

## Teaching Practicum During the Covid-19 Pandemic: A Comparison of the Practices in Different Countries

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### Abstract

Today, many countries ensure that student teachers get into the real classrooms, practice in there, spend more time and translate theoretical knowledge into practice in schools during Initial Teacher Education. So that they can receive stronger support in the practicum process, and they can develop themselves. However, schools have been closed in so many countries due to the Covid-19 pandemic preventions. Therefore, countries have rearranged the teaching practicum process. The aim of this study, which was carried out with a systematic review, is to comparatively examine the teaching practicum processes of different countries during the Covid-19 pandemic. With a systematic review made according to certain criteria, teaching practicum in the Covid-19 in the countries of Australia, Canada (Ontario State), England, Greece, Hong Kong, Malaysia, Portugal, South Africa, Turkey, the United States of America (New York State) and Zimbabwe were examined. According to the findings, it has been seen that some countries have removed or stretched the teaching practicum requirement during the Covid-19, while some countries have carried out online teaching practicum (i) in K-12 schools, (ii) with peer learning, or (iii) using VR technology, and one country re-opened the schools after a short closure.

**Keywords:** Teaching Practicum, Initial Teacher Education, Student Teacher, Covid-19 Pandemic, Systematic Review.

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## INTRODUCTION

In December 2019, a new type of virus (Covid-19) emerged in Wuhan, China, and shortly after, it turned into an epidemic that was effective all over the world by January 2020. The Covid-19 epidemic has caused change and transformation in many areas (Kırmızıgül, 2020). One of these fields is education. It has become one of the priorities in the agenda of the countries how to continue the activities of educational institutions where people have a lot of contact due to the fact that the virus spreads through the respiratory transmission (Karadağ & Yücel, 2020). Closing schools has been the most important step taken to prevent the spread of Covid-19 (Abdulmir & Hafidh, 2020). The partial or full closure practices put forward by countries to reduce the risk of transmission of the virus necessitated the closure of universities (Flores & Swennen, 2020).

Since the partial or full closure of the schools was not sustainable, it was required educational institutions to renew their learning processes (Naila & Sadida, 2020). In this vein, traditional education environments were abandoned in pre-school, primary, secondary, and higher education institutions, and the education-training process continued through the distance and digital education opportunities. This practice which was implemented in order to prevent the disruption of educational activities due to the current crisis conditions is called *emergency remote teaching* (Hodges et al., 2020). Distance education provides an alternative learning environment by providing the flexibility regarding the learning and teaching at any time and place, and emergency remote teaching is a kind of response to the Covid-19 pandemic which has become a necessity for both students and teachers (Bozkurt & Sharma, 2020; Mısırlı & Ergüleç, 2021).

The implementation of the emergency remote teaching at educational institutions is the major effect of the Covid-19 pandemic on educational activities. Due to the transition from the face-to-face education to the emergency remote teaching, teachers and students needed to adapt it not to only theoretical courses but also applied courses. Teaching practicum, which serves as a bridge between theory and practice and is taken by senior student teachers at the education faculties is also delivered through this method (Allen & Wright, 2013). Teaching practicum is regarded as one of the basics of teacher training (Vick, 2006). The version of teaching practicum that is delivered through online courses is called the pandemic practicum (Burns et al., 2020).

The Teaching Practicum, which we can consider as a pre-service training opportunity aiming to improve the professional competencies of student teachers who will take part in the education system in future, plays an important role in the teacher training process (Eti & Karaduman, 2020; MoNE, 2017). On the other hand, teaching practicum, which is based on the partnership between the school, the practice teacher, the practice instructor, and the student teachers and based on the principle of learning by doing-experience through the activities carried out by the student teachers in the classroom (Paker, 2008) is considered an important stage in teacher education due to the opportunity for the student teachers to develop themselves in the way of being an effective teacher (Darling-Hammond, 2017). It focuses on classroom activities and student teachers make practice of their theoretical knowledge which allow them to recognize their strengths and weaknesses and to have a different experience in the process of being a teacher. In addition, student teachers bring new ideas to life in this process which contribute to their learning by in-depth thinking about the quality of the teaching service they provide (Schulz, 2005).

Teaching practicum, which we can consider as an important opportunity to bridge the gap between the teacher preparation process in education faculties and the realities of the classroom environment, offers student teachers many experiences to explore their teaching identities with dimensions such as field knowledge and pedagogical competence (Varela & Desiderio, 2021). With the transformative effect of the closure of schools and the transition to distance education on teaching practice with the Covid-19 pandemic, many countries have taken different decisions and managed this process, and different practices have been employed in teaching practicum.

