

Developing EFL Preparatory Schoolteachers' Pedagogical Skills and Attitudes through an Online Teacher Training Program

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ملخص الدراسة

هدفت الدراسة الي تنمية بعض المهارات التدريسية لمعلمي اللغة الإنجليزية بالمرحلة الإعدادية اثناء الخدمة واتجاهاتهم نحو التدريب باستخدام برنامج تدريبي اونلاين. مثلت عينة الدراسة من ٥٠ معلم لغة انجليزية بالمرحلة الإعدادية من ١٤ محافظة على مستوى جمهورية مصر العربية. وقد تم تحديد احتياجاتهم التدريسية للتدريب والتي تمثلت في مهارات التفكير الناقد والتعلم المبني على المهام. وتم التوصل الي هذه الاحتياجات من خلال تحليل احتياجات المعلمين. قام الباحث بإعداد أدوات البحث وهي اختبار قبلي بعدي ومقياس اتجاهات قبلي بعدي وقد تم تحكيم الأدوات من ٧ محكمين. كما قام الباحث بإعداد برنامج تدريبي اونلاين يتم من خلاله تنمية هذه المهارات وكذلك تنمية اتجاهات المعلمين نحو التدريب اونلاين. وقد تكون البرنامج التدريبي من وحدتين تدريبيتين وكل منهما يتكون من ٦ دروس. احتوي البرنامج على ٢٠ ساعة تدريبيه على مدي شهرين. وقد تم تطبيق أدوات الدراسة قبلًا ثم أعقب ذلك البرنامج التدريبي لمدة شهرين وبنهاية التدريب تم تطبيق أدوات الدراسة بعديا على المعلمين المتدربين. كشفت نتائج الدراسة عن تقدم ملحوظ في أداء المعلمين في الاختبار البعدي مقارنة بنتائجهم في الاختبار القبلي كما اظهرت نموا ملحوظا في اتجاهاتهم نحو هذا النوع من التدريب. الكلمات الأساسية: تدريب المعلمين عبر الإنترنت، اتجاهات المعلمين نحو برامج التدريب اونلاين، التعلم المبني على المهام، مهارات التفكير الناقد، معلمي اللغة الإنجليزية بالمرحلة الاعدادية.

ABSTRACT

The study aims at developing EFL preparatory schoolteachers' pedagogical skills and attitudes through an online teacher training program. The study participants, included 50 teachers from 14 governorates around Egypt, were selected to be the audience as they needed the targeted pedagogical skills based on the needs' analysis survey. The researcher proposed the pre-post situational test and attitude scale to be administered before and after the treatment. Having established and validated the reliability of the instruments, the participants were pre-tested and pre-administered the attitude scale. The participants received an online teacher training program (OTTP) consisting of 2 modules and 20 training hours over 2 months. Each training module contained 6 lessons and ended with an assignment and a reflection. By the end of the program, the participants were post-tested and post-administered the attitude scale. The finding of the study revealed that the OTTP proved to be effective in developing in-service EFL Preparatory school teachers' pedagogical skills and attitudes toward online training.

Key words: Online Teacher Training, Teachers' Attitudes, Task-based Learning, Critical Thinking Skills, Preparatory School EFL Teachers.

Introduction

Teachers as main influencers in the educational process and key players in delivering and empowering learners with the latest technologies that play an important role in modern education, have been deprived from the use of technology in their education when they were students and now in their in-service training as teachers. Their experience as learners and their attitudes towards the changes that take place in the field of education deeply affect the adoption and application of new methodologies and use of modern technology in daily classroom activities (Albirini, 2006).

A number of studies explored the reasons why teachers hardly ever use online resources in their teaching (Hunter & Hall, 2018; Ko & Rossen, 2017) showed that a number of inhibitors were found. Among the most popular inhibitors of using technology in classroom teaching were the lack of teaching experience with technology, the lack of online support for teachers using technology, and the lack of teacher training programs using technology (Mumtaz, 2000). The area of teacher training supported by the use of technology is under researched in Egypt, where teacher training bodies rarely provide online teacher training opportunities (Warschauer, 2002). In the current study, the importance of investigating teachers' pedagogical skills and attitudes towards online training is driven from the need to support Egyptian EFL preparatory schoolteachers with the teaching tools they need to implement in their daily classes. The proposed online teacher training program can help facilitate teacher training and improve their pedagogical skills and attitudes towards online teacher training. Furthermore, having a good model of online teacher training could help improve teachers' perceptions of online teaching and training in general.

Context of the Problem

Covid-19 pandemic in Egypt as well as worldwide forced all educational institutions to tend to online teaching and online training. In spite of the widespread use of the internet services in Egypt and the availability of many qualified teacher trainers and training programs, it was clear that online training is still undervalued by teachers as a result of its scarcity and lack of high-quality online training programs that can serve as a model.

The success of online training for teachers' professional development is dependent upon their attitudes of online learning as an alternative to face-to-face delivery (Smith & Sivo, 2012). Cheok and Wong (2015) explained that teachers' use of online courses and e-learning systems for instruction may be predicted by the flexibility and interaction of the online training courses they received whether pre-service or in-service online training.

Some studies (Teo, 2008; Yildirim, 2000) confirmed that positive teachers' attitudes towards online training and online teaching in general are directly associated the success of their use of technology in the classroom. Hence, this study is an attempt to improve teachers' pedagogical skills and attitudes through an online training program. Another study (Smith & Sivo, 2012) confirmed significant positive effects of online teacher training on teachers' performance in online teaching and on students' performance.

Statement of the Problem

The current study problem stems from the lack and inadequacy of online teacher training programs (OTTPs) presented to teachers in Egypt and the negative effect caused by this lack on teachers' attitudes towards online learning. Therefore, the current study attempts to help in-service EFL teachers develop their pedagogical

skills and improve their attitudes using an online teacher training program.

Questions of the Study

The present study attempted to answer the following question:

1. What is the effectiveness of the proposed online teacher training program designed for in-service English language teachers in the preparatory stage in developing teachers' pedagogical skills?
2. What is the effectiveness of the proposed online teacher training program designed for in-service English language teachers in the preparatory stage in developing teachers' attitudes towards online training?

Hypotheses of the Study

In order to answer the questions of the study, the following hypotheses were formulated.

- 1- The online teacher training program will have a positive effect on teachers' pedagogical knowledge and attitudes towards online learning.
- 2- There is a statistically significant difference ($\alpha \leq 0.01$) in the teachers' overall average scores in pre- and post-administration of the pedagogical test as part of the proposed online teacher training program in favor of the post-administration.
- 3- There is a statistically significant difference ($\alpha \leq 0.01$) between the mean scores of the study group on the pre- and post-administrations of the attitude scale in favor of the post-administration.

Variables of the Study

The present study has the following two variables:

- 1 . The independent variable: An online teacher training program.
- 2 . The dependent variables:

- a. Preparatory school EFL teachers' pedagogical skills
- b. Preparatory school EFL teachers' attitudes towards online training.

