

# Innovative teaching practices during the emergency remote teaching (ERT) process: a phenomenological inquiry

Teaching  
practices  
during ERT

Tuğba Sadıç and Bünyamin Bavlı

*Department of Curriculum and Instruction, Yıldız Technical University,  
Istanbul, Turkey*

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## Abstract

**Purpose** – The Covid-19 period has led to defining changes in the teaching process. Therefore, it is essential to explore how teachers have approached these changes, what experiences they have gained and what they have tried to change. This study aims to elucidate how innovative practices were applied in teaching – which was influenced by emergency remote teaching (ERT) – and better understand teachers' experiences related to these practices.

**Design/methodology/approach** – The phenomenology design, a qualitative research model, was executed in the current study. Phenomenological inquiry aims to interpret people's experiences about a specific concept designated as a phenomenon. Creswell (2020) classified two types of phenomenology: interpretive and descriptive. Interpretive phenomenology was employed in the current study as researchers collected data from individuals experiencing the phenomenon, collected and interpreted the data via excluding their own experiences.

**Findings** – As a result of the data interpretation, four themes related to experiences of innovative teaching practices during ERT were discovered: interpretation of innovative teaching, innovative teaching practices, needs related to innovative teaching and challenges to innovative teaching. The categories related to the interpretation of innovative teaching include positive and negative interpretation. The categories related to the second theme, innovative teaching practices, consist of characteristics of innovative teachers and innovative teaching practices employed. The categories related to the third theme, needs related to innovative teaching, are the need for guidance, training and technological infrastructure. The categories related to the fourth and final theme, challenges to innovative teaching, are barriers related to the teacher, barriers related to the learner and those related to the environment.

**Originality/value** – This study discovered that for teachers to practice innovative teaching, they must develop themselves, keep up-to-date and develop lifelong learning skills. Hung and Li (2017) reached a similar conclusion to the findings of this study: teachers' professional development is positively related to innovative teaching skills at a high level. The participating teachers stated that they had to rapidly improve their technological competency. It is thought that teachers developing their technological competencies will contribute to both ERT and face-to-face education at the end of the Pandemic.

**Keywords** Emergency remote teaching, Innovative teaching, Online education, Teachers, Elementary school, High school

**Paper type** Research paper

## Introduction

Due to its nature, education is a system open to change. Education has been affected by social changes, technological developments and individual differences, and underwent a philosophical change. Through this change, teachers have changed from being sources of

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knowledge to primarily becoming guides in teaching and knowledge acquisition; as a result, innovative teaching has gained momentum.

Education, which is directly affected by social changes, has also been greatly affected by the global Covid-19 pandemic. The pandemic made it compulsory to replace face-to-face education with distance education. As of March 23, 2020, emergency remote teaching (ERT) was initiated, making distance education mandatory. This new ERT process influenced approaches and methods adopted by teachers during teaching. With lessons being conducted via online meetings, teachers' compliance with the process, technological skills and adoption of various types of innovation have since gained importance. Rogers (2003) classified individuals into five categories according to their reaction to innovation in his diffusion of innovations theory. The first of these are innovators, who search for innovation and are the first to adopt it; the second are early adopters, informing other groups about innovations; the third are deliberates, who are more cautious about innovations; the fourth are skeptics; and the last are traditionalists, who are prejudiced against innovation. Since teachers are supposed to be role models for their students, they are expected to be innovators and early adopters. In addition, the importance of teachers learning a new system, adapting to it and using it effectively was more pronounced during the ERT process, where in-service training was often compromised. Teachers with the necessary knowledge have the key role for applying innovation in education and training innovative individuals (Yokuş and Yelken, 2016). A previous study discovered that innovative teaching practices are related to teachers' professional development (Hung and Li, 2017). Teachers play a key role in the implementation of innovation in education. Thus, when innovative practices in education are considered, educators must undertake the task of arranging learning environments that allow for the organization of information and support of creative processes (Sedžiuvienė and Urbonienė, 2015).

Atkinson *et al.* (1996) emphasized the importance of innovative teaching methods for improving educational processes. Therefore, the necessity of innovative teaching during such a far-reaching, global problem affecting education is apparent. Distance learning processes have led to new educational paradigms and content (Nurutdinova *et al.*, 2016). As a result of this change, Chen and Swan (2020) argued that online education processes could be as effective as face-to-face education when successfully designed and implemented.

Innovative teaching includes approaches and methods that advance creativity and innovation (Kalyani and Rajesekaran, 2018). However, not every new strategy and method is considered innovative teaching (Zhu *et al.*, 2013).

