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Introduction

The world has known technology for so long, and because it plays a vital role in every field that adopts it, the world has witnessed an unprecedented growth changing the way everything and everyone functions in this world. