

**The Impact of an E-Practicum model on Post
Graduate Student Teachers' E-Teaching Readiness**

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المخلص :

أدى انتشار جائحة كورونا الي تعطيل الدراسة بالمدارس تطبيقًا لاجراءات التباعد الاجتماعي مما أثر بالسلب علي انتظام الدراسة بالجامعات المصرية بصفة عامة و كلية التربية جامعة السويس بصفة خاصة مما دفع الباحثة الي الشروع في عمل هذه الدراسة كمشاهدة لحل أزمة توقف التربية العملية لطلاب برنامج الدبلوم العام في التربية. لذلك هدف البحث الحالي إلي دراسة أثر إستخدام نموذج للتربية العملية الالكترونية علي استعداد الطلاب المعلمين بالدراسات العليا تخصص اللغة الانجليزية للتدريس الالكتروني. وتكونت عينة الدراسة من تسعة من طلاب برنامج الدبلومة العامة في التربية تخصص اللغة الإنجليزية بكلية التربية جامعة السويس خلال الفصل الدراسي الثاني للعام الجامعي ٢٠٢٠-٢٠٢١. وقام المشاركون أثناء هذه الفترة بتدريس بعض الدروس الالكترونية باستخدام تطبيق الزووم (ZOOM). ولقد تكون هذا النموذج من أربع خطوات اجرائية متتالية: مرحلة الاعداد والتركييب - مرحلة التدريس الالكتروني- مرحلة التأملات والتغذية الراجعة - وأخيرا مرحلة الارشاد الالكتروني. ولقد قامت الباحثة بتصميم مقياس الاستعداد للتدريس الالكتروني (ETRS) E-Teaching Readiness Scale لقياس استعداد طلاب الدبلوم العايب تخصص اللغة الانجليزية للتدريس الالكتروني. ولقد توصلت الباحثة إلى وجود فروق دالة إحصائية بين متوسطي درجات الطلاب في القياسين القبلي والبعدي لصالح الإختبار البعدي. ولقد خلصت الباحثة من نتائج الدراسة الحالية إلى أن إستخدام نموذج التربية العملية الالكترونية المقترح له أثر دال إحصائيا على استعداد طلاب الدبلوم العام تخصص اللغة الانجليزية للتدريس الالكتروني.

الكلمات المفتاحية: نموذج التربية العملية الالكتروني ؛ الاستعداد للتدريس الالكتروني؛ الطلاب

المعلمين بالدراسات العليا

Abstract:

The present study was conducted to identify the impact of using an E-practicum model to enhance EFL general diploma student teachers' E-Teaching Readiness (ETR). It is a one group pre/post quasi-experimental study. Nine post graduates enrolled in general Diploma of Education (English major), at Suez Faculty of Education, participated in the study. To adapt to schools shutting down caused by corona virus pandemic, an alternative practicum practice named E-Practicum was designed by the researcher to meet the needs of General diploma EFL student teachers, hoping to maintain the quality of the practicum. An E-teaching readiness scale was devised by the researcher to measure participants' e-teaching readiness before and after implementing E-practicum. Wilcoxon Signed Ranks Test yielded a significant difference in the participants' mean scores between the pre and the post administration of E-teaching readiness scale in favor of the post administration. It was concluded that the proposed E-practicum model had significantly enhanced general diploma EFL student teachers' E-teaching readiness. It is recommended to include E-practicum into teacher preparation programs.

Key Words: E-practicum, E-teaching Readiness, General diploma EFL student teachers

Introduction:

E-teaching readiness has become one of the dynamic requirements for EFL pre-service, in-service as well as post graduate student teachers at the digital age. Such a requirement needs student teachers to have adequate technology competences and know-how to integrate them into their pedagogical practices. Thus, student teachers need to consider new ways to prepare, organize, and assess their readiness for online teaching. Therefore, E-teaching readiness is considered an essential aspect in the teaching-learning process within teachers' preparation programs in general and for general diploma of education program in particular.

Elstad and Christophersen (2017) remark that student teachers with low E-teaching readiness may lack the initiative or motivation needed to improve as future teachers and in some cases they may leave the field altogether. Also, E-teaching readiness as a vital indicator for the success of E-teaching, has become the need of the hour during COVID-19 outbreak (Paliwal and Singh, 2021). Phan and Dang (2017) indicated that technical proficiencies strongly influence teacher e-readiness; therefore, to increase teacher e-readiness, training courses should be organized and provided.

In the same stream of thought, Swan (2009), who examined experienced teachers' self-assessments of integrating technology, hinted that the professional teachers who did not practise previous training lacked the readiness to change their attitudes and beliefs of how educational technology can improve their methods of teaching. Thus, E-teaching readiness is in line with today's teachers' candidates' needs to accommodate their technology literacy with teaching practices for sustainable development as digital natives in this 4.0 industrial revolution era. Consequently, E-teaching competencies has become a need to acquire not an added complication to teachers' workload (Paliwal and Singh, 2021).

As in all parts of the world, the Coronavirus (COVID-19) outbreak has caused disruptions in education in Egypt. This can be considered the first such large-scale pandemic, after the massification of education and especially higher education (UNESCO, 2020). To adapt to the need for emergency learning and strategies to minimize the disruption of learning at higher education institutions during corona virus shutdown, the idea of online teaching and learning threw its shadows and challenges before educators.

Practicum is an important part of teacher preparation programs for undergraduates and General Diploma of Education Program for Post Graduates at Faculties of Education. Through it, it is aimed that the student teachers can apply the knowledge they have received during the learning process and gain experience in a school environment (Ardiyansah, 2021) under the supervision of supervising teachers (i.e. teachers at practicum schools) and university instructors (Faculty demonstrators and assistant lecturers).

Context of the Problem

All Faculties of Education in Egypt, and Suez Faculty of Education as a model, offer EFL Teacher preparation programs for undergraduates through bachelor programs as well as post graduates through general diploma of Education program. For post graduates, the General Diploma of Education aims at helping its enrolled students grow, develop as professional future teachers, and equip them with the necessary skills and professional abilities to become effective teachers. This one-year program is divided into two parts, learning the theories of teaching, and then practicing them before stepping into the real world of teaching. Practicing teaching or better known as practicum completes the students' eligibility to be a teacher. Therefore, teaching practicum (a

compulsory course during the second semester of the program) is a crucial part of the training process for students.

The course is practice-oriented. Students are required to spend a whole day (from 8 to 12) at practicum schools assigned by university. Practicum schools are those K-12 schools that are in partnership with the teacher education programs. The practicum partnership involved elementary, preparatory or secondary schools, which were either public schools or experimental ones under the supervision of Egyptian Ministry of Education. The main objective of the practicum is to provide junior and senior pre-service teachers or post graduate student teachers with hands-on experience in teaching as mastery experiences which potentially boost teacher candidates' competencies in teaching. Consequently, for general diploma students, practicum provides a supported entry to the teaching profession.

In April 2021, after two weeks of starting the second term, an outbreak in schools happened again that prevented general diploma students in general and general diploma EFL students in particular from following their practicum in schools. For two weeks only, from the first to the middle of April, general diploma EFL student teachers had gone two times only to the assigned practicum schools and only a few of them performed one macro-teaching session. Many, however, did not have the chance to engage in even one macro-teaching before teaching took off and schools in Suez Governorate were not implementing neither online teaching nor face-to-face classes. This created a concern on general diploma EFL student teachers who were going through their teaching placement which they must fulfil based on the given duration by their universities to complete their teacher education.

To adapt to that challenge, an E-practicum model was suggested to make them stay tuned. It is not a planned digital transformation of the practicum course, yet it is a crisis adapted study. General Diploma EFL

Student teachers (GDEFLSTs) could not pursue the teaching practicum and could not complete their real-life tasks in the actual classroom settings which caused a low level of self-efficacy on their teaching profession. Hoping to reach similar outcomes of the actual teaching at practicum school settings, E-teaching practicum was suggested and each one of them demonstrated macro teaching to the researcher (acted as e-mentor) and their peers (acted as classroom students) through zoom. After each macro-teaching, detailed feedback from their e-mentor as well as peers was provided. Thus, moving this practical course to an online one was not an easy job. Therefore, the present study attempted to explore the feasibility of e-practicum for developing general diploma EFL student teachers' E-teaching readiness. The study was a simple step for introducing a suggested E-practicum model that can be used as training need analysis to help pre-service teachers be able to impart knowledge using online teaching platforms. Consequently, E-practicum was the only choice to stay tuned.

Despite a growing body of research focusing on the school-based teaching practicum, the effectiveness of E-practicum on General diploma EFL Student teachers' E-teaching readiness has not yet been sufficiently researched with experimental designs. However, it is possible to claim that teachers' e-readiness is still a new and untouched issue within education contexts in Egypt. Thus, it requires sincere effort and enthusiasm to unveil the complex nature of the phenomenon of E-practicum in line with Egyptian national education policies. To the researcher's best knowledge, the present research will be an initial study regarding the e-practicum and general diploma student teachers' E-teaching readiness.

Statement of the Problem

General diploma EFL student teachers lacked the hands-on experience in teaching in schools that might have been lost because of the COVID-19 outbreak. Thus, they were in a bad need of compensating such lack. Also, they are in a bad need of developing their E-teaching readiness if they were to be effective and proficient teachers in the 21st century and during pandemics. This was one of the motives behind initiating such a study.

Thus, the following study tries to answer the following question:

What is the impact of an e-practicum model on general diploma student teachers' E-teaching readiness?

Aims of the Study

The current research aims to:

1. investigate the effect of an E-practicum model on general diploma student teachers' E-teaching readiness.
2. foster general diploma student teachers' familiarity with digital integration into the teaching/learning process.
3. prepare general diploma student teachers for online teaching which they would most probably be involved in at their future career.
4. lay the groundwork for future research on e-practicum.
5. identify the E-teaching readiness competencies required by the online teaching communities.
6. provide guidelines to enhance E-teaching readiness competencies to build up the longer-term resilience of education systems.

Significance of the Study

The following study is significant to:

1. the educational developers and instructional designers of teacher preparation programs as it provides a better understanding of E-practicum to improve it and be included in undergraduate and post graduate teacher preparation programs in the future.

2. Student teachers as it provides a model for professional development based on e-practicum.
3. EFL student teachers as it may improve their E-teaching readiness.
4. student teachers as it increases their awareness to the necessity of e-practicum experience for their future career.
5. pre-service and in-service teachers as it provides them with the best practices followed in e-practicum to be followed and duplicated in their teaching profession.

Importance of the Study

The importance of the present study stems from:

1. Handling one of the core practical courses in teacher preparation programs, teaching practicum, as a prerequisite for graduation.
2. E-teaching is no longer an option or a fashionable mode of study; it has become a necessity for student teachers as well as in-service teachers in general and during COVID-19 pandemic in particular.
3. The study tackles one of the most challenging issues of e-learning, which is e-practicum where the faculties of education offer online practical courses online for the first time. Thus, the insights gained on the effectiveness of e-practicum would help improve e-practicum practices in EFL context.