The role of the teacher in innovative teaching is to be mobilizing and inspiring. The responsibility for educating investigative, questioning and creative students primarily lies with the teacher. Woffe and Uribe (2020) argued that distance education pushes individuals to search for creative solutions to use them for effective interaction. Similarly, Ferrari *et al.* (2009) emphasized that innovative teaching is the process of managing creative learning and that creative learning should be managed to develop the learners' creative potential and satisfy their learning needs. Teachers need to enrich the learning environment and, accordingly, integrate different teaching practices that use creative thinking skills in this environment. Amabile (1996) clarified that teaching based on standard tools ruins creativity. Innovative teaching not only eases the dissemination of information but also results in new perspectives on innovation and innovativeness. In addition, Zhu *et al.* (2013) underlined that innovative teaching requires teachers to recognize the educational needs of the new generations. According to Maass *et al.* (2019), innovative teaching allows teachers to realize defined learning goals more effectively when compared to standard practices and supports students in this direction. However, more studies are required to explore and disseminate innovative teaching practices and further integrate them into the learning environment.

In the most general sense, innovative teaching involves organizing methods and techniques employed during teaching according to student characteristics, liberating the teaching process from monotony, differentiating the learning environment and inspiring students to manage the learning process. Innovative teaching, as a comprehensive concept, is closely related to creativity. Along with the learners themselves and the fact that characteristics of the learners have changed in the virtual learning environment, changes and differentiations have also occurred in the learning environment itself. In line with this, teaching is also required to be differentiated.

When the literature is reviewed, it is evident that innovative teaching is mainly associated with creativity, the use of technology in classroom teaching processes (Yılmaz and Kocasarac, 2010) and science education (Kimik Topalsan, 2019); on the other hand, it is noted that the studies conducted in medical education are in the majority. When prior studies are reviewed, no studies aiming to define innovative teaching through teachers' experiences related to educational conditions that changed with the pandemic were discovered. In this context, how teachers implement innovative teaching practices in changing educational conditions will be uncovered in this study. The Covid-19 period has led to defining changes in the teaching process. Therefore, it is essential to explore how teachers have approached these changes, what experiences they have gained and what they have tried to change. This study aims to elucidate how innovative practices were applied in teaching – which was influenced by ERT – and better understand teachers' experiences related to these practices.

## Method

### *Research design*

The phenomenology design, a qualitative research model, was executed in the current study. Phenomenological inquiry aims to interpret people's experiences about a specific concept designated as a phenomenon (Creswell, 2020; Merriam, 2013). Phenomenology is the process of defining a phenomenon that thoroughly focuses on individuals' existing experiences and the perceptions and meanings that they attribute to these experiences (Patton, 2014). In line with this, the innovative teaching experiences of teachers during ERT, which brought forth a pronounced change in education, were designated as the phenomenon of the current study. Creswell (2020) classified two types of phenomenology: interpretive and descriptive. Interpretive phenomenology was employed in the current study as researchers collected data from individuals experiencing the phenomenon, and interpreted the data via excluding their own experiences.

### *Study group*

In accordance with the nature of the study, the purposeful sampling method was operated in the current study. Berg and Lune (2019) suggested that, according to the experiences of the researchers, individuals with specific characteristics can be included in a study using the purposeful sampling method. Considering factors such as educational status, experience, the field of study and employment location, maximum variation sampling method was employed. To ensure maximum variation, participants with different areas of study, different education levels and different professional experiences in primary, secondary and high schools were included in the study. Bryman (2012) highlighted the importance of attaining the highest variation in sample selection and selecting a sample with heterogeneity regarding related characteristics to elucidate the essence of common experiences related to the research topic. The study sample comprises 16 teachers with ERT experience in the 2020–2021 academic year. One-on-one interviews and focus group interview were conducted with the sample group to ensure data variation. Detailed information about the sample groups is presented in Tables 1 and 2.

## JRIT

Participant pseudonym	Gender	Profession	Teaching experience	Level	Type of school	Educational background
Duru	Female	Turkish teacher	4	Middle	Private	Degree
Tuğçe	Female	Classroom teacher	6	Primary	Private	Degree
Hatice	Female	Classroom teacher	11	Primary	Private	Master's degree
Ayşe	Female	English teacher	12	Middle	State	Degree
Gökçe	Female	Math teacher	13	Middle	State	Doctorate
Eylül	Female	English teacher	12	High	State	Degree
Osman	Male	History teacher	28	High	State	Degree
Bekir	Male	Math teacher	10	Middle	State	Degree
Hasan	Male	Chemistry teacher	24	High	State	Degree
Tarık	Male	Turkish teacher	17	Middle	State	Degree
Ramazan	Male	Physics teacher	20	High	State	Degree

