RESEARCH & REVIEWS IN EDUCATIONAL SCIENCES

December 2022

Editors

Assoc. Prof. Dr. Onur Zahal

Assist. Prof. Dr. Kübra Dilek Tankız

gece kitaplığı

İmtiyaz Sahibi / Publisher • Yaşar Hız
Genel Yayın Yönetmeni / Editor in Chief • Eda Altunel
Kapak & İç Tasarım / Cover & Interior Design • Gece Kitaplığı
Editörler / Edıtors • Assoc. Prof. Dr. Onur Zahal
Assist. Prof. Dr. Kübra Dilek Tankız
Birinci Basım / First Edition • © Aralık 2022
ISBN • 978-625-430-568-9

Gece Kitaplığı / Gece Publishing
Türkiye Adres / Turkey Address: Kızılay Mah. Fevzi Çakmak 1. Sokak Ümit Apt. No: 22/A Çankaya / Ankara / TR
Telefon / Phone: +90 312 384 80 40
web: www.gecekitapligi.com
e-mail: gecekitapligi@gmail.com

Baskı & Cilt / Printing & Volume
Sertifika / Certificate No: 47083

Research & Reviews in Educational Sciences

December 2022

Editors

Assoc. Prof. Dr. Onur Zahal
Assist. Prof. Dr. Kübra Dilek Tankız

CONTENTS

CHAPTER 1

PREPARATION OF PROBLEM-BASED LEARNING SCENARIOS IN SCIENCE TEACHING

İsmail KILIÇ[1], Ayhan MORALAR[2]

1 Assoc. Prof. Dr. Trakya University, Education Faculty, Department of Mathematics and Science Education, Edirne/Türkiye, E-mail: ismailk@trakya.edu.tr, https://orcid.org/0000-0002-3270-063X

2 Science Teacher, Tekirdağ Fevzi Çakmak Secondary School, Tekirdağ/Türkiye, E-mail: ayhan_moralar@hotmail.com, https://orcid.org/0000-0002-5281-4132

1. Introduction

Considering the Science Curriculum, which was last updated in 2018 in Turkey, it is seen that the student-centered inquiry-based learning strategy has been adopted. This program sets out the goals of the student who are self-learning, actively participating in the learning process and self-constructing knowledge. (Ministry of National Education [MoNE], 2018). It is also seen that the same program aims to raise science-literate individuals who research and question, make effective decisions, solve problems, be self-confident, open to cooperation, communicate effectively, and learn lifelong for a sustainable education program. It is possible to use different learning methods and approaches such as student-centered problem-based learning (PBL), cooperative learning, and active learning in achieving these goals.

Historically, PBL was first applied in the field of medicine in the 1950s, (Barrows & Tamblyn, 1980; Kaptan & Korkmaz, 2001; Norman & Schmidt, 1992). PBL was first introduced into the curriculum at McMaster University in 1968 (Taylor & Miflin, 2008). However, PBL entered the literature as a teaching strategy as a result of research conducted by Barrows and Tombly (1980). In this study, students' reasoning abilities were investigated. This study drew attention to the differences that problem-solving brings to learning. In the first trials, small groups of students were formed and they were expected to decide between the problem and the situation (Rhem, 1998). The PBL method can be said to be one of the effective student-centered teaching approaches to achieve these goals (Akben, 2019). In addition, PBL has recently been highlighted as one of the best approaches to teaching science in interdisciplinary ways (Bryan et al. 2016). PBL forces students to investigate meaningful, real-world problems and to offer solutions based on their findings (Navy, et al., 2019; Navy & Kaya, 2020) This PBL is learner-centered, which develops active learning, problem-solving skills, and content knowledge, understanding, and problem-solving. It is a method based on solving (Kılıç and Moralar, 2015). Problem-based learning (PBL) is one of the most important applications of the constructivist learning-teaching approach. Many researchers state that the PBL approach is one of the best examples of the constructivist learning environment and is a constructivist learning method (Moralar, 2012; Savery & Duffy, 1995; Saban, 2004).

PBL as an educational method is gaining ground, and many studies point to several advantages (Pinto et al., 2021): student satisfaction (Johnson, et al., 2002), student motivation (Kılıç & Moralar, 2015), academic success and attitude (Kılıç & Moralar, 2013), attitude (Hiğde & Aktamış, 2021), ability to integrate new knowledge into prior knowledge (Capon & Kuhn, 2004), greater ability to transfer concepts to new problems

(Norman & Schmidt, 1992; Özgen & Pesen, 2010), better outcomes (Zabit, et al., 2016), development of a variety of general skills (Vasconcelos, 2012), student attitudes and interest in STEM careers (LaForce, 2017), provide more opportunities for students to collaborate, thereby promoting higher-order thinking skills (Tang, et al., 2020), student interest and increases success (Almulla, 2019), and academic success and scientific process skills (Öztürk, 2019).

One of the main features of the PBL approach is the creation of real-life scenarios as a starting point for the learning process (Aslan & Duruhan, 2021). The occurrence of these scenarios differs greatly from each other. The main purpose of creating scenarios is to make students associate the scenarios with the events they encounter in real life. The scenarios are considered to provide meaningful context for concepts and principles relevant to his future professional life. In problem-based learning (PBL), first, the scenario is presented to the students and then they are expected to do free work by brainstorming. The result of the brainstorming is organized into several schemes/themes and questions are asked about each scheme or theme. In scenarios, the initial stage is important. In the beginning, students are expected to do specific work. to form their prejudices about a subject and to enable them to clarify these prejudices. Clarification is carried out while examining and discussing their associations, ideas, schemes, or themes created during the brainstorming process. The main purpose of this process is to facilitate and support the identification of learning needs. In other words, throughout this process, students It is assumed that they determine how to describe their knowledge about a recognized problem, how to meet their learning needs, and how best to acquire relevant information (Dahlgren & Öberg, 2001).

It is not enough for students to make experiments and observations to learn knowledge in science teaching. Besides, they should question their processes and observations (Öztaş-Cin & Türkoguz, 2018). It is also necessary to investigate whether creating problem scenarios in the PBL method, illustrating the scenario, and giving examples from daily life in the scenario also affect students' attitudes towards science education. It is seen that there is quite a lot of literature on the PBL method. However, there are not many studies on the creation of problem scenarios in this teaching method. In the literature, there are very few studies on the academic achievement of prospective science teachers (Akben, 2019) and students in Biochemistry courses (Günter, 2018) lessons and environmental education (Dahlgren & Öberg, 2001). In many studies, scenarios created during the application of the PBL method are mentioned, but scenarios are not given. As in Yaman and Yalçın's (2005) study, although scenario creation or creating is mentioned in The BL method, the created scenarios cannot be seen or displayed.

2. Preparation of Problem-Based Learning Scenarios

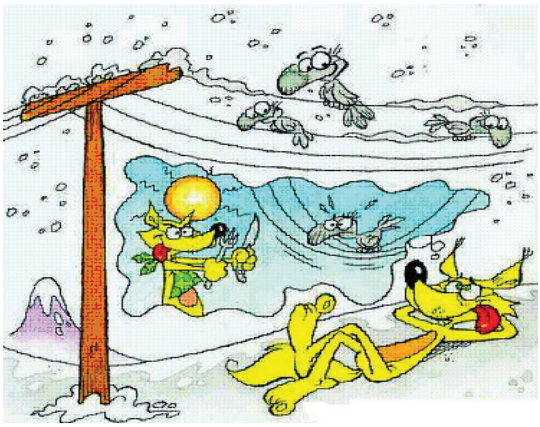
PBL scenarios were primarily prepared in line with the achievements of the 6th-grade science lesson "Matter and Heat" unit. During the preparation of the PBL scenarios, care was taken to ensure that the scenarios were suitable for the level of the student and capable of realizing the gains in the program. In the PBL scenarios, real-life problem situations related to the achievements were presented first, and then questions were asked to guide the students to solve the problem situation. Afterward, spaces were left at the bottom of the questions for students to write their answers about the solution to the problem. In addition, the problem scenarios were made interesting by visualizing them with pictures. To determine whether these problem scenarios are suitable for the unit outcomes, help from experts in the field of science and science teachers was sought. In light of the opinions, PBL scenarios were made ready for implementation.

After the teacher explained the objectives and subject of the lesson at the beginning of the lesson, problem-based learning scenarios containing the problem situation were distributed to each student, allowing the students to encounter the problem situation. With the guiding questions in the problem scenarios, the students were made aware of the problem, and each student produced solutions to the problem by using both the textbook and the auxiliary resources they brought to the school. They wrote the solutions they produced in the relevant sections of the materials distributed to them. The group members then came up with a single solution to the problem by discussing each of the solutions they came up with and reviewing their sources of information. After the groups wrote down the solutions they reached in the problem scenario given to them, each group presented their work to their other classmates. Information about the solution to the problem was discussed in the class and a common solution was reached under the guidance of the teacher.

While all these studies were carried out, the teacher fulfilled the role of organizer and guidance. While fulfilling the role of the organizer, the teacher distributed the problem scenarios and tried to ensure the active participation of the students in the lesson within the framework of the problem scenarios. While fulfilling his guiding duty, he took part in the work of the groups by walking between the groups from time to time and took a guiding role when the students got into a dead end.

2.1. Problem-based learning scenarios

2.1.1. Change scenario in electrical wires



Ahmet, a 6th-grade student, was on his way home with his friends after school on a cold and snowy winter day. Ahmet's science teacher said that at the end of today's lesson, they will move on to the new unit "Matter and Heat" in the next lesson. While Ahmet was going home, a few events around him caught his attention. He saw that the electrical wires that were drooping in the summer were stretched in this cold weather in the winter and that the solid snow melted and became liquid. Ahmet had observed a similar event in a cartoon he watched, and he immediately visualized it in his mind. Ahmet was trying to explain these situations by using what he learned about the structure of matter and the effect of heat on the matter in the 4th and 5th-grade science class, but he could not remember. How would you like to answer the question that appeared in Ahmet's mind?

Friends, I saw that the electrical wires that hang in the hot air in the summer are stretched in the cold weather in the winter. What is the reason for this?

I know that matter has a granular structure, but I couldn't remember the reason for this change.

-Why does snow turn into liquid?

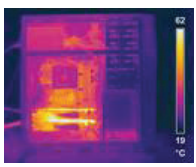
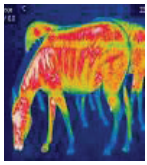
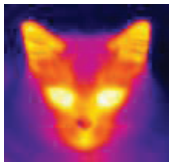
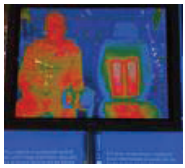
-What influences the liquefaction of the abdomen?

-Can you show me the change in the particle structure as snow passes from solid state to liquid state by drawing?

I think I can understand better this way.

2.1.2. Color images scenario in the thermal camera

Aylin's father works in the electricity industry. Aylin's father wants to buy a thermal camera to use at work. That's why, one day, while her father is examining the features of thermal cameras that she can buy from the internet, Aylin asks her father what the thermal camera is like, which she heard about on the news before. Her father makes the following statement to Aylin. "Look, girl, normal cameras create images thanks to light, thermal cameras create images thanks to the o heat. Different temperatures can be seen in different colors in these cameras. The color appearance is as follows, from warm to cold; red, orange, yellow, green, blue, and purple." After making this statement, Aylin's father shows her the following photos taken with a thermal camera and makes her watch the thermal camera images taken at airports in swine flu cases and published in the news.

a) What do you think Aylin should understand when she looks at these photos? You explain to her what Aylin should understand. What can you say about the heat energy of the photographs?

b) Looking at all the images, do you think that every substance has heat energy? Why?

2.1.3. Movement scenario in beans

You are the owner of a thermos manufacturing company. You want to produce the best thermos that will sell well.

a) What kind of materials would you use in your thermos?

b) Why are you using these materials?

2.1.4. Movement in beans scenario

Science and Technology teacher Özlem comes home after school after a tiring but fun day. After resting for a while, he decides to prepare dinner.

Meanwhile, Hakan, the beloved wife of Özlem's teacher, also comes home. The following conversation takes place between Her and Hakan;

Özlem Teacher: My dear, what would you like to eat for dinner?

Mr. Hakan: My dear, as I was walking up the stairs of the apartment, I smelled the delicious smell of dried beans. One of our neighbors will have done it. We haven't been making dried beans for a long time. It would be nice if there was a nice dry bean, along with rice.

Özlem Teacher comes on then, what are you waiting for!

Özlem Teacher and Mr. Hakan get to work. They put some water, sunflower oil, chopped onions, and beans in the pot and put them on the stove to warm up. After a while, Mr. Hakan observes that there is an acceleration in the movement of water, onions, and beans.

As a result of his observations, some questions come to Hakan's mind and Özlem asks the teacher.

a) After that, can you put yourself in Özlem teacher's shoes and answer Mr. Hakan's questions?

b) What is the reason for the acceleration of the movement of water, onions, and beans?

c) I think of the onions and beans in the water as the particles that make up the substance. So how can heat cause a change in the motion of the particles that make up matter? How can I plot the change in the motion of the particles?

d) What is the relationship between the temperature of substances and the movement of particles?

2.1.5. Aywah!!! Collision scenario

Ceyda was watching the cars passing by in the school garden between classes. Meanwhile, she witnesses a terrible event. She saw a black car coming at great speed from behind collide with a slow white car in front of her. After the collision, she saw that the car's movement slowed down and that the slow white car's movement quickened. She saw the fast black car slowing down and the slow blue car accelerating. She tried to liken this event to the collision of atoms and molecules during heat transfer between materials she had just learned in science class.

Velocity : 100 km/h

Velocity : 50 km/h

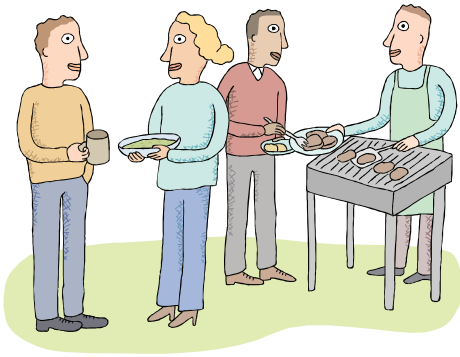
a) Which car would you liken to the material with high heat energy and which car would you liken to the material with low heat energy?

b) Based on the heat energy relationship it has with the car, which car would you like to substances with high temperatures?

c) Can you tell us how the heat transfer takes place when you compare the heat transfer between materials to the collision of cars? Can you explain the heat transfer from which substance to which substance, considering the temperature of the substances? Why do you think so?

2.1.6. Picnic pleasure scenario

When Pelin and her family go on a picnic, Pelin's father lights the barbecue. After stirring the barbecue with an iron rod, he leaves the iron rod in the corner of the barbecue. A few minutes later, he takes the iron rod in his hand to stir the coals again and his hand is on fire. While Pelin is observing this event, something happens that catches her attention. Only one end of the iron rod was touching the burning coals. His father, on the other hand, had held the stick by the other end, but his hand was still burned. So, how do you think the heat of the coal could have reached the end of the stick that did not touch the coal?



a) So, how do you think the heat of the coal could have reached the end of the stick that did not touch the coal?

2.1.7. Spoons scenario in soup

After Pelin's research, She was able to find a logical answer to how the tip of the iron rod, which does not touch the burning coal, heats up. But now he wondered if any solid matter would behave like an iron rod. To satisfy her curiosity, She decided to experiment with her mother. They would have both experimented and made soup. For this, they decide to make lentil soup. While making soup, they decide to use spoons made of three different materials: plastic, wooden, and metal spoons to stir the soup. After putting the necessary ingredients to make lentil soup in a steel pot, they lit the stove. They left the three spoons in the soup and used them to stir the soup from time to time without removing the spoons from the soup.

a) Pelin wants to hold all three spoons with her hand after 10 minutes. Which spoon do you think got the hottest?

b) Which spoon would you prefer to use when making soup? Why?

c) Do you think that after 10 minutes, the lid of the steel pot or the plastic handles got hotter?

d) How would you name substances such as iron rods, metal spoons, and steel pots in terms of thermal conductivity? Write other examples of such items.

e) How would you name the materials such as plastic and wood in terms of thermal conductivity? Write other examples of such items.

2.1.8. Researcher Serpil scenario

Serpil went shopping with her mother on a cold but sunny winter day. Serpil and her mother had to park their cars on the street because there was no space in the parking lot of the shopping mall. After two hours of pleasant shopping, they decided to return home. While Serpil was putting the items in the trunk of the car, she touched the hood of the car and felt that it was quite cold. When he got into the car, he felt that the glass was cold as he wiped the steam on the windows with his hand. In this case, there was something strange about Serpil. Although the hood and window of the car were cold, the inside of the car was warm. If the air inside the car was heated by conduction through the glass or metal hood, the outside of the car should also be warm, whereas the outside of the car was cold and the inside was warm.

In this case, some questions came to Serpil's mind. Can you help Serpil?

-How is the inside of the car warmed up?

-If it were you, what would you call this warming up?

-Can you give other examples similar to this phenomenon that I have observed?

- Friends.., if I and my mom were out shopping on a hot summer day, what kind of environment would you suggest we park our car in so that the inside of our car does not get too hot?

2.1.9. Luna park entertainment scenario

Sinem and her family have been living in Tekirdağ for many years. It was the end of summer. An amusement park would be set up on the beach on Saturday evening. She wanted to go to the amusement park. He and his family decided to go to the amusement park in the evening. Sinem's parents weren't working on Saturday because they were teachers, so they decided to leave the house early. When She was leaving the house, she decided to wear a short-sleeved thin shirt as the weather was quite hot. They wandered around the city during the day, ate at a nice restaurant by the sea, and went to the amusement park in the evening. As the hour progressed, She started

to get cold, moreover, there was no wind. Fortunately, her mother thought that such a situation could happen and bought a long-sleeved dress that Sinem could wear. Thanks to her mother, Sinem got rid of the cold.




a) What do you think Sinem may have overlooked while going to Luna Park?

b) What do you think might be the reason why the earth gets colder at night than during the day?

2.1.10. Colors and temperature scenario

Science and Technology teacher Ayhan, who will explain the unit "Matter and Heat" to his students in the 6th grade, decides to teach a lesson in a sunny place in the school garden. Teacher Ayhan gives the white one to Şenay, the black one to Cihan, and the red one to Duru, asking them to wear these T-shirts. When Şenay, Cihan, and Duru come with their T-shirts on, Ayhan tells them to sit in a suitable place under the sun during the lesson without moving. He puts a thermometer in each of their pockets on their t-shirts and when they read their first temperature, they see that it is 36°C and asks their students to record this value. At the end of this lesson, they say that they will read the values on the thermometer again and move on to the lesson. Ayhan's teacher and students read the thermometers again after a very entertaining lesson. They see that the thermometer in Şenay's pocket, who is wearing a white t-shirt, is 38°C,

that Cihan's, who is wearing a black t-shirt, is 42°C, and that Duru's, who is wearing a red t-shirt, is 40°C. Ayhan's teacher's students, who saw that although the temperature of all three of them was the same at the beginning and they stayed under the sun for equal times, were very surprised by this situation and asked their teacher the following questions.

a) How about answering the following questions based on the scenario above?

b) Teacher, why did the temperature rises differ even though the initial temperatures of the T-shirts of different colors were the same and they were kept under the sun for an equal time?

c) So, what color should we wear in summer and what color should we wear in winter?

2.1.11. Extinguished bulb and science scenario

On a cold and snowy winter day, Bahar and her family were sitting in their warm room at home and watching TV. All of a sudden, the light bulb in the room went out, but there was electricity and the television was working. Bahar, "The filament of the bulb is broken." She wanted to replace the bulb with a good one. But she knew he had to take precautions against electric shocks before she started replacing the light bulb. As a precaution, she first turned off the electrical switches, thus cutting the electric current to the bulb for a short time. Then, because she was not tall enough, she got on a chair and changed the light bulb. Meanwhile, an event caught Bahar's attention. When she got on the chair, she felt that the upper parts of the room were different from the lower parts.

a) When the stove is burning in the room, do you think the upper or lower parts of the room will be warmer? Why do you think so?

b) With the materials given below, design an experiment to show the movement of air in the room in liquids. *Tools and Materials*: A narrow glass or plastic container, ink, cold water, and hot water.

2.1.12. Sun temperature scenario

Özgür was walking down the road on a bright and sunny day. He lifted his head and looked at the sky. He felt the warmth of the sun on his face. Özgür learned how solid atoms and molecules transfer heat energy to each other in his Science and Technology class. But even though he was not in contact with the sun, he felt the warmth of the sun.

Based on this observation, Özgür thought about whether the materials needed to come into contact with each other for heat transfer to occur.

a) How would you explain this situation?

Knowledge: This study constitutes a part of Ayhan MORALAR's master's thesis completed under supervision of İsmail KILIÇ.

REFERENCES

Akben, N. (2019). Suitability of problem scenarios developed by pre-service teacher candidates to the problem-based learning approach. *Eurasian Journal of Educational Research*, *19*(83), 231-252. https://dergipark.org.tr/en/pub/ejer/issue/50254/648595

Almulla, M. A. (2019). The efficacy of employing the problem-based learning (PBL) approach as a method of facilitating students' achievement. *IEEE Access*, *7*, 146480-146494. The https://doi.org/10.1109/ACCESS.2019.2945811

Aslan, S. A., & Duruhan, K. (2021). The effect of virtual learning environments designed according to problem-based learning approach to students' success, problem-solving skills, and motivations. *Education and Information Technologies*, *26*(2), 2253-2283. https://doi.org/10.1007/s10639-020-10354-6

Barrows, H. & Tamblyn, R. (1980). Problem-based learning: An approach to medical education. New York: Medical Education.

Bryan, L. A., Moore, T. J., Johnson, C. C., & Roehrig, G. H. (2016). Integrated STEM education. In C. C. Johnson, E. E. Peters-Burton, & T. J. Moore (Eds.), STEM road map: A framework for integrated STEM education (pp. 23–38). New York, NY: Routledge

Capon, N., & Kuhn, D. (2004). What's so good about problem-based learning?. *Cognition and instruction*, *22*(1), 61-79. https://doi.org/10.1207/s1532690Xci2201_3

Dahlgren, A. M., & Öberg, G. (2001). Questioning to learn and learning to question: Structure and function of problem-based learning scenarios in environmental science education. *Higher education*, *41*(3), 263-282.

Günter, T. (2018). Ön lisans düzeyi öğrencilerine yönelik 'proteinler' konusuna ilişkin geliştirilen senaryonun uygulanması: probleme-dayalı öğrenme. *Turkish Studies*, *13*(4), 621-648. https://doi.org/10.7827/TurkishStudies.12803

Johnson, E., Herd, S., Andrewartha, K., Jones, S., & Malcolm, S. (2002). Introducing problem-based learning into a traditional lecture course. *Biochemistry and Molecular Biology Education*, *30*(2), 121-124. https://doi.org/10.1002/bmb.2002.494030020023

Hiğde, E., & Aktamış, H. (2021). Probleme dayalı harmanlanmış öğrenme ortamının etkililiğinin ve öğrencilerin tutumlarının incelenmesi. *Manisa Celal Bayar University Education Faculty Journal,*, *9*(1), 81-103. https://doi.org/10.52826/mcbuefd.884752

Kaptan, F. & Korkmaz, H. (2001). Fen eğitiminde probleme dayalı öğrenme yaklaşımı. *Hacettepe University, Eğitim Fakültesi Dergisi*, 20, 185-188.

Kılıç, İ., & Moralar, A. (2013). *The effect of problem-based learning approach on academic success and attitude in science education*. V. Uluslararası Tür-

kiye Eğitim Araştırmaları, Kongresi, Çanakkale, Türkiye

Kılıç, İ., & Moralar, A. (2015). Fen eğitiminde probleme dayalı öğrenme yaklaşımının akademik başarı ve motivasyona etkisi. *Pegem Eğitim ve Öğretim Dergisi*, 5(5), 625-636. http://dx.doi.org/10.14527/pegegog.2015.034

LaForce, M., Noble, E., & Blackwell, C. (2017). Problem-based learning (PBL) and student interest in STEM careers: The roles of motivation and ability beliefs. *Education Sciences*, *7*(4), 92. https://doi.org/10.3390/educsci7040092

MoNE. (2018). Fen bilimleri dersi ögretim programları. Available 30.05.2022 Retrieved from http://mufredat.meb.gov.tr/ProgramDetay.aspx?PID=325

Moralar, A. (2012). *Fen eğitiminde probleme dayalı öğrenme yaklaşımının akademik başarı, tutum ve motivasyona etkisi* (Master's thesis), Trakya University.

Navy, S. L., & Kaya, F. (2020). PBL as a pedagogical approach for integrated STEM: Evidence from prospective teachers. *School Science and Mathematics*, *120*(5), 285-296. . https://doi.org/10.1111/ ssm.12408

Navy, S., Edmondson, E., Maeng, J., Gonczi, A., & Mannarino, A. (2019). How to create problem-based learning units: Understanding the PBL planning process. *Science & Children*, *56*(5), 68–72.

Norman, G. T., & Schmidt, H. G. (1992). The psychological basis of problem-based learning: A review of the evidence. *Academic medicine*, *67*(9), 557-565.

Özgen, K. & Pesen, C. (2010). Probleme dayalı öğrenme (PDÖ) yaklaşımı ile işlenen matematik dersinde öğrencilerin problem çözme becerilerinin analizi. *Milli Eğitim Dergisi*, 40 (186), 27-37.

https://dergipark.org.tr/en/pub/milliegitim/issue/36198/407054

Öztaş-Cin, M. ve Turkoguz, S. (2018). Improvement of innovative science experiments criteria with science teachers. *Turkish Journal of Teacher Education*, 7(1), 28-49.

Öztürk, Z. D. (2019). *Fen bilimleri dersinde probleme dayalı öğrenme yönteminin öğrencilerin akademik başarılarına ve bilimsel süreç becerilerine etkisi* [Published master›s thesis], Pamukkale University. http://acikerisim.pau.edu.tr/xmlui/handle/11499/3936

Pinto, T.; Dias, A.G.; Vasconcelos, C. Geology and Environment (2021) A Problem-Based Learning Study in Higher Education. *Geosciences*, 11, 173. https:// doi.org/10.3390/geosciences11040173

Rhem, J. (1998). Problem-based learning: An introduction. The national teaching & learning forum, 8(1), 1-4.

Savery, J., & Duff'y, T.M. (1995). Problem-based learning: An instructional model and its constructivist framework. In B.G. Wilson (Ed.), *Constructivist learning environments: Case studies in instructional design (pp.* 31-38). Educational Technology Publications.

Tang, S.; Long, M.; Tong, F.; Wang, Z.; Zhang, H.; Sutton-Jones, K.L. A. (2020). Comparative study of problem-based learning and traditional approaches in college english classrooms: Analyzing pedagogical behaviors via classroom observation. *Behavioral Sciences*, *10*(6), 105. https://doi.org/10.3390/bs10060105

Taylor, D., & Miflin, B. (2008). Problem-based learning: Where are we now? *Medical Teacher*, *30*(8), 742–763. https://doi.org/10.1080/01421590802217199

Vasconcelos, C. (2012). Teaching environmental education through PBL: Evaluation of a teaching intervention program. *Research in Science Education*, *42*(2), 219-232. https://doi.org/10.1007/s11165-010-9192-3

Yaman, S., & Yalçın, N. (2005). Fen bilgisi öğretiminde probleme dayalı öğrenme yaklaşımının yaratıcı düşünme becerisine etkisi. *İlköğretim Online*, *4*(1), 42-52. https://dergipark.org.tr/en/download/article-file/91081

Zabit, M. N. M., Karagiannidou, E., & Zachariah, T. Z. (2016). Stimulating pre-service teacher academic achievement through problem-based learning (PBL). *International Journal of Advanced and Applied Sciences*, *3*(11), 30-35. https://doi.org/10.21833/ijaas.2016.11.006

CHAPTER 2

DISTANCE ENGLISH EDUCATION DURING COVID-19 PANDEMIC

Derya TUZCU EKEN[1]
Pınar ÇANKAYA[2]

1 Dr. Derya TUZCU EKEN, Kırklareli University, Foreign Languages Department, derya.tuzcu@klu.edu.tr, ORCID ID: 0000-0003-2606-1314
2 Dr. Pınar Çankaya, Tekirdağ Namık Kemal University, Foreign Languages Department, pcankaya@nku.edu.tr, ORCID ID: 0000-0001-7746-7053

INTRODUCTION

Disasters in the world can be categorized as environmental, economic, and health in terms of their reasons and effects. For instance, an environmental disaster like earthquake can have devastating effects on economy and environment as well. However, a sudden outbreak of a health disaster- Covid-19- has had destructive effects not only on health but also on economy, environment, social life, and education all around the world. For the first time in history a disaster labelled as pandemic by the World Health Organization (WHO) in 11th March, 2020 has brought life to a halt. As of 25th March 2020, more than 1,5 billion students from all levels of education and 63 million educators around the world were influenced (UNESCO, 2020a) by school closures. After getting over the first shock schools quickly directed towards solutions to save the education and the most widespread choice was distance education of each course.

