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Experiences of Preservice Teachers on Online-Based Microteachings: New Insights for Initial Teacher Education (ITE) Programs

Bilge Aslan Altan[1]

[1] Faculty of Education, Educational Sciences, Muğla Sıtkı Koçman University, Muğla, Turkey

Correspondence: Bilge Aslan Altan1, Faculty of Education, Educational Sciences, Muğla Sıtkı Koçman University, Muğla, Turkey. E-mail: bilgeaslan@mu.edu.tr

Abstract
Practicing online teaching activities has been favored quite some time, and it continues to gain popularity with the evolving technology as well as global dynamics (as COVID). Online-Based Microteachings (OBM), in this sense, can enforce preservice teachers to practice digitally-saturated new, possibly an ongoing, set of skills that will contribute to their teaching behaviors in future. Leaning on this idea this paper outlines the experiences of preservice teachers on online teaching activities that are inspired by microteaching strategy, which may initiate a discussion point for teacher trainers and trainees to practice more online-saturated teaching activities that can be developed as online-based microteachings in initial teacher education (ITE) programs. Doing so, the study was built upon case study design including 50 (32 females, 18 males) participants of preservice teachers from different fields. Findings indicate that preservice teachers had many new experiences that may reinforce their existing and future teaching skills as well as many challenges that resulted from digital-based drawbacks. The documented experiences can be used as evidences for international researchers and teacher educators to empower preservice teachers' online teaching skills because apparently, they had real challenges to design and practice online teaching activities in this local-context. Implications of the study suggest that ITE programs may need additional contents in which necessary online pedagogy and skills are harmonized to enable preservice teachers to be much more-ready for future circumstances and to be familiar with online teaching qualifications.

Keywords: Online Teaching Activities, Online-Based Microteachings, Preservice Teachers, Teacher Education, Online Pedagogy

1. Introduction

Teaching is a dynamic process in which teachers continuously experience new challenges and practice new skills. Digital transformation, which can be challenging transferring period of set of skills into teaching (Flores, 2020), is one of the hot topics in teaching excellence and profession (Falloon, 2020). Very recently, during pandemic period many teachers and educators have had to use digitally-saturated teaching skills and learning environments

to continue in instruction. This period has triggered to question what the teaching competencies should be for present and future teaching intentions (Cochran-Smith, 2021; Darling-Hammond, 2020) because there were certain drawbacks resulting from technical, pedagogical, and psychological reasons.

Although there is a continuous support for teachers that is wished to encourage in-service teachers to be more flexible in applying curriculum according to their local and emergent contexts (Sinnema & Aitken, 2013), preservice teachers are empowered in teaching skills in initial teacher education (ITE) programs. To do so, ITE programs are structured with necessary and fundamental pedagogy knowledge and congruent teaching practices. Therefore, to a greater extend, preservice teachers are trained to be ready in real classroom environments, to overcome (un)expected challenges, and to increase in teaching excellence. Still, ITE programs are frequently criticized due to having risks of limited applied courses or contexts for teaching practice (Cochran-Smith, 2021; Loughran, 2006).

In order to deliver pertinent teaching practices during training, microteaching can be used as a viable agent for preservice teachers' systematic progress in the act of teaching (Karlström & Hamza, 2019; Merc, 2015). Concurrently, microteachings, as early practices for preservice teachers in ITE programs, can be particularly favored by many teacher educators (Görgen, 2003; Sevim, 2013) to experience different teaching contexts before facing real school environments and classrooms. However, to answer the need for digital transformation and to proceed with different experiences in teaching practices, this study tends to combine the notion of microteaching and online teaching. Eventually, the study proposes an understanding in which preservice teachers can practice online-based microteaching through the eyes of preservice teachers and their experiences.