Aim of the Study

The present study aimed at developing EFL preparatory schoolteachers' pedagogical skills and attitudes through an online teacher training program.

Significance of the Study

Significance of the present study lies in the fact that there is a need for online pedagogical teacher training programs that can lead to an improvement in teachers' attitudes towards online training. In addition, its findings are expected to contribute to the following:

- 1- Drawing attention to the importance of OTTPs in providing flexible pedagogical training programs that meet teachers' needs.
- 2- Validating the significance of OTTPs.
- 3- Exploring EFL teachers' recent attitudes towards online training.
- 4- Highlighting the impact of teachers' attitudes on the use of technology in daily classrooms.

Delimitations of the Study

The present study is delimited to:

1. A group of EFL preparatory schoolteachers in Egypt (N=50) from various governorates.
2. Two pedagogical skills namely critical thinking skills and task-based language teaching.
3. The program was conducted during the summer of the academic year 2020-2021.
4. Developing EFL preparatory stage schoolteachers' pedagogical skills based on needs' analysis.

5. Developing EFL preparatory stage schoolteachers' attitudes towards online training through a suggested online teacher training program based on the participants' needs analysis.

Review of Literature

Literature has supported teacher online learning and training as one of the most recent trends in teacher education. Teachers are extremely busy teaching during the schoolyear and it's difficult to attend any face-to face training programs. This constrain with the spread in the use of technology has supported online teaching and teacher training.

Online learning

Online learning has witnessed huge and fast changes and developments in the last few years with the massive spread and advancement in technology. Leaders in the field of education have argued that online learning can effectively respond to accelerating global competition, increase the quality of learning experiences, remove situational hinderances, and be more cost effective (Harasim, 2017).

Different terminologies have been used for online learning, which make it difficult to develop a common definition that includes all aspects of the online learning process (Anderson, 2008). Terms commonly used for online learning include e-learning, internet learning, distributed learning, networked learning, tele-learning, virtual learning, computer assisted learning, web-based learning, and distance learning. They indicate that the learner is at a distant from the tutor or the instructor, and that the learner uses some kind of technology to interact with the tutor and with other colleagues or learners and that there is an online content provided by the means of these technological methods.

Carliner (1999) defines online learning as an educational material

that is presented on a computer. Khan (1997) defines online learning as an innovative approach to deliver instructions to a remote audience, using the web as the medium. Devedzic (2006) gave a definition focusing on the processes of online learning as “a setting for teaching, learning, collaboration, assessment, and other educational activities”. Online learning, however, involves more than just the presentation and delivery of materials using the internet. Hara-sim (2017) argues that the learner and the learning process should be the focus of online learning.

Ally (2004) gave a wider definition trying to include the many aspects online learning includes saying that online learning is “ the use of the internet to access learning materials; to interact with the content, instructor, and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning and to grow from the learning experience. In the last few years and especially at this time with the Covid-19 pandemic spread worldwide, almost all schools worldwide were closed to protect students and stop the spread of the deadly virus. Online learning at this time was presented as the only solution to deliver instructions to students staying at home. It is now important to show the impact of online learning in literature and how it affects learners and teachers.

Impact of Online Learning

Effective online teaching is not just posting traditional classroom materials to an online course management system. Morris (2011) explains that online instructors often have a great workload which is often more than expected; technology does not reduce an instructor's workload, it just changes the nature of the workload (Devedzic, 2006). The internet has the means to assist instructors in course de-

velopment, learner support, assessment, record keeping and document control tasks (Koper, 2004; Anderson & Whitelock, 2004).

In spite of the support online learning gives to teachers, they have a greater responsibility of selecting, redesigning, editing, and making the material relevant to their specific audience's needs. Online smart tools can coordinate student and teacher calendars to schedule meetings and training sessions (Anderson & Whitelock, 2004). These software tools can also provide teachers with new information relevant to their area of the subject and professional interests (Anderson & Whitelock). Devedzic (2006) noted that another important task that a online learning environment can automate for teachers is support for intervention. When an instructor identifies a need for supplementary resources for students in addition to the course materials, online learning environment will be able to provide a list of relevant resources.

On the other hand, online learning is capable of supporting a range of educational practices that makes use of the internet and communication technologies to support individual and group communication. These collaborative frameworks have generally taken root in education. The main reason is that the fundamental principles of education are established in critical communities of inquiry (Mikre, 2011). The focus in education is on developing higher-order learning outcomes and it is believed that the best means to achieve this is through critical discourse in a collaborative community of learners.

Nevertheless, the obvious shortcomings of education in relying on the lecture, collaborative online learning is seen to be consistent with the ideals and characteristics of education. Garrison and Cleveland-Innes (2005) argued that interaction is not enough for

learners to take a deep and meaningful approach to learning online. The nature of the interaction must be more structured and systematic if a collaborative process of critical inquiry is to be initiated and maintained. Various interactions must be integrated in a coherent and aimful manner that initiates and facilitates critical interaction and which purposefully moves toward meaning and understanding (Garrison, 2009). This represents a qualitative and transformative shift in how we approach teaching and learning. From this point, Garrison (2009) concluded that there are two fundamental approaches to online learning which are as follows:

- The first is to provide the tools and techniques for individuals to access and organize information to sustain existing online education practices that enhances learner independence.
- The second is to use the full resources of online learning to create purposeful communities of inquiry that is currently transforming education based on collaborative constructivist principles.

The first approach is to sustain current practices, while the second is to transform online teaching and learning by deeply rethinking the collaborative nature of education. Both approaches should in the same way serve and support teacher online training as they function with young learner's distance learning. Teachers need to practice learning in a similar way they are expected to teach their learners. They need to gain the experience as learners as well.

As a result of the recent quick technological changes in the world, teachers are now more than ever required to effectively and professionally use the technological advanced tools in their learning and teaching processes. According to the future vision of education in Egypt, teachers are not only requested to learn about the technological tools in teaching, they are also required to adopt them in

their teaching and empower their learners with best practices in the field using these advanced tools (Sabry, 2017).

As new concepts of learning have evolved, teachers are expected to facilitate learning and make it meaningful to individual learners rather than just to provide knowledge and skills. Modern developments of innovative technologies have provided new horizons to teaching professions, but at the same time have placed more demands on teachers to learn how to use new technologies in their teaching (Robinson & Latchem, 2003). These challenges ask teachers to continuously reeducate themselves and acquire new knowledge and skills while maintaining their jobs (Carlson & Gadio, 2002).

Teachers in Egypt are facing challenges and teaching is becoming one of the most challenging professions in the Egyptian society with too many responsibilities and little salaries. Apart from the low salaries, one of the major challenges is the rapid expansion of knowledge. Modern technologies are obliging teachers to learn and use these technologies in their teaching. While new technologies increase teachers' training needs, they also offer part of the solution. Online training can provide a more flexible and effective way for professional development for teachers, in-service teacher training, and connect teachers to the global teacher community (Jung, 2005).