**Table 1.** Study group taking part in one-on-one interviews

**Source(s):** Table by authors

Participant pseudonym	Gender	Profession	Teaching experience	Level	Type of school	Educational background
Dilek	Female	Chemistry teacher	22	High	State	Master's degree
Bahar	Female	English teacher	14	Middle	State	Degree
Adnan	Male	Literature teacher	8	High	State	Degree
Ceyhun	Male	History teacher	13	High	State	Degree
Salih	Male	Geography teacher	16	High	State	Degree

**Table 2.** Study group participating in the focus group interview

**Source(s):** Table by authors

In qualitative research, the size of the study group is determined by the saturation of the research (Morse, 2016). At the data collection stage, the data collection of the research was deemed sufficient when the same ideas and opinions started to come from the study group at the data collection stage.

### *Data collection*

The most appropriate method of data collection to deduce the views and perceptions related to a phenomenon is the interview method (Moustakas, 1994; Yıldırım and Şimşek, 2011). A semi-structured interview protocol was designed to gather data from participants on innovative teaching practices. The interview protocol consists of three sections. The first section discloses the purpose of the study. The second is a list of questions about the

demographic status of the participant. The third contains seven open-ended questions. Expert reviews were obtained from three experts in the field, and the form was revised in accordance with the feedback. Accordingly, possible probing questions were included in the protocol, and the questions to be asked during focus group interviews were shortened. Piloting of the protocol was executed, and no change was required. One-on-one interviews were achieved during the 2020–2021 academic year. The focus group interview was completed during the fall semester of the 2021–2022 academic year, during the hybrid education process. The questions given to the participants were elaborated with probing questions during the interviews. Interviews were audio recorded with the permission of the participants. The data collection process was carried out between June 24, 2021 and February 28, 2022.

#### *Data interpretation*

Content analysis method was operated to interpret obtained data. Content analysis is the attentive and systematic review of data to extract meaning from data through coding and interpretation (Berg and Lune, 2019). During the content analysis, the data were reviewed with the interpretive approach of Miles and Huberman (1994); the aim was to reveal the “essence of a narrative” (Berg and Lune, 2019). This approach focused on the reflections of the participant’s actions in practice. Yin (2011) drew attention to the importance of focusing on the perspective of the problem situation constituting the subject of the research when analyzing the data. In line with this, the data outside the subject context were not included in the data analysis in the current study. Multiple analyses were performed at different times, and the compatibility of the analyses with each other was examined. The final encoding was done by examining the participant statements within the subject context.

#### *Validity and reliability*

Since the study has a qualitative design, it was conducted in accordance with Lincoln and Guba’s principles of credibility, transferability, dependability and confirmability to shed light on the concepts of reliability and validity. In doing so, the stages of the research are explained in detail. The study was reported in clear and concise language. In addition, the data collected aimed to be diverse and was collected through individual and focus group interviews. Brief reminder notes were recorded during the interviews. The notes were paired with the voice recordings, and the gestures and behaviors of the participants not captured by the voice recordings were combined with the recordings in the data analysis. The researcher did not use judgmental/biased patterns related to the phenomenon while collecting data. In accordance with the interview framework, the researcher ensured a positive experience (Johnson and Christensen, 2014).

The research phenomenon was “innovative teaching experiences during distance education.” The experiences related to this phenomenon were gained over approximately two years. Thus, the data collection covered a large portion of the experience process. Long-term observation and continuous participation are important for the validity of qualitative research. The data collection process was extended to capture complete experiences rather than temporary ones.

#### *Ethical considerations*

Scientists have to adhere to ethical principles while conducting research. These principles ensure that the research proceeds scientifically and entails respect for the experiences shared by the participants with the researcher/researchers. The research was conducted by adhering to the principles of informed consent, non-deception, privacy and accuracy (Christians, 2005).

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Before the data collection, participants were informed about the research subject and its purpose, why they were invited to participate, the planned interview time and the interview questions. Respondents were informed that only voluntary participants would be included in the interviews; all teachers invited to participate accepted the interview. At the time of the planned interviews, participants were informed about the informed consent form; permission was obtained for the audio recording; and they were informed that they could terminate the interview at any time. While reporting on the research, pseudonyms were used instead of actual names. Thus, participant confidentiality was ensured.

Ethical permission regarding the data collection tools and research methods was obtained from the Social and Human Research Ethics Committee of Yıldız Technical University at the 2021/4 meeting on June 24, 201.