1.1 Microteaching vs. Online-Based Microteaching

Microteaching, firstly proposed by Dwight W. Allen and his associates from Stanford University in 1960s, is meant to improve practice in teaching, guide to preservice teachers in their teaching journey, and discuss the teaching quality with teacher educators in a controlled area (Allen, 1967). Microteaching is assumed as a method to provide opportunity for preservice teachers through which they can experience individually designed teaching activities in a given time (Görgen, 2003), in a relatively less stressful environment (Amobi, 2005), and with the concerns of demonstrating addressed teacher behaviors. Microteaching strategy is also an advantageous way to enable pre-service teachers to be more adaptive in teaching behaviors before starting the profession (Özdemir, 2019). Such experiences are very important for preservice teachers to make critical reflections on numerous mindsets while advancing in their career (Kusmawan, 2017).

Although it has mighty assets in teaching practicum, microteaching surely carries out certain units for fruitful results (Innocent, 2017). Compiled studies suggest that (Allen, 1967; Karlström & Hamza, 2019; Koech & Mwei, 2019; Zalavra & Makri, 2022) microteaching, should include three main stages and it initially starts with a planning/organization for the intended activity. The planning of the teaching activity should include set of information as outlined in a lesson plan. In other words, preservice teachers should design a micro version of an instruction, which is similar to real-time teachers' instructional designs. Secondly, the intended activity should be delivered in a teaching practice, which has limited time. Here, the planned activity is performed by the preservice teacher(s). Thirdly, the completed teaching performance is discussed and evaluated by peers and supervisors (teacher educators/instructors) so that necessary reflections and suggestions are indicated. Eventually, microteaching employs individual and collaborative teaching activities bridging theory and practice, accumulates more experiences for a better understanding of teaching and learning processes (Reddy, 2019), and encourages preservice teachers to properly use instructional strategies according to different contexts.

Even though microteaching is mostly performed as a traditional class-based practice, its concept has been extended due to the recent and unwelcomed global phenomenon: COVID-19. This intruder has turned many routines upside down, and teaching activities at all levels have had to continue online in worldwide (Kim, 2020). The pandemic has influenced structures of teacher education programs as well as teacher educators' way of delivering the program and reaching an outcome (Flores & Swennen, 2020; Kidd & Murray, 2020; Moyo, 2020). Online teaching, which has shined in the emergency distance education due to compulsory reasons, could produce digital

solutions for learning and teaching practices (Bayındır, 2021). Therefore, switching to online-based microteaching can enable preservice teachers and teacher educators to continue in adapting new circumstances (Zan & Zan, 2020) as well as evolving collaboratively with the educational technology.

Online teaching action, surely, has been performed in different teacher education programs by academics for variety of reasons such as a student-directed assessment tool (Zhang, Yan & Gronseth, 2020), and/or as a replacement for lost practicum courses (Monroe, Mendez & Nutta, 2020). Although online-based teaching intentions are appreciated in literature, Dyment and Downing (2020) make an emphasis on the disintegration of online teaching activities and pedagogical concerns of ITE programs in their systematic review study of pre-pandemic period. At this point, studies (Kidd & Murray, 2020; Zalavra & Makri, 2022) underline the idea of teachers as designers in online teaching activities, and they add that preservice teachers should design their original online context by pursuing the necessary steps of an instruction (gaining attention, delivering the content, evaluation etc.).

In such a background, microteaching can be reorganized with online-based microteaching. Researchers (Sarimanah, Efendi, & Dewi, 2020; Zalavra & Makri, 2022) tried to encourage preservice teachers to practice online-based microteaching (OBM) activities both to make up the negative side-effects of COVID-19, and to map out new horizons to improve (digital) teaching skills. Online-Based Microteaching experiences in teacher education can enforce preservice teachers to practice digitally-saturated new, possibly an ongoing, set of skills that will contribute to their teaching behaviors in future. Within OBM, preservice teachers can organize their teaching activities, and design their materials as they do in microteaching, but they should re-organize their activities respecting necessary online fundamentals and pedagogies, and deliver the performance online. Doing so, they can have more experiences with distance education, interactive teaching-learning environments, opportunities to teach in front of a camera, digital skills they are wished to have, and feedback on their performance and capabilities in an online manner.

