

INNOVATIVE RESEARCH IN EDUCATIONAL SCIENCES



Editors

Prof. Adem BAYAR, Ph. D.

Assist. Prof. Filiz KAYALAR, Ph. D



DUJAR

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Innovative Research in Educational Sciences

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Chapter 1

The Effect of Creative Drama on the Language Development of Preschool Children¹

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¹ This article is extracted from master dissertation entitled “The effect of drama in education on language development of six ages children”, supervised by Prof. Dr. Handan Asude Başal, in Bursa Uludag University, 2009.

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ABSTRACT

This research aims to reveal the effect of creative drama activities to be applied during the mother tongue activities of children in the six-year-old group attending preschool education on their language development. For this purpose, the Experimental method with the pretest-posttest control group, one of the quantitative research models, was used. The study sample consisted of 100 children attending a kindergarten affiliated with a primary school and an independent kindergarten in Bursa. The Peabody Picture-Vocabulary Test, developed by Dunn (1959) and adapted into Turkish by Katz et al. (1974), was used as a data collection tool in the study as both a pre-test and post-test. In addition, after the pre-test, the drama was applied to the experimental group for 12 weeks, one day a week, for mother tongue activities. The t-Test was applied in the analysis of the data. According to the research findings, there was a significant difference between the post-test scores of the experimental and control groups in favor of the experimental group. In addition, the primary school kindergarten and independent kindergarten groups that make up the children in the experimental group were compared among themselves. It was determined that the pre-test scores of the children in the experimental group who went to primary school kindergarten were higher. In comparison, the post-test scores of the children in the experimental group who went to independent kindergarten at the end of the drama application were higher. In addition, it was determined that the gender variable did not affect the children's pre-test and post-test scores.

Keywords: Creative drama, Language development, Preschool education

INTRODUCTION

The most important feature distinguishing man from other living things is his ability to think, learn and imagine. These features are natural abilities that people have innate (Wood, 1999). The most critical period that allows people to develop their abilities is the preschool years. Preschool education has an essential place in an individual's life. From the moment they are born, children start to gain the basic structure of the language spoken in their society by interacting with their environment. In time, they communicate with the individuals around them uniquely using language. The basis of this communication to be established healthily depends on the experiences spent in the preschool period (Bilir et al., 1998). In preschool activities, children interact with each other and their environment, and this interaction has a positive effect on language development. As a result of the research, it is seen that language development can be accelerated with rich environmental factors and activities (Gürkan, 1982).

Cüceloğlu (2002) emphasized the importance of communication in our lives by saying, "Communication begins when two people become aware of each other". Accurate acquisition of communication-related knowledge and skills is essential for effective communication. Therefore, one of the behaviors that should be acquired at an early age and that has a significant impact on people at every stage of life is language skills. Starting from the pre-school period, the importance of which we have pointed out, children should be offered opportunities to develop their language skills. The better children understand others, the easier they can interact with the world outside of themselves. Children can cooperate in group activities as they share their thoughts and improve their speaking and listening skills (Pinciotti, 1993). Therefore, appropriate environments and exercises should be prepared to develop children's language skills; In particular, activities such as dramatization, role-playing, and drama that will enable the child to move and use his/her language and highlight his/her creativity should be included.

The environment for the best development and training of language acquisition is the 'natural' environment. The most suitable natural environment for the preschool child is provided by the 'play' environment that he/she directly participates in, and the provision of this environment is of great value in education. There are dramatic elements in children's games, and the child who learns his environment by playing is always in a dramatic activity. Theatrical experiences in education are acquired by animating events, facts and situations by students. Dramatic moments are a powerful educational tool that engages children in the activity, attracts their attention, and motivates them more than

other methods because they see the result of their work (Beehner, 1990). Drama allows the child to play, explore and express himself; appealing to the five senses; supporting areas of development; It is a method that is becoming more and more common in preschool education today. In drama works, the child enables the child to express himself freely verbally and physically within a group, within the defined limits. While the drama method allows the child to learn while having fun, it also affects language development positively (Özer, 2008). Creating a story, animating a story, and animating inanimate objects in drama studies with young children develop both imaginary and intellectual skills of children (Tuğrul, 2006). During drama activities, the child initiates verbal communication and establishes mutual dialogues with imaginary characters in various situations; He speaks spontaneously and based on his imagination. Children's vocabulary can be developed with the art of creative drama, creative drama or improvisation (Gönen & Dalkılıç, 2002).

It is stated in many studies that creative drama practices are effective in the developmental areas of the child and give positive results when used as a method in education (George & Schaer 1986; Ömeroğlu, 1990; Dalkılıç, 1995; Tuzcuoğlu et al., 1998; Aktaş-Arnas et al., 2006 and Özyılmaz, 2008). Significantly creative drama activities increase the child's language usage areas and quality. Since there is communication and interaction like creative drama, it breaks the bridges between the natural world and the child's imagination, and children learn life by living directly. It also provides various opportunities for the child to try different communication methods during these practices. For this reason, this research is essential in emphasizing the effect of giving mother tongue activities with creative drama activities in preschool institutions on the language development of children attending these institutions.

This study examines the effect of creative drama education, which will be applied during the mother tongue activities, on the language development of the children in the six-year-old group who continue their preschool education. In line with this general purpose, the following sub-questions were tried to be answered:

1. After the creative drama application, is there a difference in the language development levels of the children according to the gender variable?
2. After the creative drama application, is there a difference in the language development levels of the children compared to the primary school kindergarten and independent kindergarten attendance?
3. Is there a significant difference between the experimental and control groups regarding pretest and posttest scores?

4. Is there a difference between the experimental groups in the primary school kindergarten and independent kindergarten where the drama method was used in the research regarding pretest and posttest scores?

METHOD

Research Model

This study used the experimental research model with the Pretest-Posttest Control Group, one of the quantitative research methods. In this model, two groups are formed by unbiased assignment, one used as the experimental group and the other as the control group. Measurements are taken from both groups before and after the experiment (Karasar, 2007). Accordingly, the study compared the differences in language development of children attending preschool education to whether they received creative drama education.

Environment and Sample

The research environment consists of six-year-old children who go to the kindergarten affiliated with the primary school and independent kindergarten within the borders of Bursa province. While determining the children included in the research, attention was paid to the fact that they were in similar socioeconomic and environmental conditions and constantly went to a kindergarten or kindergarten institution to receive preschool education. The research sample consists of 100 children in the age group of 6 attending preschool education, 48 children from a primary school kindergarten and 52 children from an independent kindergarten in the Osmangazi district of Bursa province, which were selected by purposeful sampling. Four groups were formed that went to primary school kindergarten and independent kindergarten. According to this group distribution, the students going to primary school kindergarten are grouped as “Experimental Group 1” and “Control Group 1”; independent kindergarten students were grouped as “Experimental Group 2” and “Control Group 2”. Table 1 shows the demographic characteristics of the sample of the study.

Table 1. *Frequency distributions of the demographic information of the research sample*

Variables	Subcategories	N	Total
School Type	Primary school preschool	48	100
	Independent kindergarten	52	
Gender	Girl	44	100
	Boy	56	
Group Type	Experimental Group 1	25	100
	Control Group 1	27	
	Experimental Group 2	25	
	Control Group 2	23	

When Table 1 is examined, the distribution of preschool children within the scope of the research is given. According to this distribution, there are a total of four groups: Experimental Group 1 (11 girls, 14 boys), Control Group 1 (11 girls, 16 boys), Experimental Group 2 (11 girls, 14 boys) and Control Group 2 (11 girls, 12 boys).

Data Collection

The study applied a 12-week creative drama to the experimental group’s children. The Peabody Picture-Word Test, developed to measure the language development of the experimental and control groups, was used before and after the application.

Peabody Picture Vocabulary Test

The Peabody Picture-Vocabulary Test is an individually administered performance test that measures the vocabulary development of children aged 2-12. This test was developed by Dunn (1959); It was adapted to Turkey by Katz et al. (1974). Material of Peabody Picture Vocabulary Test; It consists of 100 cards with four pictures on each and a form in which the researcher scores the answers given by the subjects. By saying a word for each card, the child is asked to point with his finger at one of the four pictures on the card that corresponds to the said word. The Peabody Picture-Vocabulary Test is continued until six wrong answers are given in eight consecutive questions during the test administration (Taner, 2003). The application with each child takes an average of 15-20 minutes.

Creative Drama Activities Program

The "Creative Drama Activities Program" is organized to determine the effect on children's language development levels, consisting of a twelve-week program. While creating this original program prepared by the researcher, the objectives aimed for each session were selected from the Preschool Education Program, taking into account the language development levels of the children and the stages of "preparation-warm-up, animation and evaluation" that Adıgüzel (2006) stated were used while organizing the sessions. In the first four-week part of the program, the fundamental studies of the drama and preparation for improvisations were included. In contrast, the last eight-week part had animations from the stories and studies using various drama techniques. The program was implemented 24 hours for twelve weeks, one day a week. The drama program applied in the research is given in Table 2.

Table 2. *Content of Creative Drama Activities Program*

Session No	Session Name
Session 1	Meet and warm-up exercises
Session 2	Harmony-trust studies
Session 3	Drama studies through music and rhythm
Session 4	Drama studies through visual materials
Session 5	Animation from the story "The Magic Museum"
Session 6	Animation from the story "The Colorful Snail"
Session 7	Animation from the story "The Chief's Meal"
Session 8	Animation from the story "The Puppet Shop"
Session 9	Animation from the story "The Giant Who Understands Kindness"
Session 10	Animation from the story "The king who does not love his dreams"
Session 11	Animation from the story "The Fisherman in the Storm"
Session 12	Animation from the story "Hole in the Sky"

Data Analysis

It was tried to be discussed comparatively whether the language development of the children participating in the study changed after receiving drama education, whether there was a difference according to gender and whether they went to kindergarten or kindergarten. Before looking at the language scores of the children included in the study, the Single Sample Kolmogorov Smirnov Test was applied to the whole group, and it was determined that the group was under the normal distribution as $p > .05$ (pretest $p: 0.31$ and posttest $p: 0.07$). Since the number of children in the groups was equal and the study showed a normal distribution, t-Test and Analysis of Variance were used for independent samples from parametric tests. Tukeys-

HSD Test was used to find the significant ones from the groups. SPSS 13.0 program was used in the analysis of the data.

FINDINGS

In this section, in line with the purpose of the research, statistical analysis of the data was tried to be carried out and the findings were tried to be interpreted.

1.The Effect of Gender on Pretest and Posttest Scores of Children

To determine whether gender has an effect on the language scores of the children included in the study, the independent samples t-Test was applied to the pretest-posttest scores of the children in the whole group. According to the analysis results, there was no significant difference in the pretest scores according to the gender variable ($p:0.96$; $p>05$). Similarly, there was no significant difference in the posttest scores according to the gender variable ($p:0.73$; $p>05$).

2.The Effect of Primary School Kindergarten and Independent Kindergarten Attendance on Pretest-Posttest Scores of Children

To determine whether the language scores of the children participating in the research change according to the preschool institution they attend, the independent samples t-Test was applied to the pretest and post-test scores of the children who went to primary school kindergarten and independent kindergarten. Accordingly, although there was no significant difference in the pretest scores according to the institution variable ($p: 0.09$; $p>05$), there was a significant difference between the post-test scores in favor of the children who went to independent kindergarten ($p: 0.03$; $p<.05$).

3.Examination of Children's Language Scores According to Experimental and Control Groups

To determine whether the language scores of the children participating in the study differ from the experimental and control groups, the dependent samples t-Test was applied to the pretest and post-test scores of the children. According to the analysis results, there was no significant difference between the pretest and posttest scores of the children in the control group. ($p:0.67$; $p>05$). However, there was a significant difference between the pretest-posttest scores of the children in the experimental group in the study, and the results of the analysis are shown in Table 3.

Table 3. Paired Samples t-Test results of Pre-test/Post-test Scores (Experimental Group)

Test	N	Mean	Std. Deviation	df	t	p
Pre-test	50	37,18	6.99	49	-26,18	,000*
Post-test	50	72,78	7.58			

* $p < .05$

Analysis results in Table 3 show that there is a significant difference in the pretest and posttest scores of the children in the experimental group included in the study ($p < .05$). In other words, after the drama application, the language scores of the children in the experimental group increased.

4.Comparison of Pretest-Posttest Scores Received by Children in Experimental Group 1 and Experimental Group 2 to which Drama Application was made

Within the scope of the research, it was examined whether there was a difference between the children in the experimental group, in which drama was applied, in terms of the scores they received from the pretest and posttest forms of the Peabody Picture-Word Test. The t-Test was applied to independent samples on the pretest and post-test scores of the children in Experimental Group 1 and Experimental Group 2, and the results are shown in Table 4.

Table 4. Independent Samples t-Test Results According to the Pre-test/Post-test Scores (Experimental Groups)

Sub Dimensions	Group	N	\bar{X}	S	sd	t	p
Pretest	Experimental 1	25	39,72	6,65	48	2,73	,009*
	Experimental 2	25	34,64	6,49			
Protest	Experimental 1	25	68.76	7.35	48	-4,39	,000*
	Experimental 2	25	76.80	5.46			

* $p < .05$

As can be seen in Table 4, there was a significant difference between the pretest scores of the children in Experimental Group 1 and Experimental Group 2, which consisted of the children who received drama education within the scope of the research ($p: 0.09, p < .05$). In other words, the children in the experimental group 1 in the primary school kindergarten who received drama

education; It was revealed that they were more successful in the pretest than the children in the experimental group 2 in independent kindergarten. Similarly, a significant difference was found between the posttest scores of the children in Experimental Group 1 and Experimental Group 2 ($p: 0.00, p < .05$). According to this, the children in experimental group 2, who went to independent kindergarten, consisted of children who received drama education; It was determined that they were more successful in the posttest than the children in the experimental group 1 who went to primary school kindergarten.

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

With this study, the development of the language skills of the preschool children included in the research was examined according to the answers given to the pre-test and post-test forms related to the language development of the children who were given native language activities with the creative drama application. When the findings obtained in the study were evaluated in terms of gender variable, no significant difference was found between the language scores of girls and boys in both the pretest and posttest scores. This shows that the effect of creative drama activities on the language development of girls and boys is at the same level.

Similarly, when the findings obtained in the study were evaluated according to the kindergarten and kindergarten attendance status, no significant difference was found in the pre-test language scores of the children who went to kindergarten and kindergarten. However, when the post-test scores were examined, it was seen that there was a statistically significant difference ($p < 0.05$) and that the children who went to independent kindergarten were more successful than the children who went to the primary school kindergarten. When the reasons for the emergence of this difference were investigated, it was seen that the place where the application was made in the independent kindergarten was more comprehensive. The leader had wider opportunities regarding tools and materials, and these advantages contributed to the children's participation in the activities and to move freely.

According to the findings obtained as a result of the research, after the drama program was applied to the children in the experimental group for 12 weeks, it was observed that they were more successful in the post-tests than the children in the control group and a statistically significant difference emerged ($p: 0.00$). It can be thought that the difference between them is not only due to the periodic increase in the vocabulary of children in the preschool period but also because the creative drama activates the vocabulary that is passive by nature. In this way, creative drama helps both the acquisition of language and the effective

use of vocabulary in children. It parallels the findings of other studies on the effectiveness of drama studies in education at different levels and subjects and supports the studies in the field. For example, in Dalkılıç's (1995) study examining the effect of the creative drama program applied to children attending kindergarten on language acquisition of children; At the end of the 13-week drama program, it was observed that the children in the experimental group who received drama education were more successful in the posttest than the control group. It was determined that the number of words used by the children increased.

In another study, in the study of Ulaş and Topal (2006), a teacher-centered method based on the textbook was followed with the control group, while drama activities were carried out in the experimental group for four months in the mother tongue, teaching lessons of the 4th-grade primary school students. When the pretest and posttest scores of the groups were examined, there was no difference in the pretest scores between the experimental and control groups. Still, a significant difference was found in favor of the experimental group in the posttest. In a similar study, Aktaş-Arnas et al. (2006) examined the effect of creative drama on the language development of children aged six going to kindergarten. As a result of the research, it was seen that the children who participated in the creative drama activity started to form sentences using more words than the control group. In addition, the pretest scores of the children in experimental group 1 in the primary school kindergarten and experimental group 2 in the independent kindergarten were compared. According to the result obtained in this comparison, it was seen that the primary school kindergarten children in the experimental group got higher language scores than the independent kindergarten children in the experimental group in terms of the pretest scores applied before the drama program. However, in the posttest performed after the drama program was applied, a significant difference emerged in favor of the independent kindergarten children in the experimental group.

During the applications, it was observed that the children voluntarily participated in the games and they played the games with pleasure. If we consider that play is an activity that has a significant place in the child's life and that the child does willingly and enjoys and that creative drama is an advanced form of children's games, we can understand why the students included in the research volunteer. In addition, it was observed that some children who had difficulty expressing themselves at the beginning of the activities could express themselves more quickly at the end of the activities and during the process, and children who had difficulty making some letters and sounds made progress. In

addition, it was observed that the children's vocabulary improved and the length of the sentences they formed increased.

In general, as a result of the findings, it was determined that the drama technique was more effective on children's language development than traditional techniques and enabled them to progress positively. In the research, applications were made with children in the six-year-old group in preschool education. It can be suggested that the same study be applied to children in different age groups in preschool education or that its effect can be examined in different activities such as science and nature activities, mathematics activities, and mother tongue activities. In this study, it was observed that drama studies made progress in children who have difficulties expressing themselves and who have difficulties in language development. A similar study can be conducted on the effect of this study on children who have difficulties in language development only by working with them. In addition, a program that families can implement at home, significantly enriching the drama with preparatory warm-up games, can contribute to children's reading habits and early literacy.

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Chapter 2

Contemporary Practices in Pre-Service Professional Development of Candidate Teachers in Türkiye and the World

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ABSTRACT

INTRODUCTION

The primary purpose of this chapter is to explore the contemporary practices in pre-service professional development of pre-service teachers both within Türkiye and across the globe. I will delve into the historical evolution of pre-service teacher education in Türkiye and shed light on the current state of teacher preparation programs. Furthermore, drawing on international perspectives, I will compare pre-service teacher education systems from various countries, identifying innovative approaches and best practices that can inspire Türkiye's educational landscape.

As we proceed, the focus will be on examining cutting-edge approaches employed in pre-service professional development, emphasizing the integration of technology, blended learning models, experiential learning opportunities, and collaborative initiatives. Moreover, inclusivity and diversity will be at the forefront, as strategies to address the needs of diverse learners, promote cultural responsiveness, and ensure inclusive classroom practices are explored. To support the analysis, research and evaluation methodologies used to assess the effectiveness of pre-service teacher education programs will be investigated. Identifying challenges that persist within Türkiye's pre-service professional development sphere, policy recommendations will be proposed, and potential future directions that can elevate the quality and impact of teacher training in the country will be explored.