In our country, the first case emerged on March 11, 2020, and immediately after this occurrence, all the educational institutions were closed for a few weeks, yet this temporary closure did not take long as in many countries around the world (Eken, Ö., Tosun, N, & Tuzcu Eken, D., 2020). As soon as it was understood that this situation would take long, the distance learning process started. In compulsory education in Turkey, especially at state schools, Ministry of Education (MoNE) offered education for students of all levels by utilizing an online platform called EBA (Educational Informatics Network). Besides, the national channel TRT (Turkish Radio and Television) was also used as a platform for students to watch and listen to their lessons via TRT channels assigned for this purpose.

The other countries also directed towards distance education and each took their own measures against the interruption of education. Some countries such as Bulgaria, Austria, Colombia (The World Bank, 2020), Jordan, Irak, Lebanon (UNESCO, 2020b) took similar measures (utilizing education platforms and benefitting from the TV channels of the government) as Turkey did. Some others utilized other distance learning platforms like Zoom, Google Classroom, Edmodo.

As education is an indispensable part of every society; this pandemic has caused huge differences and difficulties in every level of education system across the world (Doren, 2020). The differences can be summarized as the delivery of teaching (from face to face classes to online classes), the place of education (from schools to online platforms), the way of testing (from mostly pen and paper tests to online assessment tools), the required teaching skills (from class management to computer literacy abilities), and the interaction type (from two-way interaction to one-way

interaction). When it comes to the difficulties, since they are stemmed from the differences mentioned above, the difficulties can be categorized as instructional, emotional and personal. Instructional challenges are related to online teaching and online assessment, while emotional difficulties are concerned with interactional issues. Personal difficulties involve students or teachers' computer literacy abilities and their psychological problems during the pandemic causing "fear, anxiety, depression, and insomnia that lead to a lack of focus and concentration" (Dhawan, 2020). Based on the brief understanding of the issue, the literature review in this research study scrutinizes three main tenets as follows: a) the main defining qualities of distance learning, b) pros and cons of distance learning, and c) an overview of related research studies.

LITERATURE REVIEW

The Main Defining Qualities of Distance Learning

Distance learning has gained an increasing importance for various purposes. Two of them are that developing countries try to adapt to technological developments in today's world, and nations want to enhance lifelong learning especially for older generation (Telli & Altun, 2020). Before moving on the details of distance learning, a precise meaning of it is necessary. However, it can be challenging to give a clear definition to distance learning as it involves various terms such as online learning, open learning, web-based learning, computer-mediated learning, blended learning, m-learning, e-learning, flexible learning (Dhawan, 2020; Hartnett, 2016). But still, it can be defined in general terms as "learning experiences in synchronous or asynchronous environments using different devices (e.g., mobile phones, laptops, etc.) with internet access" (Dhawan, 2020). In its asynchronous form, learning materials (reading notes, pre-recorded course videos, assignments, etc.) can be reached by learners electronically (Smith, 2005). In synchronous environment, the learners have the opportunity to interact with the instructor and other students through a platform. The main features of distance learning are noted as flexibility, anywhere-anytime, individual-oriented, technology-based (Kumpikaite & Duoba, 2012; Lewis et al., 2016; Singh & Thurman, 2019). When it is compared to traditional learning, distance learning can be characterized as fast, flexible, technology-based, free from time and place while traditional face to face learning has slow, structured and controlled manner at schools and classrooms (Semerci & Batdı, 2012).

Pros and Cons of Distance Learning

Having defined the main qualities of distance learning, it is utmost important to emphasize the positive sides of it with an aim to clarify the advantages for both learners and instructors. To start, as Semerci and

Batdı (2012) stated distance learning provides information in an easy and fast manner thanks to the flexibility of synchronous and asynchronous learning environment. Moreover, as distance learning is suitable for individual learning (Unwin, 2008), each learner can learn at his/her own pace anytime and anywhere which is the most efficient part of it (Altunay, 2019; Dhawan, 2020; Semerci & Batdı, 2012). Young (2003) noted that compared to traditional learning in which the student is passive, distance learning leads learners to be more active and explorer in student centred learning environment. In addition to individual learning opportunities, distance learning improves technology literacy skills, interactional skills with extensive visual and audial learning materials. Thanks to visual-audio learning materials, use of mobile devices, authentic and interactive learning language activities, immediate feedback; learner motivation and attention can increase (Altunay, 2019; Semrádová & Klímová, 2008). In terms of language sub skills, Semerci and Batdı (2012) reported that group talk rooms in virtual classrooms, student-student and/or student-instructor interaction help learners improve their speaking skills while various reading texts at different levels ensures rich learning materials for learners. Learners in their study self-reported that assignments and e-mail or messages during virtual classrooms helped improve their writing skills. Not only for learners but also for instructors, distance learning is considered as advantageous as reported in the literature (Altunay, 2019). For example; updating the pre-recorded materials easily, using online records to check student improvement, giving immediate feedback, etc.

Nothing is without its weakness, so distance learning is also criticized in the literature (Altunay, 2019; Dhawan, 2020; Gürer, Tekinarsan, & Yavuzalp, 2016; Semerci & Batdı, 2012). Firstly, it is noted by Semerci and Batdı (2012) that it causes technology addiction, no face to face interaction, hence having negative effect on socializing (Haber & Mills, 2008). Moreover, when the student is not autonomous or ready for distance learning; flexibility of distance learning turns into a big challenge for them (Parkes, Stein & Reading, 2014). Considering the content, students sometimes find it too theoretical, dull and unattractive to be active (Dhawan, 2020). Technological problems like lack of internet access or mobile devices (computer, camera), inadequacy of technology literacy of both learners and instructors are also the most mentioned difficulties (Favale et al., 2020). Teachers and learners' negative beliefs about distance learning and their inexperience also have detrimental effects on their satisfaction and performance let alone lack of orientation trainings and technical support (Altunay, 2019; Gürer et al., 2016).

Related Research Studies

On international scale, there are several studies conducted during the pandemic that discuss its advantages and disadvantages, and most search for the ways to improve distance learning since the distance learning that education institutions conducted during the pandemic is different from the conventional distance education as stated by Al Lily et al. (2020). The main difference is that because of time constraints the distance education during pandemic started suddenly and in an unplanned way causing lots of confusion not only for teachers and students but also for parents who were supposed to support their children (especially the ones going to primary school) during the process. Most of these studies discuss the issue on theoretical base (e.g. Al Lily, 2020; Daniel, 2020; Klapkiv & Dluhopolska, 2020) and some others had the opportunity to conduct case studies (Basilaia & Kvavadze, 2020; Fansury et al., 2020). However, the studies that focus on distance education of English as a Foreign Language is limited.

The study of Allo (2020), for instance, aimed to investigate English program learners' perceptions of distance education during pandemic. The researcher employed qualitative study and interviewed participants through WhatsApp and questioned if online learning is effective during pandemic. As a result, he revealed that learners found online learning beneficial, yet they had some problems such as internet access, financial problems, and material usage.

Fansury et al. (2020) also aimed to investigate the ways to use digital content and to search if digital content in teaching English is beneficial in increasing student motivation and interest. For this purpose, the researchers benefitted from the YouTube, Facebook and similar platforms to teach EFL lessons and revealed that using digital media in teaching English was beneficial for millennial generation students during pandemic. Moreover, they stated that digital content helps to reduce one-way communication and increase student motivation. Yet, it also has some drawbacks such as limited internet sources and internet access which can be a restriction for students.

In Turkish context, the studies conducted during pandemic, and related to the distance education during pandemic focus on different lessons such as science education (Pınar & Dönel-Akgül, 2020), accounting education (Serçemeli & Kurnaz, 2020), and investigate the issue from the perspectives of students (Pınar & Dönel-Akgül, 2020; Sarıtaş & Barutçu, 2020; Serçemeli & Kurnaz, 2020), educators (Kurnaz & Serçemeli, 2020; Özaltın-Türker, 2020), children and their mothers (Yüksek-Usta & Gökcan, 2020) and parents (Yılmaz et al, 2020), yet the number of these

studies is scarce. As regards to EFL education during the pandemic, the research studies either focus on teacher perspectives and /or attitudes (Civelek, Toplu, & Uzun, 2021; Erdoğan & Yazıcı, 2022; Erkan & Balbay, 2021; Şevik & Yücedağ, 2021) or student perspectives and /or attitudes (Arık, 2021). Therefore, we can conclude that there are not any studies conducted in Turkey that specifically focus on distance education of EFL lessons during the pandemic from both key stakeholders.

In this regard, the aim of the current study is to examine the EFL online teaching practices conducted in two different universities in Turkey during pandemic in 2019-2020 spring term. In order to deeply analyse the issue, both teachers' and students' views were collected. Starting from this point of view, this study seeks answers to the following questions:

RQ1: Were the teachers and prep students ready to distance education when pandemic started?

RQ2: What were the experiences of teachers and prep students during the distance education?

RQ3: What were the main challenges that teachers and prep students faced?

RQ4: Are there any coping strategies offered by the teachers for the difficulties that they experienced?

RQ5: Are the teachers and prep students willing for future distance English education?

METHODOLOGY

Research Design

The current paper is a qualitative research utilizing two different interviews developed by the researchers with the aim of collecting the views and experiences of both academics and students on distance education of English conducted during pandemic. Qualitative studies require the researcher to "understand human beings' richly textured experiences and reflections about those experiences" (Jackson, Drummond & Camara, 2007, p. 22). Therefore, in-depth analysis of participants' answers was aimed in the study.

Participants and Setting

The participants of the study were selected based on the voluntariness criteria. In this respect, 12 students and 10 teachers from two different universities participated to the interviews. The students were preparatory class students of two universities and their majors were different. The teachers were English teachers of the same universities. The distance

education experiences of both groups were various ranging from 'not having any distance education experience' to 'having some previous experience'.

Data Collection

In order to collect data, two different structured interview questions developed by the researchers: one set for the students and one set for the academics. The interview questions developed for both groups focused on specific issues. Each interview questioned the students' and instructors' readiness to distance education, their experiences during the process, the challenges that they experienced and their willingness for future distance education process. While conducting the interviews, the prepared interview questions were sent to the participants as it had not been possible to come face to face because of the pandemic. However, while sending the questions to the participants they were informed thoroughly about the aim of the study and when necessary phone conversations were made. In this way, it was aimed to get away from the barriers of not having a face to face conversation.

Data Analysis

While analysing the data, content analysis method was followed. Both researchers rated two trials on each sample and in this way the coding reliability of the interview was calculated. As a result, the coding reliability of the interview, Kappa Coefficient for Inter-Coder Reliability was found to be almost perfect /highly reliable ($\kappa = 0.86$) (McHugh, 2012).

FINDINGS

The first research question of the study aimed to find out both teachers' and students' readiness to distance education when pandemic started. The findings collected from the both participant groups were given in Table 1 (teachers' findings) and Table 2 (students' findings) below.

Table 1. Teachers' readiness to distance education

Item	Explanation	Participant
Prior Experience	Yes	T1 (sync.), T2 (sync. & async.), T3 (sync.), T5 (async.), T7(sync.),
	No	T4, T6, T8, T9, T10
Perceived Readiness to DE	Ready	T1, T5, T6, T7
	Ready to some extent	T2, T3, T8
	Not ready	T4, T9, T10
In-service Training	Yes	T1
	Not so much	T2, T6, T7,
	No	T3, T4, T5, T8, T9, T10

In Table 1, teachers' readiness to distance education when the pandemic started was questioned by asking the participant teachers to state if they had prior online teaching experience or not. Half of the teachers had no experience while the other half had mainly synchronous online teaching experience. Since there might have been other factors that may lead teachers to feel experienced for the online teaching, the participants' perceived readiness to the distance teaching was also questioned. Their answers revealed that 4 of the teachers felt themselves ready to teach while 3 said that they were ready to some extent. T1 declared that "I was ready for it. Actually, I had been waiting for a chance of teaching English online to preparatory class students for long". T3 asserted that although she/he had a prior experience of distance teaching, delivering a skill-based course especially speaking was hard for her/him because of the limitations in online interaction. However, 3 of them stated that they were not ready at all. They responded as not ready mostly because of not having appropriate materials for online teaching. The participants were also asked if their institution provided them in-service training to prepare them to distance teaching, only one answered as 'yes' while the rest stated 'no' or they only mentioned about some arrangements such as sending academics explanatory documents or having an online meeting once.

Table 2. Students' readiness to distance education

Item	Explanation	Participant
Prior experience	Yes	S3 (async.), S4 (async.)
	No	S1, S2, S5, S6, S7, S8, S9, S10, S11, S12
Perceived Readiness	Ready	S3, S4, S7, S12
	Ready to some extent	S1, S2, S5, S6, S8
	Not ready	S9, S10, S11,
Necessary training	Yes	S1, S2, S3, S4,
	No	S5, S6, S7, S8, S9, S10, S11, S12

Table 2 demonstrates that only two of the students had a prior experience before the pandemic started which was asynchronous distance learning. The rest of the participant students said that they had no experience at all. Although their answer to the first question in this category was 'no', their perceived readiness to distance education varied: four of them stated that they were ready, five of them said 'ready to some extent' and only three of

them stated they were not ready. Their answers to the last question of the category (Has your institution given you training about the platform used to conduct distance education courses?) were mostly 'no' (*N=8*). The ones who answered as 'yes' stated that they were informed about the process by their teachers or via the test broadcast.

The second research question of the study aimed to reveal the distance English education experiences of both groups. Table 3 and Table 4 below indicates the own experiences of participants during the pandemic.

Table 3. Teachers' distance education experiences during pandemic

Effect	Description	Participant
	Beneficial	T1, T7, T10
Positive	Beneficial to some extent	T6
	Challenging	T2
	Not beneficial	T3, T4, T9
Negative	Time-consuming	T5
	Difficult to manage the classes	T2, T4
	Difficult to prepare materials	T8, T5

As can be understood from Table 3, negative distance education experiences of participant teachers outweigh positive ones. The participants who had positive ideas about the experience defined the process as being beneficial. Highly reported negative experiences were online education's not being beneficial and difficulty of managing the classes. Explaining the experience as being 'unbeneficial', T4 responded that "I found it as unbeneficial and difficult because of time management problems, inconsistent programming, and lack of sources and online facilities available during this process." Emphasizing how difficult it was to have nearly no communication during the online lectures, T2 reported that "The lack of physical and social interaction in the class was really challenging. Most of the time I felt like I was talking to the wall since the majority of the students signed in but left it open and went away."

Table 4. Students' distance education experiences during pandemic

Effect	Description	Participant
	Beneficial	S5, S7, S8,
Positive	Enough	S12
	Not beneficial	S1, S2, S4,

Negative	Hard	S2, S3, S6, S9, S11
	Insufficient	S10, S11

Table 4 points out the answers participant students gave to the questions in the second category which was querying the distance education experience of students during pandemic. Accordingly, positive attitudes of the participants were just stated as 'beneficial' (N= 3) or enough (N=1). However, the negative experiences of the participant students outweigh the positive ones as in the teachers' case. They expressed the experience as being 'not beneficial', 'hard' and 'insufficient'. Since some students stated more than one answer, all of them included into the table. S5 who remarked the experience as being 'beneficial' said "It was enough for me because I think the language mostly developed in proportion to one's effort, but it was bad for the practical lessons in some departments." On the other hand, S2 who explained the experience as being 'hard', said that "I understood why face-to-face education should be. Distance education is both difficult and more ineffective."

The third research question of the study was about the challenges that both groups experienced. Table 5 and Table 6 below demonstrates various challenges experienced.

Table 5. Challenges faced by the teachers

Challenge	**Participant**
Technological problems	T1, T2, T5, T7, T10
Low student attendance	T1
Building and maintaining interaction	T1, T2, T3, T5, T6, T7, T10
Not being able to see students	T2, T3
Motivating students	T3
Students' unwillingness	T4, T8
Time management	T4
Students' lack of motivation	T4
Preparing course materials	T5, T9
Assessment	T8, T9
Getting feedback from students	T6

According to Table 5, 'building and maintaining interaction' and 'technological problems' were the most challenging issues that the teachers had to endure. T5 stated that "The most challenging part was to make it sure that the students and I were really on track during the process", and moreover included that "I also had some difficulties in monitoring and getting in contact with some students since they were not really into this

kind of learning and did not follow the course properly." T3 also stated that "Because students did not use camera and most of the time a microphone, it was hard to receive instant feedback regarding what was going on in class."

Table 6. Challenges faced by the students

Challenge	Participant
Technological problems	S1, S2, S4, S5, S6, S8, S11
Lack of practice	S3, S9
Lack of motivation	S4
Lack of concentration	S4
Not having the necessary materials	S6
Boring	S8
Lack of interaction	S10
Lack of self-disciple	S11
Requiring too much self-study	S9, S12
Exams	S12
No challenge	S7

Table 6 illustrates the challenges faced by the participant students during distance education. Since some participant students stated more than one problem, all of them included into the table to diversify the problems. Accordingly, although the answers vary, the prevailing answer was 'technological problems' (N=7) which was followed by 'lack of practice' and 'requirement of too much self-study'. Although all of the participants stated one or more problems, only one of the students stated that he did not experience any challenge.

The fourth research question of the study aimed to find out the coping strategies of the participant teachers. Since each teacher had many challenges, the strategies that they offered are also multifarious. Table 7 below indicates the answers given.

Table 7. Coping strategies offered by the teachers for the difficulties that they experienced

Strategy	Participant
Supportive use of language	T1
Using interactive materials	T1, T3
Being tolerant to the students	T2
Encouraging students to participate	T3, T6

Employing self-regulation strategies	T4
Reaching students from different platforms (such as WhatsApp)	T4, T6
Asking for support from distance education department	T5
Collaboration with colleagues	T5, T9, T10
Using more developed (universal) online platforms	T7
Creating more and varied questions	T8
Benefitting from the Internet	T9, T5

According to the Table 7, 'collaboration with colleagues' was the most common coping strategy declared by the participant teachers. It was followed by 'reaching students from different platforms', 'encouraging students to participate' and 'using interactive materials' all of which focus on building and maintaining interaction with the students.

The fifth research question aimed to query willingness of both groups to future distance English education. For the teachers the teaching medium preference and for the students the learning medium preference was also asked. The results are given in Table 8 and Table 9.

Table 8. Teachers' willingness to distance education in the future and their type of education preferences

Item	**Explanation**	**Participant**
Willingness to future distance teaching	Yes	T1, T5, T8
	No	T2, T3, T4, T6, T7, T9, T10
Teaching Preference	Face-to-face	T2, T3, T4, T6, T7, T9, T10
	Distance	T1
	Both /Blended	T5, T8

As Table 8 presents, 7 of the participant teachers indicated that they do not want distance teaching in the future, while only 3 stated that they are willing to future distance teaching environments. Moreover, 7 of the participants chose face-to-face teaching, 2 of them chose blended (a combination of face-to-face and distance) and only one chose distance education.

Table 9. Students' willingness to distance education in the future

Item	Explanation	Participant
Willingness to future distance learning	Yes	S1, S3, S5, S7, S9, S10, S11, S12
	No	S2, S4, S6, S8
Perceived self-management	Yes	S1, S4, S5, S6, S7, S8, S9, S10, S12
	To some extent	S2, S3
	No	S11
Learning Preference	Face-to-face	S1, S2, S3, S4, S6, S7, S8, S10, S11
	Distance	S5, S9, S12
	Both	-

Table 9 indicates that although most of the participants (*N= 8*) stated that they are willing to future distance education, when we examined their reasons generally they stated that they chose distance education because Covid-19 still continues. S1 explained that "If Covid-19 continues in the upcoming period, I want to participate distance education actively." Moreover, S11 declared that "Yes, because in this way I don't miss school." As for their perceived self-management nearly all of the participants (N=9) indicated that they have self-management. Only one of the participant student answered as 'No' while another two participant answered as 'to some extent'. The last item in this category was about their future learning preference. Although the participants said that they are willing to future distance teaching (which was mostly because we as humanity still continue to live with Covid-19 virus), when their learning preference asked a majority of them (*N=9*) chose face-to-face learning over distance learning. None of them, on the other hand, chose both together. The ones who chose face-to-face learning generally stated that face-to-face learning has more advantages than distance learning. S4 stated that "I believe that face-to-face education is superior to distance education because exams are more fair and auditable, and everyone is in the same environment and everyone has an equal opportunity during the exam or lesson." On the other hand, S11 who chose distance learning over face-to-face learning stated that "Distance education has been very good for me because in this way I can work outside and earn money. It has been very good for students who have financial difficulties such as dormitory, road, house, food. Apart from that, it is a very good system for students with physical disabilities."

DISCUSSION AND CONCLUSION

In this study, it was aimed to find out EFL students' and teachers' readiness to distance education, their experiences during the process, the challenges that they had, and their willingness for future distance English education when the Covid-19 pandemic started. Concordantly, by taking lessons from the distance learning and teaching experiences of teachers and students during the Covid-19 pandemic, the researchers aimed to make a general analysis of the English lessons carried out through distance education, and offer suggestions in designing suitable and flexible language teaching implementations for similar practices in the future.

The findings showed that although half of the teachers had prior distance teaching experience before the pandemic, nearly all of the students had no distance learning experience. In spite of most teachers' having prior experience, their perceived readiness to distance teaching was various. Majority of the student participants, on the other hand, had no prior experience before the pandemic, yet their perceived readiness was various as in the case with teachers. Moreover, the training offered to both groups in both universities was superficial which might also explain that even universities were unprepared. The study of Şevik and Yücedağ (2021) also revealed that participant teachers did not get training on distance teaching.

With regards to learner experiences of English learning during pandemic, the studies of Allo (2020) and Arık (2021) contradict with this study since in both of these studies, the researchers stated that despite the problems distance learning was generally found beneficial. However, in this study students generally had negative experiences. As for teacher experiences, the study of Civelek et al. (2021) is in line with the current study because the researchers concluded that the distance teaching experiences of teachers were not so positive.

As for challenges, the most common problem experienced by both groups in this study was generally technological problems. The findings of the study of Şevik and Yücedağ (2021) supports the findings of this study since they revealed that teachers mostly had technological problems. The study of Arık (2021) is also in line with the findings of our study because in his study, the researcher revealed that the students who had laptops preferred online learning environments which reveal that lack of technical equipment is an important challenge in distance education environments. Moreover, teachers in this study also stated that building and maintaining interaction was a challenge for them. The findings of the study of Erdoğan and Yazıcı (2022) also support our findings because they revealed that teachers in their study felt themselves less competent in maintaining student interaction. When compared with the studies conducted before the pandemic, it was

found that the same problems were also prevalent to distance teaching long before the pandemic. Young's study (2003), for instance, indicated that the participant teachers were mostly concerned with the problem of building and maintaining interaction because of the students being passive during distance learning. However, Young (2003) claimed that distance learning enhances students' active participation by creating a student oriented learning environment. This can be also supported by the study of Parkes et al. (2014) which showed how flexibility of distance learning can be a real challenge when the student is not ready and autonomous enough. This finding is also in line with students' findings about challenges during distance learning within the present study which shows an alignment between the findings as well. The student informants noted "requirement of too much self-study" as one of the challenges they faced which might explain their passive and low participation to online EFL courses. Moreover, one other reason of their low participation might be stemmed from the course content during distance learning which was also stated by Dhawan (2020) as too theoretical, dull and unattractive content might cause learners to be inactive. Not only students but also teacher participants in the study reported that they were not ready for such an experience because of inadequacy of appropriate materials for online learning, lack of in service trainings, lack of previous experience of distance teaching. These negative concerns and beliefs of teachers and students were also reported to have adverse impact on their performance and satisfaction during distance learning as put forward by Altunay (2019) and Gürer et al. (2016). Considering technological problems, the main findings of the current study are in accordance with the similar studies in the literature (Favale et al., 2020; Semerci & Batdı, 2012) as they all reported the following challenges as lack of internet access, lack of physical and social interaction, and inadequacy of technology literacy.

When coping strategies are concerned, the mostly used ones were stated as 'collaboration with colleagues', 'reaching students from different platforms', 'encouraging students to participate' and 'using interactive materials' all of which focus on building and maintaining interaction with the students. This might explain the importance of interaction in a foreign language learning as interaction provides both a learning environment for learners through feedback and an opportunity for demonstrating and monitoring their own learning.

In terms of willingness of participant groups, it was observed that while the majority of teacher participants (7 out of 10) self-stated themselves as unwilling for future distance teaching, most of the student participants (8 out of 12) reported their willingness for distance learning in the future. However, while teacher participants justified their unwillingness with certain reasons such as lack of in-service training, lack of interaction,

difficulty of managing the class, and etc., student participants could not build a logical link between their wish for future distance learning and their learning preference. Because when their learning preference asked, a majority of them (*N=9*) chose face-to-face learning over distance learning which shows an inconsistency. The findings of our study also contradict with the study of Arık (2021) which revealed that students prefer online learning over face-to-face learning.

When both groups of participants compared and contrasted, it can be stated that although having prior experience had some benefits over the learning and teaching experiences of the participants, they were not totally ready when pandemic broke out. Therefore, both groups generally had negative experiences. The common problem experienced by the teacher and student participants was mostly technological. On the other hand, teachers also stated that they had communication problems which was not a prevalent problem among student participants. Although interaction is a must in English language teaching environments, student participants in this study were mostly worried about the requirement of too much self-study rather than the difficulty of having an interaction with the course teacher. Students were not aware that they could be able to overcome the burden of self-study if they had participated the courses actively and interacted during the distance lessons. Moreover, the coping strategies offered by the teachers indicate that they tried every possible way to reach students in order to keep in touch. As for the future distance English learning situations, while teachers' answers were consistent, students' answers were not. Although both teachers and students chose face-to-face English learning environments, students also indicated that they were also willing for future distance learning which can be attributed to the fact that students were not very aware of the situation.

In order to design and implement effective distance English language teaching and learning environments, it is suggested to the English teachers/educators studying at universities to keep up with the developments in the area of distance education. Since pandemic taught us that we can continue to benefit from distance education, from now on universities as well as other institutions should organize trainings on distance education periodically both for teachers and students. In these trainings, teachers can be trained on how to prepare materials that facilitate interaction since lack of interaction is the most prevalent problem stated in this study and many others. Students, on the other hand, can be trained on how to self-manage their own learning because distance education of English requires students to be organized in arranging their study periods. Although flexibility of distance education is beneficial, being too flexible may lead students to lose control of their organization of study times which will lead failure as a result.

REFERENCES

Allo, M. D. G. (2020). Is the online learning good in the midst of Covid-19 pandemic? The case of EFL learners. *Jurnal Sinestesia, 10*(1), 1-10.

Al Lily, A. E., Ismail, A. F., Abunasser, F. M., & Alhajhoj Alqahtani, R. H. (2020). Distance education as a response to pandemics: Coronavirus and Arab culture. *Technology in Society*, 1-21.

Altunay, D. (2019). EFL students' views on distance English language learning in a public university in Turkey. *Studies in English Language Teaching, 7*(1), 121-134.

Arık, S. (2021). Distance education learning environments during Covid-19 pandemic from student perspectives: A study in Turkish higher education. *Journal of Pedagogical Research, 5*(2), 103-118.

Basilaia, G., & Kvavadze, D. (2020). Transition to online education in schools during a SARS-CoV-2 Coronavirus (COVID-19) pandemic in Georgia. *Pedagogical Research, 5*(4), 1-9.

Civelek, M., Toplu, I., & Uzun, L. (2021). Turkish EFL teachers' attitudes towards online instruction throughout the Covid-19 outbreak. *English Language Teaching Educational Journal, 4*(2), 87-98.

Daniel, J. (2020). *Education and the COVID-19 pandemic*. Springer Nature. Retrieved from https://www.springernature.com/gp

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems 49*(1), 5–22.

Doren, M. V. (2020). Focus on: What has the covid-19 crisis taught us about online teaching? EURYDICE. Retrieved from https://eacea.ec.europa.eu/national-policies/eurydice/content/focus-what-has-covid-19-crisis-taught-us-about-online-teaching_en

Eken, Ö., Tosun, N., & Tuzcu Eken, D. (2020). Covid-19 salgını ile acil ve zorunlu uzaktan eğitime geçiş: Genel bir değerlendirme. *Milli Eğitim Dergisi, 49*(1), 113-128. DOI: 10.37669/milliegitim.780722

Erdoğan, P., & Yazıcı, E. (2022). From the eyes of EFL teachers in Turkey: Synchronous and

asynchronous online teaching during the Covid-19 pandemic. *The Journal of Language Teaching and Learning, 1*, 61-77.