The Need for Online Teacher Training in Egypt

The increasing numbers of students and teachers in Egypt necessitates online teacher training especially when compared with the limited training facilities and number of trainers. The Central Agency for Public Mobilization and Statistics in Egypt announced that the number of teachers in pre-university education reached 1.19 million teachers in 2017-2018, compared to 1.16 million teachers during 2016-2017, with an increase of 2.8% of the total number of teachers.

This increase has not been met with a similar increase in the number of trainers who, based on the latest statistics from the Egyptian Ministry of Education, does not exceed two thousand nationwide.

The latest changes in teacher promotion systems in the Ministry of Education makes it obligatory for teachers to attend training programs to get promoted from Teacher to senior (First) Teacher and from Senior Teacher to an Expert Teacher. The role played by technology in facilitating teacher training in Egypt can provide a step-forward in teacher's proficiency level. Richardson (2011) explains that in developing countries (as the case in Egypt), creating, implementing, and sustaining technology-focused professional development is a moderately recent phenomenon and Egypt has the potential to be a leader in this area as it has a large number of qualified university professors who can serve as online teacher trainers and can provide a decent quality of online training to teachers nationwide.

According to Hyde (2013), efforts dedicated to teacher training and professional development in Egypt are still in the initial stages. In detail, the development rate of science and technology and the increased rate at which new knowledge is created and spread are faster than the rate of preparing well-informed tutors capable of self-development and the creating of life-long learning. Accordingly, OTTPs in Egypt have the potential to serve as a more effective and cheaper tool for teacher development and consequently better educational outcomes for all students in the country.

Developing Online Programs

Institutional, national and global pressures demand that schools address the challenges of quality in teaching and learning. The need to offer new courses online necessitates the development of up-to-date teaching methods and adaptation of technologies that can

inform curriculum designers, trainers and teachers. Several quality guidelines have been produced that reflect different contexts and purposes. Some focus on school learning, some on pedagogy alone and some that reflect the designs of courses, course management, and websites.

Kemp (1999) explains that developments in information and communications technology also essentially change the way we think about the training content and quality. A focus on staff/students' proportions and the number of volumes in a library is being replaced by a focus on the quality of educational opportunities and outcomes rather than the magnitude of inputs.

As much as quality is considered in an online training setting, course developers, trainers and learners are all seeking instruments that enable them to measure the effectiveness of an online training course. Parker (2003), as an example, suggests that to help teachers develop the online content and features that will lead to success in an online course, you need to work on two main characteristics which are self-motivation and self-direction. Students must become comfortable as active learners. They cannot retain the role of passive learner as is so common in the traditional classroom. The online learner or teacher trainee is obligated to actively participate in the learning process. They must be encouraged to analyze and think critically. They must learn to apply new ideas to address new challenges and problems.

Alley (2000) described a set of evaluation criteria that can be used to design online learning courses. He explained that there are ten elements that are critical in designing and creating an effective online course. While doing that, he mainly focused on the pedagogical aspects of the course design as follows:

- 1- Knowledge is constructed.
- 2- Learning is more effective if a student can take responsibility for his/her own learning.
- 3- Student motivation is a strong determinant of the outcomes and success of learning
- 4- Higher order learning requires reflection.
- 5- Learning is unique to the individual.
- 6- Learning is experiential.
- 7- Learning is both social and private.
- 8- Unavoidable epistemological presumptions can misdirect higher order learning.
- 9- Learning is spiral.
- 10- Learning is 'messy'.

While Alley (2000) paid much attention to the pedagogical aspects of the online learning course design, Yuan & Kim (2014) developed four guidelines to help online trainers, online program developers, and online learners create a successful online learning community using question format. They tried to answer the four questions (when, where, who, and how) in online course design:

- 1- When to build an online learning community? They suggest that the learning community should be made from the beginning of the course and continue throughout the course.
- 2- Who to be involved in the process of building a learning community? Both learners and the instructor need to be involved in the development of the course and they should continue to refine the content and evaluate the success of each stage.
- 3- Where to build a learning community? They suggested to use both synchronous (e.g. live virtual classroom, Teams, chat) and

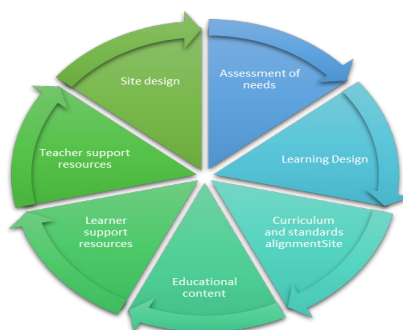
asynchronous (text, discussion forums, announcements, emails, problems, readings etc.) technologies to create a shared space in which learners and the instructor interact.

- 4- How to build a learning community? They suggest employing various strategies to stimulate discussions and exchange of knowledge and experiences.

OTTP Design Model

The model adapted in designing this online training program was originally suggested by Vaile (1999) known as one of the most acceptable considerations in online course design. He explained that there are 6 categories that need to form the basis of an evaluation of the effectiveness of online learning settings (see figure 3.2). The following points explain these considerations and how they were considered in the design of this program.

Figure 1: Considerations in online learning design adapted from Vaile (1999)



1. Assessment of needs: this stage although not part of Vail's six considerations (which are now seven after the researcher added this one), means investigating the learners' needs to design an online course. This was done at the early stage of this study through a questionnaire. Feeling the importance of this stage, the researcher added it at the start of the planning process as it lays the foundation for any training program (Yström, 2010).

2. Learning design: the pedagogy (including creative thinking, learning modalities and styles, and the learning approaches). A mix of teaching resources were added to teachers to fit their different learning styles. An ample opportunity to think, communicate and reflect on the learning content was provided at the end of each lesson and module to reflect on what they have learned and how it affected their teaching.
3. Curriculum and standards alignment: this refers to the extent to which curriculum and standards match learning objectives. Learning aims were set the beginning of the program and they centered around teachers' needs in the pre-test results. Aims of each module and lesson were directly informed by the results of the test and the questionnaires.
4. Educational content: this means the quality of the content or subject matter, organization of content, bias, sensitive content, and scope. The training knowledge content selection was made based on teachers' performance in the pre-test. The content was organized in four training modules (two pedagogical and two linguistic). The lessons in each module were organized from introduction and theoretical knowledge leading to practice. While selecting the content, culturally inappropriate and sensitive videos were avoided.
5. Learner support resources: Vaile (1999) explains here that the prevalence of acceptable use policies, documentation of procedures and other support for learners are vital in the design of an online training program. To apply this in the design, the use terms were explained to teachers in the ethics section on the home page of the website.
6. Teacher support resources: this means the extent of the instruc-

tional and support materials for teacher use. In the design of this website, various resources were selected and a WhatsApp group was created to help teachers communicate and solve any problem they may encounter during the training program. Emails were also exchanged to answer questions and provide extra information whenever needed.