### **Findings**

As a result of the data interpretation, four themes related to experiences of innovative teaching practices during ERT were discovered: interpretation of innovative teaching, innovative teaching practices, needs related to innovative teaching and challenges to innovative teaching. The categories related to the interpretation of innovative teaching include positive and negative interpretation. The categories related to the second theme, innovative teaching practices, consist of characteristics of innovative teachers and innovative teaching practices employed. The categories related to the third theme, needs related to innovative teaching, are the need for guidance, training and technological infrastructure. The categories related to the fourth and final theme, challenges to innovative teaching, are barriers related to the teacher, barriers related to the learner and those related to the environment.

#### *Interpretation of innovative teaching*

Participants described the ERT process, innovative teaching experiences both positive and negative. Participating teachers defined innovative teaching as consisting of non-traditional teaching practices in which creative skills are adopted and designed by the teacher in accordance with student needs. Teachers agreed that innovative teaching is essential; they also emphasized that teaching aimed at raising individuals with the necessary skills needed for adaptation to the contemporary age was crucial.

With 28 years of professional experience, Osman, a teacher, defined innovative teaching as knowing the necessities of the contemporary age and implementing them to keep up with the conditions of the time, combined with the ability to teach more efficiently. An English teacher, Ayşe, underlining the changing role of teachers and students, characterized the teaching approach that distinguishes itself from traditional teaching and that motivates students to research as innovative, stating, "Teachers have left their role of relaying information behind and become guides, while students have left their role of receiving information behind and become active researchers." Eylül, who has a similar view, indicated the role of the teacher as a leader and guide, asking herself the question: "What kind of a learning environment should I create so that my students reach information and choose useful information out of the information given to them much more easily?"

Teachers agreed that innovative teaching is essential and indicated the importance of educating individuals with the necessary skills to adapt to the contemporary age. Gökçe, who has PhD degree, stressed the need to rethink the teaching process to teach students the 21st century skills they are expected to have, stating, "In order to train students with 21st century skills with non-traditional methods, our classroom teaching methods had to be updated."

In addition to the abovementioned opinions, negative views about innovative teaching were also conveyed. A mathematics teacher, Bekir, argued that traditional education did not change much, stating,

I think this was a bad process for innovative teaching. The approach to innovation should not just be the usage of cameras and computers and students passively listening to the teacher's lectures; it (the distance education process) was supposed to be the beginning of innovative teaching.

In addition, another point emphasized by the participants was that they did not consider innovative teaching methods to be sufficiently instructional. A teacher of Turkish, Tarık, expressed this situation with the following statement:

In the end, we have a result-oriented system, not a process-oriented one. When students finally completed high school, they take an exam. Their futures are shaped by the success they have on that exam. And the children who do the most practice tests are succeeding, not the ones who learn the subject through activities, right? Students want concentrated information.

High School teacher Hasan states, "When the students start 9th grade, they have one thing in their mind: get accepted to medical school! How do they get accepted to medical school? By doing practice tests and answering questions with minimal mistakes. What is the only way to do this? To adapt to the test system. When the students face the questions, the (innovative) activities you conducted do not matter."

### *Innovative teaching practices*

Under the innovative teaching practices theme, the characteristics of innovative teachers and innovative teaching practices used were categorized. When the participant's statements were interpreted, the concept of the innovative teacher was explicitly defined as a person who has acquired lifelong learning skills. Technological literacy is an important skill, especially during the ERT period. The participants stated that some teachers with lower technology literacy decided to retire during this period. Bekir mentioned this:

When the transition to distance education was enacted, some teachers who reached retirement age retired, saying they could not deal with this situation. However, some of those teachers did not retire and sat down and tried to figure out how to conduct distance education using their own efforts.

This statement presents that the distance education process prompted and motivated some teachers to develop themselves because of its stimulating and novel effect. The inevitability of innovative teaching requires teachers to adapt to technology swiftly. Osman, who has 28 years of experience and describes himself as an innovator, clarifies how he felt when he was compelled to update his teaching methods:

When it was first communicated to us that we would do lessons with children in front of a screen, I didn't sleep for three days. I'm not unfamiliar with computer use, but I thought about how we would communicate with children, what programs we were supposed to use, and how I would use maps since my field of study is history in the distance education system. How would I give the lecture? I went to bed with these thoughts and got up thinking these thoughts. I couldn't sleep. But over time, I realized that when I was dedicated about doing something, I could do it. My perplexity was over then. I got used to the system, and the kids got used to it.