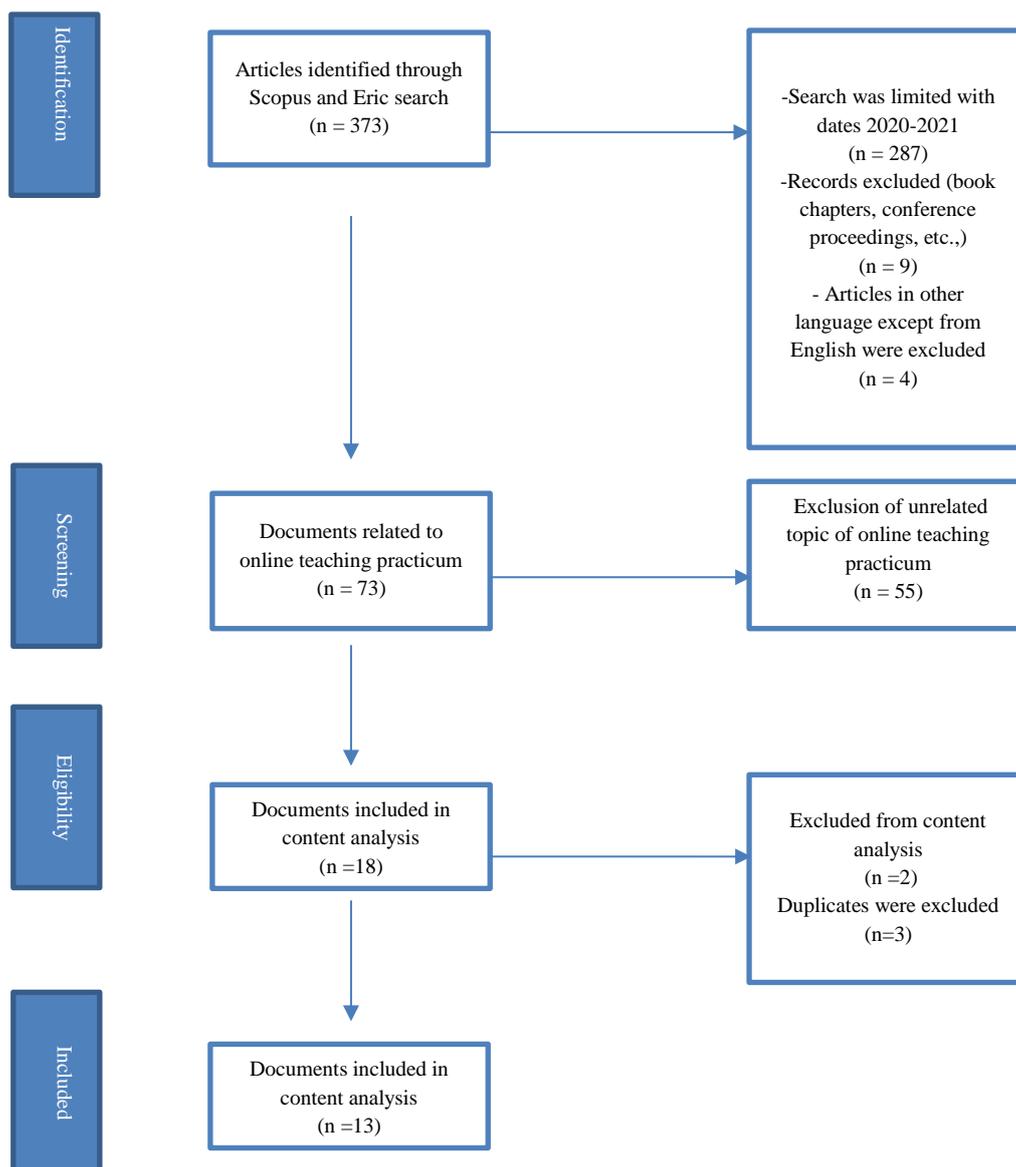
In a short period of time, instructors had to redesign and arrange an online teaching schedule so that students could meet with the supervisors and also to teach children online, in order to meet practicum requirements (Kim, 2020). In this sense, student teachers who used to perform their teaching practicum in an interactive environment in real classrooms had to fulfill different responsibilities and encounter different problems through the distance education process. Therefore, it is thought to be important to explore teaching practicum processes during the Covid 19 pandemic in different countries to gain understanding about educational practices and experiences of both the instructors and student teachers. At the same time, sharing and comparatively discussing good examples of online teaching practicum will be important in gaining an understanding of the practices and perspectives that will be used to contribute to teacher quality. In this context, the aim of this study is to comparatively examine the teaching practicum practices in different countries from different continents during the Covid-19 pandemic. In line with this general purpose, different practices for teaching practicum in eleven countries, namely Australia, Canada (Ontario State), England, Greece, Hong Kong, Malaysia, Portugal, South Africa, Turkey, the United States of America (New York State) and Zimbabwe, were examined and those with similar practices were divided into categories.