Site design: this refers to the quality of the interface, graphics, and multimedia design. An expert in the field of web design was given this responsibility to create an appealing and user-friendly website. Feedback from teachers and educational experts helped in selecting the logo and in making the website appropriate to the targeted audience.

The challenges of online learning

It is undeniable that there is an exceptional growth in online learning in the last few years and with the existence of health issues like the covid-19 pandemic the world is facing recently, the demand for online learning and training is tremendously increasing. However, online teachers and trainers still face some challenges such as dropout. Yuan & Kim (2014) argue that the dropout problem can be attributed to several reasons, with a lack of interaction between the learners and the instructor constituting one of the main reasons. This lack of interaction eventually leads learners' feeling of isolation during the online training program. They suggest creating a learning community which can provide learners with an environment conducive to increased interaction and can help alleviate the feeling of isolation.

Johnson (2009) found out that students who failed to complete an online learning course had problems such as difficulties in completing tasks that require collaboration, lack of practical inputs, insuffi-

cient communication with peers and the trainer, lack of technology orientation, conflicting schedules, low quality of the program, and work pressure. These elements are almost all represent a threat to any online learning program in developing countries where teachers' technological skills are underdeveloped, and workload is high. In addition to the problem of time management in a situation as in Egypt where teachers spend many hours doing private lessons after school time to compensate their low salary.

Another challenge explained by Liang (2012) is quality assurance and standards which represent a big challenge in online learning programs mainly because the number of online learning courses is increasing rapidly and the difficulty to control online learning materials. However, due to the ill-defined nature of online learning, the quality of online learning courses may vary. There is a well-established (though not perfect) structure to safeguard quality of transitional face-to-face courses. The workload for both the teacher and the student, and how the course is charged can be defined (with limitations). In online learning, activities can happen at any time of the day. Reporting to the classroom or for work becomes irrelevant. The so-called standards of practice and quality will need to be reconsidered and perhaps require a shift in thinking and designing.

Another major challenge that online learners face is the isolation by the system which is imposed on online learners being away from partners during course delivery and practicing activities. The barriers to participation that external students may experience are particularly evident in collaborative learning tasks through group work, group presentations and group assessments. Some of the issues experienced can be personal such as: anxiety associated with using technology; being out of one's comfort zone; (perception of) inequity in assessment, particularly in "group" assignments; and,

the (perceived) inability or difficulty in peer interaction, particularly in presentations (Gillett-Swan, J., 2017). This can leave learners in an isolated world where they may also have different levels of competency and proficiency using different forms of internet technology and are therefore on their own when it comes to the online learning environment through different Learning Management Systems (LMS). This is particularly highlighted in collaborative learning tasks where individuals may be barely managing to navigate the system on their own, let alone needing to navigate the multidimensional environments of group interaction and social discussion (Jaques & Salmon, 2007).

Although the word innovation often inspires a positive connotation to its meaning but in case of online learning it represents another challenge. Online learning is a continuously developing field. Tools involved in the learning process such as learning management systems are constantly changing. Before an institution can comfortably settle on a decision to commit to a system, a better product appears in the market. It is always a difficult decision to commit to a system. This is worsened by financial considerations, since most often the financial commitment to such a system is not light. Once many online learning courses use the chosen system, the institution will face the obligation to stick with it, or the investment in the design and development of the courses may be wasted (Liang, 2012). This poses a problem, on the one hand, the institution needs to commit to the same product to ensure its longer-term development in online learning. On the other hand, the institution should also be constantly looking for better solutions. Perhaps, the latest innovation will meet their needs better, but the question is how much one single institution is able to afford to try and experiment with new systems. This is a big load lies on those taking up online learning.

Whether it is formative or summative, assessment is another big challenge in online learning (Khan, R., & Jawaid, M., 2020). Problems of assessment such as technical issues, complexity, sequencing of activities and learning a new medium have been identified as presenting obstacles to the incorporation of multimedia application and assessment in the learning environment (Jaques & Salmon, 2007). When considering group assessment for example, it appears to be slightly more complicated to facilitate real-time online interaction when you may have students “dialing in” from different time zones who each have different internet capabilities and speeds (Gillett-Swan, J., 2017).

Another important challenge is the link between what is being taught online and what is actually practiced in real life. As compared to face-to-face training, online learning may not provide learners with the same opportunity of observing the activities and practicing what is being taught in real time with real students. While the links between unit content, assessment and discipline specific knowledge is clearer in some courses than others, student feedback suggests that, as a whole, they often see theory and practice as separate rather than interrelated and interwoven elements (Gillett-Swan, J., 2017).

To solve the problem, Cavanagh (2015) explains that a facilitator may incorporate a range of activities and learning experiences that explores unit content in a variety of ways, explicitly indicating the real-world links and articulating how specific language and teaching skills are being developed through the activities and making those connections clearer for the learners aids in demonstrating relevance of the content and increasing student engagement.

Method of the Study

Design of the Study

This study adopted the quasi-experimental study design. One group design was used where the participants (N=50) in-service

prep school teachers were pre-tested and pre-administered the attitude scale and attended online training program and at last post-tested using the pedagogical situational test and the attitude scale.

Participants of the Study

The number of teachers participated in this study was 50 teachers from 14 different governorates around Egypt. They were all preparatory English language teachers with varied teaching experiences. The majority of the participants were female teachers with a percentage of 56% (28 female teachers) and 22 male teachers (44%). Most of the participants have more than 10 years of teaching experience. Teachers were asked to indicate the number of pre-service and in-service online teachers training programs they received. The results showed that the vast majority of teachers did not receive any online training during their college study, while few teachers received in-service OTTPs. Teachers were pretested and pre-administered the attitude scale , trained and then post tested and post-administrated the attitude scale.

Instruments of the Study

Two data collection instruments were used in this study to collect the data. While registering on the teacher training website, teachers were asked to provide their information on the teacher's profile page one of the questions on this page was asking about their online training experience whether at college stage or after graduation. This question was added to measure their online learning experience and check if there is a lack in online teacher training as assumed by the study hypothesis.

The second instrument was the pre-post-attitude scale. The scale was conducted before and after the online training program to measure preparatory school English teachers' attitudes before and after and measure the effect of the online training program on the study

participants' attitudes.

1- Situational Pedagogical Pre-posttest

A pre-posttest was created to measure the participants' knowledge in the two training areas. Lots of resources and research papers (Yuan, & Kim, 2014; Voss, Kunter, & Anders, 2010; Williamson & Clevenger, 2008; Vrasidas, & Glass, 2004) were used to select the most appropriate questions that tests the foundation knowledge in each of the training areas.

Aim of the Test

The pre-posttest aimed at measuring the participant's pedagogical level based on the two training topics selected in the needs' analysis survey namely Task- based language teaching and critical thinking skills.