Delimitations of the Study

1. Nine EFL student teachers at general Diploma of Education program, Faculty of Education, Suez University.
2. On-line teaching readiness.
3. Second term of 2020-2021 academic year.

Operational Definitions

E- Practicum Model

E-practicum is a well-thought process acting as a replacement for face-to-face teaching practicum. The process starts with the construction

and preparation phase followed by the e-teaching practices. Then, the self and peers' reflections and finally the e-mentoring session. Later, the model will be discussed in detail in the method section.

E-teaching Readiness

Within the context of this study, E-teaching readiness refers to Suez Faculty of Education general diploma student teachers' willingness and preparation for teaching on-line. It is operationally defined as the scores the participants obtained on two main constructs of e-readiness: participants' attitude on the importance of online teaching, and participants' perceptions of their ability to confidently teach online.

Literature Review

Teaching Practicum

Teaching Practicum is a compulsory course in teacher education programs in faculties of education in Egypt. Practicum aims at familiarizing pre-service teachers and student teachers with the context of future teaching and its variables by collaborating with schools (Aghabarari & Rahimi, 2020). It is conducted in the third and fourth years of the four-year teacher preparation programs (Badawi, 2021) and the second term of the one-year general diploma of education program. At practicum schools, pre-service teachers spend one day a week (from 8 to 1) observing the teaching performance of school teachers, preparing and delivering lessons under their supervision (Walton and Rusznyak, 2013).

In normal circumstances, student teachers have to attend schools to have a real life professional experience and develop their teaching skills under close supervision of expert mentors and supervisors. In EFL context, practicum is intended to develop EFL student teachers' instructional performance by providing opportunities for them to apply

the knowledge, skills, and values they have been acquiring at the university (Badawi, 2021). It is an important stage in the process of teacher training. Thus, teaching practicum gives student-teachers a chance to have contact with the real world of their profession.

As a result of Covid 19 closure, Faculties of Education are affected. Pre-service teachers as well as general diploma students are deprived of the actual classroom teaching practices and field experience at an authentic school setting (practicum). Thus, a new dimension of teaching practicum (henceforth, E-practicum) came out to make sure the pre-service teachers will be ready for their real teaching journey (Sasaki et al., 2020). Through it, it is hoped to make pre-service teachers fit into the virtual process of teaching and learning made by tertiary education and schools (Sepúlveda-Escobar and Morrison, 2020). Thus, E-practicum as a new concept in pre-service teacher education has caused teaching to be adapted into an electronic environment that brought a new experience of teaching practicum for pre-service teachers. This transformation proved that practice-based courses might have an online component as well.

Osman (2020) described E-practicum as a new dimension to practicum that acts as a platform where pre-service teachers' offline and online teaching and learning skills in addition to their technical skills and instructional design are strengthened. For preservice teachers, E-practicum led various benefits including: experiencing online teaching practice (Azrai et al., 2020), developing E-teaching skills and competences (Reddy, 2019; Azrai et al., 2020), reducing their E-teaching fear and anxiety (Badawi, 2021), boosting their confidence and readiness in teaching (Reddy, 2019; Wangchuk, 2019), and finally learning how to deal with problems posed in online teaching (Tuyen, 2022). Therefore, e-practicum was challenging but an irreplaceable

opportunity as it compensates the lack of face-to-face practicum (Ersin et al., 2020).

Adding to above, Sepulveda-Escobar et al. (2020) revealed that online teaching practicum impacts pre-service teachers positively for their teacher education and future careers. Through this practice, pre-service teachers will be more prepared for the real world where changes and adaptations are crucial to keep going and keep developing.

E-Teaching Readiness

The technology use in educational settings requires a state of full preparedness, willingness, and readiness to employ such practical instructional tools (Çalışkan and Caner, 2022). As Dorathy and Mahalakshmi (2014:132) claimed, integrating technology depends on aware and passionate “teachers who are motivated and prepared to put technology to work on behalf of their students”.

Graduating qualified teachers depends on how well they are prepared. Thus, effective pre-service EFL teachers have to meet the standards including what they should know, do and believe (Badawi, 2021). Therefore, student teachers’ beliefs and emotions towards the teaching profession and E-teaching should be considered. Ben-Peretz (2000) states that much of the acknowledged failure of schooling is attributed to those teachers who thought that they are ill prepared for the teaching profession because teacher education is deficient.

E-teaching readiness is defined as the degree to which pre-service teachers are ready to implement teaching in an online environment (Alem et al., 2016). Martin et al. (2019) defined readiness as a state of teachers’ preparedness for online teaching that can be measured by their beliefs and attitudes about the importance of online teaching competencies and their perceptions of their self-confidence to teach