Similarly, Ayşe expressed that the process contributed to her self-development, clarifying "I must define myself as a teacher who practices innovative teaching. Otherwise, there would be no point in doing what I do. I can say that I can adapt quickly to changing conditions, I am willing to use technology, and I am open to learning. At this point, I think I have become more competent in the last year." This statement clearly indicates that characteristics of continuous development – adaptation and motivation – are essential competencies for

innovative teaching. It was also explored that experimental educational games, case studies, demonstrations, role-playing, Web2 tools (e.g. Kahoot and Quiz), presentation programs, interactive course contents, graphics, tablets, smartbooks/online tests, animations, STEAM applications and coding were among innovative teaching practices. Hatice, who describes herself as an innovator and is a classroom teacher at a private school, explains the different methods she employed as:

I'm a person who still does research and writes projects. I think about how to teach my children better, and I apply my thoughts to my work. I think I'm innovative. I lived through the process while transforming it to be very healthy and enjoyable both academically and emotionally as a whole. For example, I talked about a scientific topic every day, I grew plants at home, I befriended animals, I planned sharing hours each evening, and used digital tools.

Osman said he could take advantage of the online education process and use different teaching practices: "We can connect to museums during the instruction. We can connect to libraries. For example, we were able to participate in a history project by Kabataş High School with my students, which lasted for three weeks."

#### *Needs for innovative teaching*

It was also discovered that various needs occurred for innovative teaching needed to be used more widely. These are categorized as guidance, training and technological infrastructure needs. The urgent nature of the distance education process often made teachers feel lonely and uncertain. Teacher participants stated that they considered themselves inadequate from time to time in their ability to teach innovatively and that they tried to cope with this situation on their own. This led to the need to provide guidance to teachers and students. In addition, the participating teachers stated that they needed pre-service and in-service training. There have been recommendations that this need could be met through university courses or peer learning. Tuğçe, a teacher at a private school, emphasizing peer learning, expressed the need for training related to innovative teaching:

Teachers must apply innovative teaching, or they must observe another teacher, or information must be shared with group teachers. Maybe it (innovative teaching) should be given wider recognition in university. We attended lessons related to the subject, but when we don't apply them, they are in vain. There should be trainings where teachers can also be involved in. Teachers who have applied innovative teaching should give seminars, too.

Participating teachers especially felt a need for special pre-service and in-service training. In addition, they mentioned the shortcomings of undergraduate education and stated that a teacher's lifelong in-service learning ability is important.

Salih explained the need for training as follows:

How much training have we received in innovative teaching? (meaning undergraduate education)  
How adequate and innovative were those who gave us the teaching training at university? There are those who started teaching 20 years ago, and there are those who started 15 years ago. There is a lot of difference between the education they have received. How would more senior teachers be able to keep up-to-date?

Another category of needs related to innovative teaching practices through distance education is the lack of technical infrastructure. The participants stated that technical problems, experienced by teachers but primarily by students, disrupted teaching. Participants expressed that students could not learn efficiently due to issues such as the Internet connection not being available for every student or students who can access the Internet but were losing connection. In addition, the fact that Zoom, which is used as an online learning platform, is not adequate for teaching is another problem. Participating teachers also

highlighted the need for an online program that they can use to both conduct meetings and teach.

### *Barriers to innovative teaching*

The participating teachers stated various barriers related to the implementation of innovative teaching. These barriers are divided into the following categories: barriers related to the teacher, the learner, the learning environment and others.

The teachers making up the study sample often mentioned the barriers to innovative teaching. The inadequacy of the computer programs adopted for online courses was a factor that teachers specifically alluded to. Participants stated that the students' failure to turn cameras on constituted an interaction problem. This state of miscommunication, in turn, created a very difficult situation for the teachers. Another important issue is the need for in-service distance education training, which is a recent development. Teachers underlined the difficulty in keeping their students engaged and motivated throughout the process. Regarding this issue, Ayşe, an English teacher, stated the following:

If the student is not willing to be more active and to research, instruction becomes challenging. This is a problem we especially experience in synchronous lectures. Being unable to conduct interactive lessons, the inability to gather the students' attention and to motivate them about the subject is a challenge. This is because of our inability to regulate the educational environment. We were compelled to be the background music for students playing games while the lesson was ongoing or to be the lullaby while the student was sleeping throughout this process.

Osman conveyed that the process involved teachers and students influencing each other's motivation:

I had mixed emotions during the distance education process. For example, if students turned on their cameras and actively participated in the lesson, this motivated me and the class. But if they had their microphones and cameras off and did not participate in the lesson, this lowered my motivation. In that case, students were attending only in name, but not in practice.