Erkan, G., & Balbay, S. (2021). How English language instructors coped with the onset of the pandemic and remote language teaching: A case study. *Bolu Abant* İzzet *Baysal* Üniversitesi *Eğitim Fakültesi Dergisi, 21*(4), 1198-1211. https://dx.doi.org/10.17240/aibuefd.2021..-912877

Fansury, A. H., Januarty, R., Rahman, A. W., & Syawal (2020). Digital content for millennial generations: Teaching the English foreign language learner on Covid-19 pandemic. *Journal of Southwest Jiaotong University, 55*(3), 1-12.

Favale T., Soro F., Trevisan M., Drago I., & Mellia M. (2020). Campus traffic and e-learning during COVID-19 pandemic. *Computer Networks, 176*, 107-290.

Gürer, M. D., Tekinarsan, E., & Yavuzalp, N. (2016). **Çevrimiçi** ders veren öğretim elemanlarının uzaktan eğitim hakkındaki görüşleri. *Turkish Online Journal of Qualitative Inquiry (TOJQI), 7*(1), 47-78.

Haber, J. & Mills, M. (2008). Perceptions of barriers concerning effective online teaching and policies: Florida community college faculty. *Community College Journal of Research and Practice, 32*(4-6), 266-283. doi:10.1080/10668920701884505

Hartnett, M. (2016). *Motivation in online education*. Singapore: Springer.

Jackson, R. L., Drummond, D. K., & Camara, S. (2007). What is qualitative research? *Qualitative Research Reports in Communication, 8*(1), 21-28.

Klapkiv, Y., & Dluhopolska, T. (2020). Changes in the tertiary education system in pandemic times: Comparison of Ukrainian and Polish universities. *Revista Românească pentru Educaţie Multidimensională, 12*(1), 86-91.

Kumpikaite, V., & Duoba, K. (2012). E-learning process: Students' perspective. 3rd International Conference on e-Education, e-Business, e-Management and e-Learning. *IPEDR, 27*, 130-134.

Kurnaz, E., & Serçemeli, M. (2020). Covid-19 pandemi döneminde akademisyenlerin uzaktan eğitim ve uzaktan muhasebe eğitimine yönelik bakış açıları üzerine bir araştırma. *Uluslararası Sosyal Bilimler Akademi Dergisi, 3*, 262-288.

Lewis, P. A., Tutticci, N. F., Douglas, C., Gray, G., Osborn, Y., Evans, K., & Nielson, C. M. (2016). Flexible learning: Evaluation of an international distance education programme designed to build the learning and teaching capacity of nurse academics in a developing country. *Nurse Education in Practice, 21*, 59-65.

McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia medica, 22*(3), 276–282.

Özaltın-Türker, G. (2020). Covid-19 salgını turizm sektörünü nasıl etkiler? Turizm akademisyenleri perspektifinden bir değerlendirme. *International Journal of Social Sciences and Education Research, 6*(2), 207-224.

Parkes M., Stein S., Reading C. (2014). Student preparedness for university e-learning environments. *The Internet and Higher Education, 25*, 1–10. https://doi.org/10.1016/j.iheduc.2014.10.002

Pınar, M. A., & Dönel-Akgül, G. (2020). The opinions of secondary school students about giving science courses with distance education during the Covid-19 pandemic. *Journal of Current Researches on Social Sciences, 10*(2), 461-486.

Sarıtaş, E., & Barutçu, S. (2020). Öğretimde dijital dönüşüm ve öğrencilerin

çevrimiçi öğrenmeye hazır bulunuşluğu: Pandemi döneminde Pamukkale Üniversitesi öğrencileri üzerinde bir araştırma. İnternet Uygulamaları ve Yönetimi Dergisi, 11(1), 5-22.

Semerci, Ç., & Batdı, V. (2012). Learners' views about e-learning in foreign language teaching: A case study. *Erzincan University Journal of Education Faculty, 14*(2), 459- 478.

Semrádová, I. & Klímová, B. F. (2008). Exploitation of e-learning in foreign language teaching at the faculty of informatics and management in Hradec Králové. Retrieved from http://virtuni.eas.sk/rocnik/2008/pdf/fid000481.pdf

Serçemeli, M., & Kurnaz, E. (2020). Covid-19 pandemi döneminde öğrencilerin uzaktan eğitim ve uzaktan muhasebe eğitimine yönelik bakış açıları üzerine bir araştırma. *Uluslararası Sosyal Bilimler Akademik Araştırmalar Dergisi, 4*(1), 40-53.

Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education, 33*(4), 289–306.

Smith, P. J. (2005). Learning preferences and readiness for online learning. *Educational Psychology, 25*(1), 3-12.

Şevik, M., & Yücedağ, Z. (2021). An evaluation of distance education during the Coronavirus 19 pandemic: The views of Turkish EFL teachers. *Mehmet Akif Ersoy* Üniversitesi *Eğitim Bilimleri Enstitüsü Dergisi, 9*(11), 171-190.

Telli, S. G., & Altun**,** D. (2020). Coronavirüs ve çevrimiçi (online) eğitimin önlenemeyen yükselişi. *Üniversite Araştırmaları Dergisi, 3*(1), 25-34.

The World Bank (2020). How countries are using edtech (including online learning, radio, television, texting) to support access to remote learning during the COVID-19 pandemic. Retrieved from https://www.worldbank.org/en/topic/edutech/brief/how-countries-are-using-edtech-to-support-remote-learning-during-the-covid-19-pandemic

UNESCO (2020a). *School closures caused by Coronavirus (Covid-19).* Retrieved from https://en.unesco.org/covid19/educationresponse

UNESCO (2020b). Alternative solutions to school closure in Arab countries to ensuring that learning never stops Covid-19 education response. *Education 2030*, 1-7.

Unwin, T. (2008). *Survey of e-Learning in Africa: Based on a questionnaire survey of people on the e-Learning Africa database in 2007.* A report of UNESCO/UNITWIN. Royal Holloway University of London, UK.

Young, S. S. C. (2003). Integrating ICT into second language education in a vocational high school. *Journal of Computer Assisted Learning, 19*(4)*,* 447-461.

Yüksek-Usta, S., & Gökcan, H. N. (2020). Çocukların ve annelerinin gözünden Covid-19. *International Journal of Social Sciences and Education Research, 6*(2), 187-206.

CHAPTER 3

EXAMINATION OF TEACHERS' LIFELONG LEARNING TENDENCIES IN TERMS OF VARIOUS VARIABLES

Alper AYTAÇ[1]

Fatih Mutlu ÖZBİLEN[2]

Ramazan KAYA[3]

1 Dr., National Ministry of Education, alperaytac10@gmail.com, orcid no: 0000-0002-5087-8482

2 Assist. Prof. Dr., Çanakkale Onsekiz Mart University, fatihmutluozbilen@gmail.com, orcid no: 0000-0003-3187-0028

3 Phd student, National Ministry of Education, ramazankaya.10@hotmail.com, orcid no: 0000-0001-8652-3846

INTRODUCTION

All efforts to acquire new and current skills throughout life show that people continuously learn. In addition to the skills that individuals want to gain within the scope of formal education, which is defined as formal and non-formal education, it is also possible for individuals to learn in various fields in schools and other educational institutions. Therefore, thanks to lifelong learning, individuals keep themselves up to date depending on the needs of their age and the changing conditions.

The concept of lifelong learning emerged in the 1970s, and its acceptance has gradually increased with concepts such as learning society and learning organization (Ryan, 2003). With the report published by UNESCO in 1972, lifelong learning was considered the basic building block and the regulatory principle of education policies. In addition, this report stated that lifelong learning could be increased both individually and socially by creating learning societies through lifelong learning (Power & Maclean, 2013). In 1996, OECD education ministers adopted the concept of lifelong education as a guiding framework (Yüksek Planlama Kurulu, 2014). The Council of Europe, meeting in Lisbon in 2000, emphasized that a successful transition to a knowledge-based economy and society can accompany progress toward lifelong learning. With the Lifelong Learning Memorandum announced at this meeting, it was stated that lifelong learning should be considered as a guiding principle for the creation of learning environments and participation in these environments rather than being seen as an education type for the coming years (Commission of the European Communities, 2000).

Since lifelong learning is a process with international validity, it is known that it is a concept on which the OECD, the European Commission, and various states carry out intensive studies. In Turkey, lifelong learning and related regulations have been tried to be provided some legal regulations. The concept of lifelong learning in the Ninth Development Plan was published in the Resmî Gazete numbered 26215 in 2006; under the headings of increasing the sensitivity of education to the demand for labor and developing the education system. First, the development of a lifelong learning strategy was emphasized to improve the skills for the employment of individuals within the scope of the changing and developing economy and labor market. Second, the education system should be handled holistically according to the lifelong learning approach that will support the development of human resources; In this way, it has been emphasized that the effectiveness of the education system, its accessibility to everyone, and a structure based on equal opportunities can be further strengthened (Resmî Gazete, 2006). In the Tenth Development Plan published in 2013; Again, within the framework of the lifelong learning approach

that develops the personality and abilities of individuals in the education system, a quality-oriented transformation that is compatible with the labor market and suitable for equality of opportunity has been emphasized. In addition, the harmonization of the education system with the labor market, the adoption of entrepreneurship culture, and school-business relations in vocational and technical education were discussed; basic and vocational skills development program is specified. The objectives of this program are again listed as developing lifelong learning programs, restructuring public education centers and vocational training centers of local governments, and encouraging individuals to participate in lifelong learning activities (Kalkınma Bakanlığı, 2013).

With the Turkish Lifelong Learning Strategy Document, which was accepted by the High Planning Council in Turkey to cover the years 2014-2018 and was published in 2014, it was stated that the lifelong learning system would be tried to have a more systematic structure in line with national and international approaches (Yüksek Planlama Kurulu, 2014). The Ministry of National Education, which is the institution with the highest responsibility for the regulation and implementation of education and training, aims at lifelong learning with the Regulation on Lifelong Learning Institutions (MEB, 2018). In line with this, in the same regulation, lifelong learning is defined as "a) Lifelong learning b) Scientific and integrity c) Validity d) Volunteering e) Openness to everyone f) Education everywhere g) Relevance h) Cooperation and coordination i) Plannedness j) Continuity k) It has been stated that it has 11 principles, namely "innovation and openness to development" (MEB, 2018, dam 4). In line with these determined principles, it can be said that it is essential for individuals to be lifelong learners in a scientific, planned, and integrity manner, to realize this voluntarily in accordance with the understanding of education everywhere, and to be in continuous development. As Fischer (2000) states, lifelong learning can affect the creativity and innovation potential of individuals, communities, organizations, and countries. Therefore, since a situation of flexibility for individuals to receive education has emerged with lifelong learning, it can be mentioned that there are various initiatives related to changing the structures of educational institutions, courses, education models, and forms to improve the skills and abilities of students (Shubenkova, Badmaeva, Gagiev & Pirozhenko, 2008). 2017).

Lifelong learning has increased its importance with the COVID-19 pandemic process that broke out in early 2020. There are many studies conducted in the literature on this subject (Bjursell, 2020; Karakoç & Karaca, 2022; Kılıç & Recepoğlu, 2022; Kuş, Mert & Boyraz, 2021; Lopes & McKay, 2021; Waller et al., 2021; Yıldız & Akar- Vural, 2020). According to the lifelong learning theory, disconnections in the learning

process trigger learning. For example, the pandemic process has moved many activities to the online environment. Therefore, this process has come to expect new competencies from teachers (Bjursell, 2020). In addition, since the primary purpose of lifelong learning is not only to serve a privileged few in recovery, it has also been an important issue for states to pay attention to their practices in this process to reveal a just, inclusive and post-pandemic world worth living for all (Stanistreet, 2020). Therefore, many online learning service providers have sought to save on potential costs during the pandemic, and related teaching styles, such as blended and hybrid learning, have been widely used (Waller et al., 2021).

The global epidemic process has affected many fields. In this process, teachers had to carry out the learning-teaching process online. Some teachers have seen that they are inadequate in using technological tools. In the face of this situation, online in-service training has started to be implemented. Teachers have begun to receive training on managing the learning-teaching process on online platforms. In this respect, it is essential to examine the lifelong learning tendencies of teachers in terms of various variables during the epidemic period. The results to be obtained from this research will present multiple perspectives to policymakers.

This study examines teachers' lifelong learning tendencies in terms of various variables**.** In this context, answers to the following questions were sought**:**

1. What is the level of teachers' lifelong learning tendencies?

2. Do teachers' lifelong learning tendencies differ significantly by gender?

3. Do teachers' lifelong learning tendencies differ significantly according to professional seniority?

4. Do teachers' lifelong learning tendencies differ significantly according to school type?

5. Do teachers' lifelong learning tendencies differ significantly according to the school's location?

METHOD

Model

A survey model was used in this study. It is presented in terms of various features in the survey model. In survey models, properties of objects, societies, and events are defined. In this respect, survey models have a descriptive feature. (Özdemir, 2014).

Sample

The study sample consists of 357 teachers from various branches working in different cities of Turkey in the spring semester of the 2021-2022 academic year. A convenient sampling method was preferred.

Of the teachers participating in the study, 191 (53.5%) were female, and 166 (46.5%) were male. Thirty-one of the teachers (8.1%) are between 0-5 years, 76 (21.3) are between 6-10, 55 (15.4%) are between 11-15 years, 59 (16.5) are between 16-20 years, 136 of them (36.1%) have 21 years or more professional seniority. Of the teachers, 155 (43.4%) work in primary school, 111 (31.1%) in secondary school, and 91 (25.5%) in high school. 90 (25.2%) of the teachers work in rural areas, and 267 (74.8%) work in the city center.

Data Collection Tool

This study used the *Lifelong Learning Tendency Scale* developed by Gür-Erdoğan and Arsal (2015). In the development stages of the scale, first, an item pool was created, and expert opinions were taken. After that, a 49-item trial scale was developed. As a result of EFA, a scale consisting of two dimensions and 17 items was revealed. The *Willingness to Learn* (*WT*) dimension consists of 11 items, and the *Openness to Development* (*OD)* dimension consists of 6 items. As a result of the CFA performed afterward, it was determined that the fit indices were within acceptable ranges. The test-retest reliability of the scale was found to be .76. The Cronbach alpha value obtained from the overall scale was calculated as .86. The Cronbach alpha value of the sub-dimensions was calculated as .82. In this study, the Cronbach alpha value was calculated as .90 for the overall scale and .85 for the sub-dimensions. The scale development study was carried out on pre-service teachers. This study was carried out on teachers. In this respect, CFA has been performed again on the data of this research (Appendix 1). As a result of the analyzes, it was found that the fit indices (CMIN/DF: 3.381, RMSEA: .082, RMR: .029, SRMR: .053, CFI: .911, NNFI: .911) were acceptable ranges (Sümer, 2000).

Data Collection and Analysis

Firstly, the researcher who developed the scale was given permission. The data was collected online through social media tools. Volunteering was considered in participating in the study. First, the data's compliance with the normality assumptions was examined. In this context, kurtosis and skewness values were analyzed. As a result of the analysis, it was found that the kurtosis and skewness values were between -1 and +1. .05 was considered as the significance value.

RESULTS

Results related to the first study question

The data related to the study question are shown in the table below.

Table 1. *Data on the first study question*

Dimensions	N	Minimum	Maximum	Average (AV)	Standard Deviation (SD)
Willingness to Learn	357	2.91	5.00	4.38	0.46
Openness to Development	357	2.67	5.00	4.42	0.54
Scale Overall	357	2.94	5.00	4.40	0.45

According to the results in Table 1, teachers' lifelong learning tendencies are at a very high level in the dimensions of *Willingness to Learn* (AV: 4.38, SD: 0.46), Openness to Development (AV: 4.42, SD: 0.54), and in general (AV: 4.40, SD: 0.45).

Results related to the second study question

The data related to the study question are shown in the table below.

Table 2. *Data on the second study question*

Dimensions	Gender	N	Average	SD	df	t	p	Cohen's d
Willingness to Learn	Female	191	4.43	0.41	355	2.236	0.026	0.24
	Male	166	4.32	0.50				
Openness to Development	Female	191	4.46	0.51	355	1.628	0.104	-
	Male	166	4.37	0.57				
Scale Overall	Female	191	4.44	0.41	355	2.147	0.032	0.22
	Male	166	4.34	0.49				

According to the results in Table 2, teachers' lifelong learning tendencies differ significantly according to gender in the dimension of Willingness to Learn [$t_{(355)}$= 2.236, p<.05]. In this direction, it can be said that the tendencies of female teachers in the relevant dimension are higher than male teachers' tendencies. It can be said that Cohen's d value is close to the low level (0.24). Teachers' lifelong learning tendencies differ significantly according to gender in the overall [$t_{(355)}$= 2.147, p<.05]. In this context, tendencies of female teachers on the general scale are higher than male teachers. It can be said that Cohen's d value is close to the low level (0.22). On the other hand, teachers' lifelong learning tendencies do not differ significantly according to gender in the scale's Openness to the Development dimension [$t_{(355)}$= 1.628, p>.05].

Results related to the third study question

The data related to the study question are shown in the table below.

Table 3. *Data on the third study question*

Dimensions	Source of variance	Sum of squares	df	Mean square	F	p
Willingness to Learn	Between groups	.559	4	.140	.654	.624
	Within groups	75.191	352	.214		
	Total	75.750	356			
Openness to Development	Between groups	.218	4	.055	.181	.948
	Within groups	105.904	352	.301		
	Total	106.122	356			
Scale Overall	Between groups	.288	4	.072	.342	.850
	Within groups	74.115	352	.211		
	Total	74.402	356			

According to the results in Table 3, teachers' lifelong learning tendencies were determined in the Will to Learn dimension [$F_{(4–352)}$= .654, p>.050], Openness to Development dimension [$F_{(4–352)}$= .181, p>.050], and in the overall scale. [$F_{(4–352)}$= .342, p>.050], it was found that there was no significant difference according to professional seniority.

Results related to the fourth study question

The data related to the study question are shown in the table below.

Table 4. *Data on the fourth study question*

Dimensions	Source of variance	Sum of squares	df	Mean square	F	p
Willingness to Learn	Between groups	.069	4	.035	.162	.850
	Within groups	75.681	352	.214		
	Total	75.750	356			
Openness to Development	Between groups	.622	4	.311	1.044	.353
	Within groups	105.500	352	.298		
	Total	106.122	356			
Scale Overall	Between groups	.150	4	.075	.357	.700
	Within groups	74.253	352	.210		
	Total	74.402	356			

According to the results in Table 4, teachers' lifelong learning tendencies were determined in the Willingness to Learn dimension [$F_{(4–352)}$= .162, p>.050], in the Openness to Development dimension [$F_{(4–352)}$= 1.044, p>.050], and in the overall scale [$F_{(4–352)}$= .357, p>.050] did not differ significantly according to school type.

Results related to the fifth study question

The data related to the study question are shown in the table below.

Table 5. *Data on the fifth study question*

Dimensions	Location	N	Average	SD	df	t	p
Willingness to Learn	Rural	90	4.37	0.46	355	-0.190	0.849
	City	267	4.38	0.46			
Openness to Development	Rural	90	4.40	0.56	355	-0.350	0.727
	City	267	4.43	0.54			
Scale Overall	Rural	90	4.38	0.46	355	-0.272	0.786
	City	267	4.40	0.45			

According to the results in Table 5, teachers' lifelong learning tendencies are in the dimension of Willingness to Learn [$t_{(355)}$= -0.190, p>.05]. Openness to Learning dimension [$t_{(355)}$= -0.350, p>.05] and overall scale [$t_{(355)}$= -0.272, p>.05] do not differ significantly according to the school location.

CONCLUSION AND RECOMMENDATIONS

According to the first question of the study, it was found that teachers' lifelong learning tendencies were at a very high level in the whole scale and all sub-dimensions. In this context, teachers are individuals willing to learn. Studies in the literature (Altıntaş, 2022; Bath & Smith, 2009; Erdamar, Demirkan, Saraçoğlu & Alpan, 2017; Göksoy, 2022; İzci & Özden, 2020; Kılıç, 2015; Ocak, Çengelci & Yurtseven, 2022; Özdemir, 2022; Poyraz, 2014; Şen, 2021; Tanatar & Apaydın, 2019) similar results were found. On the other hand, in a few studies (Gökyer & Karakaya-Cirit, 2018; Yasa, 2018), the opposite results were found.

According to the second question of the study, it was found that the lifelong learning tendencies of the teachers differed significantly in the Willingness to Learn sub-dimension and the overall scale according to gender. Accordingly, female teachers are more willing to learn. In other words, those female teachers are more open to various changes in the learning-teaching process. Studies in the literature (Altıntaş, 2022; Aydın, 2020; Çetinkaya, Gülaçtı, Çiftçi & Kağan, 2019; Demir, Aktı-Aslan & Demir, 2022; Doğan, 2019; Ertan, 2022; Erdamar et al., 2017; Gökyer & Karakaya-Cirit, 2018; Gür-Erdoğan, 2014; İzci & Özden , 2020; Kabal, 2019; Şen, 2021; Yurdakul, 2016) similar results were found. In a small number of studies (Bahadır, 2019), the opposite results were found.

According to the third question of the study, it was found that teachers' lifelong learning tendencies did not differ significantly according to

professional seniority. In this context, professional seniority is not a factor in teachers' lifelong learning tendencies. Studies in the literature (Akpınar, 2020; Altıntaş, 2022; Ayaz, 2016; Çetinkaya et al., 2019; Erdamar et al., 2017; İzci & Özden, 2020; Özdemir, 2022; Sevinç & Çelebi, 2020; Şen, 2021; Yılmaz & Beşkaya, 2018) similar results were obtained. In some studies (Aydın, 2020; Göksoy, 2022; Kılıç, 2015; Yılmaz, 2016), the opposite results were found.

According to the fourth question of the study, it was found that the lifelong learning tendencies of the teachers did not differ significantly according to the school type. In this context, school type is not a factor in teachers' lifelong learning tendencies. Similar results were obtained in studies conducted in the literature (Kabataş & Karaoğlan-Yılmaz, 2018; Taş, 2020; Yılmaz, 2016). The fact that they work in different types of schools does not affect the fact that teachers are innovative and learners throughout their life journeys, which can be explained by the fact that they work in similar conditions. Therefore, as can be understood from the literature, it is not seen that the type of school in which teachers are assigned is not an effective variable for teachers to be individuals who learn throughout their lives. It can be thought that this is due to the fact that the research was carried out in public primary schools affiliated to the Ministry of Education and that similar opportunities are offered to all teachers. Because it can be said that expectations from teachers in this field are generally in the same direction in all three types of schools. Teachers are expected to develop themselves professionally in primary, secondary and high schools, to carry out various projects, and to learn new methods-techniques and use them in their lessons.

According to the fifth research question, it was determined that the lifelong learning tendencies of the teachers did not differ significantly according to the school's location. In this context, the school's location is not a factor in teachers' lifelong learning tendencies. In other words, the lifelong learning tendencies of teachers working in rural and urban centers are at similar levels. Same results were found in the study of Gökyer (2019) and Yılmaz (2016). On the other hand, Ayaz's (2016) study found that teachers' lifelong learning tendencies differ according to the location of the school where they work. These results can be interpreted as the expectations from teachers about being lifelong learners are at a similar level in both central and rural schools. On the other hand, based on this result, it can be said that the Ministry of Education has been able to deliver its works and services to all public schools without making any distinction as central or rural schools. Considering that common programs are used in connection with the central organizational structure in Turkey, it is thought that there are expectations for teachers to develop themselves

through various courses and in-service trainings and to present a common national approach in the educational services to be offered to students.

Teachers need to understand the importance of being lifelong learners so that they can improve their professional lives and get positive outcomes from the education-teaching process. In this direction, it is possible to increase the qualifications of teachers through in-service training. Thus, it may be possible to reduce the differences that may arise in terms of gender. At this point, the roles of school administrators may also be important. Therefore, it is important for schools to be learning organizations in order to reduce the differences that teachers have on lifelong learning. In future studies, data collection tools can be differentiated and increased by choosing models suitable for qualitative research or mixed method with teachers. For example, interviews with teachers can be conducted to evaluate in detail what kind of orientation they have regarding lifelong learning.

REFERENCES

Akpınar, Ş. (2020). Öğretmenlerin *yaşam boyu* öğrenme *eğilimleri ile iyilik hali ve* özyeterlik *inancı arasındaki ilişkinin incelenmesi: Afyonkarahisar ili* örneği [*Investigation of the relationship between teachers' lifelong learning tendencies and well-being and their self-efficacy beliefs*]. (Yayımlanmamış yüksek lisans tezi). Kocaeli Üniversitesi, Kocaeli.

Altıntaş, S. (2022). Öğretmenlerin *kişisel ve mesleki gelişimleri için açık eğitim kaynaklarını kullanma alışkanlıklarının yaşam boyu* öğrenme *eğilimleri açısından değerlendirilmesi*. [*Evaluation of teachers' habits of using open educational resources for personal and professional development in terms of lifelong learning tendencies*]. (Yayımlanmamış yüksek lisans tezi). Trakya Üniversitesi Fen Bilimleri Enstitüsü, Edirne.

Ayaz, C. (2016). Öğretmenlerin *yaşam boyu* öğrenme *eğilimlerinin bazı değişkenler açısından incelenmesi (Mardin ili* örneği*).* [*The analysis of lifelong learning tendencies of teachers in terms of some variables*]. (Yayımlanmamış yüksek lisans tezi). Bartın Üniversitesi, Bartın.

Aydın, Ş. (2020). Öğretmenlerin *yaşam boyu* öğrenme *eğilimleri ile kültürel sermayeleri ve aralarındaki ilişkinin incelenmesi*. [*Investigation of teachers' lifelong learning tendencies and cultural capital in terms of some variables*]. (Yayımlanmamış yüksek lisans tezi). Çukurova Üniversitesi Sosyal Bilimler Enstitüsü, Adana.

Bahadır, Z. (2019). Üniversite öğrencilerinin *yaşam boyu* öğrenme *eğilimlerinin yaşamın anlamı ile bazı demografik değişkenler açısından incelenmesi* [*The analysıs of the lıfelong learnıng tendencıes and meanıng of lıfe wıth some demographıc varıables*]. (Yayımlanmamış yüksek lisans tezi). Sakarya Üniversitesi, Sakarya.

Bath, D. M., & Smith, C. D. (2009). The relationship between epistemological beliefs and the propensity for lifelong learning. *Studies in Continuing Education, 31*(2), 173-189.

Bjursell, C. (2020). The COVID-19 pandemic as disjuncture: Lifelong learning in a context of fear. *International Review of Education*, *66*(5-6), 673–689. doi:10.1007/s11159-020-09863-w

Commission of the European Communities (2000). *A Memorandum on Lifelong Learning*, Commission Staff Working Paper.

Çetinkaya, B., Gülaçtı, F., Çiftçi, Z., & Kağan, M.. (2019). Öğretmenlerin yaşam boyu öğrenme eğilimlerinin ve mesleki doyumlarının çeşitli değişkenler açısından incelenmesi [An investıgation of teachers' lifelong learning tendencies and their job satisfaction in terms of various variables]. *Trakya Eğitim Dergisi, 9*(4), 809-823.

Demir, O, Aktı-Aslan, S., & Demir, M. (2022). Examining the relationship between teachers' lifelong learning tendencies and digital literacy levels. *Journal of Educational Technology & Online Learning,* 5(2), 379-392.

Doğan, E. (2019). *Sınıf* öğretmenlerinin öğrenilmiş *güçlülük düzeyleri ile yaşam boyu* öğrenme *eğilimleri arasındaki ilişkinin incelenmesi* [*The relatıonshıp between the levels of learned resourcefulness and lifelong learning tendencies of primary school teachers*]. (Yayımlanmamış yüksek lisans tezi). İstanbul Aydın Üniversitesi ve Yıldız Teknik Üniversitesi, İstanbul.

Erdamar, G., Demirkan, Ö., Saraçoğlu, G., & Alpan, G. (2017). Lise öğretmenlerinin yaşam boyu öğrenme eğilimleri ve eğitsel internet kullanma öz-yeterlik inançları [The relatıonshıp between hıgh school teachers' lıfe-long learnıng tendencıes and theır educatıonal ınternet use self-effıcacy belıefs]. Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, 17(2), 636-657.

Ertan, S. (2022). *Pandemi sürecinde yaşam boyu* öğrenme *yeterlikleri ve* öz-yeterlik *algıları bağlamında* İngilizce öğretmenlerinin *e*-öğrenmeye *hazırbulunuşluklarının incelenmesi.* [*Analysis of the e-learning readiness of English teachers in the context of lifelong learning competencies and self-efficacy perceptions during the pandemic process*]. (Yayımlanmamış yüksek lisans tezi). Bartın Üniversitesi Lisansüstü Eğitim Enstitüsü, Bartın.

Fischer, G. (2000). Lifelong learning — more than training, R. Mizoguchi & P. A. M. Kommers (eds.), *Special issue on intelligent systems/tools in training and life-long learning, Journal of Interactive Learning Research*, 11(3/4), pp. 265-294. Erişim adresi https://l3d.cs.colorado.edu/wordpress/wp-content/uploads/2021/02/final-lifelonglearnin-more-training-1999.pdf

Göksoy, Ş. (2022). *Ortaokul* öğretmenlerinin *yaşam boyu* öğrenme *eğilimleri ile mesleki etik davranışları arasındaki ilişkinin incelenmesi*. [*Examining the relationship between secondary school teachers' lifelong learning tendencies and professional ethical behaviors*]. Burdur Mehmet Akif Ersoy Üniversitesi Eğitim Bilimleri Enstitüsü, Burdur.

Gökyer, N. (2019). Ortaokul öğretmenlerinin yaşam boyu öğrenme eğilimleri [Lifelong learning tendencies of secondary school teachers]. *Trakya Üniversitesi Sosyal Bilimler Dergisi, 1*(1), 145-159. 10.26468/trakyasobed.463102

Gökyer, N., & Karakaya-Cirit, D. (2018). Sınıf öğretmenlerinin yaşam boyu öğrenme eğilimleri [Lifelong learning tendencies of classroom teachers]. *Turkish Studies, 13*(18), 649-660. http://dx.doi.org/10.7827/TurkishStudies.13927

Gür-Erdoğan, D. (2014). Öğretmen *adaylarının yaşam boyu* öğrenme *eğilimlerine etki eden faktörler* [*Factors effecting lifelong learning inclinations of prospective teachers*]. (Yayımlanmamış doktora tezi). Abant İzzet Baysal Üniversitesi, Bolu.

Gür-Erdoğan, D., & Arsal, Z. (2015). The development of lifelong learning trends scale. *Sakarya University Journal of Education, 6*(1), 114-122.

İzci, E., & Özden, S. (2020). Ortaokul öğretmenlerinin yaşam boyu öğrenme eğilimleri ile eleştirel düşünme becerilerinin incelenmesi. *Journal of History School, 50*, 465-492.

Kabal, D. (2019). Öğretmenlerin *yaşam boyu* öğrenme *eğilimleri ve mutluluk düzeyleri* üzerine *bir* çalışma *(Kocaeli* örneği*)* [*A study on lifelong learning tendencies and happiness levels of teachers (Kocaeli sample)*]. (Yayımlanmamış yüksek lisans tezi). Kocaeli Üniversitesi, Kocaeli.

Kabataş, S., & Karaoğlan-Yılmaz, F. G. (2018). Evaluation of teachers' lifelong learning attitudes in terms of self-efficacy towards educational technology standards. *Bartin University Journal of Faculty of Education, 7*(2), 588-606.

Kalkınma Bakanlığı (2013). *Onuncu Kalkınma Planı (2014-2018).* Erişm adresi https://www.sbb.gov.tr/wp-content/uploads/2022/08/Onuncu_Kalkinma_Plani-2014-2018.pdf

Karakoç, A., & Karaca, S. (2022). Pandemi döneminde çevrim içi ders deneyimleri: niteliksel bir araştırma. [Online Course Experiences During the Pandemic Period: A Qualitative Research]. *J Nursology*, *25*(3), 153-160.

Kılıç, H. *(2015).* İlköğretim *branş* öğretmenlerinin *bireysel yenilikçilik düzeyleri ve yaşam boyu* öğrenme *eğilimleri (Denizli ili* örneği*). [Prımary subject teachers' ındıvıdual* ınnovatıveness levels *and lıfelong learnıng tendencıes (wıthın Denızlı provınce)].* (Yayımlanmamış Yüksek Lisans Tezi). Pamukkale Üniversitesi Eğitim Bilimleri Enstitüsü, Denizli.

Kılıç, M. S., & Recepoğlu, S. (2022). Sosyal bilgiler ve fen bilimleri öğretmen adaylarının pandemi döneminde ve öncesinde informal öğrenmelerinin incelenmesi. [Investigation of Informal Learning Activities of Social Studies and Science Teacher Candidates During and Before the Pandemic]. *Gazi* Üniversitesi *Gazi Eğitim Fakültesi Dergisi*, *42*(1), 1-28.

Kuş, Z., Mert, H., & Boyraz, F. (2021). Covid-19 salgını süresince eğitimde fırsat eşit(siz)liği: Kırsal kesimdeki öğretmen ve ebeveyn görüşleri, [Equalıty of opportunıty durıng the ongoıng covıd-19 pandemıc: teachers' and parents' vıews ın the rural sectıon]. *Eğitim Teknolojisi Kuram ve Uygulama, 11*(2), 470-493.

Lopes, H. & McKay, V. I. (2021). Lessons from the COVID-19 pandemic for lifelong learning. *Australian Journal of Adult Learning, 61*(2), 123-149.

MEB (2018). Millî Eğitim Bakanlığı Hayat Boyu Öğrenme Kurumları Yönetmeliği, https://hbogm.meb.gov.tr/meb_iys_dosyalar/2018_04/11093946_MEB_HBO_KURUMLARI_YYNETMELYYY.pdf

Morgan, G. A., Leech, N. L., Gloeckner, G. W., & Barrett, K. C. (2004). *SPSS for introductory statistics: Use and interpretation* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Ocak, G., Çengelci, S., & Yurtseven, R. (2022). Öğretmenlerin dijital okuryazarlık beceri düzeyleri ile yaşam boyu öğrenme eğilimleri arasındaki ilişkinin incelenmesi (Afyonkarahisar Örneklemi). [Examining the relationship between teachers'dijital literacy skill levels and lifelong learning tendencies (Afyonkarahisar Sample). *Uluslararası Sosyal Bilimler Eğiti-*

mi Dergisi, 8(1), 123-155. DOI: 10.47615/issej.1103143

Özdemir, E. (2014). Tarama yöntemi. [Survey method]. M. Metin (Ed.). *Eğitimde bilimsel araştırma yöntemleri* [*Scientific research methods in education*] içinde (s. 77-97). Ankara: Pegem Akademi.

Özdemir, Ü. (2022). *Ortaöğretim kurumlarında* çalışan öğretmenlerin *yaşam boyu* öğrenme *eğilimleri ile 21. yüzyıl becerilerine ilişkin* öz *yeterlik algı düzeyleri arasındaki ilişkinin incelenmesi (Sakarya* örneği*).* [*The correlation between lifelong tendencies and 21st century skills self efficacy perception of secondary school teachers*]. Sakarya Üniversitesi Eğitim Bilimleri Enstitüsü, Sakarya.

Power, C. N., & Maclean, R. (2013). Lifelong Learning: Meaning, challenges, and opportunities, R. Maclean et al. (eds.), *Skills development for inclusive and sustainable growth in developing Asia-Pacific,* Technical and Vocational Education and Training: Issues, Concerns and Prospects 19, Asian Development Bank 2013, 29-42, doi: 10.1007/978-94-007-5937-4_2

Poyraz, H. (2014). Öğretmenlerin *yaşam boyu* öğrenmelerini *etkileyen faktörler ile kurumları tarafından desteklenme algıları arasındaki ilişki (Sakarya ili* Örneği*)* [*The relationship between the factors effecting teachers' lifelong learning and their perceptions about the support from schools*]. Yayımlanmamış Yüksek Lisans Tezi. Sakarya Üniversitesi, Sakarya.

Resmî Gazete (2006). *Dokuzuncu Kalkınma Planı (2007-2013).* Sayı 26215. https://www.sbb.gov.tr/wp-content/uploads/2022/07/Dokuzuncu_Kalkinma_Plani-2007-2013.pdf

Ryan, P. (2003). *Lifelong learning: Potential and constraints with special reference to policies in the United Kingdom and Europe*, ILO Working Papers 994096163402676, International Labour Organization. Erişim adresi http://www.ilo.int/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_103988.pdf

Sevinç, Ş., & Çelebi, M. (2020). Öğretmenlerin yaşam boyu öğrenme eğilimleri ile iş doyumları arasındaki ilişkinin incelenmesi [Investigating the Relationship Between Lifelong Learning Trends and Job Satisfaction of Teachers]. *Uluslararası Toplum Araştırmaları Dergisi, 10*, 3533-3564.

Shubenkova, E. V., Badmaeva, S. V., Gagiev, N. N., & Pirozhenko, E. A. (2017). Adult education and lifelong *learning as the basis of social and employment path of the modern man. Revista* ESPACIOS, *38*(25).

Stainstreet, P. (2020). Thinking differently, together: Towards a lifelong learning society, *International Review of Education*, 66, 449–455 https://doi.org/10.1007/s11159-020-09858-7

Sümer, N. (2000). Yapısal eşitlik modelleri. [Structural equation models]. Türk Psikoloji Yazıları, 3(6), 49-74.

Şen, N. (2021). İngilizce öğretmenlerinin *mesleki yeterlikleri ile hayat boyu* öğrenme *eğilimleri ve teknolojiyi entegre etme* öz *yeterlikleri arasındaki iliş-*

kilerin incelenmesi. [Examining the relevance between English teachers' lifelong learning tendencies with vocational qualifications and self-efficacies integrating technology]. (Yüksek lisans tezi). Bartın Üniversitesi Lisansüstü Eğitim Enstitüsü, Bartın.

Tanatar, E., & Alpaydın, Y. (2019). Öğretmenlerin iş değerleri ile yaşam boyu öğrenme eğilimleri arasındaki ilişkinin incelenmesi [The relationship between teachers ' work values and lifelong learning tendencies]. *Turkish Studies, 14*(3), 1775-1790. doi: 10.29228/TurkishStudies.22598

Taş, B. (2020). Öğretmenlerin *idealistlik düzeylerinin yaşam boyu* öğrenme *eğilimleri ile ilişkisi* [*The relationship between teachers' idealist levels and lifelong learning tendencies*]. (Yayımlanmamış yüksek lisans tezi). Kahramanmaraş Sütçü İmam Üniversitesi, Kahramanmaraş.

Waller, R., Hodge, S., Holford, J., Milana, M., & Webb, S. (2021). Reassessing the social benefits of lifelong learning in light of the COVID pandemic, *International Journal of Lifelong Education*, *40*(5-6), 435-438. https://doi.org/10.1080/02601370.2021.2017219

Yasa, H. D. (2018*).* Öğretmen *adaylarının yaşam boyu* öğrenme *eğilimleri ile bilgi okuryazarlığı becerileri arasındaki ilişkinin değerlendirilmesi* [*Analysis of the relationship between the lifelong learning tendencies and information literacy skills of teacher candidates*]. Yayımlanmamış Yüksek Lisans Tezi. Bartın Üniversitesi, Bartın.

Yıldız, A., & Vural, R. A. (2020). *Covid-19 pandemisi ve derinleşen eğitim eşitsizlikleri. Türk Tabipleri Birliği*, Covid-19 Pandemisi Altıncı Ay Değerlendirme Raporu, 556-565. Erişim adresi https://www.ttb.org.tr/kutuphane/covid19-rapor_6/covid19-rapor_6_Part64.pdf

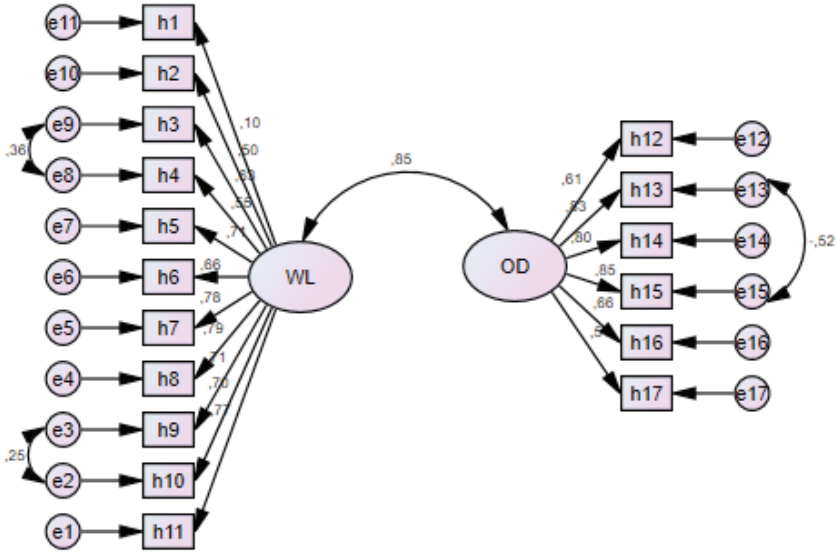
Yılmaz, M. (2016). Öğretmenlerin yaşam boyu öğrenme eğilimlerinin incelenmesi [Examination of teachers' lifelong learning tendencies]. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 13*(35). 253-262.

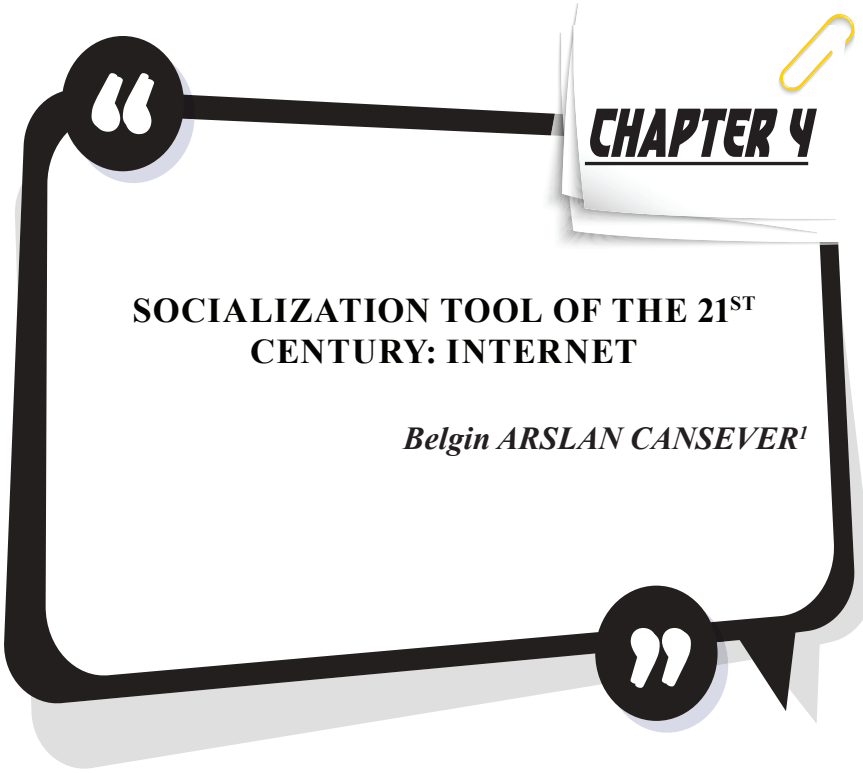
Yılmaz, R., & Beşkaya, Y. M. (2018). Eğitim yöneticilerinin yaşam boyu öğrenme eğilimleri ile bireysel yenilikçilik düzeylerinin incelenmesi [Investigation of lifelong learning trends and individual innovativeness level of education administrators]. *Ankara* Üniversitesi *Eğitim Bilimleri Fakültesi Dergisi, 51*(1), 159-181. 10.30964/auebfd.406246

Yurdakul, C. (2016). Özerk öğrenme *ve yaşam boyu* öğrenme *arasındaki ilişkinin incelenmesi* [*An investigatıon of the relationshıp between autonomous learning and lifelong learning*]. (Yayımlanmamış Yüksek Lisans Tezi). Sakarya Üniversitesi, Sakarya.

Yüksek Planlama Kurulu (2014). *Türkiye Hayat Boyu* Öğrenme *Strateji Belgesi ve Eylem Planı (2014-2018)*. Erişim adresi http://hbogm.meb.gov.tr/meb_iys_dosyalar/2015_04/20025555_hbostratejibelgesi_2014_2018.pdf Erişim tarihi 16.01.2022.

Appendix 1. *Confirmatory Factor Analysis Diagram*





CHAPTER 4

SOCIALIZATION TOOL OF THE 21ST CENTURY: INTERNET

Belgin ARSLAN CANSEVER[1]

1 Assoc. Prof. Dr. Belgin ARSLAN CANSEVER, Ege University, Faculty of Education, Elementary Education Department, ORCID ID: 0000-0002-0720-8096

1. Introduction

Technology and society mutually affect each other, and this relationship is not yet fully understood as it contains complex elements. Since the 21st century is an age where technology changes and develops rapidly, it is an inevitable fact that technology affects society in different ways and society directs technology. This interaction process also shapes and redesigns the socialization process of the individual. Socialization can be described as learning how an individual, born into a certain society, should behave towards other individuals in the society, and how to cope with the problems he/she may encounter throughout his/her life. During the socialization process, the individual internalizes social norms and values (Arslan Cansever, 2010; 2013). While socialization is limited to family, relatives and friends in traditional societies, various institutions have shown their effect in modern societies. In other words, with the formation of nation-states, where the existence of different institutions is mentioned, socialization has begun to be realized through contemporary institutions such as family, education, health, social security and law. In this period, socialization was mostly realized within the framework of these institutions where official relations were experienced (Sayın, 1994). Family, school, group of friends, written and verbal mass media and the Internet play an active role in the socialization progress in modern societies. Among these, the Internet is a technological innovation that affects every aspect of daily life, from the possibilities it provides in the field of communication to innovations in banking transactions. However, the Internet has the potential to lead to some changes in people's attitudes and behaviors in social life, as well as in interpersonal communication and interaction (Arslan Cansever, 2010; 2018). The widespread use of the Internet, especially as a communication tool, has made it a powerful socialization tool (Lee, Conroy, & Hii, 2003). The Internet offers a rich content to its users and increases the number of users day by day with different usage areas. According to sociologists, chat rooms, e-mails and websites, which are characterized as fashionable networks, constitute the most important and influential content of new cultures and communications. An increasing number of individuals spend more and more time in front of the computer and prefer to communicate with other people through machines. This situation leads people to think about how all these means of communication, which quickly enter the lives of individuals, will affect and shape social life (Macionis and Plummer, 2006). In this period, the increase in the popularity of social networks, the beginning of all kinds of communication through these networks, is seen as a new socialization process. These developments affect individuals' relationships, communication, socialization processes, lifestyles and interactions with the environment (Karagülle and Çaycı, 2014). With the

rapid spread of information technologies, the world is moving towards a global world, and institutions in modern societies lose their effectiveness in the face of globalization. This situation, of course, requires that the socialization process be evaluated within the framework of a new form and understanding. Among the mass media, especially the Internet, individuals play an active role in the socialization process in opening the doors of the global world. In this context, it is seen that it is inevitable for societies to socialize the individuals they interact with in accordance with the requirements of the age in order to maintain their existence. Within the scope of this section, first of all, the network society, which describes the social structure of the 21st century, and the socialization process in this social structure will be discussed. Then, the socialization tools will be discussed and among these tools, the feature of the Internet as a socialization tool of the 21st century will be emphasized.

2. Network Society

Castells (2000; 2005) defends the thesis that the main factor that reshapes and organizes the material basis of 21st century societies is the information technology revolution. Castells, who defines the society in question as the Network Society, explains this theory based on four main features. The first feature of this paradigm is that its raw material is knowledge. In Castells' network society, knowledge is considered as one of the basic components that shape and direct this new social structure. The second feature is related to the diffusion of new technologies. With the acceleration and cheapening of technological developments, technology also shows a faster course compared to previous periods. The third feature is that it is based on the system or networking logic that uses these new information technologies. Being based on system or network logic brings with it coordinated and collaborative work. The last feature is that it is based on producing innovation. This last feature has to do with encouraging creative ideas or inventions. According to Castells, the network society is a social organization that is decentralized, does not have a hierarchical order and is based on horizontal relations. This social structure has entered all areas of life, including social, economic, political, educational and symbolic. In Castells' network society, where there is a very strong relationship between technology and social structure, information flow and socialization processes are carried out through the network. Mass media has turned into a global network that is interconnected around the world. Santrock (2009) states that the network society exhibits two basic features. The first of these features is that these societies use especially digital technology in communication and information management. They have basic infrastructure opportunities in order to use digital technology in social, political and economic fields. The second characteristic is that

the institutionalization and reproduction of these network societies depend on the relationship of human organizations in the social, political and economic fields. When evaluated in general, network society shows a technological society structure (Barney, 2004). This structure is a new social structure and process compared to the previous ones. In network societies, family, school, etc. social relations between basic institutions such as individuals and institutions are transformed and become more flexible and variable (Castells, 1996; 2005). This situation can be described as an indication that socialization in the network society will also have characteristic features.

3. Definitions and Features of Socialization Process

Socialization is a lifelong process in which individuals construct their own personal life stories, learn the elements and rules of their culture (Macionis & Plummer, 2006). In adition socialization is the process of gradually becoming a self-conscious, knowledgeable person by acquiring skills that are valid for the culture of the society in which she is born (Giddens, 2009). Fichter (2011) describes socialization from two different perspectives, objective and subjective. Objectively, the process of socialization is the process by which the culture of the society is passed from one generation to the next and the individual adapts to accepted and approved ways of organized social life. Subjectively, the socialization process is is a learning process that takes place in the individual during the adaptation of the individual to the people around him/her. Socialization takes place in a certain society at a certain place and time, as well as in a certain society, due to the cultural difference between societies. Since each society's unique socialization process may differ, each individual can complete the socialization process in the society they live in (Tezcan, 1999; 2010). Socialization is a complex process in which the individual learns social knowledge, skills and roles, and internalizes the norms, values, attitudes and behaviors of the society. In this process, the individual plays an active role and interacts with the society. The society allows individuals to adapt themselves by socializing them in this intergenerational learning-teaching process, and the socialized social actors reproduce the society in the same way. Therefore, socialization acts as a tool in this reproduction process (Arslan Cansever, 2010). Socialization, starting in the family environment, continues its existence in different institutions called socialization tools.

3.1. Tools of Socialization

It is seen that the attitudes, behaviors, values and perceptions of individuals are constantly changing within the socialization process, and it is striking that there are many agents directing this process. It is possible

to define them as socialization agents (Çambay, 2015). Socialization agents are the structured groups or contexts in which socialization processes take place. Socialization takes place in primary and secondary socialization stages, which include different socialization agents. The primary socialization stage is experienced in infancy and early childhood and is the period when cultural learning is most intense. During this period, children learn the language and basic behavioral patterns that will form the basis for their further learning (Fulcher & Scott, 2007; Giddens, 2009). In primary socialization, the foundations of life and world knowledge that individuals need to keep up with their environment are laid. In this process, the principles of people's adaptation to the world and society around them are revealed. individual's life It includes the process of maintaining its existence safely and regulating its relations with society so that it can survive. Individuals begin to trust themselves and their environment during this period. For this reason, primary socialization is handled in a period that begins in the womb and continues until advanced childhood. The different roles that the child acquires in society and the different behavior patterns he develops through these roles correspond to the primary socialization process. In fact, not only the processes of children to develop their own behaviors, but also the expectations in their relations with the people or groups, their ability to meet their expectations, and the new behavior models they develop are among the important topics that stand out in this period. Family and school are among the most important institutions of this period; because the child experiences the first socialization processes first in the family and then in the school (Altunay, 2015). Primary socialization is limited to family members in the family environment and lays the groundwork for further learning. Through relationships with parents or caregivers, children begin to learn to be members of the society to which they belong. They learn to interact and communicate with other people through the spoken language. Family relationships, especially mother-child relationships play an important role in primary socialization (Fulcher & Scott, 2007). Because primary groups are made up of fewer people, the small size allows for frequent and intense face-to-face contact. These groups serve as the main socialization agent in the acquisition and internalization of primary group beliefs and attitudes for most individuals. The family, as the primary group, is the main focus in the realization of personal satisfaction. The family is an effective element in the formation of social control, providing its members with a general state of well-being, friendship, self-perception, trust, love and commitment (Eshleman & Bullcroft, 2009). Another main topic of socialization processes is defined as secondary socialization. Secondary socialization corresponds to the assimilation of institutional sub-worlds that are important in the consolidation of individuals' place in society. It is structured by the individual's relationship with the

assimilated lower worlds. Different behavior patterns that an individual develops under different roles in society, his ability to take part in society with different identities, his ability to manage his relations with different people and groups; defined in secondary socialization processes (Altunay, 2015). The secondary socialization stage takes place during adolescence and adulthood. At this stage, secondary group agents take over some of the responsibility from the family. Educational institutions, peer groups, organizations, both traditional and new mass media and elements of business life are becoming socialization forces for individuals. Social interactions, both in primary and secondary groups, help people learn about their culture's value judgments, behavioral patterns, norms and beliefs (Eggen & Kauchak, 2010; Giddens, 2009). The experiences of the child in the primary socialization stage are determinative on the relations he establishes with other individuals in the secondary stage. In addition, face-to-face, intense and frequent relationships in the primary stage turn into more complex networks of relationships in the secondary stage. Each of the agents, both primary and secondary, socializes the child, adolescent or adult within the framework of their own models and values in a larger world. The family has certain rituals, the boundaries of which are determined by the society; the school has a set of mandatory rules; groups of friends help with various coding and games, and mass media tools are helpful in bringing the individual into social life according to the various innovations brought by both traditional and today's technology. The first process of socialization begins with the birth of the individual in the family institution. Then, this process continues in the school environment, which is another important socialization agent. Peer groups, which are the child's own age group, are also one of the important factors in the socialization process. Mass media, which has become an indispensable part of daily life, contributes to the adaptation process of the individual to society, if a controlled and conscious use can be achieved. In addition to these four main socialization tools, there are other social institutions that are effective in the socialization of the individual. Examples of these institutions are relatives, neighbors, non-governmental organizations, artistic activities, etc. (Doğutaş, 2021).

3.1.1. Family

The family, which stands out as the first socializing tool in the life of the individual, is the first and most important step in the successful realization of socialization. Integration of the individual with the society and adaptation to the society depends primarily on the roles and behaviors in this institution (Çambay, 2015). The family prepares the child for social rules and life. It can be said that family is the only environment where children learn and socialize social norms and values until school life

begins. For this reason, the family plays a central role in the socialization of the child and becoming a member of the society (Doğutaş, 2021). Socialization is a complex process in which cultural transfer continues. The family plays an effective role in this transmission. As a result of the socialization function, the adult type targeted by families with different socio-economic and socio-cultural opportunities and equipment also differs (Macionis & Plummer, 2006). In the development of the individual, the personal characteristics and cultural characteristics of the parents, especially in the family environment, are determinative. This is due to the fact that parents are an effective role-model in the socialization of the individual. The type of relationship in which the individual lives in the family guides the individual in all social relations. The school, friendship groups, business life and all other social institutions, which are included after the family, provide the transfer of cultural elements through inter-individual relations and thus the reproduction of the society.

3.1.2. The Peer Group

The peer group is an important socialization agent in terms of being a source of information for the child and providing the opportunity to make comparisons with the world outside the family (Santrock, 2009). While the new mass media allow the relative increase in social networks and interpersonal mediated relations among peer groups, it also paves the way for the formation of a peer pressure. Such pressures, which are especially common among adolescents, are not welcome among peer groups, such as keeping their mobile phones switched off or not being able to respond to instant messages as a result of not being online at school times, not having knowledge about a computer game that is common among adolescents. leads to This situation enables adolescents who want to be included in a group to act in accordance with the rules of the friend group they want to join in their behavior (Arslan Cansever, 2010). Social networks are becoming a dominant socialization agent, especially among young people. Socialization with social media networks also affects both the development of the self and how others are defined. How many “friends” a person has in online networks can be considered as capital. Realizing new social and economic opportunities with friends on social networking sites is interpreted as a return of social capital (Schaefer, 2013). Socialization in peer groups in the network society is shaped in the context of fashionable networks, and it is also an indicator of the acceptance of individuals in a group.

3.1.3. School

Educational institutions make important contributions to raising individuals who are compatible with society. These institutions provide

the continuity of the society through education programs in creating a desired society structure foreseen by the state mechanism that directs the society. At the same time, it strives for a human profile that has the knowledge, skills and equipment suitable for the requirements of the age (Çalışkan and Kılcan, 2018). Education, which is a central element in the lives of individuals, is effective both in the organization of the society, in the building of talents and in gaining professional knowledge and skills to individuals. The coexistence of the same age groups under an institutional structure and the increase in group interactions occur in the school environment. In this context, it can be said that the school is one of the effective agents in the socialization process. The sincere and primary form of relationship in the family is replaced by the official relations at school within the framework of certain rules. In addition to the basic knowledge and skills of life at school, children and adolescents gain a social identity by interacting with their teachers and friends (Arslan Cansever, 2009; 2010; 2013). In modern societies, specialized institutions are taking over the roles of education, training and childcare. The school system in such societies; educating children, it has become a multi-purpose situation such as informing them about life-related issues, raising them as individuals who can meet the demands of working life, and this function of the family has been taken away from them (Bessenyei, 2008). The school is a formal and organized socialization institution that comes after the family and is highly influential on the individual. The school provides individuals with knowledge and skills, teaches the responsibilities of collective living, and helps individuals adopt social values. School is a formal and organized socialization institution (Giddens, 2009). Therefore, it can be said that school is one of the socialization tools that are effective in the socialization of children.

