategies. They need to teach their students that they learn from their mistakes, so making mistakes is a normal process of learning. They need to listen to their students. They need to create an atmosphere where students enjoy learning and have fun. All these items bring a busy agenda for teachers but on the other hand make them more satisfied in their profession.

Employing positive discipline in our classes are highly beneficial for the learners. A few of them could be cited as follows:

Students show respect for the teacher, students are on task and engaged, less disciplinary measures are needed, students see rules as fair, attendance improves, classroom management becomes easier, etc...

Nelson, et.al believe that creating a Positive Discipline classroom is a process of putting together parts of a puzzle (Nelson L. &, 2007). The authors warn teachers and parents on permissiveness, for misperceptions of positive discipline and ask them to be careful on not letting students do whatever they want. Teachers need to help learners to develop interpersonal, intrapersonal, systemic and judgement skills.

Teachers often believe that a well-managed classroom is equivalent to an orderly and quiet environment, but the reality is that a productive learning environment can be noisy because learning is not a passive activity. Learning requires talking, sharing, discovering, experimenting, and questioning, all of which can create noise. Most teachers believe that an effective classroom management plan relies on rewards and punishments. In fact, as stated earlier, for a positive disciplined class there is no need for reward and naturally punishment is out of question.

Quantitative Research Questions:

1. What are primary school teachers' beliefs and attitudes about positive discipline?

After analyzing the quantitative data, the researchers found the need to explore what kind of problem behaviours primary teachers encounter during their lessons as well as solutions they create in order to deal with these classroom management issues. Therefore, the researchers generated the following qualitative and mixed methods research questions:



Qualitative Research Questions:

1. What are the problem behaviors faced by the primary teachers (kindergarten, primary and English)?
2. How do they apply solutions related with positive discipline to solve these problem behaviors?

2. Method

A mixed method research was conducted to find out the answers to the above questions. The aim of this research was to examine teachers' (n=105) beliefs and attitudes towards positive discipline for a better classroom management. In order to find deeper layers of the research question, the researchers preferred to use explanatory sequential mixed method. In this design, qualitative data is collected after predominantly quantitative data are collected and analyzed. Priority is often in quantitative data. Qualitative data is mainly obtained to increase quantitative data. Data analysis is interrelated and often combined in data interpretation and discussion sections (Creswell, 2003). First of all, a questionnaire consisting of 2 open-ended questions was asked to the teachers. According to the analysis of the survey data, a semi-structured interview was implemented with 9 teachers (3 teachers from each branch) from the study group of 105 people in order to conduct an in-depth analysis of the prominent beliefs and opinions.

Sample

The target sample of the study was teachers (n=105) who work at kindergarten and primary schools in İstanbul and they were chosen randomly by convenient sampling from European side of Istanbul. **Table 1.** Teachers' Branches Frequency

	Woman		Man		Total	
	f	%	f	%	f	%
Kindergarten Teachers	32	38,6	3	13,7	35	33,5
Primary School Teachers	28	33,7	5	22,7	33	31,4
English Language Teachers	23	27,7	14	63,6	37	35,1
TOTAL	83	100,0	22	100,0	105	100,0

As seen in the table above, most of teachers from 3 branches are women.

Table 2. Frequency of Teachers' Age and Teaching Experience Years (Quantitative Phase)

Age Range	f	%	Years of teaching experience	f	%
20-25 years old	10	9,52	0-5 years	15	14,29
26-30 years old	14	13,33	6-10 years	17	16,19
31-35 years old	16	15,24	11-15 years	18	17,14
36-40 years old	16	15,24	16-20 years	18	17,14
41-45 years old	16	15,24	26-30 years	10	9,52
46- more years old	33	31,43	31 and up	27	25,72
TOTAL	105	100	TOTAL	105	100

Frequency of Teachers' Age and Teaching Experience Years (Qualitative Phase)



1 out of 9 teachers who constitute the study group in the qualitative phase of the research is male. The age range of the teachers is 4 for those who are 20-30 years old, 1 for those between 30-40, and 4 for those who are 40 and over. In terms of length of service in teaching, those with 0-5 years of service are 4, those between 6-10 years are 2, those between 21-25 years are 1, and those between 26-30 are 2. While English and kindergarten teachers are the group with the fewest years of service among the branches, the teaching experience of the classroom teachers is 26 years or more. While 2 of the 9 teachers in the study group work in a private school, the rest are in a public school.

Data Collection Tools

Beliefs and Attitudes About Discipline Survey

The data were gathered using a survey developed by the researchers to determine the demographic characteristics (age, gender, years of Experience) of kindergarten teachers, primary school teachers and English teachers in the research, as well as their beliefs and attitudes about discipline and positive discipline. Before its implementation, the survey was piloted with 30 teachers and they did not report any problems in completing it. The survey has two open-ended questions: *What do you think about discipline?*, *What does positive discipline mean to you?*

In the analysis of the data, answers for each questions were transcribed into separate documents in order to identify and categorize. Teachers' branches were coded according to their branch's first letter in Turkish. For kindergarten teachers "A", primary school teachers "S" and English Language teachers "İ" was used while coding papers.

Disruption Interview Form

In qualitative phase, "Disruption Interview Form" were developed by the researchers. Based on the results of "Beliefs and Attitudes About Discipline Survey", 3 main questions were formed: 1. *What are the problem behaviors faced by the primary teachers (kindergarten, primary and English)?*, 2. *How do the teachers apply solutions related with positive discipline to solve these problem behaviors?* Third question consists of a scenario and 2 questions based on it. It narrates a child's disruption in a primary classroom. The scenario based questions are: 3 a. *What would you do if you were in Ayşe Teacher's place? Why*, 3b. *What would you say to Ahmet? How would you explain this situation to other children?*

Data Collection Procedure

In the current study, surveys were administered in 2021-2022 academic year to kindergarten, primary school and English teachers who work in elementary schools in Istanbul's European side.. In quantitative phase: With the convenience sampling method, the researchers reached 105 teachers. The questionnaires were taken to the schools where the teachers work, those who had time to fill in were waited and filled questionnaires were taken. In addition, each teacher was waited on at the school while leaving the questionnaire, as there might be questions, they might want to ask. In qualitative phase: Researchers chose teachers (three branches) randomly from the quantitative phase group to implement semi-structured interviews. At first, teachers who have convenient time to arrange time for interview were requested to participate in the study. Then, researchers interviewed every teacher in an appropriate room of the school. During the data gathering, voice recorder was used by one researcher and the other took notes of dialogs and general observations. After completing data procedure, voice recordings were transcribed to the written format.

Data Analysis

Content analysis was used in this research. Content analysis is the systematic scanning of printed or visual materials and analyzing thematically in certain categories. The data obtained by content analysis classified among specific themes, thus revealing relationships between data (Yıldırım and Şimşek, 2011). Teachers' answers were examined and each answer was coded by researchers. After coding process, themes were identified. The reliability formula proposed by Miles and Huberman (1994) was used for the reliability calculation of the study. Reliability = Agreement / (Agreement + Disagreement): As a result of the calculation, the reliability of the study was calculated as 93%.



According to the analysis of the data, these 2 main themes were identified. Each main theme's sub-themes are shown in the table below. In qualitative analysis, content analysis was used and according to 2 main themes, data was coded. In qualitative phase, the reliability of the study was calculated as 95%. Theme tables for two phases of the study as follows:

Table 3. Themes of Quantitative Phase

Quantitative Phase Themes		Quantitative Phase Themes	
<u>Teachers' beliefs about discipline</u>		<u>1</u>	<u>Problem Behaviours</u>
<u>1</u>	<u>Order-Rules</u>	<u>1.1.</u>	<u>Self-control</u>
<u>1.1.</u>			
<u>1.2.</u>	<u>Behaviors</u>		<u>Anger and aggression</u>
			<u>Chatting with friends</u>
<u>2</u>	<u>The Meanings of Positive Discipline for Teachers</u>	<u>2</u>	<u>Teachers' Solutions</u>
<u>2.1.</u>	<u>Love and Respect</u>	<u>2.1.</u>	<u>Verbal warning</u>
<u>2.2.</u>	<u>Reward for positive behavior</u>	<u>2.2.</u>	<u>Advice</u>
<u>2.3.</u>	<u>Self-control</u>	<u>2.3.</u>	<u>Punishment</u>

3. Results

Quantitative Results

Research Question 1: What do you think about discipline?

The aim of classroom management can be defined as teachers' "controlling" their classrooms and ensuring that their students behave well (Garett, 2014). Nevertheless, the two goals of class management emphasized by Evertson and Weinstein (2006) need to be emphasized: to create environments for academic and socialemotional learning. To say that there is no need for discipline for good classroom management does not only conform to the definitions of classroom management, but also to the nature of learning. The presence of the rules and order sub-theme (f: 55) in the analysis of teachers' answers may be considered normal when examined in relation to the literature. The finding that discipline as a word means to teachers is "order" make researchers think about the teachers' beliefs and attitudes about discipline as expected in typical classroom management aspects.

In the context of 21st century skills, it is emphasized that classroom management and the discipline which is the most relevant concept should not be focused on academic content with unchanging rules and teachercentered approach.

- * 99İ: Control, order. Regular environment created to tell your lesson.
- * 12A: An environment requires regular rules.
- * 44S: Rules, order, sanction, punishment.

With the second sub-theme of "Behaviors (f: 31), it is proven that teachers' beliefs about discipline is traditional and centered on the behavioral approach. In the explanations about the concept of discipline, we come across that finding: Teachers emphasize the correction of wrong behavior by teacher. It is necessary to change not only the negative or unwanted ones, but also teachers' actions to prevent them. While teachers focus on the expected behaviors from



students, they don't emphasize that behaviors which are the output of an effective practice including a healthy communication process.

7A: Identify the wrong lines of behavior and set rules.

101S: Sanctions on students to turn negative behavior into positive behavior. 81I: Knowing what needs to be done is the attitude and behavior that will make the students' lives easier.

Research Question 2: What does positive discipline mean to you?

The teachers involved in this research expressed positive discipline in a different way from Dreikurs' definition in related literature. The analysis of answers brought us to the following themes under positive discipline: 2.1. Love and respect (59), 2.2. *Reward for positive behavior* (19) and 3. *Self-control* (7). According to Dreikurs (1964) and Nelson (2000), positive discipline encourages students to focus on solutions and helps them develop self discipline, responsibility, cooperation and problem solving skills. When we compare the findings of this research with the explanation of positive discipline, Although teachers' perspectives on the subject are mostly based on love and respect, we see that they continue their behavioral approach with the second theme. Teachers emphasized that students should be treated with love and respect. However, if there is a problem during communication with student, teacher should manage the process by rewarding positive behavior which is one of the tools of the behavioral approach. Nelson's (2000) *Positive Discipline Program*, based on Dreikurs' concepts, suggests that the teacher explores the motivation underlying students' behaviors and work together to solve problems in collaboration with families and children. Encouragement is one of the key actions in communicating with children. From these points, it is seen that the knowledge of the teachers' about the positive discipline approach participating in this research is limited and insufficient. As a result of the collaboration process, the importance of children's self control behavior answer is rarely seen in this finding of the study. These findings point out that on the basis of teachers' beliefs about positive discipline underlie teachers' tendency to reinforce teacher-centeredness and positive behavior. The absence of any differences in the perspectives of kindergarten, classroom and English teachers, who play an important role in the lives of children in the early childhood years, should also be considered as a topic of discussion. If we take into consideration the fact that preschool teachers should implement child-centered and developmentbased education, it is expected that the beliefs and attitudes of preschool teachers in this research should be separated from other branches in a positive way.

5A: *Rewarding good behavior.*

90S: *Positive behavior, positive thinking* 94I: *A set of rules based on mutual trust.*

Qualitative Results

1. What are the problem behaviors faced by the primary teachers (kindergarten, primary and English)?

In the interviews with primary school teachers, they stated that they encountered 20 different problematic behaviors in their classrooms. These behaviors are broken down into code and themes. These behaviors were found to be irritability, inattention, constant crying, stubbornness, running away from school, introversion, anger and aggression, chatting with friends during work, and inability to control oneself.

S-1: Inability of the child to control himself, not interested in the lesson, not engaging in conversation, children fighting with each other.

A-3: I often encounter behaviors such as aggression and anger problems, introversion and shyness, nail biting, bed wetting, thumb sucking.

I-1: Nervous – anger, Offensive – offended.

2. How do the teachers apply solutions related with positive discipline to solve these problem behaviors?



Verbal warning (f:10) comes first among the solutions used by teachers in the context of classroom management. It has been determined that especially English and classroom teachers raise their voices gradually and warn children about their behaviors.

The second most preferred solution is advice (f: 8). It is preferred to inform children about the consequences of their behavior and to advise them to empathize with their friends who generally behave negatively.

As a third method, although the teachers did not use the word punishment, (f:7) they mentioned that they applied sanctions such as depriving children of problem behavior from recess or playing, giving extra responsibility, and compensating for the damage they caused to the environment.

S-1: In these cases, there is usually a penalty for not going out for recess. Why? In order to make him realize his mistake, he is asked to write what he missed on the board in his notebook. Freedom never includes the right to harm others. Penalties may result as a result.

İ-3: It should be said that when Ahmet has a problem, he should try to talk about it with his teacher. If there is a problem, it can be said that it is much easier to solve when he comes and talks with his teacher, and his behavior only makes things more difficult.

OO-1: First, I would call out to the class and give an encouraging speech on behalf of the children who are exposed to negative behavior by saying that those who are disturbed by this situation raise their hands and tell their friends how they want them to compensate by reporting their discomfort to their friends. I would tell them that they wanted their friends to replicate their work.

Answers are the same solution suggestions that the teachers applied for the problem behaviors they encountered in their classrooms for the problem in the scenario read to them. This situation shows that there is consistency between the answers given by the teachers to the researchers, and that they encounter situations similar to the desperate teacher in the scenario.

Problem behaviors experienced by children in early childhood can negatively affect their lives in adolescence and adulthood, and depression can increase their tendency to commit crimes. (O'Connell, Tekne ve Warner, 2009, Bornstein, Hahn ve Haynes, 2010, Liu, 2004).

4. Conclusions and Recommendations

Disciplinary issues are at the top of the list of topics that often occupy teachers' agendas. In this study, it was aimed to examine the beliefs and attitudes of kindergarten, primary school and English teachers working at primary school level and to analyze how they offered solutions to the discipline problems they experienced in the light of the findings.

For this purpose, firstly, quantitative research was conducted. It was determined that 105 teachers who participated in this phase of the study, had disciplinary beliefs in order to shape children with rules, and to make themselves accepted as authority figures. Concerning positive discipline, beliefs and attitudes emerged under the themes of love and respect, rewarding positive behavior, and self-control. When discipline is asked, elements of traditional education such as strict rules and punishment are conveyed in the answers, while positive discipline is asked to the teachers, it is seen that positiveness is focused on the axis of love.

In the second phase of the study (qualitative phase), primary school teachers were asked which problem behaviors they frequently encountered in their classrooms. Since the discipline issue has its equivalent value in practice, it was aimed to reveal how teachers use methods related to positive discipline with this phase. More than half of the teachers stated that they faced anger and aggression problems. Also, Yağın Güder, Alabay & Güner (2018) found the same problem behaviors in their research.

It was determined that the solution methods they used for these problems were mostly verbal warning, advice and punishment. The results obtained from the two phases (quantitative and qualitative) of the research overlap with each other. Trying to find a solution to the sample scenario conveyed to the teachers in the interviews are alike they use the same methods in their classes shows the consistency between the research results. At the same time, this result shows



that there are no differences in method among kindergarten, primary school or English teachers. The problem behaviors encountered disrupt the course of the lesson and show that teachers have difficulties in applying effective classroom management strategies. Disrupting behaviors affecting the order of the classroom have been one of the important issues for which a support system has been requested for schools in recent years (Rose & Gallup, 2005). Therefore, teachers need more trainings about how to implement more effective and contemporary methods in their classes. They need to have even busier agendas.

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Ways of teaching the poetic "I" in the works of Pasha Galbinur

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Abstract

The article discusses the poetry of Pasha Galbinur, a poet of modern Azerbaijani literature. After a conceptual study of the author's work, the poetic "I" in his poems and the ways of its teaching were studied. Pasha Galbinur is one of the artists distinguished in modern literature by his creative talent, originality of thought and style. Formed in the heat of the literary and cultural environment of the 80s of the last century and tuned to the awakening of the national spirit with all its potential, the artist has always been a problem of serious analysis in the field of super-time and super-space. In general, the renewal, which began in the 60s, is characterized by the mobility of different typologies, different models of paradigmatic landscape, new expression schemes of memory codes in the following decades.

Keywords: Poetry, lyric "I", Pasha Galbinur, teaching literature

1. Introduction

One of the problems to be studied in the richness of Pasha Galbinur's poetry is to clarify the general essence of those who stand in the formation and evolution of artistic and aesthetic thinking, to reveal the layers of imagination and thought surrounding his creative personality. The work of literature and those at its core (as well as art) as a whole is to be sensitive to the anatomy of human feelings, far from events and narratives, and to clarify the spectrum of those who stand at its core. Of course, in the course of great literature, the sequence of events and stories according to a certain plot (line) has shown itself as a trend. However, in that ranking, there is a question of the character's imagination, what characterizes the types of thinking that underlie human thought. This, no matter which way we turn, leads to the analysis of man, to the clarification of his essence. Rather, it is linked to the notion that "there is no literature without psychology." All possible analyzes, to one degree or another, are based on psychologism, on human attention. The concept of artistic thinking of P. Galbinur's work is focused on learning, understanding and expressing people in all its aspects. Literary-theoretical thought, with all its aspects, has taken the path of analyzing the general course of the process at different levels, trying to understand and clarify the essence in the rational and irrational perspectives. The factual phenomenon of the text, which is factual in the general spontaneous content of the period, is due to its different approaches to the modeling nature, the peculiarities of the additions in the semantic memory of the word and speech genres. These, in themselves, necessitate analysis in the example of individual artists as a literary trend and trend that reflects the essence of the environment. The work of P. Galbinur, which is characterized by the ability to contain a high intellectual intellect of ethno-cultural thought, is characterized by serious relevance in this context. Horizontal and vertical approaches are needed in order to clarify the general flow of the literary and cultural process, the dynamic nature of modeling in the artistic and aesthetic sphere, the content and content of factualization at the level of text and environment. Because the creative work of a talented artist is characterized by a serious texture in terms of its ability to encompass the environment with all its postulates and reflect the diversity and multi-layeredness of the literary and cultural process.



The phenomenon of the text, the memory of the meaning of the word and the content of the genre as a whole express the lyrical "I" and its psychological state, the flow of sorting in the flood of inner feelings. Here, word order is manifested in a variety of ways, such as behavioral etiquette, psychological reflection, internal monologue in text // text relations. The moral-aesthetic position is based on personalized comparisons, the situation between the "questioner" and the questioner, and the "water in the cracked soils" of the questioner. The comparisons are not only interesting for the mobility of the artist's feelings and the moment of the situation, but also for the methods and ways of conveying them in the context of the explanation of the psychological situation. Because language itself, as a material for the expression of thought, forms a serious image as a coefficient of success. Approaching the issue from the point of view of the possibility of language, Ushinsky emphasizes that "language embodies the whole nation and homeland: it contains the creative power of the people's spirit, the sound of the homeland's skies, its air, physical events, atmosphere, steppes, mountains, plains, forests and rivers. its whirlwinds and storms take place ... However, the bright and transparent expanses of the vernacular reflect not only the nature of the native land, but the whole history of the spiritual life of that people" (Bualo, 2006:20). P.Galbinur's poetry is connected with the imagination of the creative power of the people's spirit with its source, polyphonicity and chronicle of genetic content. The literary and cultural environment, represented by the power to reflect the spiritual life of the ethnos, also draws attention to its original formulas in its creative pursuits. In essence, the theoretical typology of art lists the notions and historical features of real-time cuts as a party. Therefore, the networked peculiarities noticeable in Galbinur's poetry are also connected with the imagination of the artist in the creative environment. The lyric lists those that determine the formation and evolution of the "I" as a whole. The essence of all this encompasses the artist's creative psychology and image cult. The general system of the variety of landscapes exhibited by the poet's rich artistic and aesthetic thinking makes it necessary to pay attention to a number of issues in order to clarify the essence of creative psychology.

- a) The imagination of the literary text in terms of the specificity of the methods of psychological reflection and its general typological system;
- b) The notion that the subjects of speech (the author is the subject of speech and the object of hymn) in the polyphonic landscape of the inner monologue of the lyrical "I";
- c) Methods of form of behavioral etiquette manifested in the literary text;
- d) Paradigmatic picture of artistic generalization, completeness and typification at the level of text // environment;
- d) Layers of meaning revealed by the method of modeling creativity, in which the artistic content is adapted to the structure of the genre;
- e) Factors determining the individuality in the definition of style, etc.

Azerbaijani poetry at all times encompasses the branch of oral and written literature in terms of the diversity of speech genres in terms of expression, the discovery of new models and methods of self-expression, the mobility of internal changes in creative thinking, the specifics of its expression. Bayatis, folk songs, epics, ceremonial folklore, rich ashug creativity, labor songs clarify the behavioral etiquette of the ethnos, the psychological mood of the typical landscape in the world of feelings and emotions, the image it forms as a pragmatic tool. Each poetic text is loaded with the function of including the aesthetic-psychological world as a goal at different levels. The possibility of poetry in this regard comes to the fore. Because in its essence, there are invisible means and possibilities of ecstasy and ecstasy. Analyzing the influence and expression of poetry, Aristotle emphasized that "only the one who is excited can excite, the one who is angry can be angry." (Ahmadov, 2011).



The genetics of poetry as a whole is based on the mobility of feelings and emotions, to express the essence of the human soul, to discover its own world on the basis of emotions. Its source of energy is the poet's imagination and his creative imagination, which is flowing in a never-ending stream of emotions. The complexity of the creative laboratory, the poet-technological system of artistic and aesthetic thinking is determined by the possibility (success) of the methods and ways of conveying the existing subject. The ranking that takes place at the level of the objective world and subjective approaches takes place in the text // subject relations. The principles of subject perception and expression are calculated on psychological food, pathological methods of conveying the message. Lyrical text is a form of song characterized by peculiarities and loaded on the specificity components of the inner monologue as a whole. "Lyric gives words and images to dumb feelings, takes them out of the narrow cage of the chest into the fresh air of artistic life ... Here the subject has no value in itself; everything depends on the value given to it by the subject, everything depends on the spirit and meaning given by the imagination and feeling to the object" (Ahmadov, 2011:59). Galbinur's poetry is rooted in the general spirit of the 60s and is connected with the principles of art defined by him, the symbolism of the signs, the originality of the layers of metaphorical content. Literature, based on the subjective perception of the objective world, the idea of "more beautiful than life", tries to realize the goals and objectives set by the genres of speech, to present various examples as a direction. Because only a great personality can benefit the society when it draws its attention to its own personal and mental world" (Alimirzayev, 2008:166).

Galbinur's poetry is an example of high intellect. The personal destiny contained in the poem "If I Can't See", the turbulent moments of his creative life are rooted in perfect information at the level of the environment and the artist. The lyrical "I", the desires and aspirations of the creative person, the degree of closeness and contrast of those in relation to the realities of the spiritual world are rooted in the polyphonic system of the literary text as a whole. The content of the text situation is characterized by "my destiny tests me" in the example of creative destiny. Here, in the example of the complex flow of the environment (time), the sensitivity of the position of the artist, who cannot (or does not want to find) the language of the relationship between me and destiny in reality, comes to the fore. And the conformity of reality to the creative will can be possible on the basis of the general principles of the philosophy "I see a fish and a hook in the water" (though). Here, the image drawn by the creative generalization is connected in one direction only to the specific system of reflection, while in the other context it is conditioned by super-subjectivity. The lyrical "I" also takes into account the qualities necessary for a successful, favorable solution of all situations in the exam ("I see a fish in the water as a hook", "I see a hunt as a trigger") and does not forget that it will not be so easy. This is a kind of natural regularity of life itself, but also stems from the unprincipledness of the broken order. Grief, sorrow, mystery, excitement, sadness, ecstasy, protest, rebellion, etc. are represented in the image of the environment that the poet reveals on the basis of personal feelings. also draws attention to the sensitivity of such emotions. The harmony of textual information and its inner world is connected in all respects to the reality that will manifest itself at the level of super-time and super-space. Speaking about imagination and inspiration, Federico Garcia Lorca emphasizes with special sensitivity: "For me, imagination is synonymous with the ability to discover. Imagination connects fragments of the hidden truth in which a person moves and gives them vital revelation. The real child of the imagination is the excitement and shining metaphor of the long wait, born of the sudden burst of intuition"(Asgarli, 2017:226). The imaginary layers of Galbinur's poetry correspond to the system of imagination of the poet's creative world and its principles defined in the natural flow. Here, however, the balance between the creative position and the disturbed order of life realizes a serious diversity (as well as contradictions) to the point where it is "a burden of zeal."

Galbinur's creativity is poetry formed in the definition of traditions and peculiarities of individual style. All the examples he writes in syllables and free verse sizes are characterized by serious searches, the mobility of the author's inner speech, feelings and emotions, and in all situations aim to reflect the author's style, the essence of the individual. Here, the expressiveness of the spiritual world and the rich network, forms and methods of its delivery methods are listed at different levels as a party. A kind of lyric aims to create a formula of the



aesthetic ideal that I am trying to convey. There is a variety of psychological self-expression, from behavioral and behavioral etiquette to a variety of methods of reflection.

Lyricism is such a broad sense, a matter of artistic and aesthetic thinking that its content does not end only with poetry. As a fact of artistic thought, in prose and dramaturgy, creativity, as a stylistic quality, brings additional shades to the text, and is assigned a serious function as a kind of content-creating fact. In poetry, however, its place is exceptional, and as an event seen on the top floor, it creates special opportunities for the development of the aesthetic ideal. On the level of architectural texture, Galbinur's poem "Tulip at the bottom of the rose bush" is connected with the archetypes of codes defined in the imagination. The symbolism of flowers defined by ethnic thought and the image it presents in its typological order are characterized by new shades of meaning in the above text. The poet's approaches to the ranking of roses, violets and tulips, as well as the peculiarities and original meanings in the richness of classical literature, as well as the work of ashugs and folk literature, are quite interesting in the ranking. "Violet" by Dirili Gurbani, "White rose, red rose, another yellow flower" by Huseyn Shamkirli, "Carnation" by Khurshidbanu Natava, "Colors" series by R.Rza, examples written by H.Arif and others. all have always focused on systematic comparisons in text typology. P.Galbinur also creates a poetic image of a tulip growing at the bottom of a rose bush. The content displayed by the poetic system in the flow of text is connected with the models of ethnocultural thinking by the situation and the internal potential of the situation. Comparisons reveal the originality of creative approaches with content creative function. The information load carried by the content directs the analysis at the following levels.

- a) The content of the poem at the paradigmatic level;
- b) The imagination realized by the syntagmatic level;
- c) Information provided by the literary text at the genre level.

All this determines the realism of the work on the text as a whole. The symbolism of flowers, which from time to time became an ornament of literature and led to comparisons in different styles, is connected with tradition in one direction in Galbinur's poetry, but on the other hand reveals the originality of the artist's approaches.

Indeed, the content of literature is to descend into the inner world of man, to tune in to his necessary spiritual needs, to list the components of certainty in behavioral labels, to perceive life events as "lyrical self" and the inner world in psychological reflection, symmetry of physical and spiritual, spiritual and social. issues such as In Galbinur's poetry, the tendency to them as a creative style and the search and discovery of its methods of reflection are encoded as creative talent.

As it is known, poetry is such a winged, quite deep and comprehensive aspect of artistic thought, spiritual-psychological thought that in the concepts of time and environment its main stream seems more radical and fundamental with its roots. Therefore, the lines of content contained in the poetic figures that appear in its general flow make it necessary to analyze in various aspects with its diversity and multiplicity. The lyrical "I" defined by Galbinur's poetry symbolizes a boundlessness, infinity in the plane of formation and evolution, and its architectural system is conditioned by the level of super-time and super-space. In one direction, this is connected with the layers of meaning at the level of perfection of the system itself, which is reflected in the inner essence of poetry.

In Galbinur's poetry, the paradigmatic level (opportunities to reflect reality) is rooted in creative perception and the philosophy of life. Each of his poems is characterized by a richness of thought in this context, from philosophical understanding to psychological life in the relations of time // environment // time. Because all that emerges in the creative laboratory is a whole of methods and peculiarities that manifest themselves. In general, "autobiographical elements are clearly visible in the works, as personal opinion and opinion are of special importance in artistic thinking. The distance between the author and the explorer, between the



protagonist, is significantly shortened, and with the creativity of the generation of the sixties, that closeness increases, and sometimes even identification occurs” (Enveroglu, 2014:35). In poetry, on the other hand, the situation is somewhat different, and its general harmony, its spirit, is aimed at sorting out the essence of "my lyrical self" and the flow of what is inside it as a flood of emotions. The methods of reflection, which the artist // lyric I // reader's relations are listed in the wings of feelings and emotions, singing, are also the basis for the acquisition (or non-acquisition) of the literary text with its semantic function. Therefore, Galbinur's poetry in the example of lyrical self-forms a perfect image in terms of self-analysis and self-understanding. The subject matter of the poet reveals a model of success for the essence of the phonopoetic, morphopoetic system, as well as for the syntactic level itself. Psychological monotony defines the typology of internal reflection in the detail function that determines the psychological mood in individual poetic examples.