## **METHOD**

This study is carried out with a systematic review. The systematic review is a study that examines a clearly stated subject using systematic and explicit procedures to find, select, and critically appraise relevant literature, as well as gather and analyze data from the studies included in the review (Moher et al., 2009). In other words a systematic review's main purpose is to gather and evaluate all relevant high-quality research in order to answer a specific research (Vrabel, 2015). The process consists of six stages: (i) review protocol development, (ii) inclusion and exclusion, (iii) relevant studies search, (iv) appraisal of the articles and quality assessment, (v) data extraction and (vi) synthesis of the findings (Yılmaz Yenioğlu et al., 2021).

### **Review protocol development**

The review protocol covered the research questions, article search strategy, inclusion and exclusion criteria, quality assessment, data extraction and synthesis of the findings. A systematic review protocol is the key for several reasons: (i) it allows systematic reviewers to plan carefully and thus anticipate potential problems; (ii) it allows reviewers to explicitly document what is planned before they begin their review, allowing others to compare the protocol and the completed review, replicate review methods if desired, and judge the validity of planned methods; and (iii) it prevents arbitrary coding (Shamseer et al., 2015). The flow diagram of the literature review which shows the process from the identification is seen Figure 1.



**Figure 1. The flow diagram of the literature review**

### **Inclusion and exclusion**

The following inclusion/exclusion process was used to select relevant sources:

1. Search was limited with the dates 2020-2021 which focus on covid-19 pandemic
2. Only articles and reviews were included. Other types of document such as book chapters, conference proceedings, book reviews, and etc. were excluded.
3. Only full texts written in English were included in the content analysis.
4. Only documents primarily focus on online teaching practicum in general were included. Therefore, other documents which focus on online teaching practicum in spesific departments such as TESOL, early childhood education department, and etc. were excluded.

### **Relevant studies search**

The relevant studies were searched in Scopus and ERIC research databases using the following keyword string.

TITLE-ABS-KEY (online AND teaching AND practicum)

This search yielded 150 results in Scopus database and 223 results in ERIC database. When the search was limited with the dates 2020-2021, we excluded 104 results from Scopus and 183 results from ERIC database. After we limit the search with only articles and reviews, we excluded 7 other types of writing from Scopus, and 2 other types of writing from ERIC database. In the next step articles in other language except from English were excluded. According to the results, 2 articles were excluded from Scopus and 2 of them were excluded from ERIC database because of the language. Finally, we focused on determining the eligibility of the 37 articles in Scopus, 36 articles in ERIC database. To retain all the articles and reviews relevant to the online teaching practicum in Covid-19, the authors carefully read the abstracts of the 73 documents. There was more than 95% agreement between three lists. Documents on which the authors disagreed were reassessed by the authors in order to reach a final decision. After this step, the data set was reduced to 12 articles in ERIC database, and 6 articles in Scopus database which were eligible for content analysis.

### **Appraisal of the articles and quality assessment**

To retain all the articles and reviews relevant to the online teaching practicum in Covid-19, the authors carefully read the abstracts of the 18 documents. There was more than 95% agreement between three lists. Documents on which the authors disagreed were reassessed by the authors in order to reach a final decision and 2 articles were excluded for content analysis. Because we could not reach the full paper version of the article which was conducted in Arap Emirates. The second article that we excluded from content analysis was conducted in Trinidad and Tobago. However this article analysed only the one university's teaching practicum process in Covid-19. Since it is thought that the inclusion of this article can be deceptive, the article was excluded from the content analysis. In addition, 3 duplicates were excluded from the analysis.

### **Data extraction**

After the appraisal of the articles step, the data set was reduced to 10 articles in ERIC database, and 6 articles in Scopus database which were eligible for content analysis.

### **Synthesis of the findings**

In this step, articles were grouped based on country. As a result, eleven countries from different continents, namely Australia, Canada (Ontario State), England, Greece, Hong Kong, Malaysia, Portugal, South Africa, Turkey, the United States of America (New York State), and Zimbabwe were examined in terms of teaching practicum process. By interpreting the data obtained from the articles which are about the way teaching practicum courses are taught, the difficulties encountered, different practices and the effects of these practices during Covid-19, inferences about the teaching practicum during Covid-19 are made and suggestions are offered in the context of good examples. The articles which were included for analyze can be seen in Table 1.