3.1.4. Mass Media

The media fulfills the activities of the beginning of social life and meeting the need for news, which is among the needs of the people who have adapted to this life. With this aspect, the media was first adopted by the societies and increased its effectiveness on social life over time. This effect is often seen in the form of directing the society with the news delivered. In addition, the society of the media; cultural, social, administrative, etc. It is known that it directs the society it affects in the fields (Varlıer and Zafer, 2019). An important socialization tool that enables the integration of the individual with the society and affects the experience, attitude and worldview is also evident in the form of the media, which is a very wide-content tool such as newspapers, magazines, television and radio (Çambay, 2015). Mass media are becoming a part of the lives of individuals day by day. These tools offer a lot of information about roles in social life for

children and adolescents. The relations established with the mass media in the transfer of information in question are shaped by the society of which the family is a member and the culture of this society. Among the mass media, newspapers, movies, radio and television are considered as traditional mass media; computers, internet, mobile phones, game consoles, digital music players are included in the new mass media classification. These new mass media tools have an important place in the lives of individuals (Arslan Cansever, 2009; 2010). In the globalization process, socialization takes place within the child-machine relationship (Sayın, 1994). Today, children grow up under the influence of the global media world. The debates about globalization are on the one hand economic and commercial; On the other hand, it is carried out in two directions, cultural and traditional. When we look at the impact of globalization on social, cultural, economic and political processes, it is possible to say that it also reveals new forms of society. It is generally accepted that globalization and increased communication possibilities are inseparable (De Block and Buckingham, 2007). According to Buckingham (2007), the period before computers dominate daily life is the natural childhood period. The period after the widespread use of computers is the computerized childhood period.The interaction with humans in natural childhood has left its place to communication with machines in computerized childhood. In addition, abstract intelligence replaces emotions; programming in place of interaction, cognition in place of bodily-kinesthetic experience; accelerated development replaces natural development; calculating and measuring the location of arts and crafts; simulation replaces real hands-on experience; logic replaces intuition; Information processing took the place of imagination and instruction took the place of play. According to Ryan (2019) human relations are going through an unprecedented transformation process. The structure of political, commercial and cultural life is changing. The distinguishing feature of the digital age we live in is the absence of a central point. Instead, there are many intertwined points, many interconnected. Unusual and unique, the Internet is at the center of this change.

3.1.4.1. Internet as a Socialization Tool

The technology revolution is an important part of the information society. With this revolution, people are using computers as an alternative to their previous communication habits. In other words, communication by letter and telephone has given way to communication with computers over the Internet. Individuals who grow up in such a society naturally live and socialize in a technologically different world than their parents, who grew up knowing only the television world (Santrock, 2009). The Internet is one of the most effective tools of the information age and

has the power to influence many fields from education to health, from communication to marketing and economy. Developments in the field of technology have highlighted the use of the Internet for access to information and communication (Kuzu, 2011). The Internet is described as the most important messenger and mediator of the new world order that comes with globalization. When it is considered in terms of individuals, the internet is not only a communication channel, but also it is used for shopping, working, entertainment, etc. It is possible to say that it is useful for realizing online activities. All these opportunities offered by the Internet to individuals have brought about a rapid increase in the use of the Internet both in the world and in Turkey. According to the data announced by We are Social (2021), the world average rate of internet usage is 59% according to the total population in 2020; In 2021, this rate increased by 0.8% to 59.5%. A greater increase was observed in Turkey compared to the world, and this rate increased by 4.1% from 74% to 77%. While the world average of social media users by population in 2020 is 49%, it is 64% in Turkey; In 2021, while the world average increased to 53.6%, it was determined that Turkey's average increased to 70.8%. As can be seen, the rates of internet and social media users are increasing in the world and in Turkey, and even the averages of Turkey are increasing faster than the world averages (Kaba and Doğan, 2021). The Household Information Technologies Survey of the Turkish Statistical Institute (TÜİK, 2019; TÜİK, 2020) reveals that the rate of access to the Internet from home, the number of individuals using the internet and the rate of access to the services received are increasing rapidly. In this increase, which has gained momentum over the years, the effect of the pandemic leading to the use of information technologies has been added. While the rate of Internet access from home was 88.3% in 2019, this rate was 90.7% during the pandemic period. The rate of individuals using the Internet increased from 75.3% to 79.0%. The widespread use of the Internet has a profound effect on social structures as well as the economy. The Internet has enabled the emergence of new global norms and values, cultural forms, habits and their exchange among individuals, thus globalizing the cultural field. In this new cultural field, the forms of interpersonal relations have differentiated (Arslan Cansever, 2010). The Internet is one of the most common mass media with a usage rate among children. Statistics show that the rate of Internet usage among adults, youth and children has increased in Turkey. Children can communicate with people far away, play games, have fun or do research via the Internet. This situation limits face-to-face communication and negatively affects children's socialization (Doğutaş, 2021). The Internet has benefited social life by bringing many conveniences to daily life with better, faster and economical communication opportunities. However, it also brought with it the problems of social life (Fulcher & Scott, 2007).

This is related to the fact that the Internet has the potential to lead to significant changes in people's attitudes, behaviors and habits in social life, as in many innovations in the technological field. Social scientists are debating whether the change caused by the Internet, which has begun to affect a number of social structures from family relations to friendship relations, will contribute to the welfare and happiness of humanity or make people unhappy.

4. Conclucion

Socialization is a process of social experience that provides the relationship between the individual and society, starting with birth and continuing until death. In this process, the individual learns the cultural characteristics of the society he lives in by interacting with other individuals and groups in the society. Socialization is seen as a natural and necessary process for the continuation of social life. The socialization process is affected by the changes experienced by the societies and accordingly adapts itself to these changes. In this context, in traditional societies, the process has been realized with face-to-face relations with family and relatives, while in modern societies, it has been realized within the framework of institutions with different functions such as education, health, social security and law as well as the family. These institutions shared the responsibility on the family, which is seen in traditional societies, and enabled the child to have social experiences in different social structures. With the experience of the globalization process, there has been an increase and diversification of communication opportunities. This situation made it possible for the socialization process to take place in the child-machine relationship in parallel with the increasing technological developments (Arslan Cansever, 2010). Socialization is a dynamic structure that allows the transfer of the social and cultural to all generations. In this structure, the phenomenon of technology is an important socialization tool. In this context, it becomes evident as the driving force of both the construction and shaping of the social structure (Çambay, 2015). Parallel to the technological developments in the 21st century, the generation that was born in this environment and grew up with this culture was called digital natives by Prensky (2001a, 2001b). Digital life and the items offered in this life are a natural part of the socialization process for digital natives who can easily and quickly adapt the innovations brought by technology to their lives. According to Ryan (2019), who states that we are on the verge of a great change in human relations, political, commercial and cultural life is changing. The centralized, hierarchical and standardized structures of the industrial age are giving way to the emerging economy of the digital age. The said digital transformation also redesigns the social structure. In this transformation process, the Internet plays an effective

role as a socialization agent. The network plays a central role in this new social structure defined by Castells (1989; 1996; 2000). Networks are open structures that can expand indefinitely, and the network-based social structure is a highly dynamic, open system. At the same time, these networks are conducive to innovation. Network society refers to a new type of society characterized by computers and information technologies. The Internet is a medium that anyone can use for communication and access to information. This environment allows people to share their thoughts with other users. The Internet can bring together people from different nationalities who are geographically far from each other on a social network. The benefits of the internet in the flow of daily life bring about the intense use of this medium in different areas. Despite all its positive contributions, this situation makes interpersonal relations more superficial day by day. It is observed that direct relations with family, close relatives and friends have begun to be experienced more distantly than in previous times. It is not possible to say that only the Internet has caused the transformation in these relations. However, many studies in the literature (Morahan and Schumacher, 1997; 2000; Müezzin, 2017; Zorbaz and Dost, 2014) reveal that the Internet causes social isolation for the individual. Social interaction, common sharing and interpersonal communication have an important place in the socialization of the individual. On the other hand, it is observed that there is a change from the norms and values of the nation-state, which is aimed to be gained to the individual in the socialization process, towards global norms and values. This change also necessitates the erosion of social institutions and inter-individual relations. Especially emerging generations are faced with a different socialization process than the generation of their parents and teachers who raised them with the effect of the virtual society on the internet. This situation shows that adolescents try to socialize in the conflict environment between two different socialization styles that adopt different norms and values. Social changes in the 21st century constitute the building blocks of the new world order. This new world order demands individuals socialized within the framework of global norms and values. The adults of the future have to adopt the global one while preserving their local characteristics in the socialization process. In this process, the Internet fulfills its function as a socialization tool for new generations.

REFERENCES

Altunay, A. (2015). Bir sosyalleşme aracı olarak yeni medya. *Selçuk* İletişim *Dergisi. 9*(1), 410-428.

Arslan Cansever, B. (2009). Ergenlerin toplumsallaşmasında internetin etkilerine ilişkin öğretmen görüşleri. *Ege Eğitim Dergisi, 10*(1), 137-160.

Arslan Cansever, B. (2010). *Ergenlerin toplumsallaşmasında internet kullanımının aile ve okul bağlamında yarattığı sorunlar* (Yayımlanmamış doktora tezi). Ege Üniversitesi, Sosyal Bilimler Enstitüsü, İzmir.

Arslan-Cansever, B. (2013). Ergenlerin internet kullanımın toplumsal ilişkilerde yarattığı sorunlar. (Ed.: M. Kalkan ve C. Kaygusuz). İnternet *Bağımlılığı Sorunlar ve* Çözümler. Ankara: Anı Yayıncılık.

Arslan-Cansever, B. (2018). An introduction to media literacy. In J. Cubbage (Ed.), *Handbook of research on media literacy in higher education environments* (pp. 41-59). IGI Global. 10.4018/978-1-5225-4059-5.ch003

Barney, D. (2004). *The Network Society*. Cambridge: Polity Press.

Bessenyei, I. (2008). Learning ve Teaching in the Information Society e-learning 2.0 ve Connectivism, In R. Pintér (Ed). *Information Society: from theory to political practice, coursebook*. Budapest: Gondolat-Új Mveátum, 202–211.

Buckingham, D. (2007). *Beyond Technology: children's learning in the age of digital culture*. Cambridge: Polity Press.

Castells, M. (1989). *The Informational City*. Oxford: Blackwell.

Castells, M. (1996). *Information Age: Economy, Society ve Culture*, Volume I: The Rise of the Network Society. Oxford: Blackwell.

Castells, M. (2000). *The Rise of the Network Society*. Madlen, MA: Blackwell Publishers, 2 nd edition.

Castells, M. (2005). Enformasyon Çağı: Ekonomi, Toplum ve Kültür. Birinci Cilt: *Ağ Toplumunun Yükselişi*. Çev. Ebru Kılıç, İstanbul: Bilgi Üniversitesi Yayınları.

Çalışkan, H. (Editör) and Kılcan, B. (2018). *Sosyal Bilgiler* Öğretimi. İstanbul: Lisans Yayınları.

Çambay, S. O. (2015). Bir toplumsallaşma aracı olarak yeni medya: kuramsal bir değerlendirme. *Karabük* Üniversitesi *Sosyal Bilimler Enstitüsü Dergisi*, 5 (2), 237-247.

De Block, L. & Buckingham, D. (2007). *Global Children, Global Media: Migration, media ve childhood*. New York: Palgrave Macmillan.

Doğutaş, A. (2021). Temel toplumsal süreçler ve eğitim. *Eğitim Sosyolojisi* (Avcı, M. and Özalp, A. (Eds.). 2. Baskı, İstanbul: Lisans Yayıncılık.

Eggen, P. & Kauchak, D. (2010). *Educational psychology, windows on classrooms*. Eight edition, Pearson International Edition, Upper Saddle River, New Jersey: Pearson Education Inc.

Eshleman, J. R., & Bullcroft, R. (2009). *The Family.* 12 th edition, NJ: Prentice Hall.

Fichter, J. (2011). Sosyoloji Nedir? Çev. Nilgün Çelebi, 10. Baskı, Ankara: Anı Yayıncılık.

Fulcher, J., & Scott, J. (2007). *Sociology*. New York: Oxford University Press.

Giddens, A. (2009) *Sociology* (Sixth Edition). Cambridge : Polity Press.

Kaba, İ. & Doğan, T. (2021). Bilişim teknolojileri kullanım ölçeği: Geçerlik ve güvenirlik çalışması. *Turkish Studies – Education; 16*(3): 1547-1572.

Karagülle, A. E., & Çaycı, B. (2014). Ağ toplumunda sosyalleşme ve yabancılaşma. *Turkish Online Journal of Design Art and Communication, 4* (1) , 1-9. Retrieved from https://dergipark.org.tr/en/pub/tojdac/issue/13016/156815?publisher=deniz-yengin

Kuzu, A. (2011). İnternet ve Aile. *Aile ve Toplum, Ekim, Kasım, Aralık-9-31.*

Lee, C. K.C., Conroy, M. D.,& Hii, C. (2003). The Internet: A Consumer Socialization Agent for Teenagers. ANZMAC 2003 Conference Proceedings Adelaide, 1–3 December, 1708–1715. Retrieved from **http://reference.kfupm.edu.sa/content/i/n/the_internet__a_consumer_socialization_a_77038.pdf**

Macionis, J. J. & Plummer, K. (2006). *Sociology: A global introduction*. 3 rd edition, London: Pearson Education Limited.

Morahan-Martin, J., & Schumacher, P. (1997). Gender differences in internet usage, behaviours and attitudes. Joint Meeting of the 7th International Conference on Human-Computer Interaction and 13th Symposium on Human Interface, Japan.

Morahan-Martin, J., & Schumacher, P. (2000). Incidence and correlates of pathological internet use among college students. *Computers in Human Behavior, 16*(1), 13-29. https://doi.org/10.1016/S0747-5632(99)00049-7

Müezzin, E. (2017). Lise öğrencilerinde internet bağımlılığının yoksunluk, kontrol güçlüğü, işlevsellikte bozulma ve sosyal izolasyon bağlamında incelenmesi. *Sakarya University Journal of Education, 7*(3), 541-551. http://dx.doi.org/10.19126/suje.323075

Prensky, M. (2001a). Digital natives, digital immigrants. *On the Horizon*. NCB University Press, Vol.9 No. 5.

Prensky, M. (2001b). Do they really think differently? *On the Horizon*. NCB University Press, Vol. 9 No. 6.

Ryan, J. (2019). İnternetin *Geçmişi ve Dijital Gelecek*. Çev. Birsen Keleş, Ankara: TÜBİTAK Popüler Bilim Kitapları.

Santrock, J. W. (2009). *Educational Psychology*, McGraw-Hill International edition, (4 th ed.), New York: The McGraw-Hill Companies Inc.

Sayın, Ö. (1994). *Sosyolojiye Giriş: Sosyolojinin Temelleri*. İzmir: Neşa Ofset Amb.San. ve Tic. A.Ş., 2. Baskı.

Schaefer, R.T. (2013). *Sosyoloji*. Çev. editörü Simten Coşar, Ankara: Palme Yayıncılık.

Tezcan, M. (1999). *Eğitim Sosyolojisi*, 12. Baskı, Ankara: Şafak Matbaacılık.

Tezcan, M. (2010). *Sosyolojiye Giriş*. Genişletilmiş 5. Baskı, Ankara: Anı Yayıncılık.

Türkiye İstatistik Kurumu. (2019, Ağustos). Hanehalkı Bilişim Teknolojileri (BT) Kullanım Araştırması. Türkiye İstatistik Kurumu. https://data.tuik.gov.tr/Bulten/Index?p= Hanehalki-Bilisim-Teknolojileri-(BT)- Kullanim-Arastirmasi-2019-30574

Türkiye İstatistik Kurumu. (2020, Ağustos). Hanehalkı Bilişim Teknolojileri (BT) Kullanım Araştırması. Türkiye İstatistik Kurumu. https://data.tuik.gov.tr/Bulten/Index?p= Hanehalki-Bilisim-Teknolojileri-(BT)- Kullanim-Arastirmasi-2020-33679

Vardarlıer, P. & Zafer, C. (2019). Medya ve toplum. *Selçuk* Üniversitesi *Sosyal Bilimler Meslek Yüksekokulu Dergisi, 22* (2) , 355-361 . DOI: 10.29249/selcuksbmyd.472210

Zorbaz, O., & Dost, M. T. (2014). Lise öğrencilerinin problemli İnternet kullanımının cinsiyet, sosyal kaygı ve akran ilişkileri açısından incelenmesi. *Hacettepe* Üniversitesi *Eğitim Fakültesi Dergisi, 29*(1), 298–310.

CHAPTER 5

THE APPLICABILITY OF HOME EXPERİMENTS IN DISTANCE EDUCATION AND STUDENTS' VIEWS ON HOME EXPERIMENTS[1]

Arzu ASA[2]

Sevgül ÇALIŞ[3]

1 Arzu ASA, MEB Bursa Hasanağa Ş.P.E. Kadir Çavuşoğlu Ortaokulu, OrcID: 0000-0002-8608-2179

2 This study is derived by Arzu ASA's masters's thesis named 'Basit araçgereçlerle evde yapılan deneylerin öğrencilerin bilimsel süreç becerilerine ve motivasyonlarına etkisi: Acil uzaktan eğitim'.

3 Doç. Dr. Sevgül ÇALIŞ, Bursa Uludağ Üniversitesi Eğitim Fakültesi Matematik ve Fen Bilimleri EğitimiBölümü, Fen Bilgisi ABD, OrcID:0000-0002-5195-3210, scalis@uludag.edu.tr

INTRODUCTION

Being able to think and develop oneself is one of the basic features that make humans different from other living things on earth. Throughout history, people have had to find a way to cope with the difficult conditions they have faced, and this has led people to produce knowledge and learn. Although the concept of learning has quite complex sub-dimensions, it is actually a need. Although it is possible to meet this need with our life-long experiences, schools are the places that are expected to come to mind first when it comes to learning and whose effectiveness in learning is generally accepted; because the systematic teaching process implemented in schools through the curricula provides opportunities for acquiring many literally knowledge in a relatively short time, from simple to complex.

Although taking different names in different age groups in schools, Science actually enters our lives in pre-school periods; because almost everything we encounter in daily life is among the subjects of science. As it can be easily seen when the themes and subjects in the science curriculum are examined, it is a lesson that comes from life. Since science education has been given more importance recently compared to the past, student-centered education models have been emphasized more. It is seen that in the curriculums renewed in parallel with the needs of the age, more active participation of the students in the learning process, both physically and mentally, is tried to be ensured. This situation is reflected in science teaching as an approach based on research, inquiry and invention rather than transferring literal knowledge. The main reason why these approaches are preferred is to raise generations who can not only produce knowledge but also use the knowledge they produce, and the importance of laboratories, which is one of the knowledge production environments of science, is increasing as there is a need of practise areas to produce knowledge (Toprak, 2011). Hofstein and Lunetta (1982) define laboratory practices as learning experiences provided by interacting with materials of learned theoretical knowledge. Laboratories have an important place in science teaching in terms of providing learning by seeing and feeling and doing-living in science teaching (Anılan, 2016). Çepni and Ayvacı (2019, p. 289) stated that the use of laboratories, which has an important place in science teaching, in understanding the essence and method of science, developing problem-solving skills, perceiving and examining the events encountered in daily life, developing technical and scientific process skills, and developing the skills of analysis and generalization. They stated that it is effective in increasing the interest and motivation in science lessons, presenting the information in a sequential order, gaining the idea that known models and theories can change over time, and gaining positive attitudes towards scientific research and being a scientist.

Storey and Carter (1992) also stated that the reason why students have difficulty in developing appropriate solutions to the problems they encounter in their lives and that permanent learning cannot be realized is the effort to learn basic sciences with a rote approach. Perhaps the most critical and sensitive point at the secondary school level is to embody this information in order to make sense of the existing theoretical issues and thus to provide learning more easily and permanently. At this point, it can be said that experiments have great importance.

Experiments must be included for effective and complete learning in all sciences (Çepni & Ayvacı, 2019). It is almost impossible to attain and achieve significant learning outcome with only theoretical knowledge. Due to the spiral structure of the science curriculum, although the unit titles or learning areas have familiar names and some familiar concepts since primary school, students also meet different concepts every year. Testing the knowledge with experiment is important in terms of providing permanence in learning, as well as learning theoretical knowledge in science lessons, and it is an inseparable whole with learning experiences (Nasırlı et al., 2019). It is not possible to provide painting education without paint and canvas, and it is not possible to talk about a qualified science education without laboratories and experiments (Seven & Engin, 2018).

Since laboratory practices and experiments are known to play an important role in science teaching, the use of laboratories and experimental activities in science teaching has been adopted by most researchers, but it has also received criticism because science learning is limited to experiments, it is not sufficient to develop students' abilities and it is an expensive method (Ergin et al., 2012). However, many experiments can be done with very simple and easily accessible materials in daily life. Studies conducted since the beginning of the 2000s highlight laboratory lessons with simple equipment (Ören & Çömek, 2011). Science learned mostly using simple ideas and materials is the best science; what is important here is that the basis of teaching and learning is direct experiences (Akçöltekin, 2008). According to Ergin et al. (2012), it is important that students do the experiments themselves, considering the skills they are expected to acquire. From this point of view, it can be said that it is possible, important and beneficial for students to conduct experiments at home using simple materials. Of course, this has its own advantages as well as disadvantages. For example, Kennepohl (2007) in his research examining the use of home laboratories in chemistry education stated that the lack of interaction among students may have negative effects on the learning process. In the study of Pasha and Azbay (2021), in which students' views on the way they reflect the experiments to the home environment are included, attention is drawn to the danger that students' long-term individual studies may

develop negative attitudes towards collaborative group work. Lyall and Patti (2010) also stated that the most basic problem in home laboratory practices is that the teacher cannot observe the students, cannot guide the students, and therefore cannot be sure whether the student has done the experiment correctly.

Since people are faced with various problems and disasters from time to time, some disruptions may occur in the field of education. One of these disasters is the global Covid-19 epidemic that started in China as of November 2019, and during the epidemic process, with the detection of cases in our country in March 2020, face-to-face education was interrupted in schools as in many countries and distance education was started. Although distance education is defined in different ways by many researchers (Alkan, 1987; Moore & Kearsley, 2005; USDLA, 2011; Uşun, 2006), the common point of the definitions is the absence of face-to-face interaction between the learner and the instructor (as cited in Demir, 2014). The aim of distance education is to create education opportunities with systems that can contribute to education free from the effects of time and space by removing the obstacles that cause disruption in education. (Özbay, 2015). Digital learning environments have been created over the Information Network in Education (EBA) established by the Ministry of National Education (MEB) by showing a quick reflex in order to continue the education, which is a constitutional right in our country, by developing alternative methods. Apart from our country, similar alternatives have been produced in many countries and it has been tried to ensure the continuation of education from a distance, and this has brought the concept of "emergency distance education" to the agenda. According to Bozkurt et al. (2020), some of the differences that distinguish the concepts of distance education and emergency distance education can be listed as follows: (as cited in Bozkurt, 2020).

1. Distance education is an option and emergency distance education is a necessity.

2. While emergency distance education produces short-term solutions for needs, distance education can produce permanent solutions for lifelong learning.

3. Emergency distance education should try to keep education alive in line with the possibilities available, while distance education should be planned, systematic and sustainable.

However, the long duration of the Covid-19 pandemic made it compulsory to continue education with distance education, and students switched from the physical dimension of schools to a learning process away from laboratories. In this process, although the lessons are tried to be

enriched and interesting with applications such as web 2.0 tools, the effect of the experiment factor in learning science subjects cannot be ignored. In addition, all students must meet the conditions of simultaneous access to these digital contents, internet access; lack of suitable equipment, etc. For many reasons it is not possible. It can be seen as an alternative learning method that students, who have to spend time at home with the long-term and compulsory restriction of social life during these global-scale epidemic days, reinforce the aforementioned attainments with experiments that they can do by using tools that can be found in every home or that can be obtained easily and at very low costs.

It is known that experiments in science courses have an effect on many factors in the cognitive and affective fields, and it is possible to come across studies that reveal these effects in the literature. However, since it is the first time that we are faced with a global pandemic, it is seen that there are few studies on the effectiveness of the experiments that all the students have done in the emergency distance education, which was put into action by showing a quick reflex.

This research aims to reveal the applicability of the experiments that students do at home using simple tools and materials without any teacher-student face-to-face interaction in the distance education process and the students' attitudes and feelings towards these experiments from the students' perspective. For this purpose, answers to the following research questions were sought:

1- What is the situation of students doing experiments at home during the distance education process?

2- What is the attitude of the student towards the experiment in the experiments done at home during the distance education process?

METHOD

In this study, qualitative research method was adopted. One of the characteristics of qualitative research is that they are exploratory (Karataş, 2015). Researches with exploratory features are very useful and useful in illuminating the less studied subjects (Neuman, 2012: 228).

Study group

The study of the research consists of 15 students studying in the same class at the 7th grade level in a public school in Bursa.

Application steps

The research was carried out during the covid-19 pandemic process, when schools were closed and students continued their education from their homes with emergency distance education. In the research, ten

experiments were designed, all of were developed by the researcher, using materials that can be found in almost every home or can be easily obtained, for the attainments of the unit 'Interaction of Light with Matter', which is in the 5th place in the science curriculum, and throughout the unit, each experiment was carried out in the students' homes or gardens. They were allowed to do at least eight of these experiments, at least one experiment per week. The study plan is given in Table 1. In order for the students to do the experiments, experiment sheets were prepared by the researcher and shared with the students in the online in parallel with the attainments. Although the experiments were different from the experiments in the 7th grade science lesson book, care was taken to match the attainments. After performing the experiments, the students were encouraged to write unstructured science diaries including their feelings, problems, etc. during the experimentation process at their home with simple tools.

Tablo 1

Study plan

Time	**Number of the experiment**	**Name of the experiment**	***Tools and materials of the experiment***
1st week	1	Colored ottles	•2 equivalent transparent plastic or glass bottles •2 equivalent balloons •White and black papers (or acrylic paint) •Scissors •Tape •The amount of water to fill the bottles •Appropriate size brush if paint is to be used.
2nd week	2	Rainbow in the Water	•1 glass container (tray, bowl, etc.) •1 mirror (large enough to fit inside the container) •1 light source (flashlight, phone camera, etc.) •Some water
3rd week	3	Egg with Mirror	• 1 bowl • 1 egg • 1 mirror • Some aluminum foil
4th week	4	Magic in the Spoon	• 1 slightly used metal spoon • 1 piece of white paper • 2 different colored crayons
5th week	5	Missing Picture	• 1 ziplock freezer bag • 1 piece of white A4 paper • 1 ballpoint pen • Several colors paint • A deep bowl • Some water
5th week	6	Misdirected Arrows	• 1 dark colored felt-tip or ballpoint pen • 1 piece of A4 paper • 1 transparent jar • Some water

6th week	7	Invisible Cup	• 1 large transparent glass cup • 1 small transparent glass cup (to fit inside the large one) • Some oil (enough to fill both of glasses)
6th week	8	Dance with Forks	• 3 equivalent forks • 3 equivalent transparent glasses • 1 glass of water • 1 glass of oil • 1 glass of cologne
7th week	9	Oh! There's a fire	• 1 plastic transparent pet bottle with a cap • 1 piece of paper • Some water
7th week	10	Magnifying Glass in the Water	• 1 transparent jar • 1 reading book or newspaper • Some water

Data collection tools

Unstructured science diaries were used as data collection tool in the study. At the end of each experiment, students were asked to write in these diaries what they experienced during the experiment. In order to increase students' knowledge about science learning, it is necessary to examine their interactions with their peers, their science experiences, drawings, writings and interpretations from different perspectives (Erduran-Avcı, 2008).

Data analysis

The data obtained from the student diaries were subjected to content analysis. For each experiment, the data in the student diaries were examined, and the students' statements about the experiment were gathered under two themes: the attitudes and feelings created by the students by doing the experiment, and the applicability of the experiment. These themes were categorized according to the presence of positive or negative statements. Cases where no expression was found were evaluated under the neutral category.