The ERT process entailed that both teachers and students use their 21st-century skills. The respondents especially complained about their students' lack of entrepreneurship, initiative-taking and self-regulation skills. Students whose self-regulation skills are not developed need external regulation. In cases where external regulations were not applied, students didn't feel the need to learn, and problems linked to non-participation in education were observed. When the planned innovative teaching methods did not receive a sufficient response, the teachers suffered from dissatisfaction and loss of motivation.

Focus group interviews reveal the effect of central government interventions in the educational process. Dilek stated:

The next day after our Minister of National Education explained that there will be no exams or attendance requirement, the number of students that attended the lesson out of a class of 34 students decreased from 30 to 15. Then it dropped to 10. And it continued to decrease.

Adnan, who shares similar views, expressed that students did not feel the need to participate in the educational process when external regulation was non-existent, disclosing that "When assessment is eliminated, students ceased attending classes because they already knew that they will pass the exam." Teachers stated they could not get feedback on what and how much they taught when measurement and evaluation, an indispensable part of formal education, were eliminated. In the focus group interviews, Dilek also expressed the effect of the lack of assessment on student motivation as: "I sent a link to the students for instructional purposes. Then I checked who saw the message. Around 1%–3% of the class viewed the material I sent out. Why weren't they viewing the material? Because there was no assessment."

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Bahar stated that the student attendance problem had a negative effect on the implementation and persistence of innovative practices due to loss of motivation, asserting that:

I have a student group of 30 students; 3–5 of them attend classes. Those who attend do not engage in the course. This made me think that the work I was doing was in vain. I've used various methods, but as I said, the methods we apply only work if the students attend the class.

In addition to the attendance problem, the students' cameras were frequently turned off; thus, the teachers and students could not interact, disrupting the educational process.

The teachers viewed this situation as a problem that negatively affected students taking responsibility for their education, even more so in distance education than in face-to-face education. Salih, who has 22 years of professional experience, expressed his experiences related to students' initiative:

Their cameras are turned off. In distance education, all learning responsibility is given to the student. The students themselves pick out the information. They listen if they want to and don't when they don't want to. Only students who knew what they wanted have somehow improved themselves.

## Discussion

The findings of the study clearly presented that innovative teaching is associated with learning by doing and experiencing, contemporary education, learning to learn and student-centered education. The teachers' viewpoints on innovative education in this study are similar to descriptions of this method found in the literature (Zhu *et al.*, 2013). Kalyani and Rajesekaran (2018) interpreted innovative teaching as based on student needs. Innovative teaching assists students to reach their highest intellectual potential and meet their educational needs. Participating teachers expressed that they mainly associated innovative teaching with the 21st-century skills students must learn. The view that teachers should constantly improve their teaching practices to respond to the learning characteristics that vary from one student to another is also prevalent.

This study discovered that for teachers to practice innovative teaching, they must develop themselves, keep up-to-date and develop lifelong learning skills. Hung and Li (2017) reached a similar conclusion to the findings of this study: teachers' professional development is positively related to innovative teaching skills at a high level. The participating teachers stated that they had to rapidly improve their technological competency. It is thought that teachers developing their technological competencies will contribute to both ERT and face-to-face education at the end of the pandemic. The unprepared transition to the distance education process made teachers feel bad. Therefore, teachers took decisions in all kinds of positive and negative practices. Teachers with high digital skills adapted easily through various platforms (e.g. etwinning) before the pandemic. In conclusion, in the age of increasing digitalization, we were convinced that teachers' ICT skills need to be improved, regardless of Covid-19 or other reason. ICT skills need to be improved through pre-service and in-service methods. The results of Joy *et al.* (2023) also showed that teachers' technology training is an important factor for the success of flipped classroom instruction. Teachers tended to use innovative and technologically based teaching methods and techniques throughout the ERT process. Participants agreed that innovative teaching practices motivate students and attract their interest. In a study conducted by Tosh *et al.* (2021) on teaching during the pandemic, the authors found that most teachers used digital learning tools but that the program content did not completely coincide with student needs. In the current study, the fact that teachers rarely emphasized that innovative teaching makes learning permanent and enables deep learning – despite mainly having used this approach to motivate students and draw their attention –

suggests that they do not see it as completely valuable during ERT. It was concluded that the learning environment became more enjoyable with innovative teaching practices. However, teachers do not find it instructive enough. At this point, teacher cooperation and in-service training needs arise. It is necessary to ensure that teachers do innovative teaching more effectively. In their research, [Lee et al. \(2015\)](#) underlined that innovative teaching maintains interest and attention toward learning and increases passion for learning. Innovative teaching is useful for both drawing attention to subjects and learning. However, preparing and practicing beforehand is often impossible during ERT, preventing some teachers from practicing innovative teaching effectively.