1.2 Relocating microteaching as online-based microteaching

Educational ecosystem is full of surprises and Mishra (2020) reminds educators to be sincerely adaptive when technology is concerned. Besides COVID, there are unprecedented events as well as global changes that trigger using technology-enhanced teaching activities and online pedagogies. Here, as a very starting point, ITE programs are expected to take responsibilities to upgrade preservice teachers' skills to transfer them to future conditions. Connectedly, the study is inspired by the idea of both empowering online teaching skills of preservice teachers and examining their experiences to start a discussion point to make better decisions in teacher education.

In particular, teaching activities mostly comply with variety of pedagogical methods and strategies. In this respect, preservice teachers are expected to be qualified in many skills to deliver a specific content via an effective channel. Microteaching, which has been emphasized to be a powerful strategy for preservice teachers to experience combined teaching activities and pedagogies (Baştürk, 2016; Karlström & Hamza, 2019; Reddy, 2019), should ally with new circumstances of educational ecosystem. Online-based microteaching can be an alternative way to make preservice teachers much more ready to design digitally-enhanced teaching activities for future learning environments as well. Therefore, preservice teachers, also as online learners, may not be left under-prepared to design and practice online context.

To sum up, teaching competencies and skills of today's and future teachers continuously change because teaching contexts and roles of schools are formed in consonance with the century we live in (Darling-Hammond, 2017). Teaching, as a sophisticated profession, requires active disposition of knowledge and practice to meet the emergent needs of learners. To collaborate, teacher education bodies and actors can play a key role in empowering online teaching activities and pedagogies through favoring strategies, as online-based microteaching, which guide preservice teachers both to associate their theoretical knowledge with a reality and to transfer the acquired skills to teaching performances. Accordingly, this study intends to ally with empowering preservice teachers to design and deliver online context by sharing their underexplored experiences in the procedure of transferring the teaching skills into online teaching environments.

Leaning on the accentuated literature and a globally new trend, this paper aims to report preservice teachers' experiences and reflections on online-based microteachings. To better describe, the study is addressed to answer following questions:

1. How do preservice teachers evaluate OBM experiences?
2. What are the strong parts of OBM in promoting teaching skills?
3. What are the experienced challenges in OBM that need to be assisted?
4. What are the implications of OBM on preservice teachers' online teaching skills?

2. Method

2.1 Design and Context

This study followed a case study of qualitative research approach to capture rich and depth data on preservice teachers' experiences on online-based microteaching. Creswell (2015) basically offers case study design when researchers seek for a deeper understanding and exploration of an activity, process etc, and eventually encourages to collect extensive data. Also, Meriam (2009) reminds researchers that case study is eligible for limited system of a research nature and effective for detailed description of this limited system. Building upon these background, to describe and explore preservice teachers' gaining and challenges in online-based microteaching procedure, and to reflect on the implications for ITE programs and future teaching practices, the study employed the case study design.

In the study, preservice teachers were requested to perform online-based microteaching sessions as a partial fulfilment of an elective course, Open and Distance Learning. This course is offered to improve preservice teachers' online teaching skills through fundamental theoretical background (concepts, definitions, approaches, modules, teachers' roles and responsibilities etc.) and available digital agents, resources and environments to design effective online teaching activities. The course lasts for 14 weeks.

The referred course of the study was administered online during 2021-2022 fall semester. At the end of the course period, preservice teachers individually designed 20-minutes long teaching activities, presented a lesson plan, practiced their activities online (synchronously), and were evaluated by peers and the instructor (author at the same time) through discussion sessions, which reflects the units of microteaching. More, they evaluated themselves through semi-structured interview forms. The microteachings were appraised in terms of adhered theoretical background and digital resources of distance learning.