Test Description

The test included 30 questions (15 questions for Critical Thinking Skills and 15 questions for Task Based Learning). The types of questions selected were mostly multiple-choice questions (MCQs) with four distractors. Little, J (2012) explains that MCQs are the most effective when testing basic knowledge of something. They help test-takers to retain the knowledge and the test items. They also serve as time-savers and provide objective results.

Test Validity

In order to validate the test, it was sent to eight jury members who are all experts in the field of education. A certificate of validation was awarded. The jury checked, (1) the types of questions used in the test; (2) the length and the wording of the heading; (3) the wording of the questions; (4) the accuracy of the answers to the questions; (5) the order of the questions in the test. The jury members recommended some changes and based on this feedback; the

researcher made the requested changes.

Test Reliability

To guarantee the test reliability, the test was conducted twice before and after the intervention of the independent variable which is the online training program. The test was used with the same sample of teachers who attended the training program. The test was administered online, and teachers were informed of their scores if requested.

Test Piloting

To ensure the test reliability, a group of ten teachers piloted the test. They all worked at the same school (Naguib Mahfouz Experimental School, Qalioubia). The scores they received in the test were not high although they all have more than 7 years of teaching experience, but their scores were very close. It served as a good indicator that the teachers lacked the tested knowledge and were in need for the planned online teacher training program. Teachers spent an average of 45 minutes to do the test. The total time they spent in the test was divided by their number and the result helped set the test time. The pilot group's data is included in the following table.

Table 1: Participants in the Pilot Test

| No. of teachers participated | Gender | | Average years of experience | Average score |
|------------------------------|--------|--------|-----------------------------|---------------------|
| | Male | Female | | |
| 10 | 4 | 6 | +7 | out of 16.3 (50) |

To measure the internal consistency, Cronbach's alpha tool was used to estimate the internal consistency of responses of the teachers who did the pilot test. The result was 0.834 which is seen as a good indicator of the test consistency (Amirrudin, 2021).

2- Pre-Post Attitude Scale

The second study dependent variable was teacher's attitudes towards OTTPs using the per-post attitude scale. The researcher developed an online pre-post attitude scale to be used with the 50 participants.

Aim of the Scale

The scale aimed to measure teachers' attitudes towards online teacher training programs before and after the intervention of the OTTP.

Scale Description

The scale was divided into four dimensions. The total number of questions was 35 divided as in the table below.

Table 2: Distribution of Questions in the Teachers' Attitude Scale

| (Teachers' Attitudes Towards Online Teacher Training Program (TATOTTP) | | | |
|--|---------------------------------|------------------|-----------|
| Dimension | Dimension Title | No. of questions | Questions |
| Dimension A | Previous experience | 8 | 1-7 |
| Dimension B | Participation and Interactivity | 18 | 8-25 |
| Dimension C | Time and cost effectiveness | 5 | 26-30 |
| Dimension D | Certification | 5 | 31-35 |

Questions in the first dimension focused mainly on teachers' previous online training experiences in order to investigate the number of courses and online training hours they attended before and their overall evaluation of this experience. Teachers who didn't attend any online training programs were asked to skip questions 3-7 in the scale. Questions 3-7 are for the teachers with online training experience and answered "yes" in question 2 which asks whether teachers attended online training programs before or not. This dimension was not repeated in the post-training attitude scale because by the

time all participants must have an online training experience. In addition to that, the facts indicated in this section will not change after attending the program.

The second dimension of the scale aimed at collecting information about teachers' perceptions of online teacher training programs. Teachers need to select whether they strongly agree, agree, disagree, or strongly disagree to each of the statements that ask about what they think of OTTPs' support in interactivity and enhancing their participations in such online programs. This dimension was repeated at the end of the training program to measure how the program affected teacher's perceptions towards OTTPs and whether they are satisfied with the amount of interaction and flexibility of the training.

Dimension three focused on time and cost effectiveness of OTTPs. It investigates how OTTPs save teachers' time and money as well as course providers and trainers.

Dimension four was measuring participants' perception of OTTPs certification and how effective and reliable online certificates from teachers' points of view and from institutions' point of view. This dimension was not repeated after the program as it is not expected that the program will change this perception.

Scale Validity

Eight jury members reviewed the attitude scale and provided feedback. Based on the jury members' recommendation, some changes were made to the initial draft. They recommended adding the abbreviation (OTTP) to reduce word count and save teachers' time. Wording of some question headings and answers were changed to clarify meaning and aims of some question.

Scale Reliability

To check the reliability of this scale, Cronbach's alpha tool was used. Cronbach's alpha as defined by Gollagi (2020) is a measure used to assess the reliability, or internal consistency, of a set of scale or test items. In other words, the reliability of any given measurement refers to the extent to which it is a consistent measure of a concept, and Cronbach's alpha is one way of measuring the strength of that consistency. The scale result was 0.757 which indicates that the tool is reliable.

To increase the scale reliability and avoid random selection of answers, eight negatively worded questions were added in the scale. Mixing positively and negatively worded questions in a scale is recommended to use in a research to improve the quality of data and the instrument's validity and reliability (Chyung, S. Y., Barkin, J. R., & Shamsy, J. A., 2018).

Scale Piloting

A number of twelve teachers volunteered to do the pilot attitude scale. The results, as showed in the table below, were not in favor of online training programs. Most teachers felt that online training programs were not the best training tool that can support their professional development goals. This indicator served towards the importance of this study to change teachers' perception of online training programs.

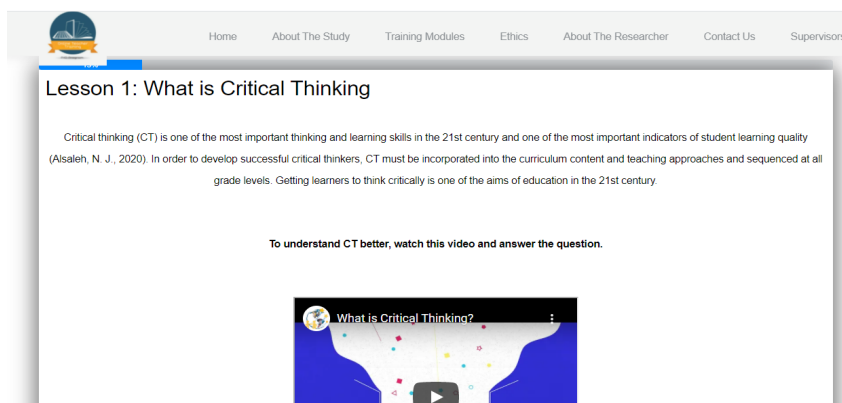
Table 3: Participants in the Pilot Attitude Scale

| No. of teachers participated | Gender | | Average years of experience | Average number of positive answers supporting OTTPs | Average number of negative answers against OTTPs |
|------------------------------|--------|--------|-----------------------------|---|--|
| | Male | Female | | | |
| 12 | 5 | 7 | +8 | 40% | 60% |

Online Teacher Training Program (OTTP)

Based on the pre-test results, the OTTP was developed and can be seen in this link <https://teachertrainingweb.com>. The website was reviewed by the study supervisors and the participants. Changes and modifications were made based on the suggestions and the needs of the teachers. The training program focused on the areas where teachers got the lowest scores based on the pilot test. In each of the four training areas selected earlier by the teachers and added in the test, four training modules were developed in the same sequence as they appear in the test starting with the two pedagogical training sections (critical thinking and task-based language teaching) followed by the two linguistic training sections (academic writing and active listening strategies).