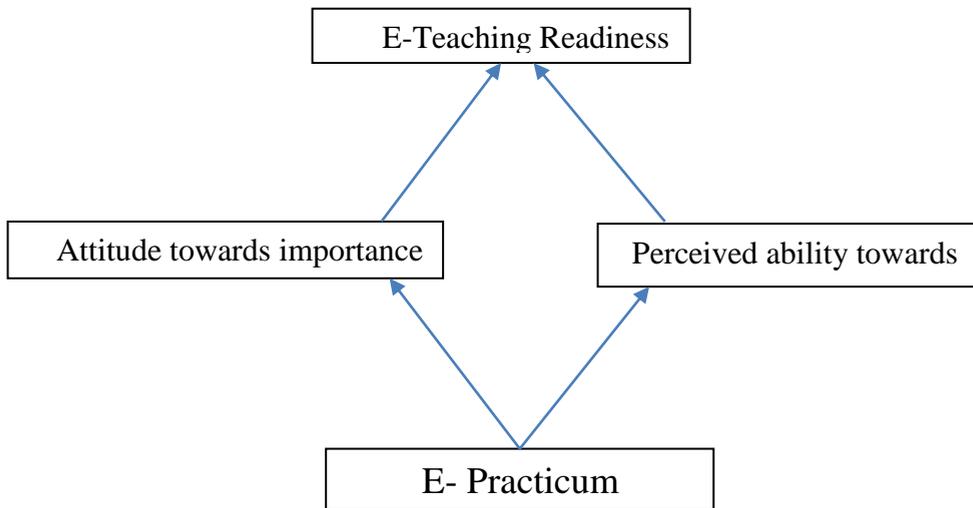
online. Readiness for E-teaching is the predispositions or qualities of instructors that helping teach high-quality online courses (Palloff and Pratt, 2011), a willingness to create collaborative and active learning environment that fosters a sense of community (Palloff and Pratt, 2011), physical and mental preparedness (Cutri and Mena, 2020), and E-teaching acceptance (Gibson et al., 2008). Therefore, Kim (2020) claimed that pre-service teachers should be given the opportunity to teach online and reflect on their teaching to develop better and that is will be achieved through e-practicum. Perceptions of E-readiness will therefore include a mixture of attitudes and experiences that are impacted by a range of individual, contextual, and cultural factors (Hung, 2016). For pre-service teachers, such perceptions and readiness are manifested in their sense of E-readiness and experiences.

E-teaching readiness would highly depend on teachers' skills and competencies to adapt the pedagogical practices and the new roles of on-line teaching environments (Paliwal and Singh, 2021). Thus, Chorrojprasert (2020) revealed that E-teaching readiness includes various constructs such as a positive attitude towards the online learning situation, well-constructed time management, commitment to online learning, and comprehension of the importance and value of learning.

Within the context of the present study, E-teaching readiness was identified through two main aspects: (1) participants' attitude concerning the importance of E-teaching and (2) participants' perceived ability to confidently teach online. As for the first aspect, participants' attitude refers to the viewpoint the students have about on-line teaching and its relevance to them. The second aspect concerned with ability refers to the students' perception of their ability to teach online since measuring their direct ability was not possible. In other words, students' perceptions of E-teaching accompanied with their willingness to be

involved in online education (Hoyt and Oviatt, 2013), and appropriate professional development opportunities (Adnan, 2018) through e-practicum, play key roles toward the future success of online education and its effectiveness for future teachers. To conclude, the following figure best summarizes the assumed impact of E-practicum on E-teaching readiness applied in the context of the present study.

Figure 1. Relationship between E-practicum and E-teaching readiness



adapted from Ersin et al. (2020)'s study.

As shown in the previous figure, attitude towards importance of E-teaching is supposed to be enhanced through E-practicum. Since teaching online is different from face-to-face teaching in the classroom, students' competencies to teach online require them to adjust their attitudes towards technology and teaching. Consequently, it is essential to examine students' attitudes on the importance of the various competencies for E-teaching to deduce their e-readiness. Additionally,

students' beliefs about or perceptions of their own competence of E-teaching are related to the use of instructional strategies and teaching effectiveness at on-line environment that can be provided through the E-practicum.

Rationale of the Study

In the present study, it is assumed that a better preparation and a training of e-teaching before the real teaching of online courses at schools allow would-be teachers to be able to perform better and to continue their profession with this mode of teaching (Alem et al., 2016). When student teachers have more experiences and opportunities to teach on-line and have both technology and instructional supports from their e-mentor, their E-teaching readiness is enhanced.

Furthermore, the suggested e-practicum model helps identify and support the pedagogical practices that promote high quality E-teaching performances for student teachers. Through E-practicum, pedagogical methods, such as active learning strategies can be transferred from face-to-face to online environments (Khan et al., 2017). The active discussion and frequent communication with student teachers during the E-practicum play a critical role in enhancing E-teaching readiness. This is particularly true when e-mentor establish relationships with student teachers to help them to feel that they are part of on-line teaching community.

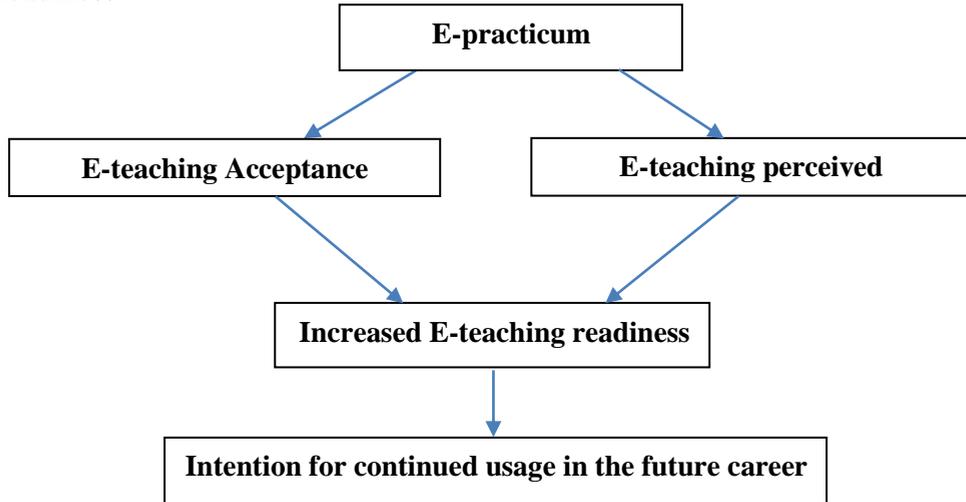
Underlying Theories

The present study adapts the theory of professional vulnerability (Kelchtermans, 1996; Kelchtermans, 2009). Accordingly, teaching requires a certain level of trust and vulnerability. During the transition from face to- face to online teaching, instructors may feel vulnerable when their identities and values associated with teaching in traditional