2.2 Participant (Subject) Characteristics

The study was supported by 50 preservice teachers (32 females, 18 males) that registered in the course. Participants were comprised via convenience sampling since they were the students of the course at the same time. The participants study in different subject fields such as science education, mathematics education, music education, art education, primary school education, English language teaching and etc. Their grade levels range from sophomore to senior, which may mean they have dissimilarities in terms of their digital capabilities and teaching skills.

In line with the course objectives, the participant preservice teachers were equipped with theoretical background of Open and Distance Learning for 7 weeks including basic concepts and definitions, historical backgrounds, approaches, systems etc., and then, in the following 7 weeks, they were introduced with applicable digital agents and resources which can be used during online teaching and learning. The introduced digital tools and environments were actively practiced by preservice teachers as well. Finally, they were asked to design and practice an individual microteaching which was to last 20-minutes and to include at least two digital agents or resources. Participants were required to share their lesson plans beforehand so that discussion sessions and evaluations were correspondingly managed.

Preservice teachers were informed about the research intentions and invited to participate voluntarily. They were eager to contribute to study with their responses. They were asked not to share any personal information and/or clue about their identity. Their answers were coded as P1, P2,…P50 to keep anonymity.

2.3 Data Collection

The core of the study relies upon preservice teachers' OBM experiences and their reflections on online teaching skills. Accordingly, semi-structured interview forms, which were assumed as effective data collection tools for qualitative studies because they encouraged the participants to express the perceived issue through their own perspectives and words (Meriam, 2009), were employed as data collection tools. The forms were developed by the researcher referring to existing literature of online teaching, online pedagogy, course objectives as well as research questions.

Semi-structured interview forms, first of all, were given student teachers to decide on their experiences of online microteachings. The forms included questions that were consistent with research questions as well as experience based, perception based, demographic-based questions, which were suggested to be involved in "a good data interview form" according to Patton (2002). For example, the forms consisted of questions such as:

- What is your subject area?
- What do you think about online microteaching processes?
- How do you evaluate your OBM experiences?
- What can you say about the strong parts of OBM experiences?

Preservice teachers were notified about the course syllabus, learning outcomes as well as research intentions. In order to achieve one of the course requirements, they designed and practiced 20-minutes long online microteaching session synchronously. After the completion of whole OBM practices, preservice teachers were asked to fill the semi-structured interview forms considering their experiences. The forms were shared and collected online. Preservice teachers were reminded not to give any personal information/names/nicknames to keep privacy and anonymity. The forms were saved anonymously.

2.3 Data Analysis

Data analysis procedure is defined as the act of answering research questions and presenting the whole picture of what the research intends (Meriam, 2009). Here, Lincoln and Guba (1985) stress two core criteria: the data should reveal what is about the nature of the study, and data should be interpretive. However, to pursue, the data should be divided into pieces, similarities and discrepancies should be identified, then categorized accordingly.

Under the light of the references, the data analysis followed open coding strategy and inductive approach during content analysis. First of all, the downloaded semi-structured interview forms, as raw data, were read thoroughly, then scanned. During this procedure, the relevant responses through words were noted down and matched with research questions. In the second round, the notes and the highlighted codes from the participants' responses were gathered according to their similarities. The grouped codes were unified under themes that represented the codes with an umbrella term and in which codes had no other meaning. Finally, after controlling the raw data not to miss any interpretive code, the themes were unified under categories that covered the general sense about the research questions and findings.

To approve internal validity and reliability, the triangulation strategy was employed, and the data were analyzed by an expert that was not involved as a researcher in the study. The list of themes and codes, obtained after treating the data by two coders, were contemplated upon commonalities and discrepancies. The reliability percentage was found as .89. To increase credibility, the categories and themes were supported with direct references of participants' answers. The results were presented in the following section in details.

3. Results

The findings were presented following research questions' sequence under each sub-title below.

3.1 Preservice Teachers' Evaluations on OBM Experiences

Participant preservice teachers evaluated OBM experiences based on optimistic and pessimistic points of views. These views are illustrated in Table 1.