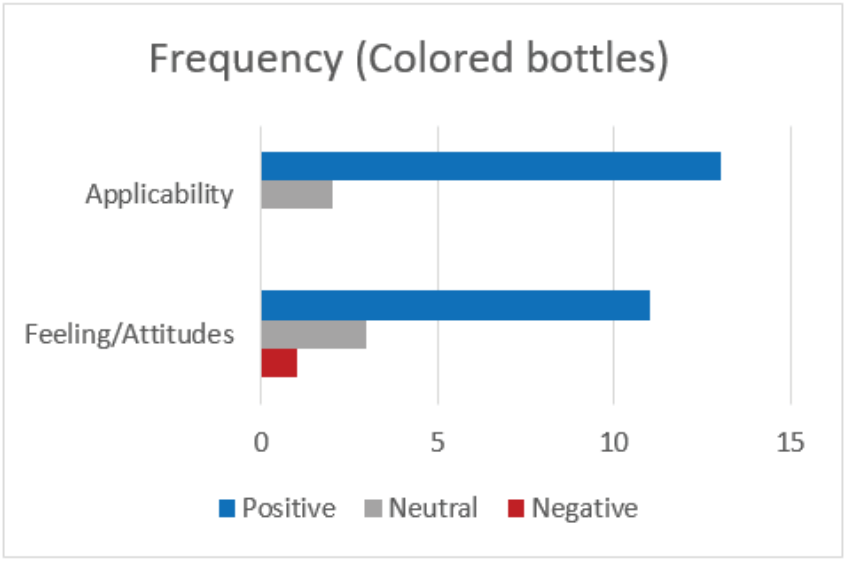
FINDINGS

In this section, the findings obtained from each experiment are presented with the frequencies by converting them into graphs, and examples directly quoted from student statements. Students were coded as S1, S2,……, S15.

Findings of first experiment

Figure 1

Frequency distribution graph of experiment 1



As can be seen at Figure 1, 'Colored Bottles' experiment was carried out by thirteen of the students, and two students did not include any statement in their diaries that they did the experiment. All of the thirteen students who did the experiment achieved the expected result. It is seen that among the students who did the experiment, statements that stated that doing this experiment created positive feelings and attitude in them were found in the diaries of ten students, while one student included statements expressing negative feelings and attitude. Examples of expressions in the student diaries regarding this experiment are given below:

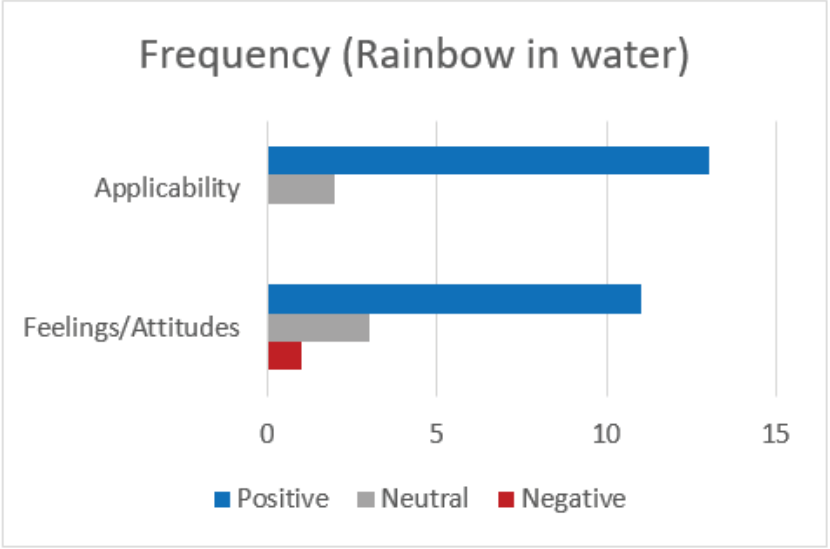
S7: "...It was a nice and fun experiment."

S12: "...While doing this experiment, at first I thought that it would not inflate at all, but as stood under the sun, the black balloon began to inflate a little and I was very surprised."

Findings of second experiment

Figure 2

Frequency distribution graph of experiment 2



As can be seen at Figure 2, the 'Rainbow in Water' experiment was carried out by fourteen of the students, and one student did not write anything in his diary about this experiment. Eleven of the students who performed the experiment achieved the expected result. It is seen that twelve of the students who did the experiment had positive feelings and attitudes in their diaries, and one of the student diaries includes negative statements about feelings and attitudes. Examples of expressions found in student diaries out about this experiment are

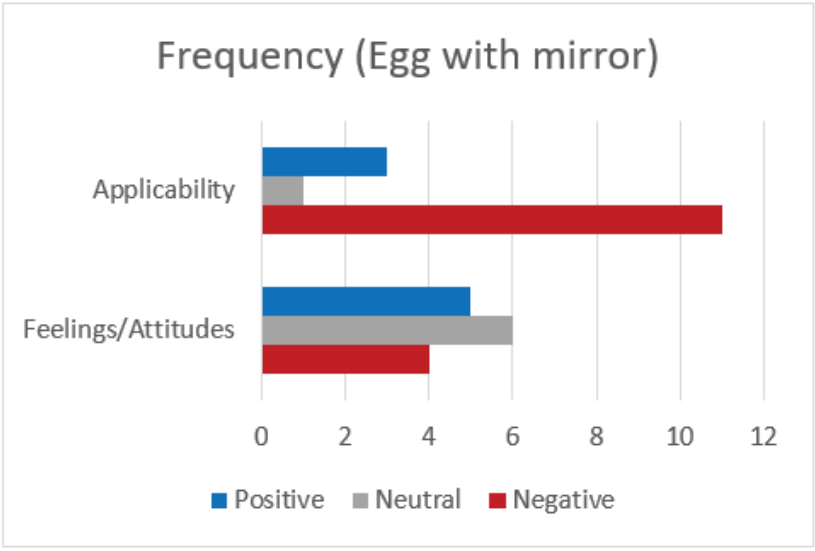
S3: "...when I did the experiment, I was very surprised and could not take my eyes off it."

S6: "...the separation of light into colors was a bit challenging, but I can say that I, who does not like to experiment, liked this short experiment."

Findings of third experiment

Figure 3

Frequency distribution graph of experiment 3



As can be seen at Figure 3 , the 'Egg with Mirror' experiment was tried to be carried out by fourteen of the students, but eleven could not reach the result as required, and there was no statement in one student diary about doing this experiment. However, it is seen that at only five students' diaries contain expressions about positive attitudes and feelings, and six student diaries include no expressions about the experiment. Examples of expressions found in student diaries out about this experiment are given below.

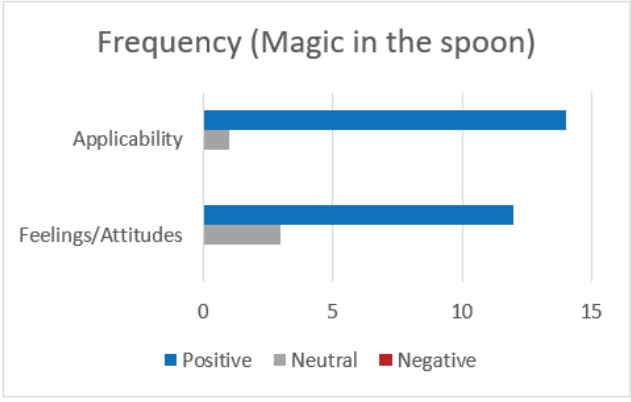
S8: "... The result was not what I expected, I was a little upset because my egg was not cooked."

S1: "...The sun is not effective, but if it was summer, we could have finished it in a shorter time because this experiment could have been completed in a short time since the sun radiates hotter in summer."

Findings of fourth experiment

Figure 4

Frequency distribution graph of experiment 4



As can be seen at Figure 4, the 'Magic in the Spoon' experiment was carried out by fourteen of the students and all of them achieved the expected result, and there was no statement in one of tehe student diary. It is seen that twelve diaries of the students' contain expressions about the attitudes and feelings created by carrying out this experiment, and all of them are positive. Examples of expressions of this experiment found in student diaries out are given below:

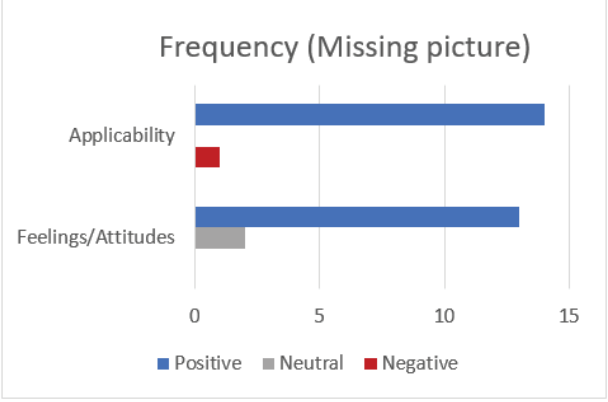
S14: "...on the other side, the picture was small and I was very surprised."

S8: "...The result was as I expected and I am happy."

Findings of fifth experiment

Figure 5

Frequency distribution graph of experiment 5



As can be seen at Figure 5, the 'Missing Picture' experiment was concluded positively by fourteen of the students, and one student did not conclude the experiment as expected. It is seen that in the diary of thirteen students, there were expressions regarding their feelings and attitudes about this experiment, and all of them were positive. Examples of expressions of this experiment found in student diaries out are given below:

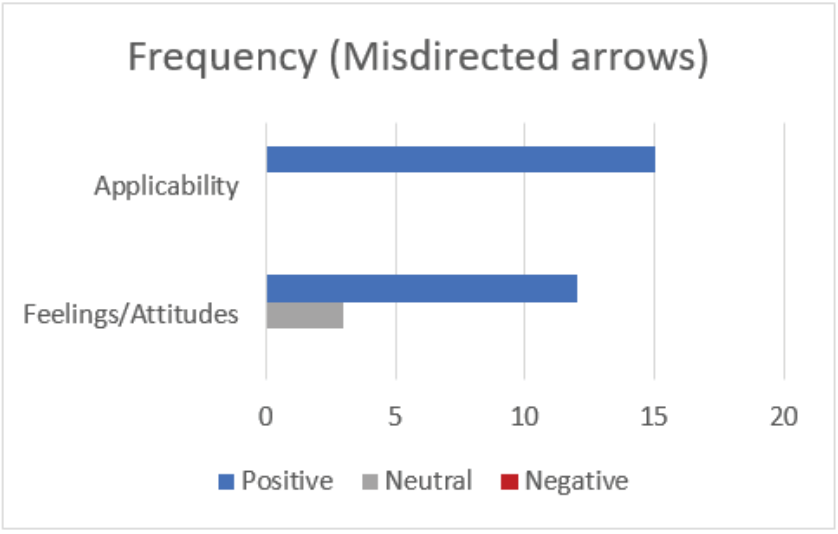
S2: "...I am surprised because the picture disappeared, I know the reason now, but it was still strange, how could such a thing happen."

S13: "...Oh, the picture I drew inside the transparent file has disappeared. I was really surprised. I took it out and looked again, but there was no change..."

Findings of sixth experiment

Figure 6

Frequency distribution graph of experiment 6



As can be seen at Figure 6, the 'Misdirected Arrows' experiment was performed by all fifteen students and concluded positively. Twelve of these students included positive statements about their feelings and attitudes about doing the experiment in their diaries. Examples of expressions of this experiment found in student diaries are given below:

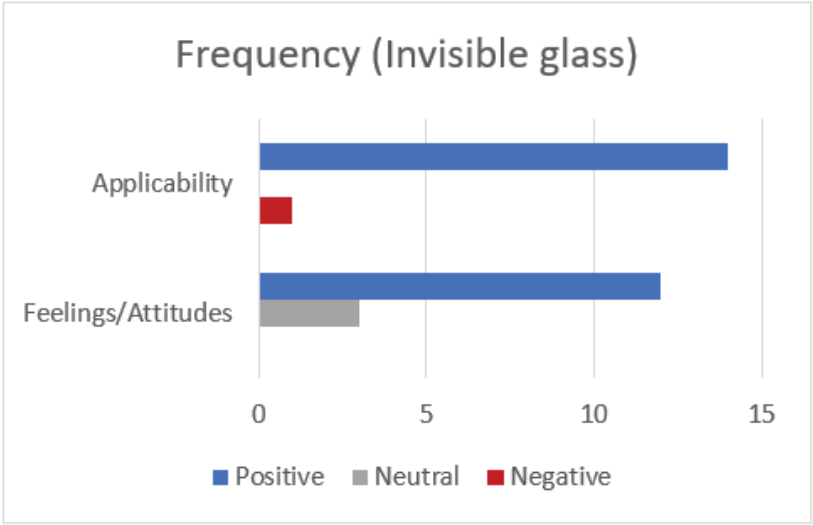
S11: "...We understand the subject in a more enjoyable way by doing experiments."

S15: "...I did not expect that it would change direction, I thought the arrow would grow or shrink, but I was surprised and it was very enjoyable."

Findings of seventh experiment

Figure 7

Frequency distribution graph of experiment 7



As can be seen at Figure 7, all students wrote statements about the "Invisible Glass" experiment in their diary, fourteen of them were positive statements and only one student used negative statements about concluding the experiment. Moreover, it is seen that twelve students made positive statements in their diaries about the attitudes and feelings that they created by doing this experiment. Examples of expressions of this experiment found in student diaries are given below:

S3: "While doing this experiment, I felt like Harry Potter, I wish I had an invisible cloak like Harry Potter, maybe I didn't have a cloak, but I can make disappearing glass."

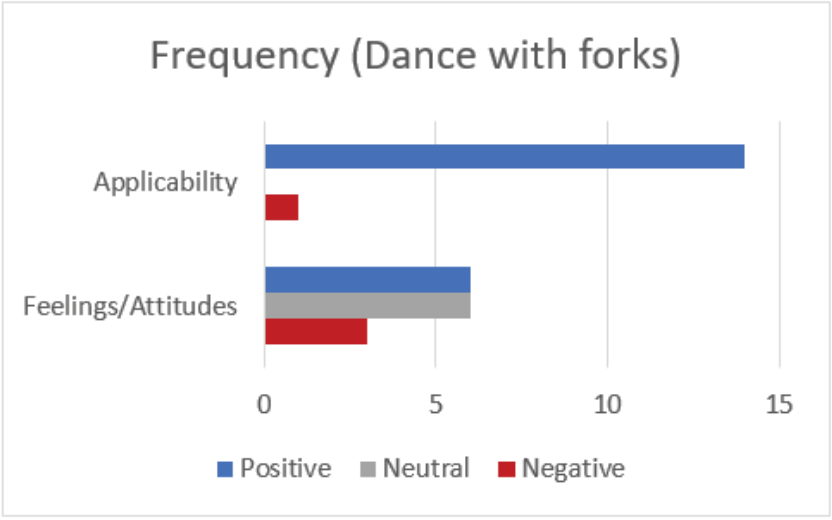
S13: "...it is the experiment that surprised me the most. ... it's seriously gone, I'm not kidding..."

S5: "When I read about this experiment, I could not believe that the glass would be invisible. ... I saw that the glass was not visible, and it was beautiful."

Findings of eighth experiment

Figure 8

Frequency distribution graph of experiment 8



As can be seen at Figure 8, the 'Dance with Forks' experiment could be concluded as desired by fourteen of the students, and one negative statement about the experiment was found in a student diary. Moreover, it is seen at six student diaries that performing the experiment, included expressions that create positive feelings and attitudes in them, while three students used negative statements in this direction, while there was no such expression in the diary of six students. Examples of expressions of this experiment found in student diaries are given below:

S4: "...I did not know the result. I thought that eventually the forks would move or the size of the forks would change, and I guessed right and it was nice actually. (10/6)''

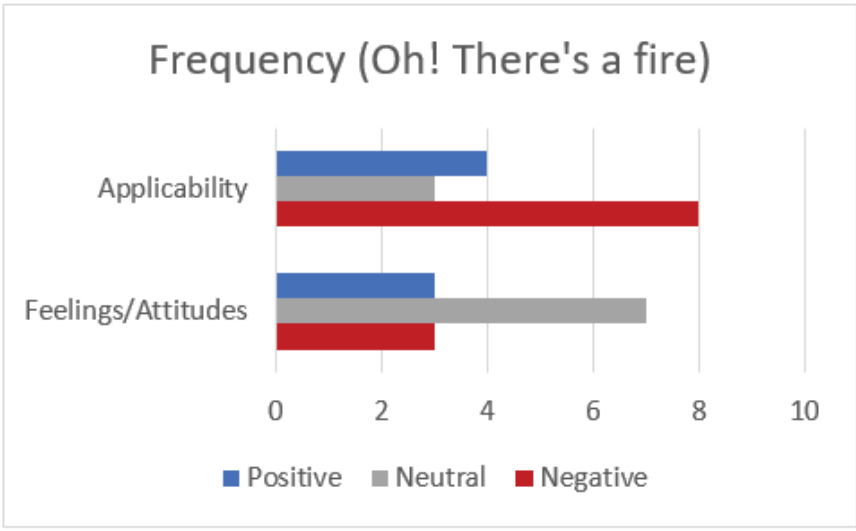
S5: "This experiment did not interest me much, but it was informative. But I was intrigued by the fact that the forks we put in the glasses looked big among the substances."

S2: "I can say that I care the least about this experiment. Because it didn't interest me much, we just observed their size. It was their movements that I dreamed of, it was a ridiculous but beautiful dream, I wish it was so, it would be better.''

Findings of ninth experiment

Figure 9

Frequency distribution graph of experiment 9



As can be seen at Figure 9, 'Oh! There's a fire! experiment was tried by twelve of the students, the expected result was achieved by four of them, eight students could not conclude the experiment as intended, and there was no statement about this experiment in the diaries of the remaining three students. However, it is seen that the number of students who used positive and negative expressions about their attitudes and/or feelings in their diaries during the experiment was equal and three. Examples of expressions of this experiment found in student diaries out are given below.

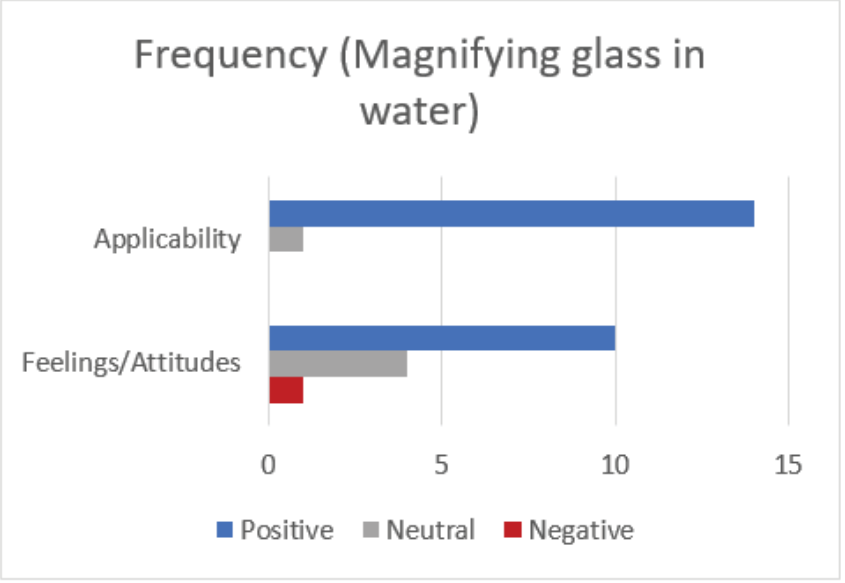
S9: "I couldn't do this experiment because there was not enough sun or because there was wind with the sun."

S3: "I had to wait a long time for the experiment, I even thought it would not burn, but it did!"

Findings of tenth experiment

Figure 10

Frequency distribution graph of experiment 10



As can be seen at Figure 10, the 'Magnifying Glass in Water' experiment was performed and the expected result was achieved by fourteen of the students, one student's diary did not contain any statement about this experiment. Ten students stated in their diary that there were positive statements about the feelings and attitude that they created by doing this experiment. It is seen that there are negative statements in this direction in a student's diary. Examples of expressions of this experiment found in student diaries are given below:

S3: "My mother loved this experiment very much, sometimes it is difficult to read the small print, and she can read it comfortably by doing this."

S11: "...I had a lot of fun while doing the experiment, it was very fun and very nice. With this experiment, I have grasped and consolidated the subject of lenses very well."

S12: "...While doing this experiment, I was guessing that it would be like this based on the title, but I thought we would look from the bottom up, but we looked behind it and this situation surprised me."

S10: "I was happy while doing the experiment. And I realized that I could make beautiful and effective experiments with simple materials."

CONCLUSION AND DISCUSSION

By examining the findings carefully, it is seen that eight of the ten experiments about 'light' that the students carried out individually in their homes and gardens using simple materials were successfully concluded by most of the students.

According to the findings obtained from the 1st experiment, the rate of students completing this experiment as required and concluding it positively is quite high (f=14, 93.33%). In addition, it is seen that most of the students (f=11, 73.33%) had positive attitude and feelings during the experiment process.

According to the findings obtained from the 2nd experiment, the rate of reaching the conclusion of the experiment is high (f=11, 73.33%). However, it was concluded that most of the students (f=12, 80%) had positive attitudes and feelings during this experiment process.

According to the findings obtained from the 3rd experiment, it was seen that the rate of reaching the conclusion of the experiment was very low (f=3, 20%), however, positive attitudes and feelings were formed in less than half of the students (f=5, 33.33%) during this experiment process .

According to the findings obtained from the 4th experiment, it was found that although it was carried out in distance education conditions and using only household materials, its applicability was quite high (f=14, 93.33%); however, it is seen that most of the students (f=12, 80%) had positive attitudes and feelings during this experiment process.

According to the findings obtained from the 5th experiment, although it was carried out under distance education conditions and using only household materials, its applicability was high (f=14, 93.33%); However, it is seen that most of the students (f=13, 86.67%) had positive attitudes and feelings during this experiment process.

According to the findings of the 6th experiment, it was concluded that this experiment was carried out by the majority of the students (f = 14, 93.33%), however, positive attitudes and feelings were felt in the majority of the students (f = 12, 80%) during this experiment process.

According to the findings obtained from the 7th experiment, it was found that although it was carried out under distance education conditions and using only household materials, its applicability was quite high (f=14, 93.33%); moreover, it is seen that most of the students (f=12, 80%) had positive attitudes and feelings during the experimentation process.

According to the findings of the 8th experiment (dance with forks),

the applicability of the experiment was quite high (f=14, 93.33%), although it was carried out under distance education conditions and using only household materials; however, it is seen that positive attitudes and feelings were formed at a low rate (f=6, 40%) in the students during the experimentation process.

According to the findings obtained from the 9th experiment (oh, there is a fire), it is seen that the applicability rate of the experiment is very low (f=4, 26.67%), moreover, positive attitudes and feelings were formed at a very low rate (f=3, 20%) in the students during the experimentation process.

According to the findings obtained from the 10th experiment (the magnifying glass in water), it was found that although it was carried out under distance education conditions and using only household materials, its applicability was quite high (f=14, 93.33%). Moreover, it is seen that most of the students (f=10, 66.67%) had positive attitudes and feelings during this experimentation process.

Here, it was determined that the third and ninth experiments were the two experiments that students had the most difficulty in reaching conclusions. The common feature of these experiments is the need for sunlight. The attainments of the 5th unit, which is the subject of the experiment, correspond to the spring months (March-April) in the 7th grade united annual plan. The research was carried out directly in the order in the annual plan without changing the order of the units. From this point of view, it can be said that these two experiments were not successful due to the lack of sufficient sunlight in March and April due to seasonal conditions. This idea is supported by the statement of S1 coded student that given as an example in the findings of the third experiment *"...The sun is not that effective, but if it were summer, we could have finished it in a shorter time because this experiment could be done in a short time, since the sun radiates hotter in summer."* and another statement of S9 coded student as an example in findings of ninth experiment *"I couldn't do the experience because there wasn't enough sun or when there was wind."*

One other conspicuous finding of the research is the rate of creating positive attitudes and feelings in students is low although the rate of achieving the eighth experiment (dance with forks) is high. It is thought that the reason for this is that the name of the experiment creates different expectations in students. In a significant number of diaries, statements supporting this idea were found out. One of them has been given in findings of eighth experiment.

REFERENCES

Akçöltekin, A. (2008). *İlköğretim fen bilgisi derslerinde laboratuarların yeri ve laboratuar yeterlilikleri.* (Unpublished Master's Thesis). Retreived from https://tez.yok.gov.tr sayfasından erişilmiştir. (Thesis no: 246336).

Anılan, B. (2016). Laboratuvar kullanımı. S. Ş. Anagün, ve N. Duban (Editörler). *Fen bilimleri öğretimi* içinde (ss. 341-380). Anı.

Anılan, B., Berber, A., & Suder, N. (2020). Basit araçlarla yaparak öğrenme yöntemi ile yapılan deney uygulamalarına yönelik öğretmen adayı ve öğrenci görüşleri. *Kastamonu Eğitim Dergisi*, *28*(1), 52-71.

Ateş, Ö., & Eryilmaz, A. (2011, June). Effectiveness of hands-on and minds-on activities on students' achievement and attitudes towards physics. In *Asia-Pacific Forum on Science Learning and Teaching* (Vol. 12, No. 1, pp. 1-22). The Education University of Hong Kong, Department of Science and Environmental Studies.

Bozkurt, A. (2020). Koronavirüs (Covid-19) pandemi süreci ve pandemi sonrası dünyada eğitime yönelik değerlendirmeler: Yeni normal ve yeni eğitim paradigması. *Açıköğretim Uygulamaları ve Araştırmaları Dergisi*, *6*(3), 112-142.

Çepni, S., & Ayvacı, H. Ş. (2019). Laboratuvar destekli fen öğretimi yaklaşımları. S. Çepni (Editör). *Kuramdan uygulamaya fen ve teknoloji öğretimi* içinde (ss. 324-354). Pegem.

Demir, E. (2014). Uzaktan eğitime genel bir bakış. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, (39), 203-212.

Erduran Avcı, D. (2008). Fen ve teknoloji eğitiminde öğrenci günlüklerinin kullanılması. *Eurasian Journal of Educational Research*, 30, 17-32.

Ergin, Ö., Şahin-Pekmez, E., & Öngel-Erdal, S. (2012). *Kuramdan uygulamaya deney yoluyla fen öğretimi (Gözden geçirilmiş ikinci baskı).* Dinazor.

Hofstein, A., & Lunetta, V. N. (1982). The role of the laboratory in science teaching: Neglected aspects of research. *Review of Educational Research*, *52*(2), 201–217. https://doi.org/10.3102/00346543052002201.

Karataş, Z. (2015). Sosyal bilimlerde nitel araştirma yöntemleri. *Manevi temelli sosyal hizmet araştırmaları dergisi*, *1*(1), 62-80.

Kennepohl, D. (2007). Using home-laboratory kits to teach general chemistry. *Chemistry Education Research and Practice*, *8*(3), 337–346. https://doi.org/10.1039/b7rp90008b

Lyall, R., & Patti, A. F. (2010). Taking the chemistry experience home—Home experiments or "Kitchen Chemistry". *Accessible elements: Teaching science online and at a distance*, (5), 83-108.

Nasırlı, M., Karataş, A., & Acar, Ö. (2019). Basit fen deneylerinin öğrencilerin bilimsel bilgiye ulaşmasına etkileri. *Fen Bilimleri Öğretimi Dergisi*, *7*(1), 1-26.

Neuman, W. L. (2012). *Toplumsal Araştırma Yöntemleri: Nicel ve Nitel Yaklaşımlar I-II. Cilt (5. Basım).* İstanbul: Yayın Odası.

Önen, F., & Çömek, A. (2011). Öğretmen adaylarının gözüyle basit araç-gereçlerle yapılan fen deneyleri. *Batı Anadolu Eğitim Bilimleri Dergisi*, *2*(3), 45-72.

Özbay, Ö. (2015). Dünyada ve Türkiye'de uzaktan eğitimin güncel durumu. *Uluslararası Eğitim Bilimleri Dergisi,* (5), 376-394.

Paşa, S., & Azbay, Ş. N. (2021). Salgın döneminde ortaokul öğrencilerinin saf madde ve karışımlar ünitesindeki etkinliklerin ev ortamında uygulanmasına yönelik görüşleri. *Türkiye Kimya Derneği Dergisi Kısım C: Kimya Eğitimi*, *7*(1), 1-22. https://doi.org/10.37995/jotcsc.997422

Sarıoğlan, A. B., Altaş, R., & Şen, R. (2020). Uzaktan eğitim sürecinde fen bilimleri dersinde deney yapmaya ilişkin öğretmen görüşlerinin araştırılması. *Milli Eğitim Dergisi*, *49*(1), 371-394.