Figure 2 Screenshot (What is Critical Thinking, Module 1 lesson 1)



The OTTP was a self-study program that gives teachers the flexibility to study whenever they have the time within the allotted two months given for the program to finish. There was a mix of resources available for teachers to view during the training program including videos, PDF research papers, selected illustrations and charts with explanation taken from present study and an opportunity to practice

and reflect on the use of each of the two training modules.

An email link was added on the website to allow teachers to send any questions they have about the program or any lessons they need support in. All necessary information about the study, its aims, ethics, the training modules, information about the researcher, and study supervisors were added with links on the home page of the training website.

During the registration process, teachers were asked to add their phone numbers to join a WhatsApp group. The group aimed at giving teachers an opportunity to asynchronously learn and exchange experience. At the end of each module, teachers were asked to reflect on their practice and what they have learned from each module in the end-of-module task.

OTTP Aims and Objectives

In this training program, there were general training aims and module-specific objectives. The general aims of the program were sent to the teachers in the invitation letter to join the course. In addition, the aims were presented and explained in the first online session.

Most of the aims were generated from the pilot test results. These general aims helped frame the objectives of each module. Participants were not allowed to start a training module without reading and confirming that they had read the module aims. The modular objectives were framed to focus on providing teachers with the essential knowledge and practice ideas related to the module topic. The general aims of the program were as follows:

1. Providing teachers with the basic knowledge in the two training areas (critical thinking skills and task-based language teaching).
2. Improving their attitudes towards online teacher training programs.

3. Stressing the value of online learning opportunities through an example.
4. Saving teachers' time and money spent in commuting to training centers.
5. Providing an extra support channel through WhatsApp groups.
6. Increasing teachers' interaction with the content.
7. Increasing teachers' participation and responsibility in their own learning process.
8. Providing teachers with tools to interact and consult each other.

By the end of the module one, teachers are expected to

- a) identify and understand critical thinking (CT) skills
- b) identify critical thinking sub skills
- c) understand Bloom's taxonomy of CT
- d) provide practical ideas on how to teach CT.
- e) identify the different approaches to teach CT.
- f) use different types of questions to teach CT.
- g) reflect on the teaching practice using CT.

By the end of module two teachers are expected to

- a) understand the background of Task Based Language teaching TBLT.
- b) identify TBLT.
- c) understand the difference between TBLT and PPP.
- d) identify the criteria of creating a task.
- e) understand the cycle of tasks.
- f) identify the features of a pedagogical task.
- g) practice the different types of activities in TBLT.
- h) reflect on what you have learned from this module.

OTTP Duration

The program was designed to take 20 hours in total with 5 hours per module. Lessons in each module would vary in the time teachers spend in each lesson based on the teachers' knowledge, experience, and skills in using technology. The program was made available for teacher for two months from July 15th, 2021 to September 15th, 2021.

OTTP Learning Tools

Four learning tools were adopted in this training program. It started with a series of training webinars (one session for every module). The sessions were recorded and sent to the teachers to view in their free time if not able to synchronously attend. During the sessions, a detailed explanation of each training module was given, and questions were answered. After the session, teachers were asked to do the online training module.

To create more engagement, teachers were optionally asked to provide their mobile phone to join the training course WhatsApp group. The group aimed at giving teachers the opportunity to interact synchronously and asynchronously to solve teaching issues, share ideas and exchange experience. Email was the last and the least used teaching tool. Teachers were encouraged to email the trainer in case they have any questions or doubts.

OTTP Content

The OTTP was divided into two training modules. Each module covers one of the training areas and was explained through lessons. The number of lessons module varies from 6 to 7 lessons. At the end of each lesson, a task was given to teachers to reflect on their understanding of the lesson content. At the end of each module, a module assignment to help teachers practice what they have

learned in the lesson in their actual classes, and an end-of-module reflection to encourage teachers to see how they are planning to take the knowledge they gained further. The following table shows the content of the program and the evaluation tool used.

Table 4: OTTP Content

| Module | Number of Lessons | Lesson Title | Lesson Evaluation |
|---------------------------------------|-----------------------|---|---|
| Module 1: Critical Thinking Skills | Lesson 1 | What is Critical Thinking | What ways do you use to help your students think critically? |
| | Lesson 2 | Skills and Subskills of CT | Which skills do you often use in your class? Give reasons. |
| | Lesson 3 | Bloom's Taxonomy | What are the three HOTS and the three LOTS in Bloom's Taxonomy? |
| | Lesson 4 | Activities to Develop CT | In your opinion, which of the activities in this lesson would work better with your students? Give reasons |
| | Lesson 5 | Approaches to teaching CT | Does the coursebook you teach include both cognitive and metacognitive approaches to teach CT? Give an example. |
| | Lesson 6 | Questioning techniques In CT | What questions do you often use in your class to help learners analyze? |
| | Module one assignment | Select a lesson from the course you are recently teaching and create questions that you can use to help your students analyze the content of the lesson. | |
| | Module one reflection | At the end of module 1 and based on what you have learnt, please type three things you are planning to implement in your class when using CT in your class. | |

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| | | | |
|---|-----------------------|---|--|
| Module 2: Task Based Language Teaching | Lesson 1 | Emergence of Task Based Language Teaching | Do you think that TBLT would provide the communication you and your learners need in everyday class? Give a reason |
| | Lesson 2 | What is TBLT? | In your own words, write a definition on TBLT. |
| | Lesson 3 | (Present, Practice and Produce) PPP VS TBLT | Which teaching approach do you think is more beneficial for your learners (PPP or TBLT)? Why? |
| | Lesson 4 | Tasks in Language Teaching | Watch the first 6 minutes of the video by Professor Rod Ellis, from Curtin University, Australia, explaining the meaning of a task and type two of the four criteria to identify a task. |
| | Lesson 5 | Task cycle | Look at the image illustrating the task framework and type which stage do you often miss in your task planning. |
| | Lesson 6 | Features of pedagogical tasks | When you design tasks for your class, which of the features do you usually keep in mind? Which feature will you consider in the future? |
| | Lesson 7 | Types of activities in TBLT | Which of type of activities do you often use in your class? Give reasons. |
| | Module two assignment | Select a lesson from the course you are recently teaching and use TBLT to teach this lesson. In your answer, type what changes have you made to make it a TBLT lesson and your aims for that. | |
| | Module two reflection | At the end of module 2 and based on what you have learnt, please type three things you are planning to implement in your class when using TBLT in your class. | |

OTTP Evaluation

Two evaluation methods were used in this study. First, formative evaluation which is represented in the questions, tasks, and activities the researcher used during the training program. The trainee teachers were asked to do some exercises, answer quizzes and reflect on the content of each lesson and module at the end. Second, summative evaluation is represented in pre-testing the participants after treatment using the situational linguistic pre-posttest. It is also represented in the post administration of the attitude scale.