classroom settings are threatened (Cutri and Mena, 2020). In the present study, it has been assumed that E-practicum, through the newly formed E-community, would rally around the general diploma student teachers so they could boost their E-teaching readiness from any possible challenges. Through E-practicum, the researcher tries to model good pedagogy by facilitating on-line teaching. As participants in this e-practicum were almost exclusively would-be teachers, they were experiencing how they may teach in the future and support their risk-taking adventures in online teaching. E-practicum is supposed to make them invulnerable, immune to the possibility of failing, and enjoy risking self. To conclude, eradicating the conditions that produce teacher vulnerability is a worthy educational aim that e-practicum is hopefully supposed to achieve.

Another theory that underlies the recent study is the Unified Theory of Acceptance and Use of Technology (UTAUT). Recently, UTAUT has taken place as one of the most developed and intensive models to test technology adoption and acceptance (Momani, 2020). UTAUT was originally formulated by Venkatesh et al. (2003) in their effort to construct a unified model regarding both user acceptance and behavior with respect to newly introduced information technology. Thus, through e-practicum, it was assumed that students should accept the use of technology and E-teaching practices and as a result they will adopt E-teaching in their future career as teachers. The following figure, as adapted from Momani's 2020 figure, depicts the assumed impact of an E-practicum model on on-line teaching readiness

Figure 2. The impact of UTAUT model on Student teachers' E-teaching readiness



adapted from Momani (2020)

In this scope, this study adopts the UTAUT model as one of the most powerful technology acceptance theories which were developed to examine the ability of users to accept technology and their intention to adopt new technologies (Momani, 2020). As shown in the previous figure, through the suggested E-practicum model the general diploma EFL student teachers' acceptance of E-teaching and perceived satisfaction are enhanced. The enhancement of E-teaching acceptance and perceived satisfaction increased the E-teaching readiness. The higher the E-teaching readiness, the more intention for continued e-teaching practices in the future.

Studies Related to E-practicum

Research on e-practicum is very limited. Some of the previous studies that handled E-practicum are introduced as follows:

Badawi (2021) investigated the effect of e-practicum on improving EFL student teachers' teaching performance and online teaching self-efficacy. The study utilized a pre/ post one-group design. The participants were eighty-four 4th year students majoring in English language at the Faculty of Education, October 6 University, Egypt. Results revealed that while e-practicum was insignificant in developing EFL student teachers' teaching performance, it was significant in developing their online teaching self-efficacy.

Koşar (2021) investigated the effect of e-practicum on pre-service English language teacher's feedback. As a result of the COVID-19 pandemic, pre-service English language teachers did their practicums online. The results obtained from the analysis of the data collected from the researcher's notes on the pre-service English language teacher's provision of feedback in the four online lessons she taught, post-lesson telephone interviews and end-of-study semi-structured interview indicated that her teaching experiences developed her skills in giving effective feedback. The findings pointed to the significance of distance teaching practicum in developing preservice English language teachers' feedback giving practices.

Ersin et al. (2020) designed an alternative practicum to meet the needs of Pre service teachers and maintain the quality of the practicum: "e-practicum". The aim was to increase Pre service Teachers' teaching competence and prepare them for online teaching. The findings revealed that Pre service Teachers found the e-practicum useful because it helped them overcome online teaching fears.

Hypothesis of the Study

The hypothesis of the study stated that "There would be a statistically significant difference in the mean scores of the general diploma EFL student teachers on the pre and post administrations of E-teaching readiness scale."

Method

Design

This study employs the quasi-experimental design. This design is a compromise one which approaches a true experimental design but lacks random assignment (Black, 1999). This design is preferred for the study because quasi experimental designs are easier and more accurate to set up than true experimental designs; quasi-experiments are natural experiments, findings in one may be applied to other subjects and settings, allowing for some generalizations to be made about population. Randomization in the present study is somehow impractical because the sample is already chosen from general diploma of education EFL students during the 2020-2021 academic year. Among the various quasi-experimental variations, the researcher selected the one group pretest-posttest design. In this design, the participants are first pretested on on-line teaching readiness then they were given the treatment (E-Practicum model) and then posttested. The experiment lasted for five weeks, two sessions a week, during the second semester of 2020-2021 academic year.

Participants

The study group consisted of 9 post graduate students enrolled in the general diploma of Education, English major during the 2020-2021 academic year. The participants are graduates of other faculties than faculty of Education who want to work as teachers. Thus, they are enrolled in the program of general diploma of Education (credit hours, one year) to be educationally prepared for the profession of teaching. They are majored in English in their undergraduate studies. Thus, they are supposed to be English language teachers after passing the one-year general diploma of Education program.

Instrument

For achieving the aim of the study, an E-teaching readiness scale was designed by the researcher to measure the general diploma EFL

student teachers' level of E-teaching readiness before and after being exposed to E-practicum. Building the scale followed different steps such as: item generation, content validity, pretesting, and application. In the first step of item generation, the process started with compiling an item pool that roughly involves 40 statements in agreement with similar scales and studies in the previous literature (e.g., Mercado, 2008's the Readiness Assessment Tool; Penn State University and Central Florida University, 2008's Preparing for Online Teaching; Chi 2015's Readiness to Teach Online; Los et al., 2021's The Online and Blended Teaching Readiness Assessment (OBTRA)) to ensure the objectivity of item selection, and other items have been created.

In the devised scale, E-teaching readiness is measured by two main dimensions: participants' attitude towards the importance of E-teaching and participants' perception of their ability to teach on-line. Therefore, the scale is divided into three parts: the demographic information, the attitude construct that is based on importance and the perception of ability construct. Each construct consists of six factors (pedagogy and design, technical competence, time management, communication and engagement, professional vulnerability, and efficiency and usefulness). The same factors were used for both constructs. Each factor included five items.

On the first construct of the attitude towards the importance, the respondents were asked to rate the attitude construct on a 4-point Likert scale from 1 (*disagree*) to 4 (*strongly agree*). As for the second construct of the perceived ability, respondents were asked to rate their perceived ability to accomplish the tasks based upon their own judgment of their competencies on a 4-point Likert scale from 1 (*I cannot do it at all*) to 4 (*I can do it well*).

For content validity, the draft instrument was revised by a jury of five EFL experts. Content Validity Ratio (CVR) is used to measure the degree of agreement among experts on the relevance of the items. The

results of this content validity showed that only 30 items are subject to a strong consensus by experts, in other words, are essential (the CVR of them is greater than 0.90). This shows that all the items within the two constructs have a level of content validity and this means that the items were representative of the construct

The following step that was piloting the draft scale aimed to detect errors, to ensure proper understanding of the items, evaluating the mean duration of response and to check the reliability of the scale. Specifically, 20 post graduate student teachers (out of the study sample) had accessed the online form of the scale to bring their comments and suggestions regarding the clarity of the scale, the accuracy of the items used, identifying too complex sentences, too easy ones. Overall, the results of piloting revealed that the items were sufficiently clear and understandable for most participants. Regarding the time required to respond to the scale, it was found to be approximately 20 minutes. Cronbach's alpha for all items for attitude construct was 0.78 and for ability construct was 0.72. Cronbach's alpha coefficient of the whole scale was 0.77 and this reflects an adequate and reliable internal consistency of the scale.

A Suggested E-Practicum Model

The main objective of designing an e-practicum model is to create a teaching environment where participants could experience being EFL teachers in an online environment. Thus, the model aims to enhance participants' E-teaching readiness. An electronic classroom consisting of nine participants was formed. Each participant performed four on-line lessons to their peers who acted as students, and under the e-mentoring of the researcher who acted as the E-mentor using Zoom.

The model consists of 4 subsequent phases as follows:

- 1. Orientation and Construction phase (before E-teaching):**
during this phase, the general diploma student teachers prepare

their lessons on the content they choose and construct the on-line activities under the supervision of the researcher who acted as an e-mentor through the whats app group. While preparing their lessons, the researcher individually contacted each participant synchronously and asynchronously to revise the lesson plans and the on-line activities and provide the assigned student teacher with detailed feedback. The participants prepared their lesson plans which target their students' proficiency level that they had in their practicum school to which they were assigned before the breakout. The topics and content of the lessons were also based on the syllabus of those practicum school. Additionally, as an authentic experience, actual class videos taken from Youtube were uploaded and EFL student teachers had to watch, analyze and imitate in the following step.

2. **E-teaching practice.** On Zoom, participants were asked to present their lessons. The remaining participants were asked to act as students in the virtual classroom. Additionally, they were also asked to take notes about their peers' teaching skills and strategies to give feedback afterwards. The researcher, henceforth e-mentor, would also attend the e-practicum sessions and take notes about the teaching methodology exactly the same way she would do in the real classroom, practicum setting. All communication took place in a WhatsApp group created by the e-mentor earlier. The "e-teaching practice" consisted of four forty-minute Zoom sessions a day, at the same time of the usual practicum from 8 to 12. The sessions were held in a row with fifteen-minute breaks in between.

During the experiment, the lessons introduced varied among reading, listening, grammar and speaking lessons. Participants shared various teaching materials and conducted various active learning activities. For instance, they asked peers who acted as students to answer

comprehension questions in pairs after reading a text. They provided wait time for peers to think and answer. They allowed peers to give their answers by using digital facilities. They tried to make the e-practicum session as interactive as possible. They did their best to give the electronic classroom the feel of a physical classroom.

For example, in one of the reading lessons introduced, the student presenter used the screen-share feature to present different menus in English on the screen and asked the student peers to comment on the genre, so as to make the class interactive. She then showed a vocabulary matching worksheet that included pictures and the names of different food items in English and asked the students to match the picture of the food item to the correct vocabulary. Student peers typed their comments and answers in the chat box. Student presenter read aloud the answers and gave feedback. In this way, an interactive and fun class discussion was facilitated. The student peers interactively took part in the lesson by raising hands and the presenter unmuted them one by one, giving each student peer an opportunity to present their answers orally.

For the speaking lesson, the presenter used the topic of sightseeing in Egypt as a trendy topic. She told the audience how she felt about the coronavirus lockdown, and asked the class how they felt and how they spent time in the lockdown. She also asked them if they missed wandering in the streets and what parts they missed the most. The presenter especially asked the student peers to give answers orally because the objective of the lesson was speaking. She unmuted the ones who wanted to speak. The peers participated in the lesson by telling others woefully how much they missed the city. After this pre-speaking activity, the presenter screen shared a video on a sample role-play, with one asking for directions to a specific touristic place and the other giving the directions. After this sample demonstration, the peers were asked to perform a similar role-play in pairs. The presenter gave them five minutes for preparation. When the peers were ready, they wrote their

pair's names in the chat box and the presenter allowed each pair to speak by unmuting them---etc.

3. **Self/Peer Reflections and feedback.** Right after the “e-teaching”, the general diploma student teachers shared their reflections, detailed feedback, and comments on the assigned student teachers’ e-practicum in the WhatsApp group. Each participant was asked to reflect on his own performance after watching the recorded video of the microteaching. Also, the peers were asked to reflect on the presenter’s performance.
4. **E-mentoring.** It was provided by the researcher who acted as the e-mentor to the general diploma student teachers one day after the “e-practicum” sessions. The e-mentor organized four forty-minute Zoom sessions for this purpose, one session a week. The e-mentor identified the strengths and weaknesses of each student teacher's e-practicum performance, making suggestions on problematic areas for improvement. Before the end of the "e-mentoring” sessions, the student teachers were asked to write their feelings and thoughts about “e-mentoring” in the WhatsApp group.

The participants attended all four sessions. The e-mentoring sessions took place in an interactive and collaborative atmosphere. The e-mentor gave detailed feedback to each student teacher individually. All the other participants were present in the sessions and they listened to the e-mentor’s feedback on their assigned peer. While giving feedback, the e-mentor gave advice to the assigned student teacher on how to improve the problematic areas by sharing her own experience. The e-mentor also guided the participants by transferring knowledge and information from the relevant literature in the field. Again, this did not occur in a monological manner; on the contrary, it was an interactive exchange of ideas. One after another, each student teacher asked questions to clarify vague parts in the e-mentor’s session and made comments. The e-mentor would give the participants an opportunity to

think through questions and to reflect on their E-practicum experience. Finally, the student teachers would share their insights about the e-mentoring.

By the end of the study, general diploma student teachers submit a teacher portfolio, including all the assignments, materials, lesson plans, recorded teaching practices and evaluation rubrics.

Results and Discussion

Due to the small sample size ($n=9$), Wilcoxon Signed Ranks Test was used to test the hypothesis of the study which stated that “There would be a statistically significant difference in the mean scores of the participants on the pre-post administrations of E-teaching readiness scale in favor of the post administration”. Wilcoxon Signed Ranks Test is used to separately analyze the two dimensions of the scale (attitude and ability) as well as the total scale between the pre and post administrations of the E-teaching readiness scale. Wilcoxon Signed Ranks Test is depicted in the following tables:

Table 1. Descriptive statistics of the attitude construct pre and post administration

	administra	N	Mean	SD
Attitude towards E-teaching	Pre	9	59.433	16.816
	Post	9	104.833	9.720

The descriptive statistics in Table 1 shows that the mean score of the participants' attitude towards E-teaching post test ($M=104,833$) was higher than that of the pre test ($M=59.433$). To test the significance of such difference, the Wilcoxon signed ranks test was used as shown in Tables 2 and 3.

Table 2. Wilcoxon Signed Ranks Test for the Difference between the Scores of the attitude towards E-teaching on the Pre and the Post administrations of E-teaching readiness scale

		N	Mean Rank	Sum of Ranks	Sig
Post-pre Attitude	Positive Ranks	9	27.02	65.00	0.003
	Negative Ranks	0	0.00	0.00	
	Ties	0			
	Total	9			

Table 3. the Z-Test for the difference in the scores between the post and pre administrations of the attitude construct of E-teaching readiness scale

	Post-pre
Z	0.39
Sig. (2-tailed)	0.01

As indicated in Tables 2 and 3, Wilcoxon Signed Ranks Test revealed a significant difference in the participants' mean scores between the pre and post administrations of attitude construct of the E-teaching readiness scale ($z= 0.86$, $p<0.05$), in favor of the post administration. Therefore, it was concluded that the proposed E-practicum model developed the attitude towards E-teaching of general diploma EFL student teachers.

Table 4. Descriptive statistics of the ability construct pre and post administrations

	administration	N	Mean	SD
Ability towards E-teaching	Pre	9	51.43	15.16
	Post	9	99.33	10.20

The descriptive statistics in Table 4 shows that the mean score of the participants' ability of E-teaching post test (M=99,33) was higher than that of the pre test (M=51.43). To test the significance of such difference, the Wilcoxon signed ranks test was used as shown in Tables 5 and 6.

Table 5. Wilcoxon Signed Ranks Test for the Difference in the Mean Scores of the ability to teach on-line on the Pre and the Post administrations of E-teaching readiness

	N	Mean Rank	Sum of Ranks	Sig	
Ability Construct	Positive Ranks	7	19.22	45.00	
	Negative Ranks	2	1.91	2.00	0.004
	Ties	1			
	Total	9			

Table 6. the Z-Test for the difference in the scores between the post and pre administration of the ability construct of the E- teaching readiness scale

	Post-pre
Z	0.59
Sig. (2-tailed)	0.03

As indicated in Tables 5 and 6, Wilcoxon Signed Ranks Test revealed a significant difference in the participants' mean scores between the pre and post administrations of ability construct of the E-teaching readiness scale ($z= 0.59$, $p<0.05$), in favor of the post administration. Therefore, it was concluded that the proposed E-practicum model developed the ability towards E-teaching of general diploma EFL student teachers.