Education plays a crucial role in shaping the future of societies, and at the heart of quality education lie competent and well-prepared teachers (McNamara et al., 2014:2). Pre-service professional development, as a vital component of teacher education, equips aspiring educators with the knowledge, skills, and dispositions essential to excel in their future classrooms. The concept of pre-service professional development centers around the idea that effective teaching is not merely an innate talent but a skill that can be cultivated and honed through purposeful training and experiences. Before stepping into their own classrooms, pre-service teachers undergo a transformative process to develop a deep understanding of pedagogy, subject matter expertise, classroom management techniques, and the ability to cater to diverse learners' needs. This stage of professional development lays the foundation for their teaching careers, shaping their identities as educators and influencing their future practices.

Quality pre-service professional development is vital for several reasons (Burstow and Maguire, 2014: 103). Firstly, it ensures that future educators are equipped with the latest educational theories, methodologies, and best practices, allowing them to provide a high-quality learning experience to their students. Secondly, pre-service training plays a pivotal role in fostering a sense of self-

efficacy and confidence among aspiring teachers, empowering them to embrace the challenges and complexities of teaching with enthusiasm and determination. Thirdly, effective pre-service professional development contributes to the retention of teachers in the profession, as those who feel adequately prepared are more likely to remain committed to their chosen career path.

I- PRE-SERVICE PROFESSIONAL DEVELOPMENT IN TÜRKİYE

A. Historical Overview of Pre-Service Teacher Education in Türkiye

The roots of teacher education in Türkiye can be traced back to the early years of the Republic when modern education systems were established under the visionary leadership of Mustafa Kemal Atatürk in the mid 1930s. The emphasis on education as a means of social transformation and progress led to the establishment of teacher training institutions, known as "Eğitim Enstitüleri" (Education Institutes), which played a crucial role in preparing teachers to meet the needs of the newly established secular education system (Kapluhan, 2012:172, Ezer, 2020:1787).

Over the decades, Türkiye's teacher education landscape underwent several transformations, influenced by changing educational philosophies, policies, and societal demands. From traditional teacher training institutes, the focus shifted towards four-year university-based faculties and departments of education. This transition aimed to enhance the academic rigor of teacher education and align it with the principles of contemporary pedagogy and research-based practices.

In order to become a teacher in Türkiye, one must attend the teacher training programs offered by the faculties of education at universities. These programs typically last for four years and provide aspiring teachers with both theoretical knowledge and practical training. Teacher training includes internships, which are essential for gaining field experience. During these internships, students work alongside experienced teachers in real classroom settings. This hands-on experience allows them to develop their teaching skills and provides them with a taste of the actual teaching profession.

The eligibility criteria for becoming a teacher are determined by the Ministry of National Education in Türkiye and may be subject to periodic updates. Generally, the basic requirements include being a Turkish citizen, successfully completing a 4-year undergraduate program, having the appropriate education in the desired teaching field, passing the teacher qualification exams (both subject knowledge and pedagogy), meeting health requirements, and obtaining clearance through a background check.

Once all these conditions are met, candidates can participate in the appointment and placement processes organized by the Ministry of National

Education to embark on their journey as teachers. In recent years, Türkiye has made concerted efforts to align teacher education with the demands of the 21st century. Various initiatives have been undertaken to improve the quality of pre-service teacher training, including curriculum reforms, professional development opportunities for teacher educators, and partnerships with international institutions to learn from best practices worldwide.

B. Current Landscape of Pre-Service Teacher Education Programs in Türkiye

The current landscape of pre-service professional development for candidate teachers in Türkiye showcases significant progress and a commitment to nurturing effective educators. However, challenges remain in ensuring that teacher education programs stay relevant, inclusive, and equipped to address the ever-evolving demands of the teaching profession (Sönmez Boran et al., 2019). Emphasizing practical experiences, technology integration, inclusivity, and research-based practices can pave the way for a vibrant and impactful pre-service professional development system that empowers future educators to lead their classrooms with confidence and competence. As stated earlier, presently, pre-service teacher education programs in Türkiye typically consist of undergraduate programs leading to a bachelor's degree in education or related fields. Students can specialize in different levels of education, such as pre-school education, elementary education, and subject-specific teaching for secondary education. The programs encompass a blend of theoretical courses, practical teaching experiences, and classroom observations, allowing aspiring teachers to bridge the gap between theory and practice.

Universities in Türkiye play a pivotal role in shaping the pre-service teacher education landscape. They are responsible for designing and implementing teacher education curricula, training teacher educators, and providing pre-service teachers with the necessary knowledge and skills to become effective educators (Atmacasoy and Aksu, 2018). Furthermore, universities often collaborate with schools to facilitate teaching internships and practical experiences, fostering a symbiotic relationship between academia and practice.

Despite significant progress in teacher education, Türkiye faces several challenges in preparing pre-service teachers effectively. Ensuring uniformity and high standards across teacher education programs remains a concern. There is a need to continuously update the curricula to reflect emerging educational trends and to incorporate research-based teaching methodologies. Although pre-service teachers receive some practical experiences during their education, there is a call for more extensive and diverse opportunities for them to interact with students in

real classroom settings under the guidance of experienced mentor teachers. While Türkiye has been making strides in integrating technology into education, there is room for improvement in incorporating digital tools and innovative teaching methods into pre-service teacher education.

C. Challenges and Opportunities in Türkiye's Pre-Service Professional Development

One of the central challenges in Türkiye's pre-service teacher education lies in effectively bridging the gap between theoretical knowledge gained in universities and the practical demands of the classroom. Integrating more practical experiences and encouraging university-school collaborations can better prepare pre-service teachers for the realities of the teaching profession (Başaran and Çoban, 2019).

Given Türkiye's diverse cultural and linguistic landscape, there is a pressing demand to prepare pre-service teachers to cater to the needs of learners effectively. Training in culturally responsive teaching practices, inclusive education, and special education can equip educators with the tools to create equitable and inclusive learning environments (Kızılaslan, 2012). Indeed, technology can be a powerful tool to enhance pre-service professional development (Ersoy, 2005). Türkiye should explore online learning platforms, webinars, and virtual communities of practice to facilitate continuous learning and professional growth for pre-service teachers, even after they graduate.

Encouraging collaboration among various stakeholders, including teacher educators, policymakers, schools, and NGOs, may create a more robust and cohesive pre-service professional development ecosystem. Platforms for knowledge exchange and sharing best practices can lead to collective efforts in elevating the quality of teacher education in Türkiye. A stronger emphasis on research and evidence-based practices in pre-service teacher education could foster a culture of continuous improvement. By conducting rigorous research on the effectiveness of different approaches to teacher training, Türkiye would make informed decisions to enhance the impact of pre-service professional development programs.

II- INTERNATIONAL PERSPECTIVES ON PRE-SERVICE PROFESSIONAL DEVELOPMENT

A. Comparison of Pre-Service Teacher Education Systems Across Different Countries

Naturally, pre-service teacher education systems vary significantly across the globe, reflecting the unique cultural, social, and educational contexts of each

country. A comparative analysis of international perspectives will offer valuable insights into diverse approaches and highlight successful practices that can be adapted to Türkiye's pre-service professional development landscape. It is important to note that the quality of pre-service professional development may change within each country and region, and there are ongoing efforts in many places to enhance teacher training and improve the preparation of candidate teachers to meet the diverse and evolving needs of education systems worldwide.

European Models:

Many European countries follow a dual-track system of teacher education, offering both university-based academic programs and practical training components (Kowalczyk-Wałędziak et al., 2023). Countries like Finland and Sweden are often cited as models of excellence in teacher education, emphasizing a strong theoretical foundation, practical experiences in classrooms, and a focus on continuous professional development throughout a teacher's career (Ostinelli, 2009; Korhonen et al., 2017).

North American Approaches:

In the United States and Canada, teacher education programs are typically provided by universities and colleges. These programs often require pre-service teachers to complete coursework in educational theory, subject-specific content, and classroom management. Practical experiences in schools, known as student teaching or practicum, are a crucial component of teacher preparation (Washburn et al., 2016; Ghosh and Tarrow, 1993).

Asian Perspectives:

Countries in Asia, such as Singapore and South Korea, are known for their high-performing education systems (Yang and Tan, 2022). Their pre-service teacher education programs often emphasize rigorous selection processes for aspiring teachers and a strong focus on subject knowledge and pedagogical content knowledge (Kim and Choi, 2020). In some cases, pre-service teachers are required to complete a period of mandatory service in underserved or rural schools (Northcote and Lim, 2009:24).

African and Latin American Approaches:

In many African and Latin American countries, teacher education faces challenges related to resource constraints and infrastructural limitations. Efforts are being made to strengthen pre-service teacher education through partnerships with international organizations and support from donor countries. Innovative

approaches, such as peer learning networks and online training, are being explored to overcome some of these challenges (Heeralal and Bayaga, 2011).

B. Global Pre-Service Professional Development Practices and Türkiye

Several countries like the USA and Finland have adopted teacher residency programs, where pre-service teachers work closely with experienced mentor teachers for an extended period (Harju-Luukkainen et al., 2019). This immersive experience provides a smooth transition from theory to practice and allows pre-service teachers to gradually take on more responsibilities in the classroom. Additionally, pre-service teachers are inspired to collaborate with their peers and mentor teachers to plan and co-teach lessons. This approach fosters a supportive learning environment and enables pre-service teachers to learn from one another's experiences and expertise.

Effective pre-service teacher education programs emphasize the importance of reflective practice. Pre-service teachers are motivated to critically analyze their teaching experiences, identify areas for growth, and develop action plans for improvement (Kimmons et al., 2015). This reflective approach nurtures a culture of continuous learning and professional development. On the other hand, participating in international exchanges and study abroad programs allow pre-service teachers to gain exposure to diverse educational settings and practices. This cross-cultural experience enriches their perspectives, fosters intercultural competence, and equips them to be more adaptable educators.

Pre-service professional development for candidate teachers in the United States varies across states and institutions. Teacher preparation programs are conducted by universities and colleges, and the duration and content of these programs can differ. Some states may require aspiring teachers to complete a Bachelor's degree in Education, while others mandate a Master's degree in Education for teacher certification. These programs typically involve coursework, classroom observations, and teaching internships to provide practical training (Gong and Wang, 2017).

In Finland, pre-service professional development for candidate teachers is highly esteemed and rigorous (Chennat, 2014). Aspiring teachers pursue a Master's degree in Education at universities. The programs emphasize a research-based approach and practical teaching experience. Teacher candidates undergo extensive teaching practicums, where they spend considerable time teaching in real classrooms to develop their teaching skills and pedagogical expertise.

Pre-service professional development for candidate teachers in Africa, Asia, and Latin America can vary significantly depending on the country and its educational system. Some countries may offer formal teacher education programs

at universities, while others may have alternative pathways to becoming a teacher. In some regions, the emphasis may be more on practical teaching experience and mentorship rather than formal university-based training. Thus, each country's approach to pre-service professional development is influenced by its unique cultural, social, and educational context.

In Türkiye, pre-service professional development for candidate teachers typically takes place within the context of university-based teacher education programs. Aspiring teachers attend faculties of education at universities, where they undergo a comprehensive training that includes both theoretical coursework and practical teaching experiences. These programs aim to equip future teachers with the necessary pedagogical knowledge and skills to become effective educators. Teacher candidates also participate in teaching practicums, where they gain hands-on experience in real classrooms under the guidance of experienced teachers.

Türkiye can benefit from strengthening the integration of theoretical knowledge and practical experiences in its pre-service teacher education programs. By providing pre-service teachers with ample opportunities to apply their learning in real classroom settings, Türkiye can better prepare educators to face the challenges of teaching. Drawing inspiration from countries with successful inclusive education practices, Türkiye could develop specialized training modules that equip pre-service teachers with skills to cater to diverse learners, including those with disabilities, learning differences, and from marginalized backgrounds.

In addition to preparing pre-service teachers, investing in the professional development of teacher educators is crucial. Türkiye can explore programs that enhance the pedagogical and research skills of faculty members responsible for guiding future educators. Türkiye may consider blended learning models that combine online courses, virtual simulations, and face-to-face interactions to create a more dynamic learning experience for pre-service teachers. Moreover, creating networks and partnerships among teacher education institutions, schools, and educational organizations can promote the exchange of best practices, research findings, and resources. Collaborative networks foster a culture of collective improvement and enable Türkiye to learn from successful initiatives worldwide.

III- CONTEMPORARY APPROACHES IN PRE-SERVICE PROFESSIONAL DEVELOPMENT

As mentioned before, pre-service professional development plays a vital role in equipping aspiring teachers with the necessary knowledge, skills, and

dispositions to become effective educators in the 21st century. Since educational landscapes evolve, it becomes imperative for teacher preparation programs to adapt and integrate contemporary approaches that address the changing needs of learners and embrace innovative pedagogies.

A. Integration of Technology in Pre-Service Teacher Training

In the digital age, technology has transformed the way we live, work, and learn. Incorporating technology into pre-service teacher training can enhance pedagogy, promote student engagement, and prepare educators to use technology effectively in their classrooms. Here are some examples within the context;

1. Technology Integration Courses:

Pre-service teacher education programs can offer specialized courses focused on technology integration in education. These courses introduce future educators to various educational technologies, digital tools, and strategies for enhancing instruction and learning outcomes (Koç, 2005:2).

2. Blended Learning Models:

Blended learning, combining online and face-to-face instruction, provides pre-service teachers with flexible learning opportunities (Atmacasoy and Aksu, 2018). Online modules can be used for content delivery, while in-person sessions allow for discussions, collaborative activities, and practical teaching experiences.

3. Digital Classroom Management:

As classrooms become increasingly digital, pre-service teachers need guidance on effectively managing technology in the learning environment (McGarr, 2021). Training in digital classroom management helps educators maintain a productive and focused learning atmosphere while utilizing technology to its fullest potential.

4. Technology-Enhanced Assessments:

Pre-service teacher training can introduce innovative assessment methods that leverage technology to gather real-time data on student performance, enabling more personalized and data-driven instruction.

B. Blended Learning and Online Courses for Pre-Service Teachers

Blended learning and online courses have gained prominence in recent years, offering pre-service teachers new ways to access content, collaborate with peers, and engage in reflective practices. Their advantages are;

1. Flexibility and Accessibility:

Online courses provide flexibility for pre-service teachers, allowing them to access learning materials at their own pace and convenience. This flexibility is particularly beneficial for those with diverse responsibilities or geographical constraints.

2. Interactive Learning Environments:

Well-designed online courses incorporate interactive elements such as multimedia content, discussion forums, and virtual simulations, creating engaging and dynamic learning experiences for pre-service teachers.

3. Global Collaboration:

Online platforms enable pre-service teachers to connect with peers and educators from around the world, facilitating cross-cultural exchanges and the sharing of diverse perspectives and best practices (Neal et al., 2013).

4. Professional Portfolios:

Pre-service teachers can develop digital portfolios to showcase their work, reflections, and growth throughout their training. These portfolios can serve as valuable tools during job interviews and as a means of self-assessment and professional development (Kilbane and Milman, 2017:101).

C. Experiential Learning and Field Immersion Programs:

Experiential learning emphasizes learning through direct experience (Grau and Turula, 2019:98) and active engagement. Field immersion programs provide pre-service teachers with authentic and immersive experiences in real classrooms, empowering them to develop essential teaching skills. Several applications may be;

1. Teaching Practicum:

Teaching practicum experiences are a core component of pre-service teacher education. Placing pre-service teachers in actual classrooms under the mentorship of experienced educators allows them to apply theory to practice and gain insights into the daily realities of teaching (Smith and Lev-Ari, 2005).

2. Internship Programs:

Internship programs, typically of longer duration, offer pre-service teachers more extended opportunities to engage with students and curriculum planning. These internships foster a deeper understanding of the teaching profession and

provide a supportive environment for professional growth (Smith et al., 2016:344).

3. Community Engagement:

Experiential learning can extend beyond schools to engage with the wider community. Pre-service teachers can participate in community-based projects, service-learning initiatives, or extracurricular activities that enrich their understanding of learners' needs and the role of education in society (Evans, 2013:123).

4. Reflective Practices:

During and after experiential learning experiences, pre-service teachers are encouraged to engage in reflective practices. Guided reflections on their teaching experiences enable them to identify strengths, areas for improvement, and strategies for enhancing their pedagogical approaches (Slade et al., 2019:1).

D. Collaborative Learning and Peer Support Initiatives

Collaborative learning environments foster a sense of community among pre-service teachers and promote peer support, which is essential for professional development (Dillard, 2016:2). A few examples are as the following:

1. Learning Communities:

Creating learning communities within pre-service teacher education programs encourages collaboration and the exchange of ideas among aspiring educators. Peer support can lead to enhanced problem-solving skills, increased motivation, and a deeper sense of belonging.

2. Co-Teaching and Team Teaching:

Opportunities for co-teaching or team teaching experiences allow pre-service teachers to collaborate with their peers and mentor teachers, co-constructing lessons and sharing instructional responsibilities. This approach fosters a sense of collegiality and enhances their teaching strategies.

3. Action Research Groups:

Pre-service teachers can engage in action research projects as part of their training. Action research groups offer a platform for pre-service teachers to investigate specific educational challenges, implement interventions, and assess their impact on student learning.

4. Professional Learning Networks:

Pre-service teachers can participate in online or offline professional learning networks that connect them with educators and experts in their field. These networks offer ongoing support, access to resources, and opportunities for continuing professional development.

IV- INCLUSIVE PRACTICES IN PRE-SERVICE PROFESSIONAL DEVELOPMENT

Inclusive education is an essential pillar of modern teaching, emphasizing the accommodation of diverse learners with varying abilities, backgrounds, and learning styles. Therefore, pre-service professional development plays a pivotal role in preparing educators to embrace inclusivity (Specht and Metsala, 2018:70) and create supportive learning environments where all students can thrive. Pre-service teacher education must prepare educators to recognize and appreciate this diversity to effectively cater to the needs of all learners.

Pre-service teachers should benefit from culturally responsive teaching training that emphasizes understanding and valuing students' cultural backgrounds (Matias, 2013:68). This approach fosters positive teacher-student relationships and promotes engagement and achievement among diverse learners. Besides, pre-service teachers should receive training on effective strategies to support multilingual learners and facilitate language development in their classrooms. Moreover, inclusive practices require pre-service teachers to be sensitive to the socioeconomic disparities that exist among students. Training in differentiated instruction and providing additional support to students from disadvantaged backgrounds can promote equitable learning opportunities.

Modules should be included into pre-service teacher education on recognizing and addressing implicit biases that may influence teaching practices and student interactions. Encouraging self-reflection helps educators develop a more conscious and unbiased approach to teaching as well. Besides, integrating diverse perspectives and cultural content into the curriculum enhances students' sense of belonging and relevance to their education. Indeed, pre-service teachers should be trained to create inclusive learning materials that reflect the experiences and contributions of all students. Culturally responsive teaching involves establishing partnerships with families and communities to gain insight into students' cultural backgrounds and learning contexts (Lambeth and Smith, 2016). Pre-service teachers should also learn effective communication strategies to engage families in the educational process. They may also focus on strategies to establish inclusive classroom environments where students feel respected, valued, and safe to express their identities and perspectives. Preparing pre-service teachers to be

culturally sensitive and respectful of the linguistic and cultural backgrounds of ELLs is essential for fostering a positive and inclusive learning environment.

V - RESEARCH AND EVALUATION OF PRE-SERVICE PROFESSIONAL DEVELOPMENT

Research and evaluation are critical components of pre-service professional development, as they inform evidence-based practices, identify areas of improvement, and contribute to the continuous enhancement of teacher education programs. Thus, in shaping the future of pre-service professional development, research and evaluation play a central role. By using rigorous research methodologies, researchers can gain valuable insights into the impact and effectiveness of different pre-service teacher training programs and approaches (Smith and Sela, 2005:293). This evidence-based approach enables teacher educators and policymakers to make informed decisions that foster continuous improvement in teacher education.

The emerging trends in pre-service professional development research hold the potential to revolutionize teacher training (Ulvik and Riese, 2016:441). Leveraging data analytics, cognitive science principles, online learning platforms, and social and emotional learning strategies can lead to more personalized, efficient, and effective teacher education programs. As Türkiye seeks to strengthen its pre-service teacher education system, research and evaluation must remain at the forefront of educational policy and practice. By investing in research and promoting a culture of evidence-based decision-making, Türkiye can ensure that its pre-service professional development programs are continuously refined, relevant, and responsive to the evolving needs of its students, teachers, and society.

A. Methodologies and Approaches in Assessing Pre-Service Teacher Programs

Assessing pre-service teacher programs is essential to ensure the quality and effectiveness of teacher preparation. Various methodologies and approaches are used to evaluate these programs, providing valuable insights for improvement and accountability. Here are some common methodologies and approaches used in assessing pre-service teacher programs:

1. Surveys and Questionnaires:

Surveys and questionnaires are a widely used method for collecting feedback from pre-service teachers about their program experiences. These surveys can

cover various aspects of the program, such as the quality of instruction, support provided, relevance of coursework, and preparation for classroom teaching.

2. Focus Groups and Interviews:

Focus groups and interviews allow researchers to have in-depth discussions with pre-service teachers to gain qualitative insights into their perceptions, experiences, and challenges during their training. These methods can provide nuanced and detailed information that complements survey data.

3. Classroom Observations:

Conducting classroom observations of pre-service teachers during their student teaching or practicum can provide valuable information about their instructional practices, classroom management skills, and ability to apply what they have learned in their program.

4. Performance Assessments:

Performance assessments involve evaluating pre-service teachers' ability to plan and deliver effective lessons, analyze student work, and demonstrate pedagogical skills. These assessments can be conducted through teaching demonstrations, lesson plans, and reflective teaching portfolios.

5. Standardized Tests:

Some teacher preparation programs may use standardized tests to assess pre-service teachers' content knowledge and pedagogical expertise. These tests can help gauge the candidates' readiness to teach in specific subject areas.

6. Quantitative Studies:

Quantitative research methods involve the collection and analysis of numerical data to measure the effectiveness of pre-service teacher programs. Surveys, standardized tests, and quantitative evaluations of classroom performance can provide valuable insights into the impact of specific training initiatives.

7. Qualitative Research:

Qualitative research methods, such as interviews, focus groups, and observations, allow researchers to gain in-depth understanding of pre-service teachers' experiences, perceptions, and reflections. Qualitative data provide valuable context and rich descriptions of the effectiveness of different training approaches.

8. Mixed-Methods Research:

Combining quantitative and qualitative research approaches in mixed-methods studies offers a comprehensive and multifaceted view of pre-service professional development. This integrated approach enables researchers to triangulate findings and gain a deeper understanding of complex phenomena.

9. Longitudinal Studies:

Longitudinal studies track the progress and development of pre-service teachers over an extended period. By following cohorts of pre-service teachers from their initial training through their early years of teaching, researchers can identify the long-term impact of different pre-service programs.

B. Impact and Effectiveness of Various Pre-Service Training Models

The impact and effectiveness of various pre-service training models for teacher candidates have been a subject of interest and research in the field of education. Pre-service training refers to the preparation and education of individuals who are aspiring to become teachers. Several training models have been explored, and their impact and effectiveness have been assessed through research studies. Here are some of the common pre-service training models and their potential impact:

1. Comparative Studies:

Comparative studies assess the effectiveness of different pre-service training models and curricular approaches. By comparing the outcomes of multiple programs, researchers can identify which practices yield the most favorable results.

2. Experimental Studies:

Experimental research designs involve the implementation of controlled interventions, such as specific teaching methods or technologies, to assess their impact on pre-service teachers' knowledge, skills, and attitudes.

3. Case Studies:

Case studies focus on in-depth investigations of specific pre-service teacher education programs or initiatives. They provide nuanced insights into the unique factors contributing to success or challenges in a particular context.

4. Teacher Performance Assessment:

Teacher performance assessments, such as Teaching Performance Assessments (TPAs), offer a standardized framework to evaluate pre-service teachers' classroom performance and readiness for the profession.

CONCLUSION

The exploration of contemporary practices in pre-service professional development of candidate teachers in Türkiye and across the world reveals promising developments and successful strategies. Türkiye's efforts in candidate teacher preparation have demonstrated notable achievements, while countries like the USA, Finland, various Asian, African, and European nations have also made significant contributions to the field.

In Türkiye, the commitment to pre-service teacher education has been commendable. The nation has recognized the crucial role of well-prepared educators in shaping the future of education. Through evidence-based policies and investments in inclusive, technology-integrated, and culturally responsive training programs, Türkiye has nurtured aspiring teachers with the necessary knowledge, skills, and attitudes for effective classroom practices. Overall, the contemporary practices in pre-service professional development of candidate teachers across Türkiye and the world are evolving to meet the demands of modern education. While Türkiye's commitment to teacher education is commendable and has shown positive outcomes, there is a wealth of valuable experiences and best practices to learn from various countries worldwide.

The USA, known for its diverse education landscape, has implemented a wide range of approaches to pre-service teacher education. Various states and institutions offer different models, emphasizing practical experiences and partnerships with schools. Innovations in curriculum design and mentorship programs contribute to producing proficient educators.

In Europe, countries like Germany, the Netherlands, and the United Kingdom have been proactive in adopting evidence-based approaches to candidate teacher preparation. They emphasize the integration of research, practice, and reflection, creating a strong foundation for future educators. Finland, renowned for its successful education system, places significant emphasis on rigorous and comprehensive pre-service teacher education. Aspiring teachers undergo extensive training and receive considerable support from experienced mentors. The focus on research-based practices and a strong culture of trust in teachers has contributed to Finland's success in candidate teacher preparation.

In different regions of Asia, pre-service teacher education varies widely due to the diverse educational systems and cultural contexts. Countries like Japan,

South Korea, and Singapore have invested in innovative training methods and professional development opportunities for candidate teachers. These nations have leveraged technology and international collaborations to enrich their teacher preparation programs.

Across Africa, pre-service teacher education faces unique challenges and opportunities. Many countries are working towards strengthening teacher preparation by incorporating practical experiences and local community engagement. Collaborations with international partners have facilitated knowledge exchange and improvement in teacher training practices.

The success of candidate teacher preparation relies on continuous improvement and adaptation. By fostering collaboration, embracing innovations, and investing in the professional growth of teacher educators, Türkiye and other nations can further enhance their pre-service teacher education systems. As education continues to evolve, the shared goal should be to prepare competent, empathetic, and culturally responsive educators who will positively impact the lives of learners and contribute to the advancement of societies on a global scale.

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Chapter 3

English Language Teaching and Learning in Turkey during the Pandemic: A Review Study

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Abstract

The outbreak of Covid-19 changed everything in the world all of a sudden. People started to work from home and students were taught through online platforms or tools. However, no one was ready for this abrupt change. Particularly teachers did not have a chance to learn how to handle with this situation and they had to carry out their classes online. Also, students and parents had some difficulties during the pandemic. Therefore, this study aimed to identify the challenges of teachers, students, and parents about English language learning and teaching during the pandemic in Turkish context. Data were gathered through document analysis and analysed via thematic analysis. 5 themes were revealed and most of the studies were related to advantages and disadvantages of online English language learning and teaching from the perspectives of teachers and students.

Keywords: Covid-19 pandemic, challenges, English language learning, English language teaching

Pandemi Süresince Türkiye’de İngilizce Öğretimi ve Öğrenimi: Derleme Çalışması

Özet

Covid-19 salgını, aniden dünyada her şeyi değiştirdi. İnsanlar evden çalışmaya başladı e öğrenciler, çevrimiçi ortamlarda veya çevrimiçi araçlarla eğitim aldılar. Ama hiç kimse bu ani değişiklik için hazır değildi. Özellikle öğretmenlerin bu durumla nasıl başa çıkacakları konusunda eğitim alma şansları hiç yoktu ve derslerini çevrimiçi ortamda yapmak zorundaydılar. Bunun yanı sıra öğrenciler ve veliler de pandemi sürecinde bazı zorluklar yaşadılar. Bu yüzden, bu çalışma pandemide Türkiye’de öğretmenlerin, öğrencilerin ve ailelerin İngilizce öğrenme ve öğretme ile ilgili yaşadıkları sıkıntıları ortaya çıkarmayı amaçlamıştır. Veriler, belge analiz yöntemi ile toplanmıştır ve tematik analiz aracılığıyla analiz edilmiştir. 5 tema ortaya çıkmıştır. Çalışmaların çoğu, öğretmen ve öğrenci gözünden çevrimiçi İngilizce öğrenmenin avantajları ve dezavantajları ile ilgilidir.

Anahtar Kelimeler: Kovid-19 pandemisi, problemler, İngilizce öğrenme, İngilizce öğretme

Introduction

In the book “Teaching and Learning Online: Pedagogies for New Technologies”, Stephenson (2001) discussed the emerging online pedagogies, which revealed as a result of a trend in online anything. People tended to prefer everything online to communicate, entertain, find information and buy or sell something. Education in turn became one part of it. He noted that evaluating the effectiveness of this change in teaching and learning process was not possible at that time. Two decades later, we, however, can discuss the satisfaction of teachers and students about online pedagogies and effectiveness of this medium since the COVID-19 pandemic has accelerated this change. Due to the COVID-19 pandemic, abruptly every education level from primary schools to higher education institutions had to shift from traditional teaching to emergency remote online teaching through various platforms. Therefore, the COVID-19 pandemic leads to emerging of new pedagogies such as emergency online learning (Aguilera-Hermida, 2020), blended teaching and learning (hybrid or hybrid-e learning) (Martyn, 2003), the increase use of digital tools and platforms (Godwin-Jones, 2015; Kay, 2011; Reimers, Schleicher, Saavedra & Tuominen, 2020), problem-based learning (Foo, Cheung & Chu, 2021), cooperation and collaboration, task-based learning (Lamy & Hampel, 2007), learner autonomy, learning any time any place, changes in assessment such as e-portfolios (www.contactnorth.ca). In addition to the pandemic, the following factors can be listed as the reasons of new pedagogies : Demands of continuous development of knowledge-based society, students’ new expectations, rapidly developed new technologies and changes in the work world (www.contactnorth.ca). There should be an emphasis on the necessary skills of twenty-first century such as critical thinking, digital literacy and information literacy (Linuma, 2016; Shopova, 2014; Kong, 2014; The European Parliament and the Council of the EU, 2006; UNESCO, 2008). Lamy and Hampel (2007) also discuss the emergence of new literacies or multiliteracies and note that “The notion of literacy has served to conceptualise this understanding (by users) of the tools in their environments” (p. 43). These literacies in online context can be related to “skills of using the hardware and software. They also involve an awareness of and ability to deal with the constraints and possibilities of the medium” (pp. 44-45). Therefore, considering these various students’ literacy demands in this century, teaching pedagogies should also be changed and shaped accordingly. Teaching has started to be organized with “cooperation and collaboration, task-based learning, problem-based learning” (pp. 64-73). On the other hand, learners’ online participation, anxiety of learners, their motivation and autonomy should also be taken into consideration while designing online or blended teaching

settings. Furthermore, inequalities among students who have easy access to internet or technological tools or who do not or who are computer or digital literate or who are not should be considered in order to eliminate or at least minimize the problems (Kearsley, 2002).

Due to the novelty of the COVID-19 pandemic, studies about language learning and teaching were carried out. For example, Akbana, Rathert, and Ağçam (2021) conducted document analysis through the studies from 1 January to 28 October 2020. They examined the effects of emergency remote teaching (ERT) in the first year of Covid-19 pandemic as all schools had to shift their education from face-to face teaching to online teaching abruptly all over the World without any preparation. Their study focused on ERT in foreign and second language teaching across the world. However, the concern of this present study is to examine the studies about English language learning and teaching process in Turkey during the pandemic from March 2020 to February 2022. In other words, this study does not focus on only ERT practices in the first year of the pandemic but the practices in the context of online English language learning and teaching, challenges of students, teachers, or parents, and online language learning and teaching tools in Turkey. Based on this aim, the following research question will frame the study.

R. Q. 1: What are the new pedagogies and language learning/teaching tools during the pandemic?

R. Q. 2: What are the difficulties that students, teachers, or parents have had during the pandemic?

Method

In this present study, it is aimed to identify the effectiveness of online tools and new pedagogies appeared due to the pandemic and challenges of students, teachers and families. For this reason, this study was designed considering the criteria of the qualitative approach research design. In order to collect data and carry out systematic review, document analysis method was employed (Bowen, 2009). According to him, “documents provide background and context, additional questions to be asked, supplementary data, a means of tracking change and development, and verification of findings from other data sources” (pp.30-31). Also, considering the advantages of this method and the availability of studies including online English language teaching and learning tools, students’ and teachers’ opinions, which are conducted in different educational levels in Turkey during the Covid-19 pandemic, this study was designed. In other words, the main concern of this study is the learners who learn English as a foreign language in online classes in Turkey during the pandemic. The underlying reason

why this study is limited to English language, online language tools or games which are used during the pandemic might vary from Turkish language because most of them are generally prepared in the world in English to cater the needs of different students in the world.

The whole process of this study includes identifying research questions based on the aim of the study, finding studies in the literature, deciding relevant studies with the criteria, gathering data from the selected studies, analyzing data following the systematic review criteria and summarizing and reporting the findings.

As it is stated above, first of all, aim of the study and research questions were identified. Therefore, in this study, English language teaching and learning in Turkish context will be scrutinized not only in terms of ERT but also digital tools and difficulties that teachers and students, or parents had from March, 2020 until January, 2022. Following research questions were answered in this study.

Research Questions

- 1- What are the new pedagogies and language learning/teaching tools during the pandemic?
- 2- What are the difficulties that students, teachers, or parents have had during the pandemic?

Secondly, databases “Google Scholar” and “DergiPark” was used in order to find out relevant studies. The data in this study were gathered from the studies including online English learning and teaching in Turkey during the Covid-19 pandemic. While searching the studies, key words “Covid 19, pandemic, language education, foreign language learning” and combinations of these words were written and searched on DergiPark. Studies published in other languages or about other languages, or studies conducted in the countries other than in Turkey were not included in this study.

Thirdly, in the database “Google Scholar” 129 studies were revealed and in another database “DergiPark” there were 33 studies. Then, among all those studies, only research papers about English language teaching and learning in Turkish context were included for this current study and finally 18 studies in total were examined.

Data Analysis

Considering the research aim and research questions, following data about the obtained research studies which were conducted in Turkey during the pandemic were extracted. In other words, studies based on literature review, and studies about other foreign languages such as teaching Turkish, German, Russian, or

French as a foreign language and teaching English in a different setting apart from Turkey were eliminated. In the selected studies, thematic analysis was conducted in order to “uncover themes pertinent to a phenomenon” (Bowen, 2009, p.32)

Table 2. Themes and sub-themes based on the document analysis

Themes	Sub-themes	Studies
Family Life	The effect of family life on communication apprehension in the online class	Dolgunsöz (2021)
Language (Writing)	Skill Using authentic writing tasks and its effect on learning in the online class	Meri-Yılan (2021)
	Effect of a self-monitoring chart for effective writing strategies (SMC) on self-regulated learning strategies (SRL) in the online class	Şeker & İnan-Karagül (2022)
	Online learning effects on writing skills	Ataizi & Aksak- Komür (2021)
Technological Tools	Use of Web 2.0 tools to teach vocabulary in the online learning	Adıyaman & Demir (2021); Türegün- Çoban & Adıgüzel (2022)
Advantages Disadvantages (Students)	& Benefits and problems in the online learning	Altunel (2021); Ekizer (2021); Han, Öksüz, Şarman & Nacar (2020); Şendoğan-Erdoğan (2020); Özdal, Yükselir & Akarsu (2021); Taşçı (2021)
Advantages Disadvantages (Teachers)	& Problems	Cantürk & Cantürk (2021); Dolmacı & Dolmacı (2020); Gündoğdu & Alkayalar (2021); Şener, Sağlam-Ertem & Meç (2020); Şevik & Yücedağ (2021); Tümen-Akyıldız (2020)

According to Table 1 above, following themes were uncovered: Family Life, Language Skill (Writing), Technological Tools, Advantages & Disadvantages (Students), and Advantages & Disadvantages (Teachers). During the pandemic from March, 2020 until January, 2022, most of the studies were about Advantages & Disadvantages (Students), and Advantages & Disadvantages (Teachers).

Under each theme, there were 6 studies whereas there was only 1 study about family life. For the themes “Language Skill (Writing) and Technological Tools” there were 3 and 2 studies, respectively.

Findings

In the following part, themes identified via thematic analysis will be summarized.

Family life

Dolgunşöz (2021) examined the interaction between family life and online language pedagogy of 223 EFL undergraduates and the effect of their communication apprehension (CA) on active online class performance. Results showed that students who had large families did not tend to participate the online English class actively due to young family members who make noise or distract them and responsibilities at home. However, it was revealed that elder siblings and parents did not intervene the online class.

Language skill (writing)

Meri-Yılan (2021) examined the design and assessment of an authentic writing task for the online course of 65 sophomores whose department is Interpretation and Translation in a state university. They had upper-intermediate level of English and they had a Linguistics course compulsorily. Participants were asked to take a photo in order to prepare an individual authentic task and to show the language in the society during the pandemic. Then, they were asked to write their ideas and describe their photo. Two experts assessed the photo and the written tasks through the written authentic assessment scale. As a follow-up study, interviews were conducted. Results showed that students had positive opinions about designing and implementing the authentic tasks. Also, “considering their suitability, online availability, functionality and emotional support, an authentic task and assessment have an influence on the advancement of learning” (Meri-Yılan, 2021, p.326).

In the study of Şeker and İnan-Karagül (2022), participants who were at ELT department and had Critical Reading and Writing courses. They investigated the effectiveness of self-supporting tool entitled Self-Monitoring Chart for Effective Writing Strategies used in the online English writing course. Data were gathered through semi-structured interviews from 48 participants. Results showed that participants agree that a self-monitoring chart for effective writing strategies (SMC) developed their self-regulated learning strategies (SRL).

Ataizi and Aksak- Komür (2021) aimed to examine the opinions of 92 high school EFL students about blended learning and its effect on their writing skills. Pre-post writing exam score, questionnaire and semi-structured interviews were used in this study. Results showed that “the research findings showed that blended learning had a significant effect on improving participants’ writing skills. Participants significantly outperformed in writing exams. The participants had a positive attitude and perspective towards using blended learning in EFL classes. The limitations of blended learning highlighted by the minority of the participants were burden of the online activities and lack of internet or mobile device accessibility.” (p.832).

Technological tools

Türegün- Çoban and Adıgüzel (2022) conducted an experimental study with 24 seventh graders who learn English in the online class during the pandemic. In the experimental group, Web 2.0 tools were used to teach vocabulary. Results showed that students’ achievement and attitudes in the experimental group were affected more positively than the students in the control group.

Adıyaman and Demir (2021) investigated English language learning motivation of 68 university students during the pandemic. They collected data through the structured interview. Results showed that the online language learning during the pandemic did not affect students’ motivation negatively. They made use of online websites and tools. “The students stated that during this period, they used the internet effectively and various websites (online dictionary, Netflix, online news sites, podcast, snapchat, grammar etc.) and social media tools (YouTube, Instagram, and Twitter etc.) helped them learn foreign language, which clearly indicates that students of FLE department took advantage of technology, online education and autonomous learning and made use of online applications effectively” (p.386).

Advantages & disadvantages (students)

Şendoğan-Erdoğan (2020) investigated the opinions of 50 English preparatory class students’ about the learning English, online tools and materials during the pandemic. Data were gathered through a questionnaire and semi-structured interviews. Results indicated that students were satisfied with the online learning, but most of them thought that listening and writing skills are weak.

Taşçı (2021) conducted a study with 116 ELT students about their opinions on emergency language education during the pandemic. Results indicated that technological difficulties, the lack of appropriate materials, experience and interaction were categorized as the problems of emergency online learning while

efficiency and flexibility and improving digital skills were identified as the benefits of online learning. Students suggest that online learning can be a part of face-to-face learning but it cannot replace it.

Özdal, Yükselir and Akarsu (2021) identified 56 English Language and Literature students' opinions and preferences about synchronous and asynchronous online teaching. Data were gathered through both the questionnaire and interview questions. Results showed that students preferred synchronous online learning due to its resemblance to face-to face learning although they stated online language learning was not effective.

Han, Öksüz, Şarman and Nacar (2020) explored English language learning experience of 84 university learners. Data were gathered through survey, questionnaire and open-ended questions. Students' online class attendance were interrupted because of the internet connection, lack of technological infrastructure, family member disturbance and online system problems.

Ekizer (2021) conducted a study to find out the effect of the pandemic on 19 English language learners in a preparatory class of a university. Data were collected through semi-structured interview. Covid-19 pandemic had positive sides such as reduced expenses (e.g. no bus fees or no rent, home environment, technological opportunities, less tiring) whereas it had negative sides such as technical problems (e.g. internet connection), health problems, concentration and economic problems. In the study it is suggested that "To provide an effective and productive on-line program, students should not only be in on how to master the fast-paced online classes but they also need to possess a sound computer and technological skills to be able to learn from on-line lectures. Some students mentioned that they did not know how to do certain activities or moves on the computer." (p.89).

Altunel (2021) investigated the willingness of 12 EFL students in English Preparatory class in Turkey. Data were gathered through semi-structured interviews. Results showed that there are three main reasons affecting the willingness of students: "1. personality, 2. the nature of online education, and 3. lack of self-confidence in speaking skills." (p.16)

Advantages & disadvantages (teachers)

Şevik and Yücedağ (2021) examined the opinions of 40 EFL teachers in Turkish secondary and high schools about the online teaching via a questionnaire. Results showed that "internet connection problems", "absence of internet", "lack of technological devices", "technical problems" and "lack of technological knowledge about the distance education (DE)" were found as the most prevalent challenges (p.184).

Şener, Sağlam-Ertem and Meç (2020) revealed the perceptions of 39 English instructors at a private university about online teaching during the pandemic via a questionnaire and open-ended questions. Results indicated that teachers had problems about the lack of technical equipment and financial support, internet connection, students' low motivation or lack of autonomy.

Cantürk and Cantürk (2021) attempted to reveal the opinions of 53 teachers from primary, secondary, and high school in Turkey about distance education during the pandemic. Data were collected through metaphors. Results indicated that “they have negative thoughts on topics such as interaction problem, inefficient, accessibility problem, uncertainty, deficiency, teacher centered and unnecessary. It can be said that they have positive thoughts in the categories of need, flexibility, comfort, fun, exploratory, bridging, effectiveness, imagination, functional, access to resources, partnership, complementary and efficient.” (p.4).

Gündoğdu and Alkayalar (2021) examined the opinions of 40 pre-service EFL teachers in Turkish context since they observed and evaluated the online class due to the pandemic. Data were collected through a questionnaire and essays. The following themes were identified in the study: “Change in the definition of teacher identity and role in the online education, Appreciation of the effective ways of integrating technology as essential to their teacher identity development, Disapprobation /or refusal of online teacher identity owing to distrust towards the efficacy of e-learning environment” (p.202).

Tümen-Akyıldız (2020) carried out a study in order to reveal the challenges that 6 secondary school EFL teachers had during the pandemic process. The problems were categorized as student- related (low motivation, unwillingness, lack of autonomy), technology-related (internet quota, lack of technological equipment), teacher-related (lack of knowledge about distance education and technology, individual problems), and parents- related (lack of knowledge about distance education, lack of motivation to help the children, economic problems).

Dolmacı and Dolmacı (2020) investigated the opinions of 10 teachers who worked in the preparatory school of a state university about distance education. Data were collected via semi-structured interviews. According to the teachers, face-to-face education is more effective than online education since management is easier in the classroom through eye contact or body language and students also participate in the class actively with high motivation. On the other hand, they stated that in the distance education there is no time or space boundary and students can reach different materials without classroom pressure.

Conclusion and Discussion

Due to the unexpected emergence and spread of coronavirus, education in all settings across the world had to shift from face-to-face education to emergency remote learning, namely online learning. COVID-19 pandemic has affected traditional education severely not only universities but also other education levels such as primary or high schools. Educational institutions “take this unforeseen opportunity to identify gaps and accelerate the online education change by advanced training materials, cutting-edge technologies and successful management.” (Şendoğan-Erdoğan, 2020, p.1088). From the outbreak of the Covid-19 pandemic, many studies about online teaching and learning in different contexts were carried out. In this current study, it was aimed to reveal what challenges teachers, students, and families had during the pandemic in terms of online learning and teaching English in Turkish context.

Considering some criteria stated in the data analysis, 18 studies conducted in Turkey were examined and following themes were identified: Family Life, Language Skill (Writing), Technological Tools, Advantages & Disadvantages (Students), and Advantages & Disadvantages (Teachers). Studies mainly focused on the advantages and disadvantages of online English language learning through the perspective of students and teachers. Only one study included effect of family life on online learning. In terms of teaching and learning language skills, writing was drawn attention. About the use of technological tools in online language learning context, there were only two studies.

As it is stated by Bailey and Lee (2020), teaching English in online classes is not new but sudden shift without any plans made this process difficult and it created some challenges for teachers, students and parents. Therefore, “Instructors and students should be provided with periodical applied training on internet literacy, social network literacy, LMS, use of e-content and e-exam development tools, ethics and security in distance education and these training should be certified” (Tosun, 2021, p.321). In the literature there are some other suggestions to prepare both teachers and students for online teaching and learning.

1. It is vital for institutions to improve their online platforms technical infrastructure and provide both teachers and students with technical equipment to increase the efficiency of online learning.
2. Student interaction, motivation and autonomy are highly important in online education. Certain ways to create more interactive synchronous lessons should be prioritized.
3. Student autonomy is even more essential in online learning. Students must gain autonomy to benefit fully from online learning.

4. Emotional well-being must be supported among teachers and students, especially during online teaching periods, wherein communication channels are fewer compared to face-to-face teaching.
5. Potential increase in teachers' workload in online teaching must be considered and measurements must be taken every level to maximize teacher performance thus efficacy of online learning.
6. Financial security during online education periods must be prioritized, since it also has potential to affect teacher's emotional well-being, and thus efficacy of online teaching. (Şener, Sağlam-Ertem and Meç, 2020, p.356-357)

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Chapter 4

The Role of Creative Climate in English Language Teaching Classes

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ABSTRACT

INTRODUCTION

Creativity is regarded as a must to progress socially, economically, and of course individually (Collard, Looney, 2014, p. 348). However, it has been a confusing term to describe (Yates & Twigg, 2017, p. 42; Jones & Richards, 2015, p. 4), due to no worldwide consensus on what creativity is (Wallace, 1986); being too broad to be defined briefly (Ghonsooly & Showqi 2012, p. 161) and as stated by the National Advisory Committee on Creative and Cultural Education (NACCE, 1999; Aragon 2023, p. 18) for having a lot of misunderstandings. For instance, creativity is linked by some as the absence of self-regulation while by some it is a talent that only very few people have, and for some, it is just a term related to art (p. 10). Similarly, Torrance (1977) argues that there have been times comparing creativity to conformity, and creativity is identified as supporting new ideas and, gaining different viewpoints for problems, however, the second one is different from creativity in terms of practicing what is required without any problem or inoffensively (p. 6). According to Collard and Looney (2014), the person who can reach the best solution in the easiest and quickest way is called creative (p. 349). For Torrance (1977), creativity is to embark on untried paths successfully, being willing to try new things, accepting the succession of situations, realizing the connection between ideas, and connecting accordingly, etc. (p. 6). In terms of Kim (2016) creativity is handled differently by the Western and Eastern worlds. While the Western world defines creativity as creating a product in artistic activities (Sawyer, 2012, p. 6), and The Eastern world, on the other hand, considered scientific innovations that had a scientific impact on people's lives as creativity, but in any case, creativity is beyond these, to produce something original and beneficial to people. (p. 32).

Sawyer (2012) as well, highlights in his book that the term creativity isn't an easy word to define, unlike other terms in social sciences, and by making this challenging definition, 1) individuals can realize their unique creativity skills 2) leaders can easily overcome the difficulties they may face in today's societies 3) we can easily solve the problems that we may encounter in our daily life 4) also our mental health can be at the best level when we solve problems and 5) educators can provide better education (p.5). Moreover, for him, creativity can be explained in two -individual and socio-cultural- contexts. In an individual context, the definition is related to combining original, novel thoughts in an expressive way. As to sociocultural context, if thoughts are accepted as convenient, beneficial, or worthy on the part of a wise social group of people, the emerged output is called creativity (p. 7). In that vein, Nussbaum (2011) combines creativity with the capabilities that are present in individuals and also

resources provided by social, political, and economic conditions and stresses that society's role is to encourage these capabilities with the necessity of education (p. 20-21). Perhaps one of the most different perspectives of these definitions is Sternberg's (1995) characterizing being creative as making a good investment through "buy low and sell high" (p. 2), namely, an old or mistaken idea can be made remarkable in society with vision, perseverance, and necessary luck (p. 3).

Again, while trying to define the term creativity, Rhodes (1961) analyzed creativity under the title of the 4P model, when he saw that all definitions were interpenetrated at the end of his research. The first strand of this model is Person. It questions whether the values, personality, physical and psychological conditions, habits, attitudes, and self-conception of a person influence creativity (and to what extent?). The process is related to the procedure to create a product (Pitta-Pantazi, et al., 2018, p. 29) and analyzed by Wallece (1986) in four steps; the preparation (tackling the problem from all angles), the incubation (the problem is held subconsciously), the illumination (the answer suddenly comes to your mind intuitively), and verification (the person who produces the idea evaluates it) (p. 70). Press is the connection between people and the environment (Rhodes, 1961, p. 308; Pitta-Pantazi, et al., 2018, p. 29) and refers to extrinsic components like society and culture (Sawyer, 2012, p. 11). Product defines creativity by emphasizing the use of an original, new, and practical idea (Pitta-Pantazi, et al, 2018, p. 29) in a sociocultural context (Sawyer, 2012). It is also pointed out by Rhodes (1961) that the process of creativity goes on-one way, for example, starting from Product to Person and there from Process to Person (p. 309). As explained above, Liu and Chang (2017) claim that different definitions of creativity and creative teaching are created by researchers (p. 858). Though creativity is explained variously, the authors reach a consensus that creativity has a connection with the ability to discover new things or produce original products (Karkockiene, 2005, p. 52). In order to act in this direction and to reach 21st-century skills, as Craft et al. (2001) state, countries need to reshape their education systems in line with the goals of creativity and innovation. NACCE (1999) as well by referring to White Paper that if it is desired to be a successful part of the 21st century, it is not enough just to have literacy and math skills. The education systems should also be designed to be inclusive, flexible, motivating, and to reveal the different talents and excellence of all our students (p. 5). What is more, society's need for creative individuals causes the expression of creative talent to be added to education systems and to be developed accordingly (Karkockiene (2005, p. 56)

Creativity and Education

Collard and Looney (2014) argue that most of the academic studies related to creativity have concentrated on describing characteristics of it and setting the boundaries of this discipline. However, the definitions of creativity and innovation in education aren't still clear (p. 349). In the same opinion, Cross (2012) states that the definition of creativity is blurred because its place in pedagogy is not understood in depth (p. 433). Our attention is also engaged to the fact that the previous studies for creativity in education focus attention on detecting students who have a high potential for creativity and it was seen as an inborn talent so its elements might be characterized effortlessly to raise individuals without wasting time (Collard & Looney, 2014, p. 349). Conversely, Sawyer (2012) objects to the claim of creativity is a genetic trait and that certain abilities make some people more creative than others. In his book called *Explaining Creativity*, he stated that as a result of some studies, it was proved that creativity is not an inherited trait and he argues that everyone can be creative with some recommendations. These are 1) focusing on a certain creativity 2) having the right working conditions 3) being able to choose good ideas 4) being able to connect ideas (p. 408). Similarly, in his study, Karkockiene (2005) asks whether creativity can be taught and states that the general judgment is that human potential can be cultivated, and therefore creativity can be developed (p. 53). Liu and Chang (2017) add that the value of creative teaching is an undeniable fact to accurately predict children's future achievements. They also stress that as innovation is heavily dependent on creativity, teachers should support their students who are eager to initiate the modernism and progress of a nation (p. 858). Collard and Looney (2014) as well emphasize that leaders in different services should have the ability to overcome the difficulties that they face, so it is normal to expect creativity as a foremost necessity for education and for 21st-century learning skills (p. 348). Therefore, it is stated that we are required to supply young learners with high motivation, self-regard, and awareness of their abilities and capabilities. To achieve these requirements, creative and cultural education is an urgent need. (NACCE, 1999, p. 9). The study conducted by Yates and Twigg (2017) using games and sessions on creativity and early childhood proves that creativity is clearly present in all of us to varying degrees but needs to be encouraged (p. 49-56).

As mentioned above, creativity isn't just about upper-level students, of course, but also as studied by Dere (2019) preschool curriculums are prepared basically in line with creativity and the aim of creativity is to produce original things. Therefore, preschool students should be supported to be imaginative

through inducing materials, to dream, and to express themselves well with provided chances and to value them as individuals as well to support their different points of view. Besides, students should be promoted to participate in creative games, and their products and personalities should be praised (p. 652). Likewise, children with high talents should be identified in their first school year, preferably in their pre-school years. This can be practiced by psychologists ideally through psycho-educational tests. (Karnes et al., 1961, p. 173). Sawyer (2012) supports the claim of the creativity of preschool children in an example that someone working with preschool children can witness that these children exhibit daily examples of creativity such as displaying impressive imagination in their wide imaginations, combining two different toys in a way that even the toy producers could not foresee, or prefer to play with the box rather than with the toy inside (p. 389). Dufy (2006) informs us that the way for us to have creative and imaginative adults is to develop these characteristics in children at a very early age because young children are instinctively more inquisitive about people and the world around them (p. 11). Thus, the study conducted by Dere (2019) also proves to us that preschool education increases the creativity of children (p. 657)

Karnes et al. (1961) note that creativity is predominantly associated with overachievement so the academic curricula should be designed in a flexible way to enable learners to improve their critical thinking, questioning, and creativity skills. Instead of meaningless presentations, instructional methods based on students' needs, problem-solving skills, autonomous study, and also divergent and convergent thinking skills, increase creativity, too (p. 174). Fasko (2001) also expresses the same opinion by arguing that students will be more motivated when they take on tasks that are meaningful to them and when their teachers focus on problem-solving skills as much as problem-solving, and this will improve creativity (p. 318).

Additionally, as it is known that teachers and parents are the key figures to foster creativity in children (Collard & Looney, 2014, p. 350), by taking the intellectually gifted learner's psycho-educational knowledge and needs into account, parents should be informed to give their children the required attitudes, attention, and sensibility through this educational planning, which will trigger their success dramatically (Karnes, et al. 1961, p. 173) To foster creativity in education, Collard and Looney (2014) recommend making a clear definition of creativity in education, restructuring the curriculum, following experience-based studies in and outside the classroom, and conducting research on measuring creativity and these suggestions can be specified as some of the necessary radical reforms for integrating creativity into education (p. 358-359).

Of course, teachers are also expected to incorporate creativity and creative teaching strategies into their usual practices, but it should not be forgotten that without the assistance of school administrators and colleagues, it won't be possible, as abandoning customary practices requires taking risks (p. 358).

As tried to be explained above, it is not easy to adapt creativity to education. Its complexity can be a deterrent for educators who don't want to deal with it, but it can be an inspiration for hopeful educators for providing a lot of opportunities in promoting creativity (Runco & Chand, 1995, p. 264). School management, curriculum, and other organizational restraints are also seen by Sawyer (2012) as inhibiting factors encouraging creativity (p. 390). However, he states that schools are indispensable for creativity because formal education is good at focusing on domain knowledge, but still, if schools are in harmony with creativity, it will strengthen creativity (p. 390). It is highlighted by Jones and Richards (2015) that with the prominence of creativity in education, administrators, and decision-makers argued that creative schools and creative teachers mean creative students and, as a result, a creative society (p. 3).

For this purpose, it is obvious that curriculums should also promote creativity and cultural education in the field of language and literacy (NACCE, 1999, p. 99).

Creativity in English Language Teaching (ELT)

Language, which is the first thing we produce as human beings, continues its development from the moment we are born until the time we die (Çelik & Tümen –Akyıldız, 2021, p. 2009) for the reason of the necessity of creating new meanings (Tin, 2014, p. 385). Therefore, Dufy (2006) explains that language, creativity, and imagination as requirements to be able to portray the experience in a symbolic way (p. 51).

Valette (1997) reminds us that success in language classes isn't measured by communicating in the real world, on the contrary, success is associated with getting high scores on tests and fulfilling the requirements of the education system. Moreover, teachers' success is judged not by the number of students who can speak the language after school, but by the number of students who get good scores on national tests (p. 21). However, the shift from test-centered education to student-centered education in schools has brought more importance to creativity in national education curricula (Richards, 2013, p. 20). It is suggested that a second language program is not a program that should be offered as an option, but rather a program that should ensure students have the language competencies to express themselves appropriately, bring out the imagination of the students, increase their awareness of other people and

cultures, and also this program should be designed in such a way that it promotes students to be able to look critically at their selves and their roles in society. (Valette, 1997, p. 22). According to Tin (2013), it is natural for language to change in order to cope with complex meanings, tasks, and the various needs of its speakers (p. 386). In addition, creativity, human ability, and the need to generate new understandings, to do something beyond themselves can activate ZPD (Zone of Proximal Development) and make learners look more mature than their age even if they don't have more talented peers to support them. This creative area -ZPD- which is introduced by Vygotsky- is very important in meeting the language learning task, their need to create new meanings and say new things that they have not created. Meanwhile, creativity in the language is about discovering new meanings and conveying them in a fun way like transforming known into unknown by exposing creative thinking and with the ubiquity of everyday language (p.387- 388). However, it should be kept in mind that creativity should not only be ubiquitous but also goal-oriented (Jones & Richards, 2015, p. 4), that is, it is advocated that through creativity, it should be aimed to achieve tangible results that are useful not only for ornamental purposes but also suitable for pedagogy, teachers and students' goals (p. 5).

Although creativity in the language is previously meant to use literary or poetic texts, which means learners imagine themselves in unexpected new situations and think of original ideas to say through drama (Jones & Richards, 2015, p. 5), creativity in language includes more than these. For instance, Jones (2015) explains creativity in two ways: creativity in the language and creativity in terms of the language user. The first is to sustain our interpersonal relations, to do what we want or not to do what we do not want, that is, to fulfill our wishes in the world, while the other is to be able to use the existing possibilities of language to perform creative actions (p. 8). Tin (2013) states that just as there is a place for communication in foreign language classes, opportunities for creativity should also be provided, and it is possible for creative tasks and communicative tasks to form a whole (p. 396). Since communicative language teaching assists students to deal with new and unexpected scenarios, as well, it is based on functional and situational language use such as role-play, and simulations, it can be given as an example for students to use creativity in the language (Richards, 2013, p. 21). Students' adding new meanings to language; transforming them from the known to the unknown makes them more inquisitive about language and helps them break down their cognitive fixed judgments and make the language memorable (Tin, 2013, p. 387). Read (2015) states that by adding creativity to English, students' cognitive skills such as

observing, questioning, comparing, making comparisons, and dreaming, and metacognitive skills such as making evaluations and reflective thinking about themselves and their learning develop (p. 29).

Pennycook (2007), on the other hand, tries to give us a different perspective on creativity and language. In the study, it is argued that language creativity means both similarity and difference because there is no completely original work, writing, or speaking even language so understanding creativity is not only dealing with one's own textual world but also with that of others. Therefore, imitations, repetitions, and reconceptualization in language are important for both language learning in terms of creative syntax and individual differences (p. 591-593). Jones and Richards (2015) add that this awareness-raising perspective on creativity can be of great convenience to teachers and students who are frightened by the "cult of originality" necessity that pervades much of the discourse on creativity (p. 7).

Jones (2010) claims that although the studies of sociolinguists on language and creativity first investigate the formal features of the language, the studies particularly done by World Englishes (a variety of forms of English spoken all around the world) mainly emphasize the social and cultural dimensions of creativity (p. 469). With this purpose, the author reveals the difference between 'language and creativity' and 'discourse and creativity' by stating that language and creativity link creativity to words and texts that are combinations of these words, but discourse and creativity are based on people's displaying these words and texts that they create with linguistic creativity (p. 467). Jones and Richards (2015) state that students should be encouraged to break the stereotyped rules in the discourse dimension. Since they aren't authentic, after a while, students get tired of the traditional dialogue methods in language books. For example, if the other person does not accept an apology made by a person instead of accepting it in a stereotyped way, or if the salesperson says something else instead of "thank you", how will the conversation proceed in a creative way (p. 22)? According to the research by Klimovienė, et al. (2010), creativity is vital in the language learning and teaching process, and learning a new language or communicating in that language has an essential impact on the learner's individual and social life. Furthermore, being able to speak more than one language is a desirable trait for individuals, organizations, and businesses, as it aids in overcoming cultural preconceptions, thinking creatively, and producing new products and services (p. 114).

According to Bekteshi (2017), creativity and cooperation are both related to the social context and if a person has the ability to speak a foreign language, namely English, he or she can also understand the culture of that language.

Teaching English, which is one of the most spoken languages in the world, therefore requires different teaching-learning abilities for the social skills required by the 21st century (p. 1132). In addition, the fact that English is a grammatically, linguistically, and culturally rich language, it requires a special education that will enable students not only to read and comprehend the texts but also to gain the skills of thinking, writing, listening, presenting, applying, producing, group-work, creativity, and cooperation (p. 1131-1132).

As Vygotsky sees as necessary (Cross, 2012, p. 436), creativity at its core, requires sociability and cooperation (Jones & Richards, 2015, p. 6). Bekteshi's study (2017) on creativity and collaboration reports that group work, where everyone has a specific task, encourages students' creative problem-solving skills and student autonomy (p. 1134). At the same time, while expressing creativity within the group, students are referred to as searchers of new concepts. Because students are not individuals who perform rituals in groups, but individuals who think and behave 'outside the box'. In this way, individuals who learn English concentrate their learning skills on getting more creative and more authentic notions. The factor that causes cooperation in foreign language classes is the impulsive and intriguing classroom climate, which has the potential to both affect and promote language acquisition (p. 1135).

Creative Classroom Climate

Feldhusen & Treffinger (1985) suggest that as the world we live in is evolving more and more complex, developing, and changing into problem-oriented, the need for all people to think creatively and to solve problems is increasing and the way to achieve this is through the children in the schools. Thus, creating environments for children to think creatively is less difficult than changing adults without formal education (p. 2).

In line with this objective, Peter-Szarka (2012) states that while personality-based creativity models were common before, there are now studies that focus more on environmental factors, and the author states that these studies claim that individual characteristics will not grow without a supportive environment and also that kind of environmental conditions will activate the individual's creativity and stimulate personal creativity skills (p. 1012).

Kim (2016) argues that since climate includes both physical and psychological environmental factors affecting a person, the climate has a wider scope than the environment so he prefers to use this term. (p. 35). The climate is a factor involved in the organizational and psychological processes, which in turn affects the efficiency and well-being of the organization (Klimovienè, et al., 2010, p. 115). Wallace (1986), meanwhile, identifies the creative classroom

as an environment where the thoughts of individuals are more important than their memory, and the child thinks that he/she contributes to the classroom environment because he/she is a valuable and respected individual. For this reason, the teacher tries to install a balanced environment where students can feel psychologically safe and at the same time free so that they can take risks. However, while this balance supports the students' freedom of thought and adventure, it does not allow the freedom of behavior that will cause chaos (p. 72). Therefore, in order to have a classroom environment that supports creative thinking, Feldhusen and Treffinger (1980) list the following items for teachers:

1. Support and reinforce unusual ideas and responses of students.
2. Use failure as a positive to help students realize errors and meet acceptable standards in a supportive atmosphere.
3. Adapt to student interests and ideas in the classroom whenever possible.
4. Allow time for students to think about and develop their creative ideas. Not all creativity occurs immediately and spontaneously.
5. Create a climate of mutual respect and acceptance between students and between students and teachers, so that students can share, develop, and learn together and from one another as well as independently.
6. Be aware of the many facets of creativity besides arts and crafts: verbal responses, written responses both in prose and poetic style, fiction and nonfiction form. Creativity enters all curricular areas and disciplines.
7. Encourage divergent learning activities. Be a resource provider and director.
8. Listen and laugh with students. A warm, supportive atmosphere provides freedom and security in exploratory thinking.
9. Allow students to have choices and be a part of the decision-making process. Let them have a part in the control of their education and learning experiences.
10. Let everyone get involved, and demonstrate the value of involvement by supporting student ideas and solutions to problems and projects (p. 32).

Karkockiene (2005) also states that a stimulating classroom environment that triggers new ideas and offers solutions to problems can pave the way for the development of different types of creativity components such as cognitive, affective, psychological, and social (p. 53).

In line with the effect of the environment on creativity, but from a different perspective, Csikszentmihalyi (1997) says that while beautiful and new

environments are effective at the moment of insight, other stages of creativity such as preparation and evaluation develop more in comfortable environments, no matter how bad the conditions. And he continues that while complex and inspiring environments are useful for gaining new insights, more ordinary environments can be indicative of sustaining much of the creative effort, as they require long preparation before that moment of intuition and long processes after subsequent elaboration and evaluation (p. 139). Kim (2016) also mentions that the climate not only affects the thinking and behavior models of individuals but also gives us the opportunity to give feedback and evaluation to determine the value of the product that comes out as a result of creativity (p. 35). Besides, Ghonsooly and Showqi (2012) explain that learning a foreign language does not require as many mental processes as being bilingual, but using the learned foreign language skillfully in the classroom requires students to take responsibility for significant changes and developments (p. 162).

In an uncreative classroom environment, the teacher is authoritarian, strict, unaware of student feelings, reluctant to make sacrifices, disciplined, and information-oriented (Wallace, 1986, p. 72). It is approved by Esquivel (1995) that less creative teachers appear to be more authoritative in their approach to controlling students. While such professors are concerned with physical appearance, position, and actions, it is preferable for them to build a teacher-student relationship that does not appeal to emotions and they approach student behavior from a moral rather than psychological standpoint (p. 190). However, the prevailing view is that creative classrooms are student-centered and teachers play a 'guide by the side' role rather than a 'stage sage' (Collard &Looney, 2014, p. 351). Beyond that, Jones and Richards (2015) argue that for creative teaching practice, teachers should not depend on a single method or style, they should use different kinds of teaching strategies and techniques, and they should put academic and pedagogical knowledge to work in order to increase creative practices with a certain purpose, they should benefit from activities with creative extends and they should be in search of their own unique teaching. And further, they need to be open to producing, trying new things, and embracing risks, to make idiosyncratic decisions in classroom management, not to be rigid to make the requisite modifications during their teaching, to adopt innovative practices to teach rather than the standard idea of "one size fits all", to tailor their teaching to the needs of students, and to exploit technology (p. 99-107). Esquivel (1995) also emphasizes that creative teachers support adaptable, democratic classroom climates in which ideas are openly expressed, as well as the focus on the student's unique demands and development (p. 190).

Therefore, changes in the teacher's role and classroom settings are very effective in terms of creativity (Collard &Looney, 2014, p. 351).

Acting with this awareness, Çelik and Tümen-Akyıldız see foreign language teachers as the biggest and most important trigger of creativity in language classes, and in this direction, EFL teachers should be creative, they should know the importance of creativity, what it means to be creative in a foreign language and they should be able to foster and promote creativity in students (p. 2009).

In light of these requirements, Read (2015) states that some issues encouraging creativity from the first day in the classroom environment are necessary in order to reveal the basis of the child's creativity in the primary foreign language class. These are: Creativity does not emerge spontaneously but with a stimulus, creative thinking occurs depending on the emotional quality that the child builds while dealing with an activity, the child must create a model for himself to develop his/her creative thinking skills, creativity involves expressing ideas instantly and freely, and students' performance can be fostered through studying hard and patience. Thereby, the experience of learning another language will increase considerably (p. 29).

Lastly, A study conducted by Klimovienė et al. (2010) using the Creative Climate Assessment Questionnaire on the perceptions of the students studying at the Lithuanian Agricultural University regarding the classroom climate in relation to creativity shows that this questionnaire is a precursor of the strong and weak creative climate in foreign language classrooms. Furthermore, the research findings claimed that a creative climate is desirable for the creative process and that certain issues need to be addressed in order to promote a more creative climate in the classroom. It is emphasized by the researcher that the creative classroom climate is indispensable for teachers and that more extensive studies should be conducted in this field (p. 120).

CONCLUSION

Although creativity is defined differently and without consensus by researchers, it is a fact that creativity is a vital part of the language teaching and learning process, as it is a necessity in all areas of today's world. And the findings of the studies examined show us that the creative climate in English language teaching has not been studied sufficiently and in detail, however, the studies on the effect of creativity in language teaching underline that creative climate has an extremely crucial role in language teaching for the development of skills such as creative thinking, generating new ideas, gaining new perspectives, taking risks, solving problems, analyzing and self-reflection.

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Chapter 5

Anxiety and Motivation as Psychological Factors in Language Teaching Contexts

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Abstract

Language teaching is a planned activity that includes particular objectives language teachers organize. In order to increase academic success in the EFL context, language teachers should be aware of educational theories, approaches, and educational psychology. This paper analyzes the role of motivation, language anxiety, and educational psychology in EFL settings. Besides, it is suggested in the study that group working, role-playing, a communitive-based approach, and applying a functional syllabus can reduce learners' stress. This study concludes that teachers should consider psychological factors as a part of their roles in the classroom. The teachers' role in the EFL setting is essential in the teaching and learning context. Based on this, teachers should be aware of learner's motivation, anxiety, and fear and choose helpful and effective teaching methods to promote a stimulating atmosphere.

Keywords: Teaching, Teacher, English Language, Psychology, Language Anxiety

Introduction

Language is a system through which information and messages are conveyed, and that helps people shape their self-consciousness. The approaches to language learning and forms of teaching are ever-changing as psychological and pedagogical data from current studies accumulate. Accordingly, this study aims to bring a perspective to two concepts that influence language teaching and learning contexts. These are the notions of *anxiety* and *motivation*, which mainly reflect the psychological aspects of learning. Regarding their characteristics, *anxiety*, and *motivation* as fields of inquiry can be said to flourish in general psychology and have had ramifications into other disciplines related to language teaching, such as educational psychology and second language acquisition, a subfield of psycholinguistics (see Scovel, 1998; Cutler, 2005 and Aitchison, 2008).

It is hard not to mention anxiety and motivation where the interest is on learner differences in a language teaching context because physiological factors should be considered as long as the learners are on target for research. In this regard, it is believed in this study that it would be beneficial to put forward previously suggested insight into anxiety and motivation at the first step. Moreover, the sketch will subsume the positive or negative relationship between anxiety and motivation in language teaching-learning contexts (Scovel, 1978). Secondly, the possible classroom teaching strategies will be put forward considering the insight about anxiety and motivation. In the concluding part, a summary of the study and suggestions to the language teachers about anxiety and motivation as physiological factors will be given.

Possible Classroom Strategies Considering Anxiety

Anxiety is prevalent in teaching and learning and can be psychological and affective (Desouky & Anderson, 2017). Generally, anxiety is "a state of intense agitation, foreboding, tension, and dread, occurring from a real or perceived threat of impending danger" (Mayer, 2008, p. 4). It is unique for each person and has different physical and emotional characteristics. Though many researchers conclude that anxiety is one of the most pervasive affect to obstruct learning, it is possible to diversify it into those not always of harmful effects. In this respect, Scovel (1978) identifies the ways to distinguish between "facilitating vs. debilitating anxiety," which suggests anxiety may sometimes promote performance as long as it is not the same as "worry," a cognitive component of anxiety. On the other side is "state vs. trait anxiety," which puts forward individuals' different permanence anxiety levels. More specifically, Heron (1989, p. 33, in Arnold and Brown, 1999, p. 8) classified three types of anxiety in the

classroom context as components of "existential anxiety." These are, respectively, "*Acceptance anxiety*. Will I be accepted, liked, wanted? . . . *Orientation anxiety*. Will I understand what is going on? . . . *Performance anxiety*. Will I be able to do what I have come to learn?"

As to "foreign language anxiety," Horwitz and others (1986), in a seminal work, made a definition proper "as a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 128). Accordingly, it is determined that anxiety affects second language performance as other learner characteristics and affective factors do after such research. From this point of view, language anxiety is a complex concept, including self-perceptions, beliefs, values, feelings, emotions, and behaviors. Anxiety as a personal feature and lack of motivation have also been considered in the language learning context for quite a long time.

Based on the phenomenon, learners' needs and interests and their features are to be recognized by language teachers as language anxiety negatively impacts students' performance, revealing a negative relationship between language anxiety and performance and success (Gkonou, 2011). Higher language anxiety causes lower language performance. There are visible signs of language anxiety, such as blushing, rubbing the palms, perspiration, poor performance in spoken texts, reluctance, less willingness to speak, less eye contact, and reading from the paper during the presentation. In addition, some students may try to avoid language production in role play or group discussion and presentation (Karimov, 2022). Language teachers should observe these symptoms to cope with such difficulties in the language setting. Reflecting the psychological side of learning, prevention of anxiety plays an essential role in an effective language-teaching environment. In this sense, language teachers should be able to detect student anxiety in the classroom setting and reduce stress and fear to develop learners' performance in the target language (Jabbarov, 2020).