**Table 1. Articles which were included in content analysis**

Databases	Articles
ERIC	Assunção Flores, M., & Gago, M. (2020)
	Boivin, J. A., & Welby, K. (2021)
	Burns, A., Danyluk, P., Kapoyannis, T., & Kendrick, A. (2020)
	Hojeij, Z., & Baroudi, S. (2021)
	Kaloo, R. C., Mitchell, B., & Kamalodeen, V. J. (2020)
	Kidd, W., & Murray, J. (2020)
	La Velle, L., Newman, S., Montgomery, C., & Hyatt, D. (2020)
	Mohamad Nasri, N., Husnin, H., Mahmud, S. N. D., & Halim, L. (2020)
	Moyo, N. (2020)
	Quinn, L. F., & Paretto, L. (2021)
Robinson, M., & Rusznyak, L. (2020)	
Van Nuland, S., Mandzuk, D., Tucker Petrick, K., & Cooper, T. (2020)	
SCOPUS	Brinia, V., & Psoni, P. (2021)
	Ersin, P., & Atay, D. (2021)
	Tsui, A. B., Chan, C. K., Harfitt, G., & Leung, P. (2020)

## FINDINGS

The teaching practicum practices of the countries in the Covid-19 process were examined, and similar practices were categorized which are presented in Table 2. As can be seen in Table 2, it is possible to categorize the ways of delivering teaching practicum during the Covid-19 pandemic as follows: (i) moving online teaching practicum, (ii) abolishing the teaching practicum requirements, and (iii) re-opening the schools after a short closure. The countries which offered online teaching practicum are divided into three categories: (i) online courses at the K-12 schools, (ii) online peer teaching, and (iii) using the virtual reality (VR) technology.

**Table 2. Ways of delivering the teaching practicum during the Covid-19 process**

<b>Moving online teaching practicum</b>	<b>Online courses at the K-12 schools</b>
	Turkey
	England
	Portugal
	Hong Kong
	<b>Online peer teaching</b>
Greece	
The USA	
<b>Abolishing the teaching practicum requirements</b>	<b>Using the VR Technology</b>
	Australia
	Canada
<b>Re-opening the schools after a short closure</b>	Malaysia
	Zimbabwe
	South Africa

### Moving online teaching practicum

Due to the Covid-19 pandemic, schools have been closed in many countries in the world, and this has brought the teaching practicum to the online platform. Such countries are divided into three categories: (i) online courses at the K-12 schools, (ii) online peer teaching and (iii) using the VR technology.

#### Online courses at the K-12 schools

The countries which used the online courses at the K-12 schools include Turkey, England, Portugal and Hong Kong. The first decision dated 13 March 2020, which came into force in the field of education after the first case report in Turkey, was to suspend education for a period of three weeks at all levels (primary education, secondary education and higher education institutions including pre-school education institutions) as of 16 March 2020. The related decision was as follows: “*Suspending*

*the education of two-year and undergraduate students who have internship and applied education in the fields of health-care, teaching, science and engineering programs, as well as all two-year and undergraduate students who continue their formal education programs.”*, and there was no explanation about how the applied courses would be conducted (CoHE, 2020a). In the press release dated 26 March 2020, it was reported that there would be no face-to-face education in the spring term, and that the education-training process would continue only with distance education, open education and digital education opportunities (CoHE, 2020b). The statement concerning the teaching practicum was released on 7 April 2020 stating that *“Considering that our students participate in practical teaching studies at schools between 5-6 weeks, limited to this difficult period and in coordination with the Ministry of National Education, we have decided to make up for the deficiencies in the teaching practice with homework and file preparation which was informed to all our universities.”* (CoHE, 2020c). With this decision, in the spring semester of the 2019-2020 academic year, student teachers graduated from the programs taking the teaching practicum which is a five-credit course delivered through two-hour theoretical courses and six-hour practice per week (CoHE, 1998; Göktaş & Şad, 2014) in a theoretical way, not in real classroom environments.

In the directive published by the Teacher Training and Development Directorate of the Ministry of National Education in Turkey on 14 October 2020, it was decided that the courses related to teaching practicum during the Covid-19 pandemic period should be carried out in digital, online live (synchronous) learning environments to be opened by teachers with the coordination of education faculties and provincial national education directorates (MoNE, 2020), and a temporary article was added to the Directive on Teaching Practicum to be made by Practicing Students in Educational Institutions affiliated to the Ministry of National Education, dated 14.06.2018 and numbered 11700767, published in the 2018 June Supplementary Notifications Journal.