In ERT, curriculum – even the instruction itself – can exist in a computer application ([Nurutdinova et al., 2016](#)). Thus, the presence and quality of the computer application have become quite significant. In line with the findings of the current study, the content of the programs used for teaching purposes should be improved.

It is also highlighted that ERT is inevitable but missed face-to-face education. In particular, it is underlined that teachers experienced challenges during classroom interaction. [Chen and Swan \(2020\)](#) strongly recommend structured interaction to solve the interaction problem often encountered during ERT.

Another point deserving attention regarding the successful implementation of ERT processes is the ability of students to take responsibility and manage their learning. According to the findings of this study, teachers stated that students with developed self-regulation competencies easily adapted to ERT, did not have attendance problems and actively engage in the courses.

The current study also presented many negative perceptions regarding innovative teaching. Teachers attributed the lack of innovation in ERT to computer programs with limited ability for educational use, students not actively participating and teachers and learners with low motivation. Specifically, the fact that the online experience was due to a pandemic caused negative emotions, such as anxiety and fear, to persist throughout the entire period for learners and teachers. According to [König et al. \(2020\)](#), teachers' self-efficacy skills come to the fore at the point of adaptation. Especially in order to remove the obstacles in front of innovative teaching, the fact that teachers' low motivation is an important problem in this research shows that it is necessary to discuss their self-efficacy. Furthermore, uncertainties linked to decisions made by the national education administration regarding ERT and face-to-face education caused additional challenges in adapting to ERT. These uncertainties created problems motivating individuals. Similarly, the exclusion of assessment and evaluation tools in ERT is another element influencing the motivation of teachers and students. The lack of assessment and evaluation prevented teachers from observing and learning from the effects of the teaching methods they implemented.

## Conclusion

The current study was carried out during the ERT process. Education has changed as lives have changed during the pandemic. This compulsory process caused challenges in teaching. It has been revealed that teachers have challenges in adapting to innovations. Since they did not have enough time to adapt, the process of applying innovative teaching methods was slow. The experiences of the participating teachers show that they try to apply innovative methods within the framework of available possibilities. However, in this emergency process, various problems were encountered. Teachers need professional development in response to new situations. In particular, they want to know what resources are available to guide them in taking action toward the new situation. At this point, teacher educators need to be helpful and supportive about innovative practices.