Table 1: Preservice teachers' evaluations on OBM experiences

Categories	Themes	Quotations
Optimistic views	New vision	"I believe that this experience is advantageous since it directs new teaching skills and intentions for teachers-to-be." (P22)
	Enriched digital materials	"It contributes to prepare many materials which are rich and easy to use. Teaching can be very effective with enriched materials and activities practiced online." (P14)
	Practicality	"There is no physical attendance problem for crowded classrooms and very time saving. We can participate in microteachings anywhere we want. It is also recordable to re-watch our experiences." (P6)
Pessimistic views	Physical limitations	"Actually, it has certain limits. For example, I wished to illustrate how to play a flute with my body poses, but I could not perform it in front of a camera." (P15)
	Less interaction	"It is hard to follow participants' modes during teaching because we could only see their faces. I am not sure if they were bored or not. I could not interactively manage the teaching session." (P38)
	Technical dependence	"OBM is effective if all the technical structures work accordingly. However, there were some misfortunes for some peers due to internet connection, and/or personal computers." (P27)

Table 1 summarizes that preservice teachers appreciate OBM experiences based on the assumptions as; it is contemporary and facilitating for future teaching visions and capabilities; it is very flexible to prepare and use digital materials in a relatively less time; and it is practical to be a participant without being in a same physical environment. On the other hand, preservice teachers draw attention to certain limits of OBM experiences such as unable to use body gestures, mimics, eye contact and etc.; unable to manage whole participants during teaching session; and unable to use alternative back-up plans when technical challenges occur.

3.2 Preservice Teachers' Experiences on Strong Parts of OBM in Promoting Teaching Skills

Preservice teachers mentioned individual and professional remarks in their OBM experiences while evaluating their improvement in teaching skills. These arguments are illustrated in Table 2 below.

Table 2: Preservice teachers' experiences on strong parts of OBM

Categories	Themes	Quotations
Individual arguments	Physical/emotional comfort	"Personally, I was much more comfortable in front of the camera while practicing the microteaching. I did not have to use my body postures, which would make my anxiety more apparent." (P33)
		"I was very comfortable with my physical appearance because nobody could see my whole body." (P42)
		"It was much less stressing to teach because my peers were not physically around me." (P49)

	Digital/technical flexibility	"One of the strongest parts of the OBM is easy access to many digital resources that can be combined with my teaching intentions and contexts. It is relatively less available to use more than one Web 2.0 tools in a limited time. However, I could engage different web tools and digital materials in my teaching." (P7) "I could share the access links of my materials with my peers during the practice so that they could easily follow and participate in my activities." (P19) "I could teach using an online classroom with screen share, but if we had been in a real classroom, I could have faced with technical problems. Because we have one projector in our classrooms, and we have to connect it through Wi-Fi, we cannot use any digital resource in classrooms." (P26)
Profession-based arguments	Improvement in digital capacities	"I discovered different digital agents and environments. I really liked it. More importantly, I feel more capable of designing an interactive lesson plan that is enriched with digital materials." (P3) "Before this experience, I used to be familiar with basic presentations and web resources. Now, I can use an online classroom, prepare online activities and embed them into the online classroom. I could organize digital environments to assess. I can be digital teacher, I can say." (P15)
	Self-reflections	"After I practiced my OBM, my peers and instructor commented on it. However, I could record while I was teaching, and I could watch myself and observe how good I was. I found out my drawbacks." (P9) "We keep journals or diaries about our teaching journey in many courses, but in this experience I could watch myself and it was much more effective than writing opinions. I could evaluate my performance in teaching. Self-correction, I think, is more permanent." (P22)

In Table 2, preservice teachers' arguments rely on both individual and professional justifications when their experiences on strong parts of OBM are underlined. Through individual explanations, preservice teachers stress the physical and emotional comfort they had while practicing online-based microteaching. Although these may not be directly related to empowering teaching skills, feeling comfortable in such experiences may help to overcome individual challenges during professional training. Profession-based arguments, on the other hand, may give some hints about preservice teachers' digital capacities. According to their responses, preservice teachers claim that they have improved in their generic digital knowledge by practicing new digital agents and environments; and, they have felt more mature about designing digitally-enhanced teaching activities. Additionally, they had the chance of recording their microteachings and monitoring themselves. Through these self-monitoring and reflections, it is fair to say that they could evaluate their own skills and capacities.