The situation in England is very similar to Turkey. The England declared an emergency e-learning due to Covid-19 in March 2020 and all universities and schools were closed. Teaching and student assessments continued online (Murphy, 2020). The sending of student teachers to schools for practical teaching activities was also stopped abruptly as schools closed, and student teachers practiced at schools only for eight to nine weeks (40-45 of the expected 120 days) (la Velle et al., 2020). In England, pre-service teachers enroll in the one-year Post-Graduate Certificate of Education (PGCE) and must complete 36 weeks: 24 weeks at school and 12 weeks at university, to graduate from this program (Kidd & Murray, 2020). Although students stayed at home, the schools should remain open to provide a safe environment for the children of the key workers. It can be argued that the process of the teaching practice at schools was quite complicated. At schools that continue face-to-face education, some student teachers were able to attend teaching practice on a voluntary basis and complete their teaching practicum in this way. Two-thirds of the initial teacher education cohorts reported that they included student teachers in the online courses offered by the schools. In addition, not to make student teachers disadvantaged universities adopted different tasks and assessments such as, trainees recording their teaching on a specific topic/concept and accepting peer feedback; microteaching via BlackBoard Collaborate, and writing schemes of work (la Velle et al., 2020). In short, it can be said that although different practices were adopted in order not to put pre-service teachers into a disadvantaged condition, the British institutions mostly cooperated with schools and had student teachers completed their online teaching practicum.

Portugal is another country where teaching practicum was delivered through online methods. In Portugal, student teachers are required to teach 24 hours and develop an inquiry-based pedagogical intervention based on their field observations and experiences. However, in line with the Covid-19 measures in Portugal, as in Turkey and England, they had to abruptly stop their face-to-face teaching practices at schools and continue to do so remotely. The teaching practicum continued with student teachers following the activities of the school counselor teachers online. However, just like England and Turkey, although the teaching practicum in Portugal is mostly adapted to online education at schools, it has been seen that very different practices were employed. In this process, the Institute of Education published a guide for teaching practice, and the faculty members and practice consultants at schools were expected to follow this guide. According to this guide, if student teachers' research

designed for pedagogical intervention was not possible to implement, a more theoretical and flexible perspective should be adopted in practice (Flores & Gago, 2020).

In order to achieve a professional teaching qualification in Hong Kong, teacher education programs typically need a minimum of 12 weeks of practical teaching in schools. The four-week suspension of instructional practice in schools began in late January 2020, but was prolonged many times until late May 2020. This period the suspension also occurred during major teaching practicum period, which lasts eight weeks. The School-University Partnership (SUP) Office reduced the practicum time from eight to five weeks. On the other hand, in the first school closure period, student teachers mainly supported the school mentors by creating teaching materials such as work sheets, preparing PowerPoint (PPT) presentations and online teaching tools and marking the work of students. When the shutdown was extended, some of the student taught online, frequently using the teaching materials they created for their mentors. During the pandemic process, student teachers received feedback from their mentors and had chance to reflect their own experiences. It can be said that this situation served as a solid foundation for rethinking the standard teaching practicum (Tsui et. al., 2020).

### **Online peer education**

Some countries, on the other hand, could not do teaching practicum at the K-12 schools due to the insufficient infrastructure. Instead, they conducted the teaching practicum online at universities. In this process, student teachers taught lessons to their classmates who acted like students, and after the lesson, they improved themselves in line with the feedback they received from them and the instructor. Greece is one of the countries that carried out teaching practicum in this way.

In Greece, student teachers undergo 4-year training and do the teaching practicum at schools during the last two years. First, they observe the teaching activities in the classrooms with the practice teacher, then they start to teach independently. The duration of the teaching practicum, on the other hand, takes a few weeks, depending on conditions such as time, whether the course is required to continue, or credit (Sarakinoti & Tsatsaroni, 2015). However, with the Covid-19 pandemic, student teachers could not go to schools for the teaching practicum. Instead, they were divided into the groups and conducted the teaching practicum in online classes with their friends pretending to be students. As one of the articles reviewed in this study, Brinia and Psoni (2021) conducted a study with these student teachers, concluded that student teachers were satisfied with online peer education because they did not waste a semester since they could not practice at schools.

Another country that carried out online peer learning and teaching practicum is the USA. In the USA, teacher certification requirements are determined by each state, and colleges and universities must develop the educational programs and related practices to comply with the state regulations. In short, there is no national obligation to train teachers in the USA (Çakıroğlu et al., 2005). However, in teacher education, it is obligatory to make teaching practice in the classroom for certain hours. For example, according to the New York Education Department (n.d.), it is required to have at least 100 hours of classroom teaching practice in order to obtain a teaching certificate in many fields. With the Covid-19 pandemic, 50.000 schools in 22 states were completely closed, and teaching practicum was also affected by this situation. While education continues online at universities, it was recommended that student teachers should watch the videos of the training given in the classroom and present their lessons to their colleagues online (Kim, 2020).