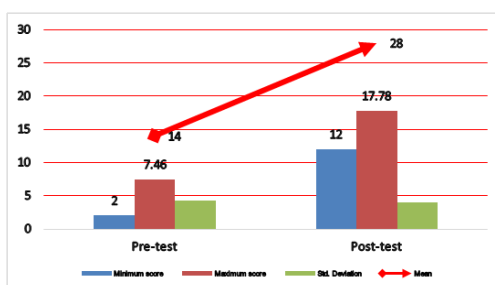
Discussion of Results

Verifying the First Hypothesis

The first hypothesis of this research states that there is a statistically significant difference at ($\alpha \leq 0.01$) in the teachers' overall average scores in pre- and post-administration of the pedagogical test as part of the proposed online teacher training program.

To measure this hypothesis, SPSS analysis was carried out measuring the mean of the teachers' scores in the pre- and post-tests (see figure 3). The mean line shows a significant increase from 14 (28% of the total test score) in the pre-test to 28 (56%) in the post-test with an increase of 28% of the overall scores. This statistically significant increase was reflected in the minimum scores in the pre-test moving from 2 to 12 in the posttest and in the maximum scores in the pre-test moving from 7.4 to 18 in the post-test.

Figure 3: Overall Pre-post-pedagogy Test



In addition, the standard deviation was improved from 4.247 in the pre-test to 4.050 in the post-test with a 95% confidence interval ranging from 11.1 to 9.5 (as in table 6). The t-test result $t=25.513$ is statistically significant at .000.

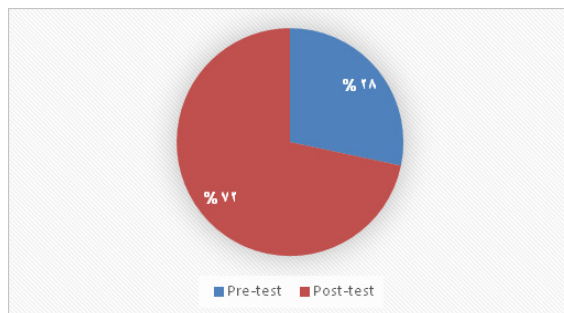
Table 5: Paired Samples T-test of Overall Pedagogy Pre-post-tests

| Mean | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|--------|---------------------|------------------------|-----------------------|---|--------|-------|--------|----|--------------------|
| | | Std. Devia- tion | Std. Error Mean | 95% Confidence Interval of the Dif- ference | | | | | |
| | | | | Lower | Upper | | | | |
| Pair 1 | PREAVE - POSTAVE | 10.320 | 2.860 | .405 | 11.133 | 9.507 | 25.513 | 49 | .000 |

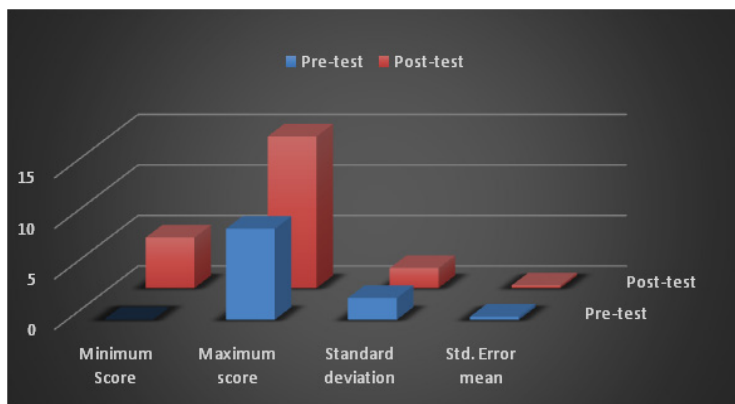
In addition to the t-test data, the effect size of the increase in the pre-post-tests was measured using the eta squared statistics analysis. The test covered the two training areas in two training modules, which resulted from the needs' analysis survey. Each training module within the pedagogy test will be independently analyzed in the following sections.

A. Verifying the Results of Module 1 (Critical Thinking Skills)

To measure the effectiveness of each training module within the pedagogical training, t-test was used to compare the participants' mean scores in each of the training modules starting with the first module focusing on Critical thinking skills. The mean of the pre-test administration (see figure 4) was 3.80 (28% of the total score) and the post-test administration was 9.62 (72%) which indicated a big difference between teachers' performance in the pre-post-tests in favor of the post-test administration.

Figure 4: Mean of the Pre-post-Critical Thinking Test

The following figure (5) shows the teacher's scores in the pre-critical thinking test administration which ranged from 0 to 9 while in the post-critical thinking test administration, it ranged from 5 to 15. This reflects the effectiveness of the suggested online training course and how it helped in improving teachers' performance.

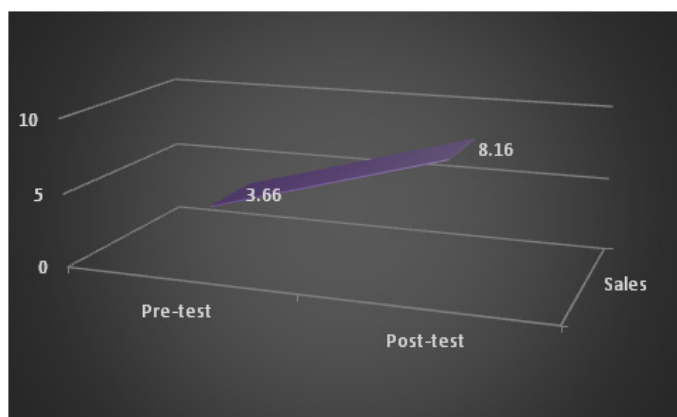
Figure 5: Paired Sample Statistics of the Pre-post-Critical Thinking Test

In addition to the paired sample statistics of the mean scores in the pre-post-test administration, the effect size of the increase in the pre-post-tests was measured using the eta squared η^2 statistics analysis. Eta Squared (η^2) = 0.57 states a large effect size of the on-line critical thinking training module on developing teacher's pedagogical knowledge.

B. Verifying the Results of Module 2 (Task-Based Learning)

The second training module was Task-based Learning which was selected earlier by teachers in the needs' analysis survey. To measure the effectiveness of this training module, t-test was used to compare the participants' mean scores in the pre-post-tests. The mean of the pre-test administration (see figure 6) was 3.66 and the post-test administration was 8.16 which indicated a big difference between teachers' performance in the pre-post-tests in favor of the post-test administration. This supports the hypothesis that the on-line teacher training program, represented in the task-based learning module, had a positive impact on improving participants' pedagogical knowledge.