Table 7. Descriptive statistics of the difference in the mean scores between pre and post administrations of E-teaching readiness scale

	administration	N	Mean	SD
E-teaching readiness	Pre	9	120.43	20.16
	Post	9	199.33	11.20

The descriptive statistics in Table 7 shows that the mean score of the participants' E-teaching readiness post administration ($M=199,33$) was higher than that of the pre administration ($M=120.43$). To test the significance of such difference, the Wilcoxon signed ranks test was used as shown in table 8 and 9.

Table 8. Wilcoxon Signed Ranks Test for the Difference in the Mean Scores of the general diploma EFL student teachers between the Pre and the Post administration of E-teaching readiness scale

		N	Mean Rank	Sum of Ranks	Sig
E-teaching readiness	Positive Ranks	9	70.02	99.00	0.004
	Negative Ranks	0	0	0.00	
	Ties	0			
	Total	9			

Table 9. the Z-Test for the difference in the scores between the post and pre administration of the E- teaching readiness scale

	Post-pre
Z	0.79
Sig. (2-tailed)	0.01

As indicated in Tables 8 and 9, Wilcoxon Signed Ranks Test revealed significant difference between the pre administration mean ranks and post administration mean rank at 0.05 for the E-teaching readiness scale as a whole. Therefore, it was concluded that the suggested e-practicum model significantly developed the E-teaching readiness of general diploma EFL student teachers. In light of this statistical result, the hypothesis of the study was accepted.

This result may be attributed to different reasons. The first reason may be the hands-on E-training on E-teaching. The proposed E-practicum model provided general diploma students with hands-on experience to get used to on-line teaching and solve any problems during such experience. During E-practicum, the authentic E-teaching practices and challenges faced made general diploma EFL student teachers more ready to teach lessons on-line and thus enhanced their E-teaching readiness. Moreover, in their reflections, participants revealed that they had acquired adequate expertise in E-teaching when giving the opportunity to teach on-line to their peers during E-practicum.

With the continuous practices of E-practicum model, the E-teaching anxiety level of the participants have decreased. Supporting evidence is introduced by Pokhrel (2020) that practicum enabled the preservice teachers to eliminate fear. The decreasing of the E-teaching anxiety level might have boosted E-teaching readiness. A more reason may be related

to the various E-competences (i.e. technical, design and pedagogy, professional vulnerability, engagement and time management) enhanced during E-practicum model. Through teaching on-line the general diploma EFL student teachers were given the opportunity to manage their time and overcome the time constraints of the on-line teaching environment. Also, the continuous practices of E-teaching during E-practicum model helped participants improve their technical competences and manage technical problems.

Additionally, the E-practicum model helped general diploma students hopefully transfer their thinking, pedagogical knowledge and beliefs to somewhat successful online teaching through the new online learning and teaching practices. These on-line practices empowered them as autonomous professionals who constantly engage in a dialogue about solving the complex problems and making decisions about their online teaching and this in return caused their attitudes and acceptance of on-line teaching to be increased.

The self-reflection and various types of feedback associated with E-practicum also improved the participants' E-teaching readiness. The participants' own analysis, students' or peers' reflections, audio and video recordings, and the e-mentor's feedback helped them obtain information and awareness about their E-teaching performance and competencies and thus their E-teaching readiness was enhanced. This reason is in line with the results of El Sakka (2017) study that assured that video reflections developed the teaching self efficacy of student teachers.

Adding to above, by applying E-teaching during the E-practicum model, general diploma students become aware of the blessings of teaching with technology and thus their attitude towards importance of E-teaching was enhanced and thus increased their e-readiness. Moreover, the e-mentor sessions associated with the E-practicum model have emphasized the noticeable, strong points of E-teaching that would

not have been noticed if they had not experienced e-practicum. Having the opportunity to re-watch their e-practicum session over and over again and see what went well and what went wrong, the pre-service teachers believed that they were confident with their ability for teaching online, and thus their e-readiness was enhanced. These results agree with studies conducted by Ersin et al. (2020), and Badawi (2021).

Conclusion

In the light of the statistical finding, the researcher concluded that the suggested E-practicum model had a significant effect on developing the E-teaching readiness of general diploma EFL student teachers.

Recommendations

In light of the findings of the study, the following recommendations have been formulated:

1. E-practicum should be integrated in teacher preparation programs to help produce competitive teachers with sufficient skills to meet workforce teaching demands and preparing pre-service teachers as 21st -century teachers.
2. Faculties of Education should provide good quality electronic training to pre-service teachers.
3. The Ministry of Education should share the responsibility of offering training about online teaching that would definitely be plan B in time of crises and this type of training will be very beneficial for the professional development of teachers in the 4.0 industrial revolution era.
4. As universities are moving to Internet-based, digital platforms, transforming the practicum course (or a part of it) to e-practicum under the guidance and support of e-mentors seems to be a valuable addition to teacher education programs.

5. Supervisors should liberate themselves from the traditional ways of supervising pre-service teachers and effectively apply the new approaches of supervision.
6. E-teaching readiness should be highlighted in teacher training programs.

Suggestions for Further Research

Based on the results of this study, the researcher suggests the following future research:

1. A correlational study between student teachers' E-teaching readiness and sustainable professional development.
2. The impact of On-line Micro-Teaching (OMT) on developing pre-service teachers' teaching efficacy.
3. A study on the effect of E-teaching readiness on the professional development of in-service teachers.
4. The feasibility of e-practicum needs more investigations at various levels (junior and senior pre service teachers) and on new variables such as on-line teaching performances and technology acceptance.

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