Seven, M. A., & Engin, A. O. (2018). Fen bilimleri eğitiminde laboratuvarın önemi [Öz]. *TURAN: Stratejik Araştırmalar Merkezi*, *10*(38), 256-265.

https://doi.org/10.15189/1308-8041

Storey R. D., & Carter J. (1992). Why the scientific method?, *The Science Teacher, 59*(9), 19-21. Retreived from https://ekutuphane.uludag.edu.tr/vetis-bt/?p=1&dil=tr

Toprak, F. (2011). *Fen bilgisi öğretmenliği genel kimya laboratuvarında 3E ve 5E öğretim modellerinin uygulanmasının öğrencilerin akademik başarısı, bilimsel süreç becerileri ve derse karşı tutumlarına etkisi* (Unpublished Master's Thesis). Retrieved from https://tez.yok.gov.tr (Thesis no: 300492).

Yılmaz, A. (2021). Fen bilimleri eğitimi kapsamında uzaktan eğitimde kalite standartları ve paydaş görüşleri. *Atatürk Üniversitesi Kazım Karabekir Eğitim Fakültesi Dergisi*, (42), 26-50.

CHAPTER 6

THE EFFECTS OF A RESEARCH AND STUDY TECHNIQUES COURSE ON THE ATTITUDES OF ENGLISH LANGUAGE AND LITERATURE STUDENTS TOWARDS RESEARCH

Derya TUZCU EKEN [1]

1 Dr. Derya TUZCU EKEN, Kırklareli University, Foreign Languages Department, derya.tuzcu@klu.edu.tr, ORCID ID: 0000-0003-2606-1314

INTRODUCTION

Research is a necessary part of all the academic disciplines, yet, when one refers to the word research in academia, most of the time research in natural sciences is understood. However, there are also social sciences and humanities disciplines conducting their own scientific research. Although, in essence, all the disciplines aim the advancement of knowledge through research, each discipline has "different disciplinary traditions" (Newing, 2011, p. 5). Research in the academic discipline English Language and Literature (ELL) in fact is different from research in biology.

As an academic discipline of humanities research, in ELL branch the research is called literary research. Literary research "depends more on the literary scripts than on field surveys, experiments and social surveys" (Deshpande, 2018, p. ix), and the subject and methodology of literary research differs from the natural and social sciences. In essence, literary research is about finding something new in a piece of literary work though it is not as simple as stated. The process of analysing a literary work requires a set of skills which heavily relies on critical thinking as well as finding necessary resources, reading and evaluating these sources in a critical way to incorporate them into one's own thinking (Fitzpatrick, 2007). In order to enter into the literary research community, literature students first need to know what literary research means and then they are required to develop their analytical and critical skills along with their knowledge of theories, paradigms, and methodologies in the field. Mastering research skills requires students to make an effort in this regard, which is possible, as in many areas, if students have positive attitudes towards research. However, undergraduate students who are at the earlier years of their academic life may have difficulty in understanding the importance of research for their academic development. Although students' attitudes towards research is a common topic in academia especially in English language teaching, there is a lack of studies on the attitudes of ELL department students towards research, which lays the foundations of this study.

LITERATURE REVIEW

Literary Research and Literature Students

Research in general is "a quest, an attempt to better understand the complex worlds we live in" (Heigham & Croker, 2009, p. xi). Each discipline (literature, history, linguistics, biology, philosophy etc.) has "different expectations for their publications and research practices and different ways to measure the quality of their scholarship" (Brookbank & Christenberry, 2019, p.5). A person who knows how to do academic research in a discipline (for instance, natural sciences) might find it difficult to understand the research process of other disciplines (e.g. humanities

research), or this knowledge that the person has might make it easier for them to do research in other similar fields. In all disciplines, the main aim of doing research is to contribute to the advancement and development of knowledge. To contribute to the field, research in humanities deals with "theory, source and text" (Ochsner, Hug & Daniel, 2013, p. 80). Therefore, the literary work to be analysed is the primary source of the literary researcher who is also expected to analyse and criticize that piece of literature according to some literary theories.

Literary research is often associated with literary criticism or literary study since the main aim of literary research is to study or criticize a piece of literary work according to theoretical norms. These theoretical norms are stated as literary theory, "the systematic account of the nature of literature and of the methods for analysing it" (Culler, 1997, p.1). Literary researchers, generally called as scholars, are expected to use literary theories during their analysis of literary texts since "literary theory enables readers and critics a better understanding of literature through close readings and contextual insights" (MasterClass, 2021). Some of these theories are modernism, post-modernism, structuralism, post-structuralism, Marxism and deconstruction, and each has its own lens for the researchers to wear for the analysis of literary works.

In order to conduct literary research, undergraduate literature students, in the first place, need to know what a research is because students generally confuse the term with "searching" since they spend most of their time in front of electronic devices such as computers, laptops, and smart phones. Students of the modern world use these electronic devices as their libraries (Ivanitskaya, Laus & Casey, 2004). Whenever they need information, they do an internet search to get that information. Although during literary research, students might benefit from the Internet, it is not the only source of information to consult. Moreover, it is also important for the university students to learn how to search on the Internet and how to select the most reliable sources from the data stack that they encounter. For all these reasons, undergraduate literature students need to be enlightened about what research is (Waite & Davis, 2006) and how to conduct literary research.

Attitude Towards Research Skills

The Oxford Advanced Learner's dictionary's definition of the word attitude is "the way that you behave towards sb/sth that shows how you think and feel" (Hornby, 2000, p. 62). This definition highlights three dimensions of attitude: affect (emotions, feelings), cognition (thoughts, ideas), and behaviour (overt actions, interactions) (Eagly & Chaiken, 1993). People have feelings and thoughts that are reflected in their behaviour which are

also called attitudes. In our daily life, we have attitudes towards anything around us such as people, objects, and actions. Our attitudes towards a phenomenon affect our choices and behaviours especially "when they [are] easy to recall and stable over time" (Glasman & Albarracin, 2006, p.778). Since humans are inclined to behave according to their attitudes, in different academic disciplines it is essential to evaluate the attitudes of people in order to predict and assess their behaviours (Ajzen, 2001). Given the fact that research courses equip students with necessary research skills and theory-driven critical thinking (Petrella & Jung, 2008; Uzun, 2020), the positive attitude of ELL students towards research is pivotal in their academic advancement.

Although attitude is given importance and has been investigated in many disciplines, in the educational front as a result of my search, there is no study that covers attitudes of literary students towards research courses. However, there are studies conducted in related fields such as linguistics and English language education. The methods and findings of these studies are multivariate.

The study of Belgrave and Jules (2015), for instance, examined undergraduate linguistics students' attitudes towards research so as to decide students' approach to the use of student-centred principles adopted in the research-oriented courses. As a result of their action research, the researchers found that if students perceive research as functional and applicable to real-life situations, they develop positive attitudes. In that case, the researchers suggest teachers to apply student-centred principles to their research components which they believe would increase the practicality of research and would yield a positive attitude.

On the other hand, research studies conducted on the attitudes of undergraduate students yielded different results than the research conducted with postgraduate students. Generally, the researchers reported that the latter group had more positive attitudes towards research. For instance, the study of Uzun (2020) which aimed to reveal the effects of a research course on the attitudes of undergraduate English teacher candidates towards research indicated a decrease rather than an increase in the attitudes of undergraduate pre-service EFL teachers. As a result, the researcher stated that an increase in the course hours and a decrease of homework are necessary since the way the researcher taught the content was too heavy for the duration of the course. Another study conducted by Garancho and Marpa (2019) on the undergraduates' research attitude also ascertained that teacher education students have moderately negative attitudes towards research and its relevance to life. The study of Kakupa and Xue (2019), on the other hand, focused on the research attitudes of graduate students and compared master and doctoral students. The researchers found that doctoral

students had more positive attitudes than master students which supports the idea that more exposure to the research would yield more positive research attitude as suggested in many studies (e.g. Garancho & Marpa, 2019; Kakupa & Xue, 2019; Uzun, 2020). Nevertheless, the study of Butt and Shams (2013) compared two Master in education student groups from different public universities in terms of Master students' attitudes towards research, and they revealed that students have negative attitudes which the researchers attributed to the teacher giving the research course and suggested the course teacher to be a role model during the course. Besides, a lack of research culture in their own country is another attribution of the researchers to the problem.

Previous studies have ascertained that a wide variety of factors play a role in students' attitudes towards the research course. Course teachers, for instance, play an important role in defining the needs of their own students and influencing students' attitudes positively. For this reason, the course teacher as a researcher of this study initially aimed to evaluate the impacts of the Research and Study Techniques course on the attitudes of 1st year English language and literature students (N=53) towards research. After doing research on the 1st group of participants, however, it was decided that it would be better to redesign the course and further apply it to another group in the following year. The aim was to examine if the suggestions of the 1st group of students would have an effect on the advancement of the course which is also expected to affect the attitudes of the 2nd group of students (N=44) positively. Considering all these, the questions of the study were designed as follows:

1) What are the attitudes of ELL students towards research before and after taking a research and study techniques course?

2) What are the general ideas of students about the research and study techniques course?

a. The things that they liked about the course

b. The things that they did not like about the course

c. Their suggestions to improve the course content

3) How do the students perceive the changes in their attitudes towards research?

METHODOLOGY

Research Design

This study is an action research which is a process that requires participants to explore their own practices methodologically (Ferrance, 2000). "Action research emphasizes the involvement of teachers in

problems in their own classrooms and has as its primary goal the in-service training and development of the teacher rather than the acquisition of general knowledge in the field of education" (Borg, 1965, p. 313). Action research is chosen as the research design of the study since the researcher is the course teacher and takes part in the study with the aim of advancing her practices in the future. Though there are many types of action research, in this study individual teacher action research was utilized based on the focus that each time a single class is investigated by the course teacher (Ferrance, 2000).

Setting and Participants

The study was carried out at the English Language and Literature Department of a Turkish university located in the European part of the country. The participants consisted of two different groups. The 1st group was the one where the course teacher delivered the research course for the first time during the 2021 Spring term. The 2nd group got the course during the 2022 Spring term, one year after the first group.

The participants of the 1st group were 53 first year (freshman) students of the department. Although there were 64 students in the class, the ones taking the course for the second time were excluded from the study as they took the research course from another instructor previously which may have had effects on their attitudes. Thirty-three participants were female while 20 of them were male. Their ages ranged from 18 to 25. The participants were also asked to state their perceived proficiency levels in computer usage, internet search, ability to write in English and literary skills which are believed to have an effect on their research skills. The answers of the participants are given in Table 1.

Table 1. 1st group's perceived levels of research-related skills (N=53)

Level	**Computer skills**		**Internet skills**		**Writing skills**		**Literary skills**	
	f	%	*f*	%	*f*	%	*f*	%
Very Strong	5	9.4	5	9.4	0	0.0	0	0
Strong	12	22.6	21	39.6	14	26.4	6	11.3
Medium	30	56.7	25	47.2	39	73.6	36	67.9
Weak	4	7.5	2	3.8	0	0.0	10	18.9
Very Weak	2	3.8	0	0.0	0	0.0	1	1.9

As can be observed from Table 1, the majority of the 1st group participants believed that their computer skills, internet skills, writing skills and literary skills were 'medium'.

The 2nd research group, on the other hand, were composed of 44 students: 30 females and 14 males. Their ages ranged from 18 to 21. Care was taken to ensure that there were no students in this group who failed the

course the previous year and took the course again because it was thought that this situation might affect the attitudes of the students. The 2nd group of students' perceived research-related skill levels are given in Table 2.

Table 2. 2nd group's perceived levels of research-related skills (N=44)

Level	Computer skills		Internet skills		Writing skills		Literary skills	
	f	%	*f*	%	*f*	%	*f*	%
Very Strong	1	2.3	4	9.1	2	4.5	3	6.8
Strong	10	22.7	19	43.2	10	22.8	2	4.5
Medium	27	61.4	17	38.6	27	61.4	27	61.4
Weak	5	11.3	4	9.1	3	6.8	12	27.3
Very Weak	1	2.3	0	0.0	2	4.5	0	0.0

Table 2 indicates that the 2nd group of participants' perceived levels of computer skills, writing skills and literary skills were generally medium while their perceived internet skills were strong.

The Research and Study Techniques Course

The Research and Study Techniques course is given in the spring term of the 1st year of the English Language and Literature department of the aforementioned university. The course hours are normally three hours per week. However, because of the Covid-19 pandemic, to the 1st Group the course was delivered via a Learning Management System (LMS) arranged by the university. Since each lesson hour is limited to half an hour due to the distance education rules of the university, approximately one and a half hour of lesson was held online each week. The 1st week of the course was an introduction to the course. In this week, the questions of what is research and what is the importance of research were focused on, and in this way, students were directed to think about what research is. Having a general idea about the research and discriminating it from an internet search was the main aim of the week. The 2nd and 3rd weeks of the course were allocated to teaching study techniques and methods. In the 4th week, library search, specific database search, and the Internet search were the topics studied. For the 5th and 6th weeks, what is citation and how to borrow ideas (paraphrasing, summarising, and direct quoting) were discussed and practiced as well as explaining plagiarism to the students and showing what counts as plagiarism and how to avoid plagiarism while borrowing ideas. The 7th week was an introduction to the MLA documentation and general formatting rules. In the 8th week, students took the midterm exam in the online test format which required them to answer multiple choice questions about the topics discussed for seven weeks. After the midterms, in the 9th and 10th weeks MLA in-text citations and creating works cited list were focused on and practised. The 11th week was about APA citation rules. Although in literary studies MLA is the dominant citation format,

in order to familiarize students with the APA format as well (which might also be beneficial for them) a brief in-text citation rules and creating references list were introduced and compared to the MLA format. For the 12th week, students were given a short story to read before coming to the class, and during the class hour some ways of generating ideas about a short story such as annotating, brainstorming, focused free writing, listing were demonstrated. In the 13th, 14th, and 15th weeks, different forms of criticism (explication and analysis) were introduced and practised. During these weeks, students were assigned to criticise a short story and send their assignments via a plagiarism detection platform. Their assignments were evaluated by the teacher, and students received feedback on their work. For this homework, while writing their own criticism for the assigned short stories, students were also asked to read other articles about the topic and give in-text citations and create a works cited list at the end. In this way, students were enabled to put into practice what they had learned up to that point. The last week of the course was a revision week and at the request of the students, the assignments of a few students were examined together and students were enlightened about their final paper that they were assigned to prepare as their final exam.

The 2nd group of participants took the same course one year after the 1st group. Since the collected data from the 1st group about the attitudes of students towards research yielded no significant differences between the pre- and post-test results of participants, the researcher conducted interviews with 16 volunteer participants of the 1st group. The interviews revealed that students expected the course teacher to assign more assignments and thus to give more feedback which they believe would help them to enhance their literary research skills. Therefore, for the 2nd group of participants, the course teacher increased the number of assignments and assigned two papers to which detailed feedback was given. The organization of the course stayed nearly the same, yet, this time the course was delivered face to face.

Data Collection

In order to collect the quantitative data of the study, the revised version of the Attitude Towards Research (ATR) scale of Papanastasiou (2005) which was revised by Papanastasiou and Schumacker (2014) was utilized. The first version of the scale included 32 items; however, the revised version includes 30 items and the items that were extracted from the revised version of the scale were the ones that originally were "related to the construct of statistical analysis of data rather than a research construct" (Papanastasiou & Schumacker, 2014, p. 7). Since ELL students do not need statistical knowledge in preparing their research studies, the revised version of the scale was found to be more appropriate to the context.

Besides, while getting the permission to use the scale in the current study, the researcher also asked Papanastasiou if the scale is appropriate to the target group of the study. The answer was 'yes'. The revised version of the ATR scale consists of 30 items on a 7-point Likert scale and focuses on 5 factors: usefulness of research for profession, positive attitude towards research, research anxiety, relevance to life and research difficulty. The English version of this scale was shared with the students using Google Forms both at the beginning of the spring term before the students learn anything about research, and at the end of the spring term after they took the research course. Although the scale was tested by the developers for its reliability, in this study both pre- and post-test reliability checks of the scale were done. Accordingly, both pre-test and post-test Cronbach's Alpha coefficients of the scale was $\alpha = .92$ indicating that internal consistency of the scale was highly reliable (Streiner, 2010).

To further explore 1st group participants' responses to the questionnaire, a structured interview was composed by the researcher which required students to state their views about the course such as what they liked and disliked about the course, their suggestions for improving the research course, in what ways their attitude towards research changed (positive, negative, neutral). In this way, it was expected to validate the results of the scale, and further generate ideas about the efficient and inefficient parts of the course as well as checking students' own ideas about the change in their attitudes towards research. Sixteen students volunteered to participate in the interviews.

As for the 2nd group of participants who got the research course one year after the 1st group, the same scale was applied both at the beginning and at the end of the course term. This time rather than individual interviews, a focus group interview was utilized at the end of the semester to further explore the ideas of the 2nd group participants regarding the efficiency of the course. The same interview questions (the ones that were used for the 1st group) were asked to the students who attended the final week of the course (*N=38*).

Data Analysis

The quantitative data of the study was analysed using R (R Core Team, 2020). Initially normality was checked for both groups, and it was found that normality assumptions were not met (for the majority of the categories). So, Wilcoxon signed-rank tests were conducted using the Wilcox. Test function. For the individual interviews, frequencies of students' answers were reported after coding the answers under relevant themes. The data gathered from focus group discussion were evaluated thematically.

FINDINGS

The first research question of the study aimed to find out pre-course and post-course attitudes of the participants and in this respect the Wilcoxon signed-rank test was applied. Test results are given below in Table 3 for the 1st group of participants.

Table 3. 1st Group's Wilcoxon signed-rank test results (N=53)

	M	SD	p	r
$ATRS_{Pretest}$	5.11	0.71	.800	0.02
$ATRS_{Posttest}$	5.08	0.67		
Usefulness for $profession_{Pretest}$	5.68	0.80	.337	0.09
Usefulness for $profession_{Postest}$	5.85	0.69		
Research $anxiety_{Pretest}$	4.16	1.11	.983	0.01
Research $anxiety_{Posttest}$	4.12	1.08		
Positive $attitudes_{Pretest}$	5.42	0.76	.599	0.05
Positive $attitudes_{Posttest}$	5.28	0.78		
Relevance to $life_{Pretest}$	5.21	1.12	.712	0.04
Relevance to $life_{Posttest}$	5.09	1.09		
$Difficulty_{Pretest}$	4.38	1.08	.274	0.11
$Difficulty_{Posttest}$	4.16	1.04		

Wilcoxon signed-rank test results indicated that at the end of the course with the 1st participant group the mean values of all sub-scale items except for the 'usefulness for profession' decreased although their decrease was not statistically significant. The mean value of ATRS score in the pre-test was 5.11 (*SD*= 0.71) which reduced to 5.08 (*SD*= 0.67) (p =.800, r = 0.02). The subscale 'research anxiety' was lowered from 4.16 (*SD* =1.11) to 4.12 (SD= 1.08) (p=.983, r = 0.01) while 'positive attitude' was decreased from 5.42 (*SD*= 0.76) to 5.28 (*SD*= 0.78) (p = .599, r = 0.05). In the subscale "relevance to life" pre-test mean was 5.21 (*SD*= 1.12) which lowered to 5.09 (*SD* = 1.09) (p = .712, r = 0.04) in the post test. Lastly the subscale mean value of 'difficulty' decreased from 4.38 (*SD* =1.08) to 4.16 (*SD* = 1.04) (p = .274, r = 0.11).

The second research question aimed to reveal positive and negative feelings of the students about the research course and their suggestions to further advance the course content. In this regard, individual interviews with volunteer participants were conducted and the results with the 1st group of participants are given in Table 4 below.

Table 4. 1st group participants' interview results

Item	Explanation	Participant
Positive sides	Learning how to do research	S1, S2, S3, S5, S6, S7, S9, S11
	Increased knowledge about analysing a literary text	S4, S10, S14
	Developing writing skill	S8, S12
	Necessary for professional development	S15, S16
	Increased productivity	S13
Negative sides	Nothing	S1, S4, S6, S9, S10, S12, S14
	Online teaching	S2, S7, S11, S13
	The complexity of citation	S5, S8, S15
	Giving points to assignments	S3
	Too many technical terms	S15
Suggestions	Increasing assignments	S1, S2, S4, S5, S6, S7, S9, S10, S11, S12, S14, S15, S16
	Not giving points to assignments	S3
	Establishing a research club	S13
	No idea	S8

As is seen in Table 4, 'learning how to do research' and 'increased knowledge about analysing a literary text' were the prevalent positive sides of the research course that were liked by the participant students. Nearly half of the students, on the other hand, stated that there is nothing about the course that they did not like. In the meantime, 'online teaching of the course' and the 'complexity of citation' were the things that students did not like. S7 stated that "What I don't like about the course is that it is remote. I have difficulty in understanding because I could not attend the class". In this regard, the prevalent suggestion to further enhance the course was 'increasing assignments'. S4 indicated that "In order to enhance the course, the teacher should give more assignments so that we will have a chance to write more and put our technical knowledge on paper".

As regards to the third research question which aimed to learn how students perceive the change in their own attitudes towards research: positive, negative or neutral. As a result, it was found that all the students who volunteered to participate in the individual interviews believe that their attitude to the research changed positively.

As for the second group of participants, Table 5 demonstrates Wilcoxon signed-rank test results of the 2nd group of participants which also aims to answer the first research question.

Table 5. 2nd group's Wilcoxon signed-rank test results (N=44)

	M	SD	p	r
$ATRS_{Pretest}$	4.43	0.54	**.027**	0.23
$ATRS_{Posttest}$	4.58	0.60		
Usefulness for $profession_{Pretest}$	5.56	1.22	**.011**	0.27
Usefulness for $profession_{Postest}$	5.95	0.96		
Research $anxiety_{Pretest}$	4.06	1.41	.368	0.10
Research $anxiety_{Posttest}$	3.73	1.36		
Positive $attitudes_{Pretest}$	5.18	1.17	.280	0.11
Positive $attitudes_{Posttest}$	5.35	1.00		
Relevance to $life_{Pretest}$	3.83	1.19	.499	0.07
Relevance to $life_{Posttest}$	4.03	1.46		
$Difficulty_{Pretest}$	3.53	0.62	**.004**	0.30
$Difficulty_{Posttest}$	3.84	0.62		

According to Table 5, the mean values of ATRS, usefulness for profession and difficulty increased significantly. The mean value of ATRS score in the pre-test was 4.43 (*SD* = 0.54) and in the post-test it increased to 4.58 (*SD = 0.60*) (p = .027, r = 0.23). The subscale 'usefulness for profession' increased from 5.56 (*SD* = 1.22) to 5.95 (*SD* = 0.96) (p = .011, r = 0.27), while 'difficulty' raised to 3.84 (*SD* = 0.62) which was 3.53 (*SD* = 0.62) (p = .004, r = 0.30) in the pre-test. The rest of the subscale items did not change significantly. The 'research anxiety, for instance, lowered to 3.73 (*SD* = 1.36) which was 4.06 (*SD* = 1.41) (p = .368, r = 0.10) in the pre-test. 'Positive attitudes', on the other hand, increased from 5.18 (*SD* = 1.17) to 5.35 (*SD* = 1.00) (p = .280, r = 0.11), however, it was not a significant increase. Lastly, the subscale 'relevance to life' increased from 3.83 (*SD* = 1.19) to 4.03 (*SD* = 1.46) (p =.499, r = 0.07).

To further answer the second and third research questions of the study, with the second group of participants a focus group interview was conducted. The focus group discussion with the 2nd group of participants revealed that students were generally content with the course. Since the 2nd group took the course after designing the course content according to the suggestions of the 1st group of participants, the negative items such as online delivery of the course were absent in this group. Besides, the complexity of MLA citation was tried to be overcome by increasing examples during the course hours. In this regard, the delivery method of the course was not emphasized by the 2nd group of participants in the focus group interview. Two term papers were assigned to this group of participants and as a result they found the assignments enough. Just a few students stated that even three papers might have been assigned. However, when the burden of giving detailed feedback (in terms of teacher) and preparing papers to such assignments (in terms of students) is considered, three papers would be a little bit overwhelming both for the teacher and students. Although students in the focus group interview stated less when compared to the 1st group, this does not mean that they found the course content easy. There

were still problematic parts stated by the 2nd group of students such as the MLA citation format. Even if the examples and explanations were increased regarding the MLA citation rules, most students found it difficult to handle and uttered that during the focus group interview.

DISCUSSION AND CONCLUSION

The first aim of this study was to evaluate the impacts of the Research and Study Techniques course on the attitudes of 1st year English Language and Literature students and to design the course according to the needs and suggestions of the students. Therefore, the second aim of the study was to further apply the redesigned course to another group and find out if the suggestions of the 1st group of students had an effect on the enhancement of the course and in return on the attitudes of the 2nd group of students towards research.

The findings with the 1st group of students revealed that there were no significant changes in the attitudes of the 1st group of participants after taking the course, although some of the subscale items decreased. The mean values of four sub-scale items such as 'research anxiety', 'positive attitude', 'relevance to life' and 'difficulty' decreased while 'usefulness for profession' increased. Although the decrease of research anxiety and difficulty was aimed and expected, positive attitude and relevance to life items were actually expected to increase since the aim of the course was to increase positive attitudes of the students towards research and show them that the research is relevant to life. Therefore, with the individual interviews the views of participants about the research course were collected in order to understand the decrease in the regarding subscale items. The results indicated that although students stated that their knowledge about conducting research, writing, and analysing literary texts increased, they also said that online delivery of the course and the complexity of MLA citation were the issues that led them to feel negative about the course. As a result, it was expected that their suggestions would be beneficial to further develop the course content. Therefore, after redesigning the course according to the suggestions of the 1st group of participants, the following year it was delivered to the 2nd group. The same procedure of pre and post-tests applied to this group as well. The findings indicated that the mean values of ATRS, usefulness for profession, and difficulty increased significantly. The increase in the subscale usefulness for profession was an expected outcome. However, an increase in the difficulty subscale was not expected. This also showed that increasing the number of assignments or increasing in-class MLA examples and explanations may lead students to think that a research course is necessary for their profession; however, all of these changes may not be enough to reduce the complexity of the course itself. Since undergraduate level students still are in the beginning phases of understanding and applying research logic, at this stage, it is inevitable for the course to be perceived as complex or difficult. This showed that in the following years, the content of other courses in the

department should be arranged in a way that would encourage students to do research and apply citation rules on their assignments. Moreover, the findings of Kakupa and Xue's (2019) study support my idea that the more exposure to the research would decrease the difficulty and complexity of research, and in return would yield better attitudes towards research.

This finding of this study contradicts Uzun's (2020) findings which revealed that students' attitudes towards a research course changed negatively. In this study, with the 1st group of students there were no significant changes, yet in the second phase of the study with the 2nd group some significant increase in some of the subscale items (which explained above) was found. Since the target group and scientific research method of both studies are different (literature students and literary research in this study, English language teaching students and educational research in Uzun's study), this contradictory outcome may have been inevitable. Furthermore, Garancho and Marpa (2019) also found that undergraduate education students have negative attitudes towards research and its relevance to life. In fact, many factors may affect students' attitudes towards research or any other course. In their study Butt and Shams (2013), for instance, stated that even a lack of research culture in their own country may have impacted the negative feelings of students towards research.

Although the increase in the positive attitudes of 2nd group of students was not significant compared to the increase in usefulness for profession, we can even so say that the findings of this study is in line with the findings of Belgrave and Jules' (2015) study in which the researchers found that if students perceive research as functional and applicable to real-life situations than they develop positive attitudes. Belgrave and Jules (2015) also examined the attitudes of students on the application of student-centred principles in research-oriented courses which, in this study, coincides with the aim of organizing the lesson in line with the expectations of the students by receiving feedback from the students.

When interpreted as a whole, we can say that each learning environment and its participants are unique. Therefore, designing research courses according to the needs and expectations of students would be in line in the context of today's student-centred learning and teaching approach. After delivering a course for the first time, then course teachers may find a balance between their own expectations and the expectations of the target student group. Moreover, in the case of a research course, giving enough assignments and making sure that students fully understand the research procedure play a big role in students' positive attitudes towards research. To ensure increased exposure to research, the courses that students get in the following years of their undergraduate coursework may also require students to apply the research procedure that they learnt in the research course. By this means students can have the chance to practice more which will eventually enable students to master the logic of research.

REFERENCES

Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology, 52*, 27-58.

Belgrave, K. L., & Jules, J. E. (2015). *Students' attitudes towards research: Applying best practice principles through a student-centred approach*. Paper presented at the Regional Conference on Institutionalising Best Practice in Higher Education, UWI, St. Augustine, Trinidad and Tobago.

Borg, W. R. (1965). *Educational research: An introduction*. New York: David McKay Co. Inc.

Brookbank, E., & Christenberry, H. F. (2019). *MLA guide to undergraduate research in literature.* New York: The Modern Language Association of America.