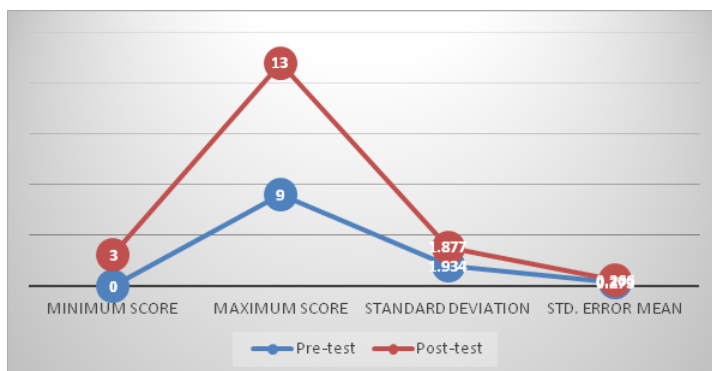
Figure 6: Mean of the Pre-post-Task-based Learning Test



Moreover, figure 7 illustrates the teacher's scores in the pre-task-based learning test administration which ranged from 0 to 9, while in the post-test administration, it ranged from 3 to 13. This result confirms the effectiveness of the suggested online training program and how the information provided online helped upskill teachers in this training area. The standard deviation in the task-based learning test moved from 1.934 in the pre-test results to 1.877 in the post-

test results. The t-test result was 16.862 with a significance at 0.009 which indicated a large difference between the two tests.

Figure 7: Paired Sample Statistics of the Pre-post-Task-Based Learning Test.

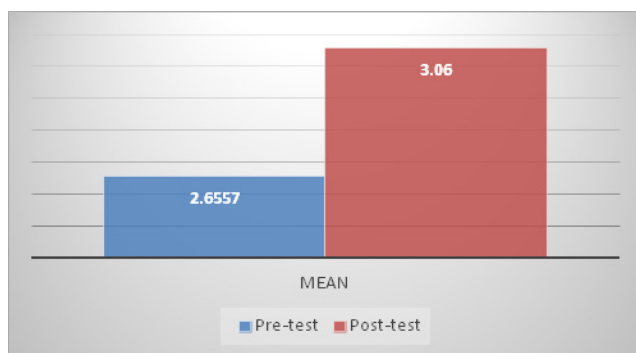


In addition, the effect size of the increase in the pre-post-tests was measured using the eta squared η^2 statistics analysis. Eta Squared (η^2) = 0.40 states a large effect size of the online critical thinking training program on developing teacher's pedagogical knowledge.

Verifying the Second Hypothesis

The second hypothesis states there is a statistically significant difference ($\alpha \leq 0.01$) between the mean scores of the study group on the pre- and post- administrations of the attitude scale towards on-line teacher training in favor of the post-administration. To validate this hypothesis, paired sample t-test was conducted comparing the mean of the pre- and post-scale results. The following figure (7) indicates that the mean in the pre-attitude scale administration was 2.6557. This figure increased to 3.0600 in the post-attitude scale. The increase in the mean proves that the online course participants' attitude toward online teacher training was improved as a result of the training program.

Figure 7: The mean score of the study group on the pre- and post-administrations of the attitude scale.



The analyzed t-test data (as in table 6) indicated that there was a statistically significant difference at 0.004 in the overall attitude scale between the mean scores of the study group on the pre and post administrations of the attitude scale in favor of the post administration, since the calculated t-value (10.191) with (39) degree of freedom. This showed that the sample group developed a positive attitude towards online teacher training as a result of the intervention of the suggested program.

Table 6: T-test Results of the pre and post administrations of the Attitude Scale (N =50, df=49)

| Assessment | Mean | N | Std. Deviation | Std. Error Mean | t-value | .Sig |
|------------|--------|----|----------------|-----------------|---------|-------|
| PREAVE | 2.6557 | 50 | 33711. | 04767. | 10.191 | .004. |
| PSTAVE | 3.0600 | 50 | 18042. | 02552. | | |

Furthermore, the calculated effect size value (.293) shows that the program had a large effect on the study group's attitudes towards online teacher training in the post- administration as compared to their attitudes in the pre-administration of the attitude scale. Thus, the second hypothesis of the study was verified.

Discussion of Results

The statistical analysis showed that there was a large effect size of the online overall pedagogical teacher training program (0.51)

on developing teacher's knowledge of the two pedagogical training modules (Critical Thinking Skills and Task-Based Learning). Given the results of the mean in the pre-and post-test administrations, t-test results and the eta squared effect size result, we get a clear evidence that there is a significant difference between teachers' scores in the pre- and post-tests in favor of the post-test. This indicates that the online training program positively affected teachers' performance in the test.

Similarly, the result of the pre-post attitude scale showed that the program significantly improved the participants' attitudes toward online learning moving their mean scores in the pre-scale from 2.6 to 3.06 in the post-scale. This significant increase indicated that if training bodies represented by the Ministry of Education or any other private training bodies can provide high quality online training, this will encourage teachers to adopt positive attitudes toward online training and hence teachers will be more successfully passing the experience to their learners.

The behavioral aims of the OTTP contributed to the positive effectiveness of the program as teachers could easily link the training content with their needs that they stated earlier in the needs analysis survey. In addition, the program content was also appealing to the teacher. Changes in the program design was continuously changing based on the teacher's feedback. The formative and summative assessment tools included in the program helped teachers reflect on and review what they have learned in every lesson.

The results of this study are consistent with the findings of another study (Lackey, 2011) conducted at the University of Northwestern Ohio, US which reported that teachers found collaborating with colleagues and online courses and resources provide both technical

and pedagogical instruction, making them the best candidates for teaching online. Similarly, the findings of another study (Quintana, 2014) demonstrated the importance of considering online training that can be influenced by the availability of technological resources to influence teacher performance, such as communicative style, linguistic, pedagogical, and cognitive skills.

Conclusions

Based on the above study findings, the following list can be concluded:

- 1- The suggested OTTP positively affected teachers' performance in the pedagogical training based on the test results.
- 2- OTTPs could serve as a good training solution in times of emergency and movement restrictions as happened during the Covid-19 pandemic worldwide.
- 3- Providing a good OTTP model can positively impact teachers' attitudes towards online training. Consequently, teachers would adapt and deliver more successful online training programs to their learners.

Recommendations

Based on the results of the current study, the following recommendations are suggested:

- 1- The Ministry of Education in Egypt represented by the Teachers' Academy should focus on providing more OTTPs.
- 2- The Ministry of Education in Egypt and other training bodies should provide good models and high quality OTTPs that can improve teacher's attitudes towards this kind of learning.
- 3- Online teacher training should be an essential part of teacher education at all Egyptian universities as part of the teach-

er education.

- 4- Teachers should have the upper hand in their online training program selection. They should choose the topics they would like to attend to develop their teaching skills.

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