### **Using the VR technology**

Within the scope of Australian initial teacher education, pre-service teachers are required to teaching practice for a minimum of 80 days under the supervision of their school counselor. In addition, student teachers do internships in an educational environment created for them for an extra 20 days (Bahr & Mellor, 2016). However, due to the Covid-19 pandemic, the Australian schools in each region and state had to be closed in different scopes and duration. For example, in Victorian state

at the beginning of May 2020, only 3% of students could attend school, compared to 79% in the Northern Territory. In Australia education at the K-12 schools is carried out in four ways in general: (i) traditional classroom-based education and learning, (ii) state distance learning services, (iii) independent home learning, and (iv) school-directed distance learning (Sacks et al., n.d.). The execution of teaching practicum was also closely affected by the closure of schools. In this process, Australian Technical and Further Education (TAFE), which offers vocational education and training, moved the practicum held in classrooms to an online platform. In addition, some other higher education institutions formulated various alternative ways. One of these ways was the VR technology. It requires that student teachers log into the system from his home or from any place he wants on the day and time of the lesson. There are 5 student avatars in the classroom which are controlled simultaneously by the simulation expert. This means that all interactions are simultaneous and real and reflect similar to the real experience of learning and teaching. Courses that last approximately 15 minutes are recorded. The simulation specialist forwards the copy of the recording to the lecturer responsible for the course to discuss it with student teachers. The findings indicate that student teachers who carry out teaching practicum with the VR technology feel like they are in a real classroom and feel themselves more comfortable because there is no mentor teacher or instructor during the lesson (Sasaki et al., 2020).

### **Abolishing teaching practicum requirements**

The method and duration of the teaching practicum in Canada are determined by Provincial Teacher Certification Requirements. For instance, in Western Canadian states and in Ontario teaching practicum should be done at two or three different schools, but in Quebec it should be done in four or more institutions (Van Nuland, 2011). The duration of teaching practicum also differs based on the states and the structure of the teacher training programs (simultaneous or sequential programs). For instance, in the West and East the duration of the teaching practicum varies between 13–20 weeks, but in Ontario it is between 8–12 weeks and in Quebec it is 21 weeks or more (Crocker & Dibbon, 2008). However, with the spread of the Covid-19 pandemic in the country, several provinces and territories decided to close schools, universities, colleges and childcare homes, although the durations of the closure differed from one location to another (Chouinard, 2020). This situation also affected student teachers' completion of teaching practicum at schools. The universities switched to online education as of 13 March 2020, but considering that the term would end on 30 April, student teachers had about 3 weeks of course time and 3 weeks of teaching practicum. However, the pre-service teachers had to complete their teaching practice in order to be registered and certified as teachers. In March 2020 some Canadian teacher training programs managed to offer online courses, but the others were closed. For example, in Ontario, a large province, (1.076 million km<sup>2</sup>), 12% of the population did not have sufficient internet infrastructure as they live in rural, remote and northern areas. Because of this fact the Ontario College of Teachers that registers and certifies teachers in Ontario, announced that they are reorganizing their teacher qualifications. Accordingly, the obligation of teaching practicum would not be expected from the pre-service teachers who could not complete their teaching practice due to the closure of schools. In addition, the Canadian universities expected pre-service teachers to comply with the updated 80-day mandatory practice requirement (Van Nuland et al., 2020).

A similar case is in Malaysia. In this country the pre-service teachers should involve in the teaching practicum for nearly two months at schools (Mohamad Nasri et al., 2020). Since Malaysia was the country that was worst affected by Covid-19 in Southeast Asia (New Straits Times, 2020), all public and private higher education institutions were closed nationwide. The Malaysia's Ministry of Higher Education cancelled all learning and teaching activities on 17 March 2020 and stopped all forms of teaching and learning, including online courses as well as exams, student development and research activities during the restricted movement period (Crawford et al., 2020). In Malaysia due to the closure of schools 4.9 million K-12 students and 1.2 million undergraduate students are affected (Salleh et al., 2020). In this process, student teachers could not perform their teaching practicum either face-to-face in the classrooms or in online courses. It is thought that this situation may cause student teachers to have problems especially in classroom management in future (Mohamad Nasri et al., 2020).

Another country that could not implement the teaching practice activities during the Covid-19 process is Zimbabwe. Teacher training in Zimbabwe is provided at the 3-year Teachers' Colleges or at the 4-year universities. Student teachers studying at the university are required to complete 18 class hours of teaching practicum at schools in the 3<sup>rd</sup> grade (Mukeredzi & Manwa, 2019). However, due to the Covid-19 in Zimbabwe schools were closed for 34 weeks which affected nearly 4 million students (UNESCO, n.d.). In this process, teaching practicum and activities were also interrupted. Because the teaching practicum is under the supervision of the Ministry of National Education, not the Higher Education Institute. The other undergraduate courses could continue online, but schools had to be open for the teaching practicum to continue. However, as Moyo (2020) emphasized that when the schools were closed, student teachers who started teaching practice but had not yet been visited by a faculty member caused a problem due to the evaluation requirements.

### **Re-opening the schools after a short closure**

In South Africa, student teachers in their initial teacher education spend between eight and twelve weeks a year in schools. During Covid-19, schools were closed, and teacher education continued online. After ten weeks closure, South Africa re-opened the schools under limited and strict conditions. Limited access to schools during the pandemic caused two important problems in terms of online teaching practicum in South Africa. First, how to provide opportunities to observe, prepare, and teach the lessons in authentic settings. Second, how to expose student teachers to various schooling contexts (Robinson & Rusznyak, 2020). To deal with these difficulties, educators in South Africa attempted to develop materials named "Teacher Choices in Action" including a set of online materials based on the choices and actions of teachers. This module uses a set of lessons recorded in different school contexts, including rural or urban, and highlights the pedagogical choices all teachers make around key questions in their lessons: how teachers organize knowledge, work with learners, and support learner engagement (Robinson & Rusznyak, 2020). With the help of this module student teachers could understand what they need for different schooling contexts and make links between educational practices and theoretical knowledge in their initial teacher training. The re-opening of school with new classroom arrangements based on social distancing encouraged the idea of adapting a new philosophy based on the active and engaged teaching practices through technology and distance rather than a close interaction with students in classroom settings. Therefore, learning form practice that consists of case studies, video records or lesson observations has begun to gain importance in teacher education curriculum of South Africa with Covid-19.

## **DISCUSSION**

The Covid-19 pandemic brought about changes in many areas, and one of the main areas affected in this process was education. In this context, how to conduct education and training activities against the rapidly spreading and respiratory virus has been one of the issues discussed by many countries. The pandemic, which brought about a transformation in the education-teaching processes, also caused the teaching practicum, which the education faculties conducted in coordination with the Ministry of National Education within the scope of faculty-school cooperation to take a different form. Since the teaching practicum is a course that enables pre-service teachers to make observations and practices in the classroom environment, it aims to improve the teaching skills of the pre-service teachers. At the same time, it contributes to the development of their professional competencies by providing a unique learning experience by presenting an opportunity to assume all the responsibilities of the teaching profession (CoHE, 1998). In this sense, student teachers who used to perform their teaching practicum in an interactive environment in real classroom environments had to fulfill different responsibilities through the distance education process.

In this study, how the teaching practice courses are conducted during Covid-19 is discussed in a comparative manner with the examples of different countries. Based on the ways of delivering teaching practicum during the Covid-19 pandemic the countries were categorized as follows: (i) those countries which offered the online teaching practicum and (ii) those countries which abolished the teaching practicum requirement, (iii) the countries which re-opened the schools after a short closure.

The countries which offered online teaching practicum are divided into three categories: (i) online courses at the K-12 schools, (ii) online peer teaching, and (iii) using the virtual reality (VR) technology. While Turkey, England, Portugal and Hong Kong implemented online education at K-12 schools, Greece and the USA continued education through the online peer learning. In this process, student teachers taught lessons to their classmates who acted like students, and after the lesson, they improved themselves in line with the feedback they received from them and the instructor. Among the countries that moved online teaching practicum Australia implemented a new implementation as the VR technology. There are 5 student avatars in the classroom which are controlled simultaneously by the simulation expert. This means that all interactions are simultaneous and real and reflect similar to the real experience of learning and teaching. On the other hand, Canada, Malaysia and Zimbabwe abolished the teaching practicum requirements. Lastly, South Africa re-opened the schools after a short closure (ten weeks) under limited and strict schooling conditions.

As the findings conclude that although there are different implementations, the countries might also encounter common problems about how to manage teaching practicum during Covid-19. One of the common problems was the inadequacy of infrastructure. In order to carry out the teaching practicum with distance education, the first point that should be noted is the necessity of questioning the inadequacy of the infrastructure needed in the distance education practice. Countries that cannot continue teaching with distance education due to a lack of infrastructure include Canada, Malaysia and Zimbabwe. Due to the geographical features of Canada and the regions without internet infrastructure in Malaysia and Zimbabwe abolished the requirement to complete the teaching practicum with distance education. However, although Portugal has switched to distance education, it has emphasized that all students cannot receive education equally due to the lack of infrastructure (Flores & Gago, 2020). The same is true for Turkey. For instance, in the study by Karadağ and Yücel (2020) on a sample of 17.939 undergraduate students their satisfaction regarding the distance education practices of universities in Turkey was examined. It is found that only 63% of them had internet connection at home. One third of the participants did not have computer or tablet. One fourth of the students participating in the study do not have access to their internet or computer/tablet etc. Therefore, they stated that they could not continue their education due to such negative conditions. In short, the inequality of opportunity in education, which has become more evident with online education, needs to be discussed again.