3.3 Experienced Challenges of OBMs That Need to Be Assisted

All new experiences may result in challenges and contradictions. Therefore, preservice teachers have experienced different challenges during their OBM practices. These challenges are illustrated in Table 3 below.

Table 3: Experienced challenges of OBMs

Categories	Themes	Quotations
Technical challenges	Technical features	"My microphone did not function properly. It resulted in some voice problems while I was practicing. It was not the teaching practice I intended." (P3)

	Design procedures	"I had connection defaults some time. It kept me to practice my activity smoothly." (P36) "Since there are vast variety of digital possibilities in designing an activity, I spent too much time while I was organizing my teaching." (P13) "I could not predict that activities took less time in digital environments so that I could not manage my time properly." (P44)
Emotional challenges	Lack of interaction	"Because I was alone in the room, I felt as I was speaking to myself. It was annoying." (P27) "I was not very comfortable because I could not see my peers' eyes, body poses etc., and I could not understand whether they were having fun or not. I prefer to have eye contact with them." (P41)
Other intruders	House/room mates	"While I was practicing my teaching, my roommates were at home and they were making noises. It distracted me a lot." (P11) "My parents sometimes made much noise. Especially, my mother had to come in to my room. It was hard to concentrate." (P19)

Detailed explanations of preservice teachers show their challenges which mainly indicate technological and psychological drawbacks. Connectedly, preservice teachers could face with technological problems that might affect their OBM practices. Such problems can be encountered in digitally-enhanced activities and/or practices. The generic digital knowledge and digital teaching competencies may be determinant of technical drawbacks and/or overcomes. Mutually stated, lack of interaction can be accounted as a dissatisfying issue in distance teaching and learning procedures. Most of the students and teachers can, habitually, feel more secure when they are physically together. Class atmosphere can be more positive and effective when everybody can have eye contact, interact, communicate and etc. The social distance can be a consequence of physical distance so that teaching may not be fulfilling for their actors.

As one of the natural challenging outcomes of online teaching and learning, unexpected intruders can disrupt the progress we are in. In this very specific context, preservice teachers, also as students, share their rooms and houses with others, as a result, they can be exposed to abrupt noises, interruptions, distracting conditions. Thus, responses show this reality of unwelcomed interventions on OBM procedures.

3.4 Implications of OBMs on Online Teaching Skills

Regarding the aim of the study, preservice teachers' experiences were examined regarding their implications on OBM practices and future online teaching skills. Based on their claims, online microteachings can provide new experiences for teaching skills; improve digital capacities for teaching; and develop new visions in future directions of teaching. Preservice teachers' arguments are demonstrated below.

Table 4: Implications of OBMs on online teaching skills

Categories	Themes	Quotations
New experiences	Theory into practice	"We have gone through so much theoretical foundations about distant education. However, we had chance to practice all these theories and necessary knowledge in OBMs. I could apply my knowledge into practice before I actually started to teaching." (P6) "Although we had many challenges, we found answers for how to teach online, how to make online teaching possible." (P15)
	Sense of being a teacher	"OBM experience flashed me on a new issue: empathy. For a while, many teachers and our instructors were dealing many complicated tasks to keep teaching distantly. It is very difficult to teach without interaction, feedback, etc. I developed a new sense of being a teacher." (P4)