**References**

- Amabile, T.M. (1996), *Creativity and Innovation in Organizations*, Cambridge: Harvard Business School.
- Atkinson, E., Conboy, I., Atkinson, J., Doods, A. and McInnis, C. (1996), *Evaluation of the Open Learning Initiative: Tertiary, Access to through a National Brokerage Agency*, University of Melbourne, Melbourne.
- Berg, B.L. and Lune, H. (2019), *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*, Konya: Eğitim Yayınevi.
- Bryman, A. (2012), *Social Research Methods*, Oxford: Oxford University Press.
- Chen, C.C. and Swan, K. (2020), "Using innovative and scientifically-based debate to build e- learning community", *Online Learning*, Vol. 24 No. 3, pp. 67-80, doi: [10.24059/olj.v24i3.2345](https://doi.org/10.24059/olj.v24i3.2345).
- Christians, C.G. (2005), "Ethics and politics in qualitative research", *The Sage Handbook of Qualitative Research*, 3rd ed., Sage, London, Thousand Oaks, CA, and New Delhi, pp. 139-164(in press).
- Creswell, J.W. (2020), *Qualitative inquiry and Research Design Choosing Among Five Approaches*, Sage Publication, Thousand Oaks, CA.
- Ferrari, A., Cachia, R. and Punie, Y. (2009), Literature review on innovation and creativity in E&T in the EU Member States.
- Hung, C.L. and Li, F.C. (2017), "Teacher perceptions of professional role and innovative teaching at elementary schools in Taiwan", *Educational Research and Reviews*, Vol. 12 No. 21, pp. 1036-1045.
- Johnson, B. and Christensen, L. (2014), *Educational Research (Quantitative, Qualitative, and Mixed Approaches)*, Norrskén(in press).
- Joy, P., Panwar, R., Azhagiri, R., Krishnamurthy, A. and Adibatti, M. (2023), "Flipped classroom– A student perspective of an innovative teaching method during the times of pandemic", *Educación Médica*, Vol. 24 No. 2, 100790.
- Kalyani, D. and Rajasekeran, K. (2018), "Innovative teaching and learning", *Journal of Applied and Advanced Research*, Vol. 3 No. 1, pp. 23-25.
- Kınık Topalsan, A. (2019), "Öğretmen Adaylarının Yenilikçi öğretim uygulamaları sonrası fen bilimleri dersi öğretimi sırasında tercih ettikleri strateji, yöntem, teknik ve taktiklerin değerlendirilmesi", *Education Sciences (NWSAES)*, Vol. 14 No. 2, pp. 81-96.
- Kocasaraç, H. and Yılmaz, H. (2010), "Hizmetiçi öğretmen eğitiminde yeni bir yaklaşım: yenilikçi öğretmenler programı ve değerlendirmesi", *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, Vol. 11 No. 3, pp. 51-64.
- König, J., Jäger-Biela, D.J. and Glutsch, N. (2020), "Adapting to online teaching during COVID-19 school closure: teacher education and teacher competence effects among early career teachers in Germany", *European Journal of Teacher Education*, Vol. 43 No. 4, pp. 608-622, doi: [10.1080/02619768.2020.1809650](https://doi.org/10.1080/02619768.2020.1809650).
- Lee, C.P., Lin, P.C. and Kang, H.H. (2015), "The influence of open innovative teaching approach toward student satisfaction: a case of Si-Men Primary School", *Quality and Quantity*, Vol. 50, pp. 491-507.
- Maass, K., Cobb, P., Kainer, K. and Potari, D. (2019), "Different ways to implement innovative teaching approaches at scale", *Educational Studies in Mathematics*, Vol. 102, pp. 303-318.
- Merriam, S.B. (2013), *Nitel Araştırma Desen Ve Uygulama İçin Bir Rehber*, Ankara: Nobel Kitap.
- Miles, M.B. and Huberman, M.A. (1994), *Qualitative Data Analysis An Expanded Sourcebook*, Sage Publications, Thousand Oaks, CA(in press).
- Morse, J.M. (2016), *Mixed Method Design: Principles and Procedures*, New York: Routledge.
- Moustakas, C. (1994), *Phenomenological Research Methods*, Sage Publications, Thousand Oaks, CA.
- Nurutdinova, A.R., Perchatkina, V.G., Zinatullina, L.M., Zubkova, I.G. and Galeeva, F.T. (2016), *International Journal of Environmental and Science Education*, Vol. 11 No. 10, pp. 3807-3819.

- 
- Patton, M.Q. (2014), *Nitel Arasturma Ve Deęerlendirme Yöntemleri. M Bütün Ve S. B. Demir (Çev Edt.). 1. Baskı*, Ankara: Pegem Akademi.
- Rogers, E.M. (2003), *Diffusion of Innovation*, Newyork: Free Press.
- Šedziuvienė, N. and Urbonienė, L. (2015), “Strategy of innovative teaching/learning in higher school”, *Professional Education: Methodology, Theory and Technologies*, Vol. 2015 No. 1, pp. 5-15.
- Tosh, K., Ashley, W. and Doan, S. (2021), *Did Experience with Digital Instructional Materials Help Teachers Implement Remote Learning during the COVID-19 Pandemic?*, Santa Monica, CA: RAND Corporation, available at: [https://www.rand.org/pubs/research\\_reports/RRA134-8.html](https://www.rand.org/pubs/research_reports/RRA134-8.html)
- Woffe, A.K. and Uribe, S.N. (2020), “What we wish we would have known: tips for online instructors”, *College Teaching*, Vol. 68 No. 2, pp. 57-59.
- Yıldırım, A. and Şimşek, H. (2011), *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*, Ankara: Seçkin Yayınevi.
- Yin, R.K. (2011), *Qualitative Research from Start to Finish*, London: The Guildford Press.
- Yokuş, G. and Yelken, T.Y. (2016), “Yenilikçi materyal tasarlamının sınıf öğretmeni adaylarının yenilikçilik düzeylerine etkisi”, *Bartın University Journal of Faculty of Education*, Vol. 5 No. 3, pp. 857-878.
- Zhu, C., Wang, D., Cai, Y. and Engels, N. (2013), “What core competencies are related to teachers’ innovative teaching”, *Asia-Pacific Journal of Teacher Education*, Vol. 41 No. 1, pp. 9-27.

### Further reading

- Zhu, C. and Wang, D. (2014), “Key competencies and characteristics for innovative teaching among secondary school teachers: a mixed-methods research”, *Asia Pacific Education Review*, Vol. 15, pp. 299-311.

### Corresponding author

Tuğba Sadıç can be contacted at: [tugbasdc@gmail.com](mailto:tugbasdc@gmail.com)