Butt, I. H., & Shams, J. A. (2013). Master in education student attitudes towards research: A comparison between two public sector universities in Punjab. *A Research Journal of South Asian Studies, 28*(1), 97-105.

Culler, J. (1997). *Literary theory: A very short introduction*. New York: Oxford University Press.

Deshpande, H. V. (2018). *Research in literature and language: Philosophy, areas and methodology.* Chennai: Notion Press.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes.* Fort Worth, TX: Harcourt Brace Jovanovich College Publishers.

Ferrance, E. (2000). *Themes in education: Action research*. Providence, RI: Northeast and Islands Regional Educational Laboratory.

Fitzpatrick, K. (2007). Introduction to literary research. Retrieved from https://kfitz.info/introduction-to-literary-research/

Garancho, G. A. G., & Marpa, E. P. (2019). Teacher education students' attitude towards research studies: A case study. *Rangsit Journal of Educational Studies, 6*(1), 12-25.

Glasman, L. R., & Albarracín, D. (2006). Forming attitudes that predict future behavior: A meta-analysis of the attitude-behavior relation. *Psychological Bulletin, 132*(5), 778–822. https://doi.org/10.1037/0033-2909.132.5.778

Heigham, J., & Croker, R. A. (2009). *Qualitative research in applied linguistics: A practical Introduction*. London: Palgrave Macmillan.

Hornby, A. S. (2000). *Oxford advanced learner's dictionary of current English*. Oxford: Oxford University Press.

Ivanitskaya, L., Laus, R, & Casey, A. M. (2004). Research readiness self-assessment. *Journal of Library Administration, 41* (1-2), 167-183.

Kakupa, P., & Xue, H. (2019). Students' attitudes towards research: A study of graduate education students at a Chinese normal university. *Educational*

Process: International Journal, 8(2), 97-110.

MasterClass (2021). Literary theory: Understanding 15 types of literary criticism. Retrieved from https://www.masterclass.com/articles/literary-theory-explained#what-is-literary-theory

Newing, H. (2011). *Conducting research in conservation: Social science methods and practice.* New York: Routledge.

Ochsner, M., Hug, S. E., & Daniel, H. D. (2013). Four types of research in the humanities: Setting the stage for research quality criteria in the humanities. *Research Evaluation, 22*, 79-92.

Papanastasiou, E. C. (2005). Factor structure of the 'Attitudes towards research' scale. *Statistics Education Research Journal*, *4*, 16-26.

Papanastasiou, E. C. & Schumacker, R. (2014). Rasch rating scale analysis of the attitudes toward research scale. *Journal of Applied Measurement*, *15*(2), 1-11.

Petrella, J. K., & Jung, A. P. (2008). Undergraduate research: Importance, benefits, and challenges. *International Journal of Exercise Science, 1*(3), 91-95.

R Core Team (2020). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/

Streiner, D. L. (2010). Starting at the beginning: An introduction to coefficient alpha and internal consistency. *Journal of Personality Assessment, 80*(1), 99-103.

Uzun, K. (2020). The effect of a research methods course on the attitudes towards research among pre-service English teachers. *Mehmet Akif Ersoy* Üniversitesi *Eğitim Fakültesi Dergisi, 54,* 233-257.

Waite, S., & Davis, B. (2006). Developing undergraduate research skills in a faculty of education: Motivation through collaboration. *Higher Education Research & Development, 25* (4), 403-419.

CHAPTER 7

FOCUS ON FORM IN BLENDED LANGUAGE TEACHING: SAMPLE OF TEACHING TURKISH AS A FOREIGN LANGUAGE

Betül ÇETİN[1]

1 Dr. Betül Çetin, Dokuz Eylul University, ORCID ID 0000 0002 0287 2924

Introduction

The technological possibilities of the century and the tendency of new generations to use technology have made online and blended teaching applications necessary in education in all fields and language teaching particularly. In language teaching, face-to-face lessons have many advantages, but using some online activities also provides advantages. There are debates in the literature about whether face-to-face or online education is better. Blended learning eliminates the question, "Is it better to learn face-to-face or online?" (Chamberlin and Moon, 2005; Graham, 2006; Hartle, 2022; Lock, 2006; Poon, 2013; Schlager et al., 2002; Etc.).

Blended teaching has many advantages, such as addressing individual differences between students, eliminating peer pressure, and saving time and space. As in every field, it has great advantages in language teaching. It can be used to carry out activities to develop linguistic skills in language teaching, easily show authentic language usage examples to the student, and make classroom and out-of-class activities more fun.

In this study, it is discussed how blended teaching can be used in focus on form grammar teaching. In this context, "focus on form" language teaching, and the literature on blended teaching are briefly discussed, and application suggestions can be used in blended teaching to focus on form language teaching materials.

Focus on Form in Language Teaching

The place of grammar in foreign language teaching has been debated in the last 40 years (Batstone, 1994; Batstone&Ellis, 2006; Celce-Murcia & Hilles, 1988; Celce-Murcia & Larsen-Freeman, 2003; Long, 1991; Fotos &Hinkel, 2007; Larsen-Freeman, 1995, 2001; Rutherford & Sharwood, 1985; Etc.). Nassaji and Fotos (2011:10) state that "In response to the problems presented by traditional approaches to the teaching of grammar, on the one hand, and dissatisfaction with purely communicative approaches on the other, Long (1991), proposed an approach which he termed focus on form (FonF)." "Focus on form" is a way to teach grammar in a language-teaching classroom. In the simplest terms, "focus on form" can be defined as planning lessons within the framework of grammar. "Focus on form" does not mean explaining grammar rules explicitly. In

explicit grammar instruction, the teacher teaches the rules and structures of the language, using examples and exercises to help students understand and apply the grammar concepts. Implicit learning is a kind of unconscious behavior; the learners do not know the content they are learning in the process of learning and do not know who is learning, which cannot be built and verified (Ling, 2015). In focus on form activity, it is optional to teach grammar explicitly. The teacher can explain the rules explicitly or implicitly.

Ellis (2001) divides "focus on form" activities into two areas: focus on planned forms and focus on incidental forms. Doughty & Williams (1998) indicate the degree of obtrusiveness of focus on form techniques. Obtrusiveness indicates that grammar structures are presented explicitly by using metalinguistic terms. It can be found in Table 1.

Table 1. Degree of Obtrusiveness of Focus on Form (Doughty &William,1998: 258)

	Unobtrusive ⟷ obtrusive
Input flood	x
Task-essential language	x
Input enhancement	x
Negotiation	x
Recast	
Output enhancement	x
Interaction enhancement	x
Dictogloss	x

Consciousness-raising tasks	x	
Input processing		x
Garden path		x

By input flood activities, students are exposed to linguistic features, whether orally or textually, and this type of activity is in the unobtrusive category. Input enhancement there is modified (e.g., underlined, bold, italic, capital, colorful, Etc.) input to students to make the input more noticeable.

Çetin (2022) indicates that grammar teaching is not the primary purpose of language teaching. However, while considering agglutinating languages such as Turkish, it is impossible to deny the importance of grammatical features.

By incorporating activities and exercises that focus on specific linguistic forms, teachers can help learners develop a more conscious and accurate understanding of the language and provide opportunities to practice using the language in real-world contexts. This situation can help learners develop their language skills more quickly and effectively and help teachers identify areas where learners need additional support.

Blended Language Teaching

Blended teaching has been considered an important method to overcome various limitations of face-to-face and online learning because blended learning adopts the advantages of both types of learning (Graham, 2006; Hartle, 2022; Poon, 2013; Schlager et al., 2002). Schlager et al. (2002) state that teachers can benefit from the advantages of face-to-face and online teaching practices with blended learning. Additionally, blended learning is an effective time and place flexibility, reaching resources and interactions (Chamberlin & Moon, 2005; Lock, 2006).

Figure 1. shows all the components of blended teaching and the relationship between them, created by Kalmamatova et al. (2021) (reproduced from Adel & Dayan, 2021).

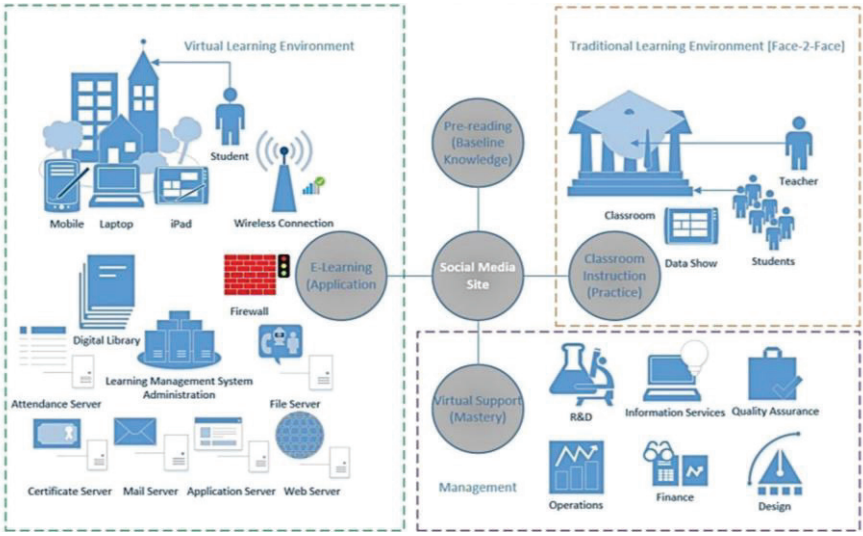


Figure 1. *Blended learning system activities model (Kalmamatova et al., 2021)*

As seen in Figure 1. mobile, laptop, iPad, wireless connection, the digital library is related to e-learning applications, Etc., and classroom, data show, students, teachers, Etc. is related to classroom instruction. There is an important relationship between them. One of the benefits of using online tools is that they can help teachers develop more effective language teaching materials. By using blended teaching, teachers can develop materials by using various teaching methods and activities in their lessons, which can help keep learners motivated. This situation can lead to a more positive learning experience for teachers and learners.

Al Bataineh, Banikalef & Albashtawi (2019) lists blended teaching's advantages as follows:

1. Encouraging dynamic, simultaneous, free, joint and significant learning experiences

2. Helping learners to accomplish satisfaction and achievement effectively

3. Enhancing learning and outcomes, including content, objectives, materials, procedures,

and assessment

4. Dealing more effectively with individual differences

5. Managing and controlling the class easily

6. Reducing the cost per credit hour (Al Bataineh, Banikalef & Albashtawi, 2019)

There are many online tools and resources available that can help students practice their language skills, such as grammar exercises, vocabulary games, and interactive language lessons. These tools can be integrated into the classroom or used as part of a homework assignment, allowing students to receive regular practice and feedback on their language skills.

Hart (2022) lists the online learning tools on their site and puts them to the vote to determine the frequency of use of these tools. They separate tools lists for personal learning **(PPL),** workplace learning **(WPL)**, and education **(EDU).** In Table 2. The top 10 list can be found.

Table 2. Hart's Top 10 online learning tools (2022).

TOP 300	TOOL	BRIEF DESCRIPTION	PPL	WPL	EDU
1	YouTube	video hosting and sharing platform	✓	✓	✓
2	PowerPoint	presentation software	✓	✓	✓
3	Google Search	search engine	✓	✓	✓
4	Microsoft Teams	enterprise collaboration platform	✓	✓	

5	Zoom	video meeting platform	✓	✓	✓
6	Google Docs & Drive	office suite/file sharing platform	✓	✓	✓
7	LinkedIn	professional social network	✓	✓	
8	Word	document tool	✓	✓	✓
9	Canva	graphics tool	✓		✓
10	Wikipedia	online encyclopedia	✓	✓	✓

For the purpose of showing how each of these tools can enable and support learning in a different context, Hart (2022) makes a diagram of Top 100 Tools of Learning 2022. It can be seen in **Figure 2.**

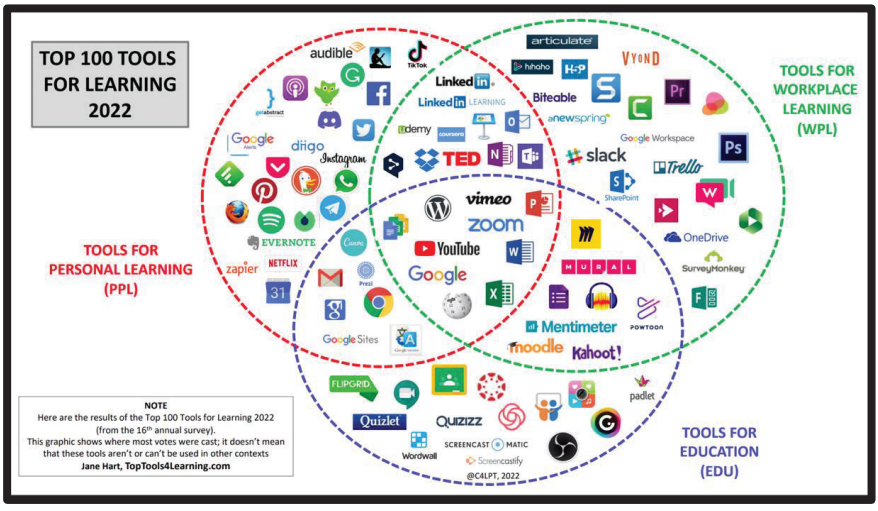


Figure 2. *Top 100 Tools for Learning 2022 (Hart, 2022)*

As seen in Figure 2, tools such as “YouTube,” “Google,” “Zoom,” “Vimeo,” “PowerPoint”etc. are used for common purposes among Personal Learning **(PPL),** workplace learning **(WPL)**, and education **(EDU)**.

In their study Sarıgül (2021) discussed 13 tools (Edpuzzle, Factile, Gimkit, Google Forms, Hot Potatoes, Kahoot, Mentimeter, Nearpod, Plickers, Poll Everywhere, Quizizz, Quizlet, and Socrative) used in online formative assessment, mentioned their features, and analyzed extensively, especially in teaching Turkish as a Foreign Language.

All these tools can be used for developing blended language materials. When incorporating technology into a focus on form blended teaching approach, it is important for teachers to carefully select the tools and resources that will be most beneficial for their students. This may involve conducting a needs analysis to determine each student's specific language skills and areas of difficulty and selecting tools and resources that address those needs. In addition, providing training and support for students to use the technology effectively can help ensure that they are able to take full advantage of online learning opportunities.

Form-Focused Teaching Turkish Activities in Blended Teaching

Some studies show that success in grammar teaching with blended teaching increases. Al Bataineh, Banikalef & Albashtawi (2019) found that students' success increased after grammar teaching with blended learning in their study with the quasi-experimental design (pre and post-test) method. Pinto-Llorente et al. (2016), in their studies to explore students' perceptions towards some asynchronous tools to acquire the objectives of the subject of English Morphosyntax, it is seen that blended applications contribute to the development of grammar teaching. Ngo (2018) stated that positive impacts associated with students' engagement and performance within blended learning using Edmodo were demonstrated and found that students engaged much more in the learning process and scored higher on the post-test. According to their study, Sujana&Syahrial et al. (2021) emphasize that "students perceive positively to the printed and online materials using Google Classroom (GC). Most students consider F2F materials, in terms of difficulty, organization, fulfillment of needs, and assessments, suitable for their present situations. The use of GC also

obtains positive responses in relation to ease of access, usefulness, and satisfaction." Acar&Kayaoğlu (2020) found that the blended model helped learners to progress in their studies, which sought to find out whether the use of MOODLE in English lessons as an online tool for blended instruction makes a significant difference in the achievement of the students.

When it is considered in terms of teaching Turkish as a foreign language in the literature, Khalmatova (2021) discussed blended teaching practices in terms of Turkish as a foreign language in their thesis titled "Blended Learning in Teaching Turkish as a Foreign Language: Station Rotation Model." As a result of their study, it is seen that the station activities applied as blended are effective according to the opinions of the students and the teacher about the model and the results obtained from the observations of the researcher.

Focus on form in blended teaching is a teaching approach that combines traditional language instruction with a focus on form. In teaching Turkish as a foreign language, these teaching methods would involve incorporating activities and exercises that focus on specific linguistic forms, such as grammar, vocabulary, and pronunciation, into the lesson plan. This type of teaching system aims to help learners develop a more conscious and accurate understanding of the language while also providing opportunities for them to practice using the language in real-world contexts. This approach can be effective because it allows learners to receive explicit instruction on the language forms they need to improve while also giving them the opportunity to apply what they have learned in authentic language use. By using online language teaching tools, the teacher can provide regular feedback on student's use of the target language. This can include correcting errors, explaining grammar rules, and providing additional practice opportunities. For example, the teacher might use online quizzes or exercises to give students personalized feedback on their grammar skills or provide individualized instruction during class to address specific areas of difficulty. In addition, providing regular opportunities for students to receive corrective feedback on their language use can help them improve their accuracy and fluency in the target language.

Some examples of the focus on form blended teaching in the context of teaching Turkish as a foreign language might include:

Example (1):

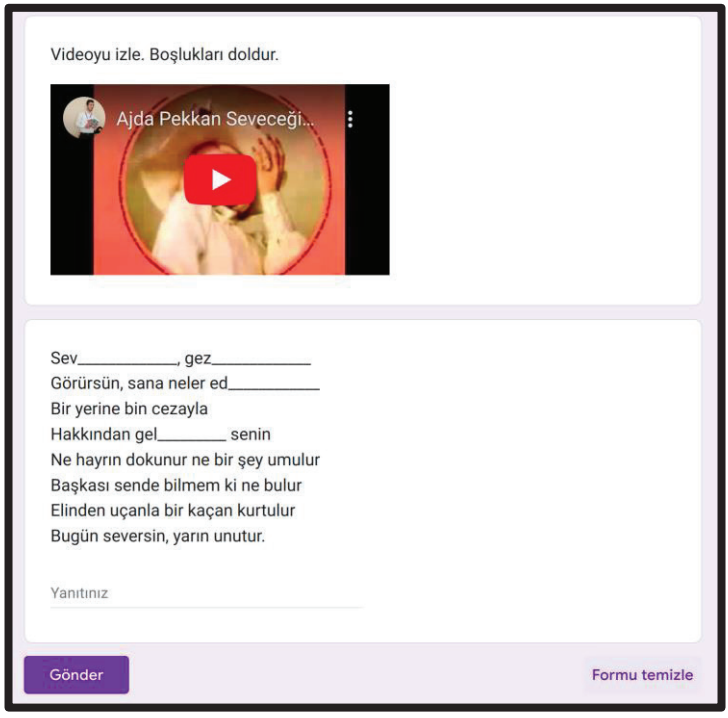
A Sample Drag Drop Activity with Wordwall for Teaching Turkish Past Tense Suffix (-DI)

After face-to-face activities and explanations in the classroom, the teacher might provide learners with sentences with a missing suffix and ask them to fill in the correct suffix form using Wordwall. In example (1), there is a drag-drop activity for A1-level Turkish students. Students can do this activity out of the classroom by themselves, or they can do it in the classroom with their teacher. This activity is an activity that can be done by writing the activity in the worksheets. However, in the conditions of the current period, it may be better to do online activities, especially since online activities will increase the motivation of young people. Furthermore, it should be noted that more than this activity will be needed to learn the structure. There should be other supporting activities before and after.

Example (2):

A Sample Fill in the Blank Activity with Google Forms for Teaching Turkish Future Tense Suffix (-(y)AcAk)

They incorporated authentic language materials, such as videos, songs, or news articles, into lessons to provide learners with opportunities to practice using the language in real-world contexts. For example, a teacher might show a video of Turkish songs and ask learners to listen for grammar structures and fill in the blanks with the correct structure. Before this activity, tense suffix can be explained, or this activity can be used as an input enhancement tool.



Example (3):

A Sample Speaking Activity with YouTube or Flipgrid for Teaching Turkish Present Tense Suffix (-(I)yor)

Using various teaching methods and activities, such as group work, role-plays, or games, keeps learners engaged and motivated. For example, a teacher might ask learners to work in small groups to create a dialogue in

Turkish and then have the groups record their dialogues with the class using tools like YouTube, Flipgrid, etc.

https://www.youtube.com/watch?v=tloj4fwYk-E

Firstly, students watch a YouTube video called "***Tr_A1U2 - Türkçede Şimdiki Zaman***" prepared by Anadolu University. Including videos in language teaching makes it easier for the student to understand the context in which the dialogue takes place. After watching, they are asked to record a video like the one prepared by Anadolu University and upload their video to an appropriate platform.

Example (4):

A Sample Speaking or Writing Activity with Wordwall Teaching Turkish Optative Mood Suffix (-(y)AlIm)

With Wordwall, boxes are created where verbs' images will be placed. Students are asked to choose from the boxes by saying a number. They are told to ask a question with the verb in the opened image. For example, "*Kahve içelim mi?"* (Shall we have coffee?)". All students are asked a number in turn and asked to create questions. Students can give their answers in writing or orally.

These are just a few examples of how blended teaching can be implemented in teaching Turkish as a foreign language. The specific activities and methods used will depend on the learners' level, needs, and interests, as well as the goals and objectives of the lesson.

Conclusion

Grammar teaching is essential in teaching Turkish as a foreign language since functions and uses cannot be handled independently of the form. Functions and uses are not considered independent of form. On the other hand, blended teaching combines traditional face-to-face teaching methods with online learning activities, allowing students to receive personalized instruction and practice outside the classroom.

As seen in the studies of Acar&Kayaoğlu (2020), Bataineh, Banikalef & Albashtawi (2019), Khalmatova (2021), Pinto-Llorente et al. (2016), Ngo (2018), Sujana&Syahrial et al. (2021), one of the main benefits of the focus on form blended teaching is that it can help teachers provide more effective language instruction. By incorporating activities and exercises that focus on specific linguistic forms, teachers can help learners develop a more conscious and accurate understanding of the language and provide opportunities to practice using the language in real-world contexts. This can help learners develop their language skills more quickly and effectively and help teachers identify areas where learners need additional support. Additionally, by using a blended teaching exercise, teachers can incorporate various teaching methods and activities into their lessons, which can help keep learners engaged and motivated. This can lead to a more positive learning experience for teachers and learners. By combining traditional teaching methods with online learning activities, teachers can provide personalized instruction to help students the grammar.

In their studies, Pilancı, Saltık & Çalışır-Zenci (2020) discussed the place and importance of language teaching in the field of open and distance learning and emphasized that technology provides an advantage to language teaching and the teacher should know this advantage. If technology is used appropriately, it can bring many advantages to teachers and students, so teachers need to get support from experts in the use of technology (Pilancı, Saltık& Çalışır-Zenci, 2020).

Blended teaching can be used not only to teach grammar but also by using vocabulary-building activities, such as word games, flashcards, or word lists, to help learners expand their lexical knowledge. Providing instruction on pronunciation, such as with phonemic charts, minimal pairs exercises, or pronunciation drills by online teaching tools. For example, a

teacher might use a phonemic chart to show learners the different sounds in Turkish and then ask them to practice pronouncing words that contain those sounds. Overall, blended teaching activities for Turkish as a foreign language can effectively help students improve their language skills and achieve their language learning goals.

REFERENCES

Acar, A., Kayaoğlu, M. N. (2020). MOODLE as a potential tool for language education under the shadow of COVID-19. E*urasian Journal of Educational Research 90,* 67-82.

Al Bataineh, K. B., Banikalef, A.A. A., & Albashtawi A. H. (2019). The effect of blended learning on EFL students' grammar performance and attitudes: An investigation of Moodle. *Arab World English Journal, 10*(1) 324-334. DOI: https://dx.doi.org/10.24093/awej/vol10no1.27

Batstone, R. (1994). *Grammar*. Oxford: Oxford University Press.

Batstone, R., & Ellis, R. (2009). Principled grammar teaching. *System, 37,* 194–204.

Chamberlin, S. A., & Moon, S. (2005). Model-eliciting activities: an introduction to gifted education. Jo*urnal of Secondary Gifted Education, 17,* 37-47.

Celce-Murcia, M., & Hilles, S. (1988). *Techniques and resources in teaching grammar.* New York: Oxford University Press.

Celce-Murcia, M., & Larsen-Freeman, D. (2003). *The grammar book: An ESL/EFL teacher's course.* Boston: Heinle & Heinle.

Çetin, B. (2022). Form-focused foreign language teaching in agglutinating languages: the case of Turkish. *Journal of Language Education and Research, 8*(1), 207-226.

Doughty, C., & Williams, J. (1998). Pedagogical choices in focus on form. In C. Doughty, & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 197-261). Cambridge: Cambridge University Press.

Ellis, R. (2001). Introduction: Investigating form-focused instruction. In R. Ellis (Ed.), *Form-Focused instruction and second language learning,* Vol. 51, (pp. 1–46). Blackwell Pub.

Graham, C. R. (2006). Blended learning systems: definition, current trends, and future directions, In C. J. Bonk & C. R. Graham (Eds), *The handbook of blended learning: Global perspectives*, San Francisco, CA: Pfeiffer Publishing.

Fotos, S., & Hinkel, E. (2007). Form-focused instruction and output for second language writing gains. In S. Fotos, & H. Nassaji (Eds.), F*orm-focused instruction and teacher education: Studies in honour of Rod Ellis*. Oxford: Oxford University Press.

Hart, J. (2022). *Top tools for learning 2022*, https://www.toptools4learning.com/.

Hartle, J. (2022). Developing blended learning materials. In Norton, J. & Buchanan, H. (Eds.) *The Routledge handbook of materials development for language teaching*. The Routledge Handbooks.

Kalmamatova, Z., Shamurzaev, A., Tynybekova, C. et. Al. (2022). Effectiveness of blended learning in teaching a foreign language in aspect of modern education. *Journal of Positive School Psychology 6*(4), 1728 –1733.

Khalmatova, Z. (2021). *Blended Learning in Teaching Turkish as a Foreign Language: Station Rotation Model,* PhD Thesis, Ankara.

Larsen-Freeman, D. (1995). On the teaching and learning of grammar: Challenging the myths. In F. Eckman, D. Highland, L. P. J. Mileham, & R. Weber (Eds.), S*econd language acquisition theory and pedagogy* (pp. 131–50). Mahwah, NJ: Lawrence Erlbaum.

Larsen-Freeman, D. (2001). Teaching grammar. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (3rd ed., pp. 251–85). MA: Heinle & Heinle.

Lock, J. (2006). New image: online communities to facilitate teacher professional development. *Journal of Technology and Teacher Education, 14*(4), 663–678.

Long, M. (1991). Focus on form: A design feature in language teaching methodology. In K. DeBot, R. Ginsberge, & C. Kramsch (Eds.), *Foreign language research in crosscultural perspectiv*e (pp. 39–52). Amsterdam: John Benjamins

Ling, Z., (2015). Explicit grammar and implicit grammar teaching for English major students in university. *Sino-US English Teaching, 12*(8), 556-560.

Nassaji, H., & Fotos, S. (2011). *Teaching grammar in second language classrooms: Integrating form-focused instruction in communicative context.* New York: Routeledge.

Ngo, J. (2018). The impact of blended learning on students' performance in English Grammar Courses. 2018 ASAIHIL Conference. Tokyo. https://www.academia.edu/36972621/THE_IMPACT_OF_BLENDED_LEARNING_ON_STUDENTS_PERFORMANCE_IN_ENGLISH_GRAMMAR_COURSES

Pilancı, H., Saltık, O., Çalışır-Zenci, S. (2020). Basic principles for open and distance foreign language Turkish teachers. *International Journal of Humanities and Education 6*(14). 516 -529.

Pinto-Llorente, A. M., Sánchez-Gómez, M. C., García-Peñalvo, F. J., & Casillas-Martín, S. (2017). Students' perceptions and attitudes towards asynchronous technological tools in blended-learning training to improve grammatical competence in English as a second language. *Computers in Human Behavior, 72,* 632–643. https://doi.org/10.1016/j.chb.2016.05.071

Poon, J. (2013). 'Blended learning: An institutional approach for enhancing students' learning experiences'. *Journal of Online Learning and Teaching, 9*(2), 271-288. Retrieved from http://jolt.merlot.org/vol9no2/poon_0613.htm

Rutherford, W., & Sharwood Smith, M. (1985). Consciousness-raising and universal grammar. *Applied Linguistics, 6,* 274–82.

Sarıgül, K. (2020). Online formative assessment tools in teaching Turkish as a foreign language. *Karamanoğlu Mehmetbey University Journal of Literature Faculty,4* 56-80. https://doi.org/10.47948/efad.922748.

Schlager, M., Fusco, J., & Schank, P. (2002). Evolution of an online education community of practice. In K. A. Renninger & W. Shumar (Eds.), *Building virtual communities: Learning and change in cyberspace* (pp. 129–158). New York: Cambridge University Press.

Sujana, A. M., Syahrial, E., Arifuddin, A.& Thohir, L. (2022). Designing Blended Learning for Teaching English Grammar at Higher Education. *Advances in Social Science, Education and Humanities Research, 556*. 447-451.