There may be more than one reason for the arousal of language anxiety. It is generally related to psychological features derived from the learners' personality, self-esteem, and self-perceptions, which play essential roles in communicative conditions. Regarding different social contexts, extrinsic motivators may also cause language anxiety (Abduamitovna, 2018). The objective to attain native-like proficiency in pronunciation exercises may also be a reason for language in classes. The opted teaching method with formal teacher-centered language traditions like the grammar-translation method may cause language anxiety, too.

Moreover, the course material may be another factor for anxiety arousal. It may be sometimes troublesome that the syllabus needs to be revised for language

learners' academic levels and needs. One more factor is the teachers' rapid and faster pronunciation than those of the learners, blindsiding the students and bringing about a stressful atmosphere. As suggested earlier, formal and strict language classroom contexts, especially teacher-centered ones, can be a significant source of fear, anxiety, and stress. In this sense, a friendlier, natural-sounding, and less formal class atmosphere may reduce stress and fear. Drilling and repeating tasks as an audio-lingual method can cause language stress (Long, 1997). Instead of a teacher-centered traditional language context, language teachers and learners can perform group work and collaborative activities. The concept of culture plays a significant role in language anxiety. Cultural differences, an inevitable fact of language learning context, may also cause anxiety and stress. For some learners, facing different cultures and social notions creates language anxiety. In such contexts, depressive thoughts and beliefs of students should be eliminated (Berman, 2008) as anxiety and stress negatively impact the teaching and learning process.

Educational Psychology in English Teaching and Learning Process

Preliminaries about educational psychology

Among others, the psychological approach to learning has an important role. Psychology focuses on human recognition, behavior, and learning. Language production, perception, and acquisition have to do with the psychological aspects of learning a language. The perception of language subsumes recognition of written and spoken language (Tomasello, 2003), while language acquisition as a discipline focuses on how individuals gain necessary native or second language abilities. Educational psychology explains the role of possible psychological features in language learning contexts. It depends heavily on the principles of general psychology as it is a subbranch of it. In this sense, educational psychology comprises the research areas on creative thinking, memorizing, short-term and long-term memory, measurement, intelligence, the role of teachers and learners, and academic achievement. Besides, it focuses on how people learn in the educational context and the place of psychology in teaching.

Additionally, it deals with the impacts of physiological elements on their improvements. Gifted learners and subgroups with particular disabilities (Slobin, 1985) are among the research fields of educational psychology. It is based on the cognitive functions of individuals, and the life-long development of independent learners, personality improvement, mental activities, and functions play essential roles in educational psychology.

In most developing countries, foreign languages began to influence all aspects of life (MacWhinney, 2001). Along with the sudden changes in the 19th Century,

it is the 20th Century when innovations became prevalent in language teaching and learning (Jusczyk, 1997). The teachers' professional language competence and learners' features, especially motivation to learn foreign languages, were seen to play essential roles in the world. The revelation of the role of psychological aspects within the foreign language teaching context has made them a limelight of research comprising educational topics, psycho-analysis of oral communicative activities, and learners' educational performances. The relationship between psychology and language education has led to research on teaching methods, learners' skills and capacities and ages, motivation, and problems in language teaching, such as anxiety, stress, and fear, called psychological barriers in learning.

Adopted teaching methods and techniques from the perspective of educational psychology

Today many approaches and techniques are currently used to develop foreign language teaching. The old concepts and theoretical perspectives, such as memorizing as a procedure of grammar-translation or teacher-centered classes, have been neglected in educational contexts. Mental, social, communicative, and interactive activities are instead foregrounded in language teaching (Anderson, 2000). Three main theoretical frameworks in which language teaching methods can be categorized are *structural*, *functional*, and *interactional* theories (Bloom, 2000). The structural theory focuses on lexico-grammatical syntactic features of a language. Sentences, paragraphs, and phrase structures are foregrounded within it. On the other hand, the functional theory focuses on communicative functions, which presupposes that languages convey ideas, information, emotions, beliefs, and messages as the social dimension of language (Slobin, 1985). The relationship between individuals and the society in which they live forms the field of research of interaction theory, which emphasizes interpersonal relationships and social transactions (Horwitz and, Horwitz & Cope, 1986).

Learning a foreign language can be challenging (MacWhinney, 2001), and pedagogically, students' mental development and adaptability play a significant role in learning, which the teachers must be aware of and be able to reflect on in classes (Stephan, 1999). Learners' mental development is emphasized in psychological and pedagogical conditions, in the light of which the teachers can shape the physical condition of the language classes. Accordingly, *the cognitive approach* in educational psychology has a significant role in a language context (Mayer, 1992). It deals with how individuals think through the thought process, tackling thinking disturbances, changing their negative thoughts, and finding out

the primary source of language anxiety, fear, and stress by improving the procedures of self-thought, self-development, and self-evaluation (Claros, 2008).

As for the classroom procedures involving writing skills, it is recommended that the teachers pay more attention to students' writing output and correct them appropriately, as they play a vital role. Using *top-down* and *bottom-up processes* involving teacher feedback on student papers is crucial for educational psychology to observe learners' language progress (Mayer, 1992). The bottom-up process focuses on specific meanings and lexico-grammatical features of the texts. In a top-down process, learners use background information to realize the meaning of the text (Bloom, 2000), which heavily depends on learners' background knowledge. Language teachers may give intriguing subjects as they may decrease written challenges (Farsani, 2022). Authentic and contextual reading materials in language settings are among the valuable materials, and examples from blogs, which can be good material for learning a target language, can be utilized in classes. They are generally associated with the real world, and the learners may find the chance to use daily language, which indicates that language used in social context plays a vital role in applying pedagogy (Güzel, 2022a).

Accordingly, listening and reading activities, for instance, include language perception, while speaking and writing activities reflect language production (Elman, 2001). Listening, speaking, writing, and reading are four essential skills reflecting specific linguistic features. If learners are to be competent language users, they should be capable of each of them adequately. There are essential criteria for speech production and listening in the target language, such as proper word numbers, motivation, and environmental noise. Besides, teachers of educational psychological background should be attentive to increasing reading speed, eliminating environmental noise, and preparing texts that fit the learners' age and background information (Bloom, 1997).

What teachers can do about personal differences in classes

Considering personal differences is essential in terms of educational psychology as each student is diverse in age, educational background, race, beliefs, values, and needs, all of which should be noticed, and afterward, the teaching methodology may be designed accordingly (Slobin, 1996; Tomasello, 2003). Some students, for instance, may learn a target language faster and easier than others. The lesson plan should be designed considering them. While some learners are visual learners, others can best learn by hearing or be kinesthetic (Evans, 2007), learning through physical actions and role-playing. An extrovert can produce language more quickly than an introvert who feels fear, tension, and

anxiousness while learning a second language (Elman, 2001). Learners may also have speech deficiencies such as voice disorder, tongue disorder, disarticulation, and traumatic conditions like aphasia and autism. For such problems, therapies and counseling are recommended (Gibson, 1992).

Age is another critical factor for educational psychology influencing language learning (Matlin, 1994). While young learners acquire a new language with solid knowledge of their native language, mature learners can quickly learn a foreign language with native-like speech and intonation proficiency, provided they are highly motivated. Researchers point out learning differences between adults and children regarding syntax and phonology morphology (Bybee, 2007). Psychological theories try to explain the learning process by considering individuals' perceptions and understanding of a language (Jesa, 2008) by checking the brain functions concerning their developmental stages.

What teachers can do about tackling anxiety in classes

When learners have to answer in front of others, though they do not want to, they may think their teachers can judge their answers and evaluate them for grades. They may not want to be corrected. The insecurity and self-doubt can always be seen in such contexts (Stephan, 1999; Bybee, 2002). Thus, the teachers should be sensitive to their insecure state, not be harsh in correcting their mistakes, and construct a supportive atmosphere to reduce language anxiety, all raising communicative interaction between them in the target language (Güzel, 2022b). They should be able to sense the learners' anxiety to promote learning. In order to construct a stimulating atmosphere, teachers should establish democracy in classes and give positive feedback, as well as improve their communication strategies to deal with anxiety (Berman, 2008). Another way of overcoming students' anxiety can be the chair design fulfilled by the teachers. The students may be asked to sit in a circle form in the classroom, bringing the introverted ones to a position appropriate for eye contact. Doing so allows them to interact effectively, reduce stress, and participate more in group activities.

Speech is an essential aspect of human communication and thought, and as for the psychological dimension, it is related to thinking, memory, and emotions. In the ELT context, students who want to avoid producing language (Bybee, 2002) are typical, as they think their peers will make fun of them if they incorrectly produce the lexis or sentences. The students should know that making errors is integral to speaking (Jay, 2003). The students can be involved in group work and interact with each other to overcome such difficulties. The teacher-centered implementations produce anxiety and stress, whereas student-centered ones decrease anxiety and fear, where the teacher can patiently guide learners to

correct mistakes (Gibson, 1992). In today's world, teaching is not only teachers' tasks; students should be independent learners who can obtain information using their mental and cognitive skills. Thus, the teacher's role has often been reduced to guiding the class (Patel & Jain, 2008). In this position, teachers may more effectively discover learners' talents, skills, and psychological capabilities (Fernald, 1992; Alduais, 2012), which leads students to natural and conscious language learning.

The negative distinguishments of students by the teachers according to their academic levels may be a source of anxiety and stress in classes. These ascriptions can be *average*, *below average*, *above average*, *good*, and *excellent*. The learners may find them disparaging and feel they have limited potential no matter how hard they study. A possible distinguishment is between the students taking and avoiding risks (Alduais, 2012). Identifying them will help teachers free them from the idea that making errors is integral to language use. Also, with positive feedback, teachers may reduce their fears and language anxiety (Kudysheva, 2010). The atmosphere of competition may be a source of language anxiety, fear, ill will, hatred, and jealousy among the learners in the language class, too (Jabbarov, 2020). Instead of a competitive mood, the teachers may lead them to the idea that each student is responsible for their development. In this way, learners may feel more independent, collaborate more efficiently, and realize their target-driven language learning objectives (Karimov, 2022).

Another source of anxiety may occasionally be teachers' opted language teaching methodologies. Traditional language methods, for instance, grammar translation and direct methods, negatively affect language anxiety (Matlin, 1994). Communicative language teaching, a more student-centered method of reducing stress (Jusczyk, 1997), can instead be employed in language classes to promote speaking activities and communication (Claros, 2008). Functions of language, interaction skills, and cultural framework can be promoted by using the communicative approach. Moreover, it may boost students' acquaintanceships with the daily use of English, making them closer to the target culture. Besides, it emphasizes social skills more than grammatical competence and improves culturally accurate and fluent productions of students, all of which significantly contribute to eliminating anxiety (Patel & Jain, 2008; Horwitz et al., 1986).

What teachers can do about raising students' motivation in classes

Teachers today use language-based Internet documents that motivate students and facilitate language learning (Jusczyk, 1997). As stated earlier, language teachers should eliminate learners' psychological barriers, excessive stress, and anxiety by constructing an atmosphere of self-esteem and a stimulating

environment for real-life situations in the classroom (Kudysheva, 2010). They should create a positive learning environment with proper thought strategies in the learning process (Kuhl, 2004). A safe climate setting is necessary for motivation, and providing it will help learners feel relaxed and calm as well as improve their language skills (Farsani, 2022). If learners are motivated, their attention to the activities will increase, and they can enjoy the learning process and get rid of external pressures they bring from their social lives, like pleasing their parents as a pragmatic aim.

When the teachers lead the students with principles of educational psychology, they can more confidently cope with complicated tasks and be successful. In this regard, the teachers should create motivation, which is significant in learning and by which their students can more successfully attain a higher academic level. Teachers can use visual aids with related contexts to students' lives to eliminate a lack of motivation (MacWhinney, 1987). By creating a motivational atmosphere regarding their personal and mental characteristics, students may quickly learn new lexis in the target language and store them in their long-term memory (Kelso, 1995).

Conclusion

This study points out that teaching the English Language based on educational psychology can be an effective teaching method in today's world. Teaching English in many countries, including Turkey, deals with many matters. The language teachers and learners are involved in the teaching and learning process for many hours in the language class, but more success is needed. If language teaching is based on educational psychology, language teachers know learners' desires, motivation, and mental and physical aspects of the learning process. Language teachers can construct self-confidence among learners by using knowledge of educational psychology. Educational psychology and pedagogy should be foregrounded in the ELT context to improve the properties of the psychological process of learners. In this sense, this study underlines the language teachers' success based on their psychological information. To conclude, this study suggests that language teachers can take some particular training courses on general educational psychology related to language anxiety, fear, and stress to cope with stress and anxiety in their language classes.

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Chapter 6

Technology Addiction as One of the Risks of Adolescence

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ABSTRACT

Adolescence can be defined as the termination of childhood and the transition from adolescence to adulthood. This period may harbor a set of risky behaviors, one of which is the Internet addiction. Risk-taking behavior in adolescence has both positive and negative consequences. Examination of adolescents' behaviors on the Internet has shown that they use social networks, are engaged in instant messaging, play online games, and use websites. The present research has discussed the Internet addiction, which can be a risky behavior of adolescents.

Adolescence is a critical period when an individual passes from childhood to adulthood. Although it comprises the ages of 10-18 years chronologically, it may comprise the ages of 9-26 years depending on developmental characteristics of the individual (APA, 2002). According to the World Health Organization, adolescence comprises all individuals between the ages of 10 and 19 years, whereas the age range of 10-24 years is referred as "young people" (WHO, 2015). The first definition of adolescence was made in the Oxford English Dictionary in 1482. According to that definition, that period was 14-25 years for males and 12-21 years for females between childhood and adulthood (Murray, Bradley, Craigie & Onions, 1989). U.S Department of Health and Human Services developed the content of "Adolescent and Young Adult Health Program" in accordance with the age range of 10-19 and 20-24 years (CDC, 2015). Adolescence comprises physiological, psychological, historical and cultural values. It is an important transition period to growth and development of an individual. At this period, the individual achieves his independence while transiting into adulthood with a continuing rapid physiological development.

The authors say that young adults in their adolescence have reached physical maturity, yet their cognitive development still goes on (Steinberg, 2014). In addition to the situation in which the way of thinking is not fully developed, the social independence behaviors and risky behaviors are mostly seen in adolescence (Arnett, 2000). Individuals go through periods of infancy, early childhood, primary school, adolescence, adulthood and maturity, respectively. After infancy, the most growth is seen in adolescence. The brain and physical growth of adolescents, who show rapid growth and development particularly is striking (APA, 2002).

According to the moral developmental theory of Kohlberg (1980), the individual begins to have advanced level of social ethics and a social perspective in young adulthood. They may refuse traditions when they think that they cannot meet expectations of the society. According to Erikson's (1968) psychosocial development theory, if an adolescent can solve all conflicts healthily at this period, then he/she can develop a strong identity. Therefore, he/she can have a wholesome identity ready to make plan for the future. However, young people,

who have not solved their conflicts healthily during their adolescence, may possibly have identity confusion. They will have risk in their sexual preferences, professional lives or choosing roles in social life and making decisions. It is possible to that they refuse truths under these adverse conditions (Ataman, 2009).

A healthy development of adolescence is related to feeling competent, having confidence, attachment, and seizing valuable opportunities to develop a healthy personality. When adolescents are given the chance to improve and express themselves, they can have positive outcomes. When they are devoted close attention, they can learn to care and have self-control. Support given to them may reduce potential risks to their development. Therefore, reducing risks and focusing on increasing the opportunities to teach positive attitudes are important for their development (Scales, 2002). The authors say that adolescence embodies a set of risks.

Risky Behaviors in Adolescence

Risky behaviors can be defined as pursuing potentially dangerous situations, trying actions that can be harmful to health, and well-being and health compromising behaviors. Risky behaviors in adolescence may cause physical, social and psychological harm. When compared to other periods, such behaviors are mostly seen in adolescence. Individuals may experience new behaviors during adolescence, accepting the accompanying risks while making an effort to seek excitement. It is not possible to say that every adolescent shows risky behaviors (Steinberg, 2007).

The changes happening in the brain during adolescence are an effective factor in risk-taking behaviors. The risk-taking behavior in adolescence provides neurobiological evidence in the imbalance between early maturing brain regions, such as the limbic system and the reward system of the brain, and the prefrontal cortex, which is called the control region of the prefrontal cortex acting as the control region that takes on the controlling of impulses maturing later. Risky behavior in adolescence comes out as the product of interaction between changes in two different neurobiological systems (Resch & Sevecke, 2020).

The risk-taking behavior in adolescence may result in both positive and negative consequences. It may also negatively affect well-being of adolescents. Its potential of resulting in negative consequences may be high. It is possible to say that risky behaviors are seen mostly in adolescence (Pekel-Uludağlı & Sayıl, 2009). This infers that addiction to technology is one of the risky behaviors observed in adolescence.

Technology Addiction

Digitalization is one of the inevitable outcomes of modern life, which goes on by increasing its effect day by day. According to 2021 world Internet, social media and mobile usage statistics, 59% of the world population actively use the Internet. Digital transformation and change are ongoing in every field. This is creating life by influencing thinking, feeling and tendency of societies and all individuals throughout the universe (Gözen-Bozdoğan & Bayramoğlu, 2022).

Today, developing technologies not only provide many advantages to adolescents, but also bring along a number of disadvantages. While technologies, on the one hand, facilitate our lives, they, on the other hand, negatively affect us. An example for this is that, thanks to the Internet that is one of the most important technologies, the researchers have the chance to meet some needs such as communication, telecommunication, education, banking transactions regardless of time and space. However, excessive use of Internet when it goes beyond being a means only and becomes a goal, it may turn to be an addiction, negatively affecting our lives (Kubey, Lavin & Barrows, 2001).

The Internet and social media are used intensively in adolescence particularly. During the pandemic process, even education continued digitally. The digital media that involved up-to-date information, follow up of the agenda, applications of fashion, art, entertainment and health has taken its place in our lives rapidly. Being in front of a digital display is very popular. Thus, the researchers say that there is a positive relationship between the time period spent in front of a display and technology addiction. Digital or Internet addiction has taken its place among behavioral disorders. In addition to digital addiction, the concept of problematic use of the Internet comes along excessive use of the Internet (Güngör, 2020).

One of the addiction types that affect adolescents mostly is digital game addiction. There are studies investigating negative effects of digital games on the development of adolescents (Dursun & Eraslan-Çapan, 2018). Studies have reported that some adolescents are addicted to digital games and live their lives based on games. Adolescents' health, psychological condition, academic development and daily life are negatively affected (Sakarya, 2020).

The Internet is a good source of information. It has benefits to offer to adolescents. However, if not properly used, it may contain many risks. It has the potential to lead them to disservices. Playing online games for long hours, interacting with and texting foreigners or gambling have many harmful aspects, such as enabling access to pornography and harmful substances. Constant use of the Internet may leave permanent negative impacts on adolescents' mental health, personality, attitudes and behaviors, and moral values (Downshire & Grew, 2018).

The literature mentions two types of addiction. The first is substance dependence, which is defined as the addiction to a certain behavior. Addiction to substances such as tea, coffee, cigarettes, chocolate, drugs and alcohol is generally examined under the substance abuse. The second one is behavioral addiction. It can be defined as the loss of balance in the physical, psychological and social structures and functions of the individual as a result of frequent display of a certain behavior in an abnormal order, the order distortion and inability to adapt to the environment. Looking at the other definitions of dependency in the field, it is possible to see that there are many. These definitions mostly focus on substance abuse that include alcohol, drugs, smoking, etc. Developing technology and behavioral changes have been considered as addiction (Cengizhan, 2005).

There are studies associating the Internet addiction with major depression, attention deficit hyperactivity disorder and social phobia (Long, Verhulst, Neale, Lind, Hickie, Martin & Gillespie, 2016). Regarding the Internet becoming an addiction, adolescents are in the highest risk group. An adolescent who continuously learns new knowledge and plans future life can reach the world from the Internet and spend time using the popular applications offered. Individuals of this age have not yet switched into their roles completely and have not matured. This leads them to Internet addiction (Esen, 2010).

There are many studies conducted on technology addiction of adolescents.

Toraman (2013) investigated the effect of science high school students' Internet addiction and levels of social network usage on their academic achievement. The results revealed that Internet addiction increased as their level of social network usage increased.

Berigel, Kokoc and Karal (2012) investigated the relationship between the usage of social network sites by education faculty students and their tendency to addiction. For this research, 2539 undergraduate students from 12 different departments were included. The results showed that there was a significant difference between teacher candidates' addiction levels and time spent on the Internet.

Leung and Lee (2012) investigated the effects of Internet literacy, Internet addiction and the Internet on academic performance. They included a total of 718 children and adolescents aged 9-19 years. They found that children of families with lower income used social networks for entertainment more and were more interested in online gaming. The study results showed that male participants were tended more to Internet addiction and Internet literacy increased the likelihood of being addicted to the Internet in the field of technology and publishing. Besides, Internet activities such as social networks and online games were significantly and positively associated with Internet addiction symptoms and entertainment-

oriented Internet activities could be more addictive than applications such as communicating through e-mail and browsing websites.

Turel, Serenko and Giles (2011) conducted a study on Facebook users regarding the integration and use of technology addiction. Data were collected from 186 social network users. The study showed that social network sites caused problems in user perceptions by influencing their behavioral use intentions.

Junco and Cotten (2011) conducted a study with 100 students aged 18-26 years. Their results indicated that the university students used instant messaging applications at high rates. As their levels of addiction to instant messaging increased, they were less interested in homework and responsibilities. A negative significant correlation was found between instant messaging applications and academic performance.

Kirschner and Karpinski (2010) worked on 219 university students to examine the relationship between the use of Facebook and academic performance. They asked the students whether Facebook affected their academic performance. Of them, 26% affirmed that Facebook affected their academic performance and 74% of these participants indicated a negative effect.

Huang and Leung (2009) worked on 316 students aged 12-19 years who used instant messaging applications. The research data showed that addiction of both chatting and the level of instant messaging had a significant positive correlation with the decline in academic performance. As a result, young students' use of instant messaging negatively affected their academic performance. Their addiction level increased with higher time period of usage and accordingly, their academic performance decreased.

Chen and Peng (2008) revealed that those who used the Internet less had higher academic achievement, felt more satisfied with learning and had a better social life than those who used it more. They found that those who used the Internet more had higher symptoms of depression, physical diseases, solitude and introversion than those who used it less.

Hauge and Gentile (2003) investigated the effect of video game addiction on academic performance and aggression in adolescents. Their study included 607 students enrolled in the 8th and 9th grades. They found that addicted students spent more time playing video games. According to the findings, male students were more addicted than females and the addicted students resorted to more violence, had significantly more hostile attitudes, and argued more with their friends and teachers compared to non-addicted students. Also, addicted students had lower academic achievement than non-addicted.

Kubey, Lavin and Barrows (2001) conducted a study with 572 university students in total. A questionnaire was used to collect the data. Their study results

showed that intensive use of Internet for entertainment purposes was effective in the decline of academic performance. Problems such as solitude, being late, fatigue and missing the class were attributed to the Internet use. Furthermore, intense use of Internet applications, particularly chat rooms may have negative effects on academic performance.

Abraham Maslow (1943), a social scientist, in his theory of hierarchy of needs, states that it is not possible to move from the most basic needs to a higher level without meeting a need at a lower level in a certain hierarchy. This actually corresponds to the general description of life satisfaction. This is because a general evaluation is made for one's life in life satisfaction. However, it is usual that things do not go as people wish and their positive feelings about their life become dominant here. In other words, individuals are satisfied with their life, which is an indicator that there is sufficient satisfaction in terms of self-realization. One of the needs in the Maslow's theory of needs is belongingness. As individuals interact with their social groups, they feel more belong to the group. Adolescents whose social environment is limited quite likely prefer spending time with technology more.

There is research discussing the benefits of online gaming too. That research examined social interaction of the participants aged 11-63 years in games. An online questionnaire was administered to the participants from 45 different countries. As a result, the participants regarded these games as an environment of social interactions allowing to establish strong friendships and emotional relationships. They also found their friendships in the gaming environment comparable to real ones. They shared with gaming friends what they could not do with their real life friends (Cole & Griffiths, 2007).

Results

According to the World Health Organization, all individuals aged 10-19 years are adolescents. However, the term of young people is used for individuals aged 10-24 years. Excitement seeking and risk-taking behaviors are highly observed in adolescence. Risk-taking behaviors create a risk factor on the health of adolescents. They affect developmental process of young people in a negative way. Considering differences according to age, risk-taking behaviors have been found more in men (Pekel-Uludağlı & Sayıl, 2009). As the education level of the family increases, risk-taking behaviors of adolescents increase (Kazel, 2001; Yılmaz, 2000). Adolescents' risk-taking behaviors increase with age until university level in general. Risk-taking behavior tend to decrease at the end of adolescence (Bayar & Sayıl, 2005). Internet addiction is one of risk-taking behaviors. Digitalization has rapidly taken its place in adolescents' life. Thanks

to several applications, it is possible to follow updated news, agenda, fashion, art, entertainment and do health control. There is a positive correlation between the time spent in front of a display and technology addiction of adolescents. Digital addiction or Internet addiction is regarded as a behavioral disorder (Güngör, 2020).

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Chapter 7

Pre-Service Science Teachers' Experiences of Emergency Remote Teaching

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ABSTRACT

Face-to-face education in many educational institutions globally has been interrupted due to the COVID-19 pandemic, and online distance education applications have been implemented. Scholars have used the term "emergency remote teaching" to describe short-term distance learning programs used during the pandemic. This case study sought pre-service science teachers' experiences of emergency remote teaching in a physics course. The research was carried out within the scope of the Physics II course in the spring semester of the 2019-2020 academic year. The study sample consists of twenty-two pre-service teachers enrolled in the Physics-II course in the science teacher program at a public university in Türkiye. Data were collected through an opinion form, including fourteen questions administered via Google Forms. The findings revealed that pre-service science teachers had positive and negative experiences during distance education. Pre-service science teachers generally have positive thoughts about the general structure and organisation of the course. Findings show that synchronous live online learning sessions and recording lectures promote learning. Some challenges experienced by pre-service science teachers are related to internet access, technical problems, lack of technological tools, loss of motivation, and physical environment.

Keywords: emergency remote teaching, distance education, physics

INTRODUCTION

Distance education is a formal education procedure where the learner and educator are not physically in the same place (Akdemir, 2011; Parsad & Lewis, 2008). Distance education is an interdisciplinary field that employs current technologies with a pragmatist perspective to eliminate the barriers between learners, teachers, and learning resources (Bozkurt, 2017). There are four characteristic features of distance education as follows; (1) these are academic learning environments provided by institutions, (2) instructor and learner are not in the same place, (3) teacher and student interaction are supported by generally interactive telecommunication (e.g., the internet) but possible include traditional methods such as postal system, (4) includes a learning community that composed of learners, an instructor, and instructional resources (Simonson 2009, p. 231). The expansive definition of distance education covers not only internet-based instruction but also instruction based on mail, radio, or television (Means & Neisler, 2020). Distance education gives flexibility since learners can participate in learning from any place. According to Bozkurt (2017), distance education in Türkiye has been the following process historically; correspondence (letter, 1956-1975), audio-visual devices (radio-television, 1976-1995) and web-based (1996-present). Especially with the establishment of Eskişehir Anadolu University Open Education Faculty, distance education has developed rapidly in Türkiye (Kırık, 2014). Anadolu University Open and Distance Education System, the first institution in Türkiye to offer higher education with a distance education approach, was established in 1982 (Anadolu University, n.d.). On the other hand, internet-based distance learning began particularly around the end of the 1990s and grew popular in the 2000s in Türkiye (Kırık, 2014). Today, education opportunities are available in many associate, undergraduate (Bachelor's), and graduate (degree) programs in higher education through distance education in Türkiye.

Using communication technologies to connect learners and instructors has been a turning point in the history of distance education (Moore, 2022). Emerging technologies have carried distance education further and offered broader opportunities for access to learning (Cleveland-Innes & Hawryluk, 2022). The spread of the internet gives various options to raise alternative online learning environments to support people's learning processes (Chen & Shaw, 2008). The web is undoubtedly the most important of all the technologies tied to online distance education, as it laid the groundwork for most technologies that followed (Weller, 2022). The course management system (CMS) in distance education is the most visible technological component.

Of course, online courses are no longer an innovation in higher education (Cleveland-Innes & Hawryluk, 2022). As stated earlier, online distance education opportunities have been available in higher education institutions for a long time. In the 1990s, many educational institutions took steps to design online distance-learning programs (Moore, 2022). Higher education institutions may offer three forms of online distance education: synchronous, asynchronous, and bichronous online learning (Martin & Bolliger, 2022). Synchronous online distance education means learners and instructors must participate in online classes at a scheduled time (Scheiderer, 2022). Synchronous online learning involves real-time sessions, and learners can communicate simultaneously with their classmates and instructors via synchronous technology (Martin & Bolliger, 2022). Asynchronous online learning offers learners a flexible, self-paced/independent learning environment to access course content at any time and place (Martin & Bolliger, 2022; Skylar, 2009). Bichronous online learning provides a medium that combines synchronous, real-time sessions with asynchronous, time-delayed learning opportunities (Martin, Kumar, Ritzhaupt, & Polly, 2023).

Many educational institutions acted quickly to create distance education opportunities after The World Health Organization (WHO, 2020) declared COVID-19 as a pandemic on 11 March 2020. According to reports, the closure of schools and universities due to COVID-19 impacted more than 1.5 billion students of all ages worldwide (OECD, 2021; UNICEF, 2020). Although some online teaching formats existed in higher education, the whole of higher education was suddenly transitioned into an unplanned distance education in the spring of 2020. Similarly, distance education in Türkiye has started to be implemented throughout the country and at all education levels in the spring term of the 2019-2020 academic year due to the pandemic.

Constructing an effective learning environment is a complicated process that includes careful planning and design (Bozkurt & Sharma, 2020). As Klein et al. (2021) emphasised, there was almost no time to prepare for distance education during the pandemic. Unfortunately, the emergency suddenly forced educational institutions to conduct distance education without adequate planning and preparation. The pandemic reshaped online distance education (Chan, Bista, & Allen, 2022). Because of this, scholars have used the phrase “emergency remote teaching” to refer to short-term distance learning programs utilised during crises like the pandemic. Emergency remote teaching (ERT) is a short-term shift of instructional delivery to an alternative delivery mode due to emergencies, as opposed to experiences planned and intended to be online (Hodges, Moore, Lockee, Trust, & Bond, 2020). This situation, which forces

education to be done remotely, raised the question of how prepared we are for distance education that can be done in an emergency. Fuchs (2022) underlined that in emergency remote teaching, instructors do not have the opportunity to plan and test their implementations thoroughly. As Klein et al. (2021) emphasised, the burden was on instructors to transform their lesson plans, teaching strategies, and materials to an online format. In this context, questions such as the following may need to be answered: (1) Did instructors appropriately adapt their teaching to the online format? and (2) Are the teaching approaches the instructors use in face-to-face education still effective when transferred to distance education? Bozkurt and Sharma (2020) emphasised that the global education crisis during the Covid pandemic revealed that the education systems were unprepared for external threats.

Educational institutions have been forced to change their teaching strategies and research practices due to the COVID-19 disaster. The digital transformation of education has also been dramatically expedited by it (Chan et al., 2022). As Bozkurt and Sharma (2020) underlined, disruptions in education are not limited to pandemics and they should be on the agenda of other potential sources of interruption in future, such as natural disasters. All stakeholders should collaborate to find the best solutions for emergency remote teaching. Furthermore, it is critical to understand how learners and instructors experience the process and feel in distance education. Therefore, it is important to evaluate the distance education experiences of pre-service science teachers during the pandemic. The pre-service teachers' experiences during the pandemic may shape their perceptions about distance education. In addition, understanding how pre-service teachers feel and think in this process can provide ideas that will help us prepare them for future educational problems.

Moreover, pre-service teachers' experiences in education faculties may affect the learning environments they will design for the future. For this reason, analysis of the learning environments experienced by pre-service teachers before becoming teachers can give us an idea about future learning environments. This study aimed to reveal pre-service teachers' experiences of emergency remote teaching in a physics course. In this context, the research problem is "*What are pre-service science teachers' experiences of emergency remote teaching in a physics course?*".

METHOD

This case study sought pre-service science teachers' experiences of emergency remote teaching in a physics course. The research was carried out within the scope of the Physics II course in the spring semester of the 2019-

2020 academic year at a public university in Türkiye. The total number of students enrolled in the Physics II course was thirty-six. Twenty-two students were evaluated during the data collection phase of the study voluntarily. The study sample consists of twenty-two pre-service teachers enrolled in the Physics-II course in the science teacher program (twenty girls-91% and two boys-9%).

Procedure

Physics II courses in higher education have content based on electricity and magnetism. A large part of the Physics II course occurred during the COVID-19 pandemic. For four weeks, the physics instruction was delivered face-to-face in the classroom. Due to the pandemic, there was a transition from face-to-face to online distance education in the physics course. According to the course schedule, the Physics II course was held synchronously (live broadcast) for ten weeks (4 hours per week). The distance physics course was conducted through the *Google Classroom* platform (course management system- CMS). The CMS provided access to course content for both synchronous and asynchronous learners. The weekly course contents were informed to the students, and the teaching materials of the relevant week were shared with the students via the *Google Classroom* platform every week before the course time. Moreover, learners could access recorded/archived videos of the synchronous lectures via the platform. The course used methods and techniques such as discussing conceptual issues, question solutions [sessions], and brainstorming to keep the pre-service science teachers' motivation and participation high. The Physics II course was enriched with *Jamboard* smart board application, *PhET* virtual laboratory, and various technological applications and tools [software and hardware]. *Google Forms* were used to get feedback from pre-service science teachers.

Data Collection and Analysis

At the end of fourteen weeks, data were collected through an opinion form, including fourteen questions administered via *Google Forms*. The data of this study were analysed through descriptive analysis. Some sample questions from the data collection tool are given below.

- What are your thoughts about the Physics-II course held via Google Classroom?
- What are the positive and negative aspects of distance and face-to-face Physics courses compared to each other?

FINDINGS

This section presents the findings reflecting the emergency remote teaching experiences of the pre-service science teachers.

Attendance in synchronous lectures

The pre-service teachers' responses to the question "*Did you routinely attend the synchronous lectures?*" were as follows: Yes, 45.5% (f=10), partially 45.5% (f=10), and no, 9% (f=2). The graph about how often the pre-service teachers attend the synchronous lectures is presented in Figure 1.

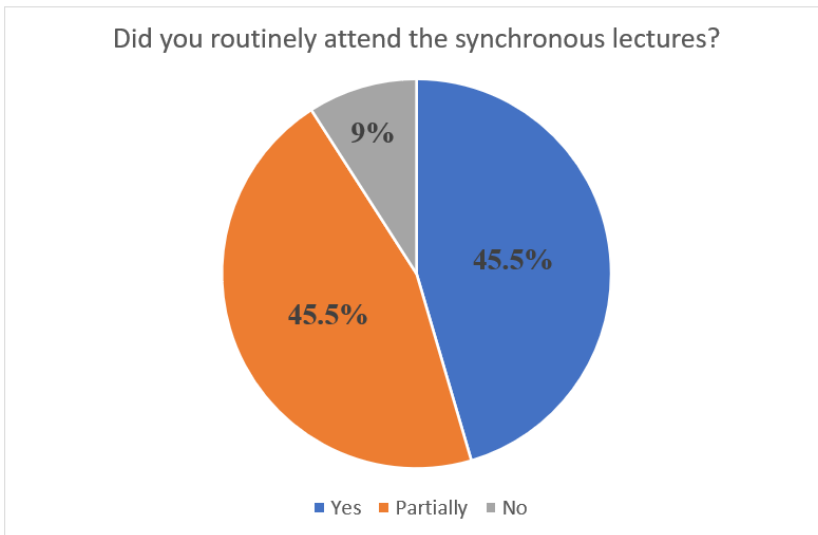


Figure 1. Pre-service science teachers' synchronous lectures attendance

Pre-service science teachers routinely attend the synchronous lectures for various reasons, such as the course being important, listening to the lectures on time to understand, the immediate feedback/asking of questions, teaching style, enjoyable practice, love of physics, and preparation for the exam. Some sample statements explaining why the pre-service teachers routinely attend the synchronous lectures are as follows:

"Yes, I attended the synchronous lectures routinely because the Physics-II course is important to me." (PSST-7)

"Although I had the opportunity to watch the video recordings later, I routinely attended the lecture to learn the full content of the lecture. Because otherwise, I may not be able to ask questions immediately about the subjects to the teacher." (PSST-11)

“Because I believe that learning a subject in real-time [Synchronous] with the teachers’ guidance is easier.” (PSST-8)

“I followed synchronous lectures routinely. Because to learn the course’s subjects, I must follow the course content routinely. So, I have the chance to ask questions to my instructor in the synchronous lectures about a part of the subject I do not understand. In addition, I followed the lessons to get information about the homework or exams related to the lesson one-to-one.” (PSST-14)

“The physics course was good. It helped me to learn the [physics] subjects in online education. ...it was enjoyable.” (PSST-16)

The pre-service teachers partially attended the synchronous lectures for the following reasons: Internet connection problems, technical problems, the opportunity of watching video recordings later [asynchronous], and other reasons (e.g., work, family, environment). Some sample statements explaining why the pre-service teachers partially attend the lessons are as follows:

“Since I live in a village [rural area], there were internet connection issues, so I could partially attend the synchronous lectures.” (PSST-17)

“Because it was possible to watch the course videos later.” (PSST-6)

The pre-service teachers did not attend the synchronous lectures enough for the following reasons: Internet connection problems, no adaptation to the system, recording synchronous lectures, and low motivation. Some sample statements explaining why the pre-service teachers did not routinely attend the synchronous lectures are as follows:

“I did not attend live lessons [the synchronous lectures] sufficiently because I could not adapt to this system [distance education]. I did not feel exactly like I was at school, so my motivation to enter class on time was low.” (PSST-2)

“Due to internet problems, I could not attend class routinely. Also, I forgot the course time several times. ...Since the live lessons were recorded, there were some lessons that I did not attend the live lectures. ... I told myself there were video recordings of the lessons, and I could watch them another time, but I didn’t.” (PSST-4)

Thoughts and experiences

Pre-service science teachers noted the online distance physics course as a supportive learning environment due to such teaching style, organisation of the course, teaching materials, live sessions, recording of live sessions, virtual laboratory activities, instant feedback, and problem-solving sessions. The following excerpts illustrate the pre-service science teachers' positive experiences and thoughts.