In general, the definite certainty at the typological level in Galbinur's poetry goes hand in hand with the definite definition of the formation and evolution of lyricism. The methods of psychological reflection, which manifest themselves in individual poems, the content of the inner monologue depends on the possibilities of the artist's creative talent. The ordering of the content at the bottom of the text, with its identical character, is based on the expression of the essence as a whole in the artist's imagination, or rather on revealing it. Therefore, in Galbinur's poetry, genre and expression models (song, folk ceremony, saga, tale, narration, legend, ashug poem, etc.) from folk thinking are mixed at a high and successful level and form an element that forms the integrity of the literary text. manifests itself at the level of.

The imagination defined by textual information requires an approach in several directions, clarifying the picture that manifests itself in the plane of functional structure and syntactic sequence of situations. Because poetry is such a magnificent phenomenon of thinking that its content is loaded to the level of being an example of all times and all places with the power to shake and move the ethno-memory as a whole with the help of ultrasound. The paradigmatic picture defined by the poem "There is a house left in Gilatagh" also provides a solid material to clarify the integrity at the genre level. The situation and the situation does not end with bringing the internal situation to the literary text of what is in the creative memory, it is the attitude to the broken order in terms of what comes to the fore. The ranking and the imagination created by the text are based on the principle of highlighting a historical reality.

The spiritual richness of the artist, who revives lyricism in literature and gives it extra wings, is the ability to create psychological situations. The ability to create psychological situations brings a poetic tone and color to the literary text. In the early twentieth century and in the 60s and 70s, the idea of fiction was rooted in the presentation of the intellectual landscape of ethno-cultural thinking as a literary fact. It is true that neither the process of the early twentieth century (which can be attributed to the late nineteenth century) nor the spirit of literature in the 1960s encompassed equality on all levels. Of course, the main thing here was the awakening of national archetypes and self-awareness as a line. In such a situation, of course, the clichés, style labels, methods of expression in the artistic and cultural sphere, the renewal, the newness, or rather the leadership of those who appear from time to time in the ethnic imagination, appear. Galbinur, as a creator of this wave of renewal, saw what was happening at the ethnic level, political ideology in literature, "cultural hero" ideas, the concept of "Soviet man" aimed at destroying national models of thought, and was well aware of the direction of the essence. Bualo N.D. (2006). Therefore, his poetry was rooted in the general harmony of the 80s with a modern imagination.

In the perfection of the artistic system, the layers of meaning of the text and the elements that are noticeable in the various methods of reflection reveal the chronotope of artistic and aesthetic integrity. Here, creative psychology, the codes of diversity of the inner monologue, typological approaches as an indicator of the artist's thinking intellect are necessary. The metadyl exhibited by Galbinur's poetry serves as a guarantor of the inner harmony of the cult of poetic images. Therefore, the evolution determined by his work is in itself connected with a creative identity, a certain style. From the first poems to the last poems, the status of the artist, which is



noticeable in the text information, is calculated directly on the concept of originality, which prevails in the search for creativity. "This winter night", "I know there is divine love in the heavens", "My whirlwind in the White Sea", "I believe in you so much", "Again", "Don't cry" and so on. Various poetic examples form a perfect imagination as an indicator of high creative intellect.

The variety of content that lyricism exhibits in poetry is conditioned by the variety of themes and shades of expression. The methods of self-expression manifested in the works of prominent representatives of classical literature, creative pursuits, the image visible throughout the work and the author's codes of behavior, the diversity of methods of reflection are factual and condition the author's style.

Galbinur's poetry knows no boundaries in terms of thinking and expressive possibilities. Those who rely on his creative imagination are completely connected with the ethnos, the landscape of the ethno-cultural system since its inception, the concept of perfection of historical and cultural ideas, artistic and aesthetic models and the codes of the poet's genetic memory.

One of the problems to be studied in Galbinur's poetry is to reveal the philosophical system of peculiarities, approaches to different issues, which grow in its rich content layers. The poet's work, based on the successes of the 60s, carries out serious paradigmatic approaches as an example of thinking intellect. Because the methods of expression of his work, the possibilities of interpretation are noticeable as a quality fact in horizontal and vertical approaches. The work of Galbinur, characterized by the unique richness of speech etiquette on the sources of national thought, is characterized by a wide range of topics. Here, the artist's understanding of the event and its philosophical essence, the issue of presentation is rooted in originality.

Galbinur's poetry, in all its essence, acquires important value as an indicator of ethnic memory, as well as by expressing the rich ethnic system of the people. Bayati, song, proverb, parable, legend, narration, tale, saga, epic, etc. The use of examples of folklore such as This use has manifested itself at various levels. For example, at some points, the poet added food to the literary text by creatively increasing the folk bayat or a certain line, verse and verse of a song and ensured its success as an example of art. "Three apples", "Our mountains are gone in my dream", "Shusha mountains", "There is a house in Gilatagh", "Yagag to Karabakh", "Arab brother", "I am white light", "World", "Fortune teller", "Lost as longing", "I didn't pick it up, Blueberry", "The phone you turned off", "You are divinely full", "You are going" and so on. his poems are a classic example of this.

The richness of the folk poetry tradition, the use of various images of ashug poetry attracts attention as a matter of the general spirit of Galbinur's poetry. His poetic examples in syllable weight form a high imagination not only in terms of art and the perfection of the canonical system, but also in terms of the genre's ability to create content. Here, the memory of the meaning of the word, the phenomenal code of the artistic sample itself is connected with the creative potential. "World", "Mountains", "Fisherman and hashish", "Mountains of Shusha", "It is raining in my heart" and so on. (Aliyev, 2002:23) His poems are rooted in the idea of a high level of ethnic spirit in all parameters. Here, not only the general principles of the scale, but also the system of formulas form a perfect picture of the success of the artistic sample, an important component of the originality of the paradigmatic level.

The work of the artist, which is characterized by a rich texture, is characterized by a wide range of possibilities in the field of textual phenomena. A variety of poetic examples, characterized by a comprehensive network of content, are characterized by perfect detail in the text // text, text // environment, text // subject. All the subtleties of the ethno-cultural system, archaic memory, originality of invariants, functional nature of archetypes as an indicator of the quality of Galbinur's poetry manifests itself with perfect dynamics throughout his work, starting from his first poems. Poetic examples with a wide range of topics are of exceptional importance in terms of the poet's love of country, land, sensitive attitude to nature, artistic and aesthetic worldview, philosophical views, feelings of love, attitude to the socio-political processes of the time. An overview of the post-Soviet period of



Azerbaijan, as well as the forcible resettlement of the people from their historical ancestral lands, the war, genocide, etc. takes place in creative thinking at different levels.

1. Methods

Scientific-theoretical, comparative, historical, stylistic, empirical. Comparison methods were used. Two main requirements have been met for the effective comparison: it is appropriate to compare only those events that have an objective commonality, and the comparison of objects was carried out on the basis of important indicators. Application of special technical devices and measuring units of the quantitative indicators of the research object with the measurement method was carried out. The experimental method was used for hypothesis testing in scientific research or scientific research of causal relationships between phenomena. The investigation of the object was carried out with the methods of synthesis and analysis.

2. Conclusion

Galbinur's poetry opens the way to typological analysis in all contexts. It is defined by a perfect imagination, from text types to hypertextuality. Because the writer's methods of choosing a subject, approaching it, as well as expressing his creative intellect in the artist's thinking are always characterized by originality. Rich creative talent, unique approach technology, perfection of the poet-technological system are factualized in Galbinur's poetry.

The perfection of the phonopoetic, morphopoetic system, the possibilities of modeling the syntactic level, the thought load of the verse, the function of superspace and supersaturation reveal the comprehensiveness of creative talent in all its aspects. Sound symbolism, sound associations, genre paradigm, level of semantic modeling, aesthetic sign function of the text, etc. manifested in the poet's work. as a whole determines the place of Galbinur in the modern literary and cultural environment.

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Experimental methods in education: Experiments on pregnant mice for the treatment of alcoholism

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Abstract

The article discusses the inhumanity of alcohol and other experiments on pregnant mice in biological education. Use of "indicator" animals with known microbiological status. Animals are placed in the same environment as the population being tested and periodically sacrificed and examined. Naked (athymic) mice are excellent indicators because they are immunodeficient and especially susceptible to pathogens. But these mice are not suitable for detecting changes in serological titer, which may indicate the presence of viruses, since there is no antigenic response in nude mice. To determine the serological titer, it is necessary to use animals with the appropriate immune status.

Keywords: Pregnant mice, experience, humanism, blood test, alcoholism, ethyl alcohol

1. Introduction

The World Health Organization has identified six criteria for diagnosing alcohol dependence. The main and first criterion is a person's inability to control alcohol intake. According to the second criterion, a person feels the urge to drink. This desire can manifest itself both openly and under the pretext of relieving tension and relaxation. As a result of this desire, a person forgets his family, laws and norms of social behavior. The third symptom is that the body easily "tolerates" alcohol. If a person drinks three glasses of vodka and brags that he is not drunk, it is a dangerous syndrome. The problem is that the body tries to process ethyl alcohol into the bloodstream to the best of its ability. But sooner or later the final stage is reached and the mechanism is broken. As a result, alcohol causes mental weakness. That is, the person can greet you and forget about it after a few seconds.

The fourth symptom is abstinence syndrome. This means that a person feels tired, depressed, and his hands swell the day after drinking. Such people look forward to the end of the working day to drink again, even if they do not drink early in the morning. However, those who feel unwell after drinking are also divided into two groups, and those who are poisoned by alcohol cannot be considered alcoholics. They simply feel bad the next day because they have been poisoned and do not want to drink again to improve their condition. Alcoholics, on the other hand, feel the need to drink again. However, alcohol poisoning is also directly related to the culture of alcohol consumption. If a person drinks two bottles of vodka, he receives 400 milliliters of ethyl alcohol. This is a lethal dose for a person weighing 70 kilograms. The average person is resuscitated with this dose. This does not happen in alcoholics. Therefore, for drinkers, alcoholism and heroism are synonymous. The fifth symptom is various diseases. That is, a person's laboratory tests are negative or his family breaks up as a result of drinking. He can't stop drinking and can't stop drinking alcohol. The last criterion is that alcohol plays a key role in human life. In other words, according to this criterion, a person's life and personal life are built around alcohol. Other non-alcoholic interests take second place.

Alcohol is one of the drinks that contains ethyl alcohol, and when drunk, it gives a person temporary pleasure and intoxication, as well as a harmful effect on the body, which has become a habit in many people. Those who are unable to abstain from alcohol are called alcoholics if they consume alcohol to the extent that it impairs their physical and mental health, family, social, and work life. Alcoholism is a disease that occurs as a result of regular consumption of alcohol and is addictive. This disease negatively affects a person's reputation by causing physical and mental disorders. Alcohol is mainly toxic to brain cells. A drunk person celebrates for the



first moments, enjoys himself and so on. but as the effects of alcohol increase, all of this can be replaced by irritability, obscenity, irritability, and rudeness. Alcoholism causes dystrophic changes in the vascular system, the development of hypertension, serous liver, impaired renal function, as well as profound mental and somatic disorders. The disease results in mental retardation, alcoholic epilepsy, and sometimes alcohol psychosis. The patient is frightened, sleep is disturbed, hallucinations are observed. Accidents often occur among alcoholics, their ability to work is weakened. Alcoholism has a negative effect on the female psyche. Alcohol consumption during pregnancy is especially unacceptable. Thus, the alcohol consumed in this case has a very negative impact not only on the mother's body, but also on the health of the unborn child. It is more common for women with alcoholism to give birth to children with physical or mental disabilities.

Unfortunately, both in education and in science, have to experiment on animals in order to treat alcoholism and measure the scale of harm in general. Acute alcohol toxicity should be studied in several animal species, and it is imperative to use the species in which the therapeutic effect of the pharmacological substance has been shown and in which long-term toxicity was studied. Usually 2-3 species of rodents and non-rodents (mice, rats.) are used. Groups of male and female experimental animals are formed separately. For small rodents, each group should contain at least 5-6 females and the same number of males.

An experiment carried out on several lines often shows different susceptibility of the lines. The assessment of nano safety should be based on the most sensitive line, but in some cases it is necessary to find the gene for such susceptibility. This will help clarify mechanism of nano toxicity and obtain data for innovative drugs in the future. Unfortunately, toxicologists have never attempted such a design. If mice are used instead of rats, then more radical changes will be needed. According to foreign data, it was mice (91.4%) that were the most commonly used species for gene modification, and only then were rats (3.6%), zebrafish (2.3%), and other species, including chickens, sheep and cows (1.3%). The most frequently used for gene modification of mouse lines C57BL/6 (48.1%), 129Sv (11.1%), Balb/c (4.3%), CD1 (2.5%) and FVB (0.3%). The advantage in using mice is the wide availability of different strains and an extensive database of mouse genetics, mouse/human gene matching, and the relative ease of mouse genetic manipulation. Genetic modifications may include the "insertion" of the necessary gene that gives a response to nano substances. (Fang, McLaughlin & Fang, 2008:45)

The similarity constants show how many times faster (or slower) intoxication can develop in an animal compared to humans due to a higher (or lower) intensity of biological processes and, according to our calculations, if a person is taken as a unit: for a mouse ~9.7, rats ~5.2, guinea pig, ~4.3, rabbit, ~2.5, dogs, ~1.7, sheep, ~1.4, pigs, ~0.83 and horses~0.75.

When switching to real time, this means that, for example, intoxication or an adverse drug reaction that develops in a rat in 3 months will manifest itself in a mouse after 1.5 months, in a rabbit - after 6 months, in a dog - after 1 month, in humans - 16 months, and in the horse only after 22 months of exposure to the substance. The existence of allometric dependencies of time for the development of the effects of intoxication is necessary take into account when assessing the adequacy of the duration of pharmacological and toxicological experiments when extrapolating data from animals to humans.

Genetic analysis has shown that the number of newly acquired genes per neuron in the human brain is greater than in the chimpanzee brain. In addition, the adult human brain contains significantly more copies of mobile genetic L1 elements than the liver and heart, which is due to the adaptation of the nervous system to the constantly changing environment and the individual's lifelong learning. In 2006, it was found that the human genome contains 212 copies of the MGC8902 gene, which is expressed only in brain neurons and encodes the DUF1220 protein with unknown functions. At the same time, in the genome only 37 copies of this gene were found in chimpanzees, and one copy each in mouse and rat genomes. Hence, it was suggested that the MGC8902 gene may be involved in evolutionary changes in the brain. It is also assumed that the formation of a more complex neural network and, accordingly, a more complex structure of the human brain is responsible for the so-called extended transcription of the human genome. About 20% of brain neurons normally regenerate, while at the same time, with age, up to 30 g of neurons are irretrievably lost every year.



It has been established that mice infected with toxoplasmosis “run badly” from cats and, most importantly, the parasite is transmitted to cats with great success. It is also believed that toxoplasmas “redistribute” and affect the psyche of the infected person. This is one of them examples of an amazing biological phenomenon when a parasite can be managed by a host.

In real time it has not been possible to create yet human hybrids and to obtain therapeutic antibodies are used only mouse hybrids. Imaging monoclonal antibodies represent their own powerful immunogens, which are formed in the body of patients with HAMA (from the English “human anti-mouse antibodies” -

antimyshynye antibodies of man). To reduce the immunogenicity of such antibodies are carried out with the help of different and sufficiently labor-intensive ways of their “embodiment”, transferring mouse sites, determining complementarity (CDR, from English. “Complementarity determininiges” regions). Protein NR2B was found that the process of training and blood pressure are regulated by one and the same biochemical mechanism, in particular, with the participation of protein NR2B. This protein has a beneficial effect on the process of memory and training in mice. Transgenic mice with an additional copy of the NR2B protein gene instantly learned the details of the LEGO designer. This line of mice was called “Arc”, in honor of the hero of the TV series “Arc Hauser - Doctor of Medicine.” It is assumed that the transfer of the gene NR2B protein in human offspring will allow to create the future “wunderkinds to order”. However, the addition of “smart protein” sharply increases the likelihood of stroke in the carrier of an additional copy of the gene.

In view of all this, scientists are studying the effects of alcoholism on pregnancy through various experiments. As mentioned earlier, mice, the gene closest to the human gene, are used for this purpose. Scientists keep pregnant mice in a cotton cell impregnated with ethyl alcohol and its derivatives. Some even drink ethyl alcohol to pregnant mice. Blood tests and other tests of these pregnant mice are then performed.

Let's clarify right away: the main component of any alcoholic beverage is ethyl alcohol (or ethanol). It is he who is responsible for all the changes that occur to our body after drinking alcohol. After swallowing, ethyl alcohol enters the stomach, where approximately 20% of its volume is absorbed into the blood. Most (80%) a little later enters the bloodstream already from the intestines. Once in the blood, ethanol begins to act on the body. The fact is that ethyl alcohol has a different effect on different types of nerve cells, upsetting the balance of the processes of excitation and inhibition.

All alcoholic products necessarily contain ethyl alcohol. For example, what is beer? 100 grams of beer is 6-12 grams of poison (ethyl alcohol), “dressed” in hops, rye, yeast and other ingredients. What is wine? 100 g of wine is 20 g of poison (ethyl alcohol), “dressed” in grape, apple and other must (juices). Different varieties of grapes, apples - these are different varieties of wine, but the main component of them is poison - ethyl alcohol, one for all. 100 g of champagne is 17 g of poison, and the rest is various extracts.

What is vodka? 100 g of vodka is 40 g of poison (ethyl alcohol) “dressed” in 60 g of water and various extracts. What is cognac? 100 g of cognac is 40 g of poison, “dressed” in color, which is drawn from an oak tree and 60 g of water and various extracts.

What is moonshine? 100 g of moonshine is from 20 to 70 g of poison, “dressed” in water and fusel oils.

Once in the body of a mouse, ethyl alcohol is absorbed through the walls of the stomach and intestines, quickly reaches the liver and appears in the blood. The state of intoxication depends on the concentration of alcohol in the blood. The content of alcohol in the blood up to 0.5 g / l usually does not cause immediately noticeable changes. At an alcohol concentration of 0.5-1 g / l, there is no noticeable intoxication observed, but the nerve centers cease to function normally. This is a very dangerous condition, especially for car drivers. As a result of numerous medical examinations, the probability of accidents in this case increases 14 times. With the accumulation of 2 g / l in the blood, the degree of intoxication increases: the gait becomes unsteady.

In the biochemistry of ethanol, an important role is played by the fact that it forms solutions in a wide range of proportions with both water and fats. It is a by-product of glucose metabolism; the blood of a healthy mouse can contain up to 0.01% of endogenous ethanol, which is a metabolic product. When ingested, ethanol has a narcotic and toxic effect, depending on the dose, concentration, route of entry into the body and duration of exposure, its effect varies. Any dose of alcohol harms the body, there is no safe dose. Under the narcotic effect, its ability to cause coma, stupor, insensitivity to pain, depression of the central nervous system, alcoholic



arousal, addiction, as well as its anesthetic effect is indicated. Under the influence of ethanol, endorphins are released in the nucleus accumbens (Nucleus accumbens). In certain doses to body weight and concentrations leads to acute poisoning and death (lethal single dose - 4-12 grams of ethanol per kilogram of body weight). The main metabolite of ethanol, acetaldehyde, is toxic, mutagenic, and possibly carcinogenic. There is evidence for the carcinogenicity of acetaldehyde in animal experiments; in addition, acetaldehyde damages DNA. Long-term use of ethanol can cause diseases such as cirrhosis of the liver, gastritis, necrotizing pancreatitis, gastric ulcer, breast cancer, stomach cancer and cancer of the esophagus (that is, it is a carcinogen), hemolytic anemia, arterial hypertension, stroke, cause sudden death of people suffering from ischemic heart disease; can cause serious metabolic disorders. Alcohol may increase the risk of having a child with congenital anomalies of the nervous system and cause growth retardation. The use of ethanol can cause oxidative damage to brain neurons, as well as their death due to damage to the blood-brain barrier. Alcohol abuse in mice can lead to clinical depression and alcoholism. The intake of alcoholic beverages while taking medication is highly undesirable, since alcohol perverts the effect of drugs and, as a result, becomes dangerous for the life of the mouse.

The negative effect of alcoholic beverages on the results of pharmacotherapy is diverse and depends on various factors: the individual characteristics of the patient, his sensitivity, the severity of the disease, but in all cases, in patients taking drugs and consuming alcohol, the effectiveness of pharmacotherapy is weakened, and sometimes even reduced to nothing. Ethanol can be synthesized in small amounts in the lumen of the gastrointestinal tract as a result of the fermentation of carbohydrate foods by microorganisms (conditional endogenous alcohol).

The existence of biochemical reactions with the synthesis of ethanol in the tissues of the mouse body (true endogenous alcohol) is considered possible, but has not been proven to date. The amount of endogenous alcohol rarely exceeds 0.18 ppm, which is on the border of sensitivity of the most modern devices. An ordinary breathalyzer cannot determine such quantities.

Ethanol can also be harmful to health when inhaled vapors at sufficiently high concentrations. Mutagens can be various factors that cause changes in the structure of genes, the structure and number of chromosomes. By origin, mutagens are classified into endogenous, formed during the life of the organism and exogenous - all other factors, including environmental conditions.

Chemical mutagens are the most common in the group. These include the following groups of compounds:

- some alkaloids: colchicine - one of the most common mutagens in breeding, vincamine, podophyllotoxin;
- oxidizing and reducing agents (nitrates, nitrous acid and its salts - nitrites, reactive oxygen species);
- alkylating agents (eg, iodoacetamide, epoxybenzanthracene);
- nitro derivatives of urea: nitrosomethylurea, nitrosoethylurea, nitrosodimethylurea - often used in agriculture;
- ethyleneimine, ethyl methanesulfonate, dimethyl sulfate, 1,4-bisdiazoacetylbutane (known as DAB);
- some pesticides (pesticides of the aldrin group, hexachloran);
- some food additives (for example, aromatic hydrocarbons (benzene, etc.), cyclamates);
- oil refining products;
- organic solvents;
- drugs (eg, cytostatics, mercury preparations, immunosuppressants).

A number of viruses can also be conditionally classified as chemical mutagens (the mutagenic factor of viruses is their nucleic acids - DNA or RNA).

The mechanism of action is based on the formation of so-called DNA adducts with nucleic bases. The more such DNA adducts are formed in a molecule, the more the native structure of DNA changes, which leads to the impossibility of the correct course of protein biosynthesis processes (transcription and replication) and thereby generates the expression of mutant proteins. Almost all chemical mutagens are sources of malignant tumors (they are carcinogenic), but not all carcinogens exhibit mutagenic properties.

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thereby generates the expression of mutant proteins. Almost all chemical mutagens are sources of malignant tumors (they are carcinogenic), but not all carcinogens exhibit mutagenic properties (Goodlett, Horn & Zhou, 2005:34)

Let us consider the mechanism of action of one of the mutagens, benzene epoxide.

By itself, benzene does not have mutagenic activity; is a promutagen. However, as a result of biological oxidation and biotransformation in the cells of the liver, kidneys, and especially in the myeloid tissue of the red bone marrow, it acquires mutagenic properties. Once in the hepatocyte, benzene is immediately hydroxylated by the microsomal oxidation system catalyzed by a group of enzymes of the cytochrome P450 family to epoxide. Benzene epoxide is extremely reactive due to the formation of a strained cycle between the oxygen atom and the benzene molecule. It is able to very quickly alkylate nucleic acid molecules, in particular DNA. The mechanism for the formation of a DNA adduct with benzene epoxide is the reaction of nucleophilic substitution of SN₂: an electrophile - in this case, it is an epoxide (due to ring breaking, it becomes electron-deficient), - which interacts with nucleophilic centers - NH₂ groups (which are electron-rich) of nitrogenous bases, - forming covalent bonds with them (often very strong). This alkylation property is especially manifested in guanine, since its molecule contains the most nucleophilic centers, with the formation, for example, of N7-phenylguanine. The resulting DNA adduct can lead to a change in the DNA structure, thereby disrupting the proper course of transcription and replication processes, which is the source of genetic mutations. The accumulation of epoxide in liver cells leads to irreversible consequences: an increase in DNA alkylation, and at the same time an increase in the expression of mutant proteins that are products of a genetic mutation; inhibition of apoptosis; transformation and even cell death. In addition to pronounced genotoxicity and mutagenicity, it also has strong carcinogenic activity, especially this effect is manifested in the cells of myeloid tissue (the cells of this tissue are very sensitive to this kind of xenobiotic effects).

Congenital malformations, primarily spina bifida, increased in oral doses of 150-250 mg / kg / day (approximately 1-2 times the recommended maximum human dose based on body surface comparison) in offspring of pregnant rats given ethyl alcohol during organogenesis. In the fetuses of pregnant mice treated at a dose of 50-200 mg / kg, the cleft palate was increased depending on the dose (approximately 0.2 to 0.8 times the maximum recommended human dose based on a comparison of body surface area). Incomplete osteogenesis and embryotoxicity have also been reported in pregnant rabbits at doses up to 200 mg / kg of ethyl alcohol per day (approximately 3 times the recommended daily human dose based on body surface area comparison). (Miranda RC, Pietrzykowski A.Z. and Tang Y. (2010). Although there is no adequate and well-controlled study in pregnant women, rifampin has been reported to cross the placental barrier and appear in cord blood.

2. Methods

Experimental, empirical, theoretical, comparative. Comparison methods were used. Two main requirements have been met for the effective comparison: it is appropriate to compare only those events that have an objective commonality, and the comparison of objects was carried out on the basis of important indicators. Application of special technical devices and measuring units of the quantitative indicators of the research object with the measurement method was carried out. The experimental method was used for hypothesis testing in scientific research or scientific research of causal relationships between phenomena.

Result. In the end, not to mention that all the research proved that the mouse genome contains the same number of genes as the human genome, with 99% of these genes appearing to be identical and 96% in the same order. This means that disease genes identified in mice can be transferred to the human gene map. You can conduct experimental crosses between mice with different traits, and then very quickly begin to study the resulting offspring. It is possible to obtain mutant mice with certain gene defects, the phenotype of which can then be studied. In view of all this, at least we should pay attention to their living conditions and good nutrition. We must follow safety rules in accordance with the norms.



3. Findings and Results

Oral administration of ethyl alcohol to both rats and rabbits during pregnancy has been reported to have embryocidal effects, although reproductive studies in mammalian species (mice, rats, and rabbits) have not revealed congenital anomalies associated with ethyl alcohol. (Goodlett C.R, Horn K.H and Zhou F.C. (2005) Strain mice are more sensitive than, and the degree of testicular weight loss is stronger than in hybrid animals. An analysis of these indicators revealed that on days 30 and 45 after administration of ethyl alcohol, the weight of the testicles was slightly higher in the variants with the introduction of NNP. In both periods of the analysis, the frequency of was lower in the case of the introduction of the drug. When summing up the results of the analysis on days 30 and 45 after administration of ethyl alcohol.

The results of the analysis of embryonic mortality in the offspring of males who received a total dose of 3 Gy, fractionated by 0.6 Gy for 5 days, which were administered after ethyl alcohol with a minimum dose of RNP 4 mg/kg for 10 days. Within 4-6 weeks after the administration of ethyl alcohol, the fertility of males in the control decreased significantly up to complete sterility. Analysis of the results as early as the 3rd week of mating revealed a positive effect of RNP on the mortality rate of embryos before the implantation period. Summing up the results of the study of the genetic action of RNP, it should be noted that in all the experiments carried out, there was a tendency towards a therapeutic effect of RNP. A statistically significant decrease in the degree of alcohol damage in terms of the percentage of effective crossings was found with the introduction of NNP (10 mg/kg) five times, after the administration of ethyl alcohol at a dose of 3 Gy of gray hybrids CBAXC57BX F1. In addition, a decrease in the frequency of AGS was found in BALB mice in a similar variant of the experiment. Three similar experiments were carried out (3 Gy + 10 mg/kg RNP × 5) on mice of three different genotypes (gray hybrids, white hybrids and BALB strain mice). The therapeutic effect was most pronounced in BALB mice. A positive effect in hybrid mice was found only in experiments on old animals. This suggests that the beneficial effect of NNP is associated with the stimulation of the cellular repair system, which may be weakened in linear and old mice. In general, the beneficial effect is most pronounced at a relatively high dose of alcohol.

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In view of all this, at least we should pay attention to their living conditions and good nutrition. We must follow safety rules in accordance with the norms.

The territory on which the building of biomedical research is located must be fenced and protected from external access. The order of entry into the territory is strictly defined. carry out weaning of young animals from the uterus at the end of the suckling period (mice, rats - 28-31 days; hamsters - 21-29 days; guinea pigs - 27-29 days; miniature pigs - 45 days) and form groups of according to sex.

In the laboratory building, rats and mice are kept in cages in direct contact with the bedding. As bedding, it is recommended to use sawdust, shavings or small chips (length 5–20 mm, thickness 1–2 mm) from environmentally friendly hardwood. It is not allowed to use bedding made of chemically treated wood, as well as softwood. The bedding is autoclaved on trays at 118°C for 30 minutes. Bedding paper is stored and cut in a special auxiliary room. The required amount of bedding enters the housing in cut form in closed plastic bags. The closed bags are stored in the feed and litter storage room. Sanitization of the room is carried out in accordance with the "Plan of sanitary measures in the storage room for food and bedding". (Kraemer G.W, Moore C.F. and Newman T.K. (2008)). The control of the presence of parasites in the litter is carried out by a specialized state enterprise of the system of the sanitary and epidemiological service under a contract for disinfection work.



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