	Adapted teaching practice	"I really appreciate what we did so far, I really do. Because we had to continue with our training, we could practice microteaching no matter what the conditions were. It was an opportunity to speak in front of my peers and instructor." (P36)
Improved digital capacities	Digitally confident	"OBM practices were useful, I think. I have learnt new digital agents for my future teaching. Besides, I feel more confident to search and select new digital resources and environments. I was prejudiced while integrating technology in my lesson plans. Now, I started to understand the power of technology in teaching and learning." (P21)
	Digitally progressed	"Once my instructors talked about something called TPCK. I know understand what it means. Indeed, technology used to be limited to using web servers to watch videos, make presentations, and play games, according to me. However, it is no longer limited. I can search for digital tools and adapt them into my teaching intentions." (P32)
New visions	Change in perception	"I think, my OBM practice made me realize if a teacher designs a proper teaching activity, s/he can continue facilitating learning no matter which teaching environment is preferred. I used to think that virtual classrooms are not effective in learning, but it is not true." (P47)
	Teachers' roles	"As far as I regard the whole OBM procedure, I can honestly say that teachers do not only teach, they also do a lot of research. I had to look for many digital agents, I had to examine them, select the most suitable ones and many other work. I read articles about varying my materials and teaching activities. Teaching, particularly online teaching, is not very easy." (P1)

Based on the Table 4, preservice teachers experienced a new challenge through online microteaching practices, and they combined these practices with their existing teaching skills. It is utterly reasonable for preservice teachers to have certain challenges in practice, yet such experiences seem to reinforce online teaching skills of participant preservice teachers. During their training, they are mostly exposed to advancing in pedagogy, however, unexpected situations, as COVID, enforced them to be active users and participants of distance education. Turning the unfamiliar conditions into an opportunity, OBMs could assist preservice teachers to be able to use online teaching and its components somehow. The procedure is assumed to strengthen preservice teachers' digital teaching skills, sense of being a teacher in every condition, and getting perceptively ready for teaching in different environments.

4. Discussion

Teaching, as a demanding profession, is continuously influenced by human-driven needs and changes. Recently, pandemic results have directed new visions for teaching activities that are particularly combined with online designs. Accordingly, ITE programs also deliver online instructions for preservice teachers both to continue in training and to assist them in developing digital teaching skills. This paper, in particular, concerns the online microteaching experiences of preservice teachers with their self-reflections and implications on online teaching skills. Accompanying results on common evaluations indicate individual reflections which elicit supporting components of OBM practices and remind hindering issues of online teaching. Preservice teachers explain the assisting parts of OBM experiences by favoring the physical comfort, enriched digital sources and flexibility, opportunity in improving digital capacities, and chance to monitor their practices. Microteachings, actually and traditionally practiced, are appreciated with varied opportunities such as progressing professionally, designing a lesson, managing a classroom, communicating effectively (Kılıç, 2010) to support teaching behaviors. In this context, online microteachings are reinforced with supporting insights for teaching skills, yet in an online manner, which is also advised and mentioned in Bozkurt's (2020) study.

As expected in new and firstly experienced circumstances, OBM practices are still need to be assisted. Preservice teachers mention certain challenges in their responses. These challenges address the technical deficiencies and emotional effects of online teaching as we encounter in the related literature (Badia, Garcia, & Meneses, 2018; Gülbahar & Kalelioğlu, 2015; Naylor & Nyanjom, 2021). Teaching is profoundly attached to emotions because teaching profession requires personal commitments which are shaped by teachers' beliefs, values, relationship with students and etc. (Bayındır, 2021; Naylor & Nyanjom, 2021). Participants of the study, as very novice future teachers, have expressed their incompleteness due to the lack of interaction through online microteaching practices. The social distance and physical distance resulted in feeling lonely for the preservice teachers in this study. Similarly, Jones and Issroff (2005) reminds the effects of emotions on learning by referring to social presence that may not be completed during online learning. Therefore, designing an online teaching activity should follow emotional implications of online learning to advance in commitment.