“The physics lesson was organised well so that we could understand the topics as much as possible. With many question solutions, practical ways of solving questions were taught. Lessons were supported with the virtual laboratory to increase our interest and motivation.” (PSST-18)

“The physics course was more productive than other field courses. The process in physics class was pretty good. I think this is because our instructor who teaches the lesson has technological knowledge that enriches the course.” (PSST-20)

“Our teacher effectively gave the lecture. This is a course that I understood well.” (PSST-6)

“I like my teacher's teaching style. Distance Physics-II course helped me to understand the subjects. Because the live lessons [synchronous lectures] were held efficiently and actively. ...The Physics-II course conducted remotely allowed me to understand the subjects fully and efficiently because I think the active use of teaching materials and live lecture recordings contribute to understanding the topics. Also, we practised experiments through laboratory applications and solved many questions, which was an impressive explanation. Moreover, the communication was good in the [google] classroom.” (PSST-7)

“I was eagerly entering the class and was understanding the topics. For me, taking the Physics II course is nice in distance education. Because even when I could not attend the course, I could watch course recordings whenever I wanted and understand the content well.” (PSST-12).

“I was satisfied with the Physics-II course. We were also lucky that the live lectures were recorded so we could watch them later while repeating

the subjects. Moreover, students who could not attend the lessons can watch the video lesson recordings and learn the topics later.” (PSST-14)

“I think the lessons were as productive as the classroom environment; there was no difference.” (PSST-17)

“Since we could attend live sessions [synchronous lectures] in the Physics II course, we got instant feedback on points we did not understand. We could easily access the lecture video records in the Physics-II virtual classroom when we did not understand subjects or wanted to repeat them. I am pleased that our instructor shared his notes, offered us virtual laboratory environments, and shared the course recordings. I liked that he [the instructor] learned about the difficulties we experienced by constantly sharing surveys [feedback forms] with us and reading the surveys we took individually. It is something I am not used to.” (PSST-19)

“It is a great privilege to watch the lecture again whenever I want; it has contributed much to me.” (PSST-21)

The critical points underlined by the pre-service teachers with some negative experiences are the internet connection, technology (e.g., lack of equipment), interaction and motivation/focus issues. The following excerpts illustrate the challenges and negative experiences of pre-service science teachers.

“Sometimes problems arose while solving questions due to the lack of equipment in distance education. However, like in the classroom, there was interactive learning in distance education. ...I feel more responsible in face-to-face instruction. Because distance education takes place at home. Home comfort negatively affected participation in lessons.” (PSST-11)

“Although it was not like face-to-face education, it was still helpful. Distance education has been successfully implemented, but keeping motivation and focusing was a little challenging in distance education.” (PSST-5)

“It was easier for us to focus on lessons in face-to-face education than in distance education. The comfort in the home environment in distance education made it difficult for us to focus on the lectures.” (PSST-10)

“I think distance education was efficient for me. ...distance education has contributed to me because physics is a course I like, and the topics covered also caught my attention. ...regularly following the course also helped me understand the topics. However, I still think that face-to-face training is more beneficial because it is easier to ask questions that are not understood.” (PSST-15)

“I could not follow the course regularly due to internet problems, and this course did not contribute much to me. ...In courses such as physics, it is easier to understand the subjects in face-to-face education.” (PSST-4)

“It is easier to focus on the lessons in the classroom environment, and it has become a bit difficult to follow the course in distance education. Distance education has negatively impacted my learning.” (PSST-2)

“... if there were something we did not understand in face-to-face lessons, we could discuss it with the whole class” (PSST-3)

“Distance courses are a little complicated in the aspect of learning. There is a specific authority to guide and motivate us in the classroom environment. However, we cannot provide it ourselves in distance education.” (PSST-8)

The instructor informed and encouraged the pre-service teachers that they could share their questions and ideas using a microphone during the distance lessons. However, it was observed that some pre-service teachers prefer to write from the message section even though they have the necessary equipment (e.g., a microphone). A pre-service teacher explained his/her observation as follows: “*Some students need to be persuaded to attend lectures with a microphone. I do not have an idea how you can manage this, but I think it makes the lesson effective.*” (PSST-20). Another pre-service teacher noted the challenge she/he experienced in this situation: “*The teacher sometimes could see the questions we wrote in distance education late.*” (PSST-17)

Teaching/education mode choice

The graph about the teaching/education mode preferred by the pre-service science teachers is given in Figure 2.

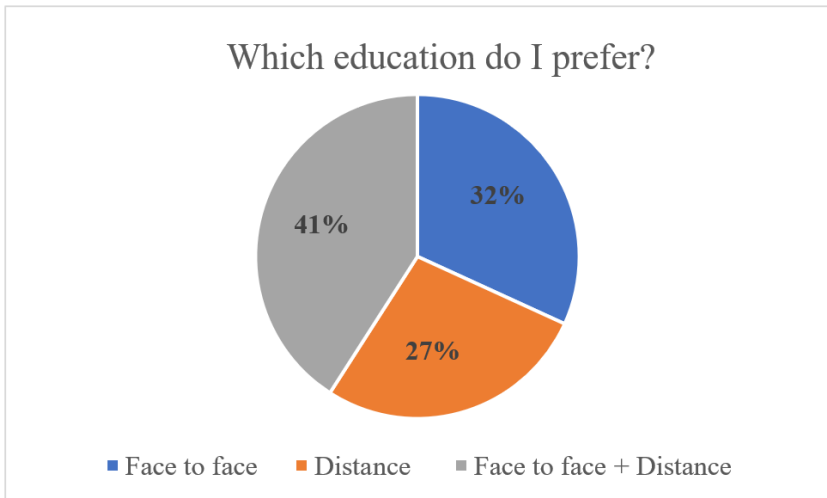


Figure 2. The teaching/education mode preferred by the pre-service science teachers

Face-to-face education

Pre-service science teachers noted that communication and interaction are more prominent in face-to-face education, especially compared to distance education. The following excerpts illustrate the pre-service science teachers' thoughts.

"... communication in the classroom environment is more effective. Our focus and participation in the lesson are better in the classroom. Interaction with our teacher and friends in the classroom is more effective in learning." (PSST-2)

"Distance education takes place at home. The comfort of home prevents me from focusing on the lesson. There is more in-class interaction in face-to-face instruction." (PSST-14)

"Distance education was more comfortable because we were at home. The home was more comfortable than the classroom, but such comfort was not good. There was no difference in the course content and the lectures of our teacher." (PSST-17)

“In face-to-face education, we can solve a question on the board. Pre-service teachers need to overcome their blackboard phobia. The solution method to a question is more important than its answer, but in distance education, the teacher does not see how we solve a question, and we cannot see our mistakes.” (PSST-15)

Face-to-face + online distance education

Some pre-service teachers underlined that it would be more beneficial to add distance education to face-to-face formal education that they had experienced previously. These pre-service teachers suggest blending the two learning environments.

The idea underlying the blended learning approach can be considered as increasing the efficiency of face-to-face education by using online opportunities efficiently. Some pre-service teachers also advocated the fundamental philosophy underlying blended learning.

For example, some pre-service teachers used the following statements;

“...some subjects or lessons must be practical. This shows that they should be in a face-to-face learning environment. But to save time, some topics can be in remote teaching.” (PSST-5)

“Both education models have both positive and negative aspects. Therefore, taking the generally positive parts of both models can be a good form of education.” (PSST-19)

“Together, the two complement each other. Two education systems can be combined, and a new education system can be created.” (PSST-18)

“I had the opportunity to interact more in the classroom, but I can watch the lectures again whenever I want in distance education.” (PSST-16)

“In my opinion, our field courses are few regarding course hours. Distance education can be preferred as a supplement to in-class instruction. The lesson can be taught in the classroom, and then more information, discussion, explanations, comments, and so on about the subject can be carried out through distance education. Or, due to the density of topics in classroom training, sometimes different activities may be missing (e.g., question-solving). These activities to be done with

distance education can enable students to understand the subjects better.”
(PSST-20)

Online distance education

Pre-service teachers expressed opportunities for distance education, such as not spending time on transport, watching the course recordings again, using time wisely, learning at your own pace, and protecting health. The following excerpts illustrate the pre-service science teachers’ thoughts.

“In distance education, the teacher organised the learning environment well and used the time well. ...Distance education is better for protecting our health in these times.” (PSST-1)

“I can say that the different aspect of distance education is to be able to follow it [the course] comfortably at home without having to travel or spend time preparing.” (PSST-22)

“It is much more comfortable than the classroom environment, and we can watch the lesson recordings many times.” (PSST-6)

“Because sometimes we need to listen repeatedly to understand some subjects well. If you cannot attend a face-to-face lesson, you may not understand other related topics in subsequent classes.” (PSST-3)

“Face-to-face instruction is effective, but I lose interest and motivation after twenty minutes. But I can take a break when needed in distance education and refocus.” (PSST-13)

“Distance education is pretty good for me. We do not waste time going to school, and we do not pay for transportation and food.” (PSST-12)

Virtual Labs.

Virtual laboratory activities supported concept teaching, class discussions, or sample question-solving in distance education. Some pre-service science teachers’ statements about the virtual laboratory are as follows.

“I think they [virtual lab activities] were beneficial. Because when solving questions, visualisation and proving are very useful. Seeing the

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accuracy of a question after solving it increased my interest in the lesson.” (PSST-18)

“Thanks to these applications, I noticed a more precise and clearly understand of the subject. I like it very much, and I think it is helpful too. Because having a demonstration of something helps me understand it better. So, these experiments helped me to understand physics subjects.” (PSST-14)

“Although it does not replace the experiments done in the laboratory, that is, the experiments performed live, the virtual laboratory is the most appropriate model in such times.” (PSST-20)

Measurement and evaluation approach

Pre-service teachers especially emphasized the stress of taking the exam in front of the computer. While some pre-service teachers underlined that exams would be more appropriate, some pre-service teachers suggested that homework and exams also could be used together for assessment and evaluation. It was also recommended that different exam questions be used for each student to prevent unethical behaviours.

“I had difficulties taking the first exam, which made me stressed during the exam. However, considering the warnings made in the second exam, I had no problems during the exam entry, which allowed me to perform the exam more comfortably.” (PSST-19)

“There are two options for measurement and evaluation in such processes: homework and exam. Frankly, I think the homework is unsuitable for numerical-based courses such as physics. As a result of the cooperation between the students, the homework assignments may be similar. I think that this is not suitable for measurement and evaluation. It is ideal for verbal-based courses.” (PSST-20)

“If homework and exam were both, it would be good.” (PSST-7)

“Homework topics or exam questions can be made differently for everyone. I think this way may prevent cheating in the exam.” (PSST-15)

“Since I was unfamiliar with taking the exam through a computer, I was very excited and thought I could not complete the exam. This situation affected me negatively.” (PSST-14)

DISCUSSION AND CONCLUSION

This study sought to reflect a distance Physics course in higher education from the perspective of pre-service science teachers. The findings revealed that pre-service science teachers had positive and negative experiences during distance education. Pre-service science teachers generally have positive thoughts about the general structure and organisation of the course. Although some pre-service teachers use expressions that reflect their positive opinions about the online learning atmosphere created in the physics lesson, they also admit that their engagement and interest in the course are low. Although an effort to design a learning environment like a classroom environment for the physics lesson through various technologies, the sudden transition from face-to-face to distance education can be seen as an obstacle to adequately implementing all transition elements. The success of a distance education program is linked to adapting to the needs of the learners (Granger & Benke, 1998). As is known, instructors must decide on various factors, such as technologies, teaching approaches, course materials, and assessments, while planning and teaching in distance education. It is essential to plan distance education by considering learners' needs. However, this is a process, and as Granger and Benke (1998) underline, distance education programs are learning organisations.

Pre-service science teachers underlined synchronous live online learning sessions promote learning. Most students underlined that the video recordings of the lectures were beneficial for reinforcing the subject learning (rewatching the content as needed) and learning the content in case of not able to attend the course. The online distance physics course helped pre-service teachers to learn at their own pace and schedule, as they could access course resources and teaching materials whenever convenient. However, it is seen that recording synchronous lectures sometimes negatively affects attending synchronous lessons. As stated earlier, distance education gives flexibility since learners can participate in learning from any place and sometimes at any time. Pre-service science teachers noted the recording of the live sessions and the flexibility of time and place as opportunities linked to distance education. This finding is consistent with studies in the literature (Özüdoğru, 2021; Petillion & McNeil, 2020). As stated in the literature, the findings support the contributions of an asynchronous monitoring facility of an online or similar education structure.

Some pre-service teachers noted that the comfort of home is an obstacle to focusing and concentrating on the lesson. Some pre-service teachers also pointed out that the presence of a teacher in the classroom [face-to-face learning environment] helps to focus on lectures. Some students noted the less class discussion and interaction in distance education with the sample expression, “... *if there were something we did not understand in face-to-face lessons, we could discuss it with the whole class*”. Although the instructor informed and encouraged the pre-service teachers that they could share their questions and ideas using a microphone during the distance lessons, some pre-service science teachers ignored this. The point these pre-service science teachers underlined is that many learners do not sufficiently participate in these discussions simultaneously. One of the necessary pillars of intrinsic motivation can be damaged by the relative lack of interaction with other learners and instructors during learning activities (Dron, 2019, p. 53). More interaction with peers and teachers increases the sense of community in distance education. Otherwise, students who do not attend in the course are invisible in distance education, and student participation may impact satisfaction (Allen, Omori, Cole, & Burrell, 2019, p. 126). As in other learning settings, motivation is critical for online distance learning (West, Hill, & Song, 2019, p. 117). Motivation explains how much attention and energy learners dedicate to various learning needs in educational contexts (Hartnett, 2019, p. 145). Learner motivation might affect how focused and committed students are to the learning process, according to Cole, Feild, and Harris (2004). Intrinsically motivated learners enjoy being involved in a task because of the interest or challenge it provides rather than any external demands or incentives (Hartnett, 2019). For this reason, the fact that some pre-service science teachers do not participate enough in the lesson may be related to the decrease in intrinsic motivation. Moreover, it should also be noted that since this distance education takes place during the Covid-19 pandemic, isolation from social life may affect learning motivation during the pandemic process. Ciğerci (2020) reported that the lockdown negatively affected pre-service teachers' learning motivation during the pandemic. Özüdoğru (2021), in her study during the pandemic, noted that pre-service teachers' opinions on distance education courses were that there was little participation in discussions and insufficient interaction. Kurnaz, Kaynar, Şentürk Barışık, and Doğrukök (2020) reported that students are active and participate more in activities and discussions in face-to-face education than in distance education. Ferri, Grifoni, and Guzzo (2020) underlined that one of the challenges in distance education during the Covid-19 pandemic is the decrease in interaction between instructors and students and among students. In this

framework, it would be beneficial to carefully consider the student's internal and extrinsic motivation to maintain distance education successfully.

Other challenges experienced by pre-service science teachers are related to internet access/connection, technical problems, lack of technological tools, and their environment. Similar challenges were reported in the literature (Can, 2020; Ferri et al., 2020; Klein et al., 2021; Özüdoğru, 2021). It is not unexpected that some challenges may arise in emergency distance education, but taking precautions by considering these findings may benefit future unexpected situations or planned distance education programs.

The findings revealed that PhET virtual laboratory applications contribute to the student's interest and learning. Similarly, the studies reported that virtual laboratories such as PhET increased students' understanding and interest during the pandemic (Inayah & Masruroh, 2021; Shyr, Liao, Hsu, & Chen, 2021).

Within the scope of the assessment and evaluation approach, the pre-service teachers noted the stress of taking the exam in front of the computer and the unethical behaviours that may be encountered in the exams. A suggestion arose by some pre-service science teachers that give each student different exam questions or assignments to prevent unethical behaviours. Özüdoğru (2021) reported that pre-service teachers believe some of their friends acted unethically in the distance education exams. Gudiño Paredes, Jasso Peña, and de La Fuente Alcazar (2021) reported that artificial intelligence-supported remote proctored exams minimized unethical behaviours. To reduce the learners' concerns, it would be helpful to evaluate the learners' suggestions and the various practices in distance education in the literature together.

Many pre-service science teachers in this study noted that they prefer distance education in combination with face-to-face instruction or alone for future education settings. Moreover, pre-service science teachers generally have positive thoughts about the general structure and organisation of the course. Some pre-service teachers underlined that there was no difference between face-to-face and online [distance education] physics course. This situation may result from the practices carried out in the course, as underlined by the students. It can be said that virtual laboratory applications, question-solving, and some technological tools and applications used during lectures positively affect pre-service science teachers. Undoubtedly, it is essential for the student's intrinsic motivation and, therefore, to voluntarily take his place on the other side of the screen for the lesson. In the next step, using tools and teaching materials that can increase student extrinsic motivation are some critical factors affecting teaching effectiveness. This indicates that the pre-service science teachers

believe the university physics course, on average, appropriately managed the sudden transition from face-to-face to distance education.

In today's world, concepts such as digital natives are used for learners, and the opportunities offered by instructional technologies have become indispensable for educational environments. However, the pandemic has shown us that instructors must now be ready for technology and pedagogies that can be used for possible educational crises. As a precaution against potential educational crises in the future, we need to organise and quickly implement learning environments for tomorrow's teachers where they can use educational technologies effectively, both pedagogically and technically.

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