Another point to be emphasized is professional competencies of student teachers. In another study, in which the views of student teachers regarding the teaching of the teaching practicum through the distance education were taken, it was concluded that the teaching of this course via the distance education negatively affected their professional competencies. At the same time, although it was stated in the study that the teaching practicum should be carried out in a face-to-face manner, it was also stated that the distance education process had some positive contributions to the professional competencies (Eti & Karaduman, 2020). Considering the unique opportunity that the teaching practicum offers to pre-service teachers in gaining professional competencies such as subject area and content knowledge, teaching-learning process and assessment, it can be considered as an unexpected result that student teachers feel themselves inexperienced and inadequate.

Senior teacher training program students who take the teaching practicum can qualify as future teachers. When the findings of another study, which emphasizes that the health crisis caused by the Covid-19 pandemic as well as the changing educational status of future teachers, are examined, it can be seen that the practices they perform through virtual teaching, unlike the situation in which they participate by interacting with the students in the classroom environment, cause feelings of insecurity, uncertainty and melancholy. Consequently, it turns out that it may negatively affect their future professional practices (González-Calvo et al., 2020). According to the findings of the study conducted by Karatepe et al. (2020) student teachers have a negative attitude towards synchronous distance education courses and have the opinion that not every course is suitable for distance education. The fact that the negative effects of this process can be advantageous in possible future uncertainties should not be overlooked. It has been revealed in the studies that student teachers who continue their teaching practicum online during the pandemic period have improved themselves in the use of

technology and in keeping up with the differences (Brinia & Psoni, 2021; Kim, 2020). On the other hand, there are some studies that emphasize the implications for online teaching practicum during Covid-19. In their study based on the deficiencies of online teaching practicum and the implications for initial teacher training in South Africa, Robinson and Rusznyak (2020) emphasized that online teaching practicum and the re-opening of schools under limited conditions encouraged the idea of adapting a new philosophy. This philosophy should include active and engaged teaching practices with the help of technological arrangements such as case studies, video records or lesson observations rather than close interaction with students in physical class environments. Learning from practice has begun to gain more importance than learning in practice in initial teacher education. Therefore, it can be said that Covid-19 served as a solid foundation for rethinking the standard teaching practicum.

In addition, many of the articles reviewed within this study emphasized that the obligations and responsibilities of instructors and pre-service teachers should be reviewed following the start of the Covid-19 pandemic. For example, in Portugal, student teachers had to adapt very quickly to the process and follow the guidelines and recommendations that were constantly being published. This has meant a near real-time adaptation process for them (Flores & Gago, 2020). Similarly, student teachers in Malaysia started to question the concept of success and stated that success has undergone a transformation (Nurfaradilla et al., 2020). It can also be said that in countries such as Australia and the USA, student teachers try to improve their skills related to the using technology (see Kim, 2020; Sasaki et. al., 2020). In addition to the changing responsibilities of student teachers, it was also apparent in many reseraches reviewed within this study that instructors had to gain extra responsibilities and skills in order to fulfill the requirement of their students on the path becoming teachers as well. In the uncertainty during the pandemic, the effort of a faculty member in the USA to conduct the teaching practicum in the best way can be given as an example. Although the state in which the school is located switched to peer learning, the faculty member met with the parents in the surrounding schools with his own effort, got their permission, and allowed the pre-service teachers, whom he supervised, to conduct the teaching practicum online with preschool students (see Kim, 2020).

As with any research, this study also has some limitations. First of all, the articles were used to examine the practices of the countries in question, and the data could not be obtained from the websites of the Ministries of Education of these countries. Therefore, only academic studies have formed the dataset of this study. Another limitation is related to the education systems of the countries. As a result of the decentralization of the Ministries of Education in some countries, there may be different practices in different states. In this study, practices in certain provinces of Canada and the USA were evaluated (For example, Ontario state of Canada and New York state of the USA were evaluated).

It must be admitted that the Covid-19 pandemic has caused a transformation in educational paradigms, and teacher education has also taken its share from this change and transformation. In future studies, alternative solution proposals that will take the system forward should be put into practice in line with the views of pre-service teachers, lecturers and mentor teachers. In this context, comprehensive studies on their professional qualifications can be planned by collecting data from teachers who completed the teaching practicum with distance education and began teaching profession during the pandemic process.

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