Continuously, shifting from traditional way of teaching to online one also needs technical support and capacity to manage an effective online instruction (Stavredes, 2011). However, digital skills may not be enough when computer hardware and/or internet access fail to run. The paper also outlines the related findings indicating preservice teachers' technical challenges which mostly result from hardware and internet problems. Additionally, digital teaching skills require the knowledge and practice on what digital agents, sources and environments are appropriate; and how to use all this digital world in an effective teaching design (Howard et. al, 2021). Still, there are study findings that imply design-based challenges in an online environment (Amiel & Reeves, 2008; Burchum et. al, 2007; Zalavra & Makri), so that it is fair to say that preservice teachers, though they may be aware of variety of digital tools and environments, they may need further assistance in selection of relevant tools and environments to save much time and effort in design procedures.

The design-based challenges, however, brings the idea of TPACK as an alternative strategy that should be infused into ITE programs. As Mishra and Koehler (2006) propose in their model, in which preservice teachers should be capacitated with technical, pedagogical and content knowledge collaboratively to use digitally-enhanced teaching activities effectively, this study also calls teacher educators both to help preservice teachers improve in online teaching skills, and to guide by integrating TPACK in their own course delivery. In Karalar and Aslan-Altan's (2018) study, they applied Web 2.0 tools and encouraged preservice teachers to use these tools in microteaching, and finally they found that preservice teachers improved in Web-TPACK scale and self-efficacy. Therefore, it is possible to contribute in different teaching skills and behaviors as long as preservice teachers are led exclusively. Following, implications of OBMs on online teaching give some clues about preservice teachers' progress in ITE programs. According to the provided responses, preservice teachers are contented with the new experiences since they affirm that they had chance to combine theory and practice. In other words, they could both be engaged in necessary theoretical background and apply actively what they have acquired into practice. Along with teaching practices, they also appreciate the practice because all courses in their training program were offered online and they had to track applied courses with theory-based instructions. Therefore, they may feel relatively more as a teacher while designing and teaching (Kidd & Murray, 2020). It can also be assumed as a road map for ITE programs to find a better way to continue progressing in unwelcomed conditions. These implications can also be a starting point to change teaching visions and perceptions to be much more ready and responsive for future generations and dispositions. To achieve, ITE programs can increase online practice for preservice teachers to experience design-based procedures realizing what and how to organize.

Considering what Darling-Hammond (2017) suggests about ongoing roles and skills of teachers and their harmony with present world, online-based activities can be encouraged in microteaching performances. It may start with the integration of digitally-enhanced activities that are planned for any part of an instruction, then continue with progressing in online-based instructions as tried and found effective in the literature (Monroe, Mendez & Nutta, 2020; Zhang, Yan & Gronseth, 2020). Within this study, it is also hoped to make connections between teaching skills and online instructions through the reflections of preservice teachers on the contrary to what Dyment and Downing (2020) conclude in their systematic review study.

Further, ITE programs are criticized about not involving consistent content to respond needs of teaching competencies (Berkovich & Benoliel, 2020; OECD, 2019) as well as are invited to make reforms to include

innovative and inclusive pedagogies (Darling-Hammond, 2020; OECD, 2019). These calls to advance in ITE programs can be international, yet, mostly, the followed steps are revolved around national contexts (Cochran-Smith, 2021). As one of the national contexts, Turkey, recently taking action on the revision of ITE programs by given the autonomy to the faculties of education, can be an example to re-arrange ITE programs concerning online and digital based teaching practices through the given autonomy.

Although this study is limited to a local context with its practices, the reflections and implications can contribute to ITE programs in international contexts. The paper wishes to discuss different perspectives and insights which may elaborate meaningful practices in initial teacher education programs. Online microteaching can be offered as an alternative practice to empower preservice teachers in their digital teaching capacities, in their practice-based teaching skills, and to enrich their future teaching visions and adaptability. This study can be embellished with different contexts, participants, and research methods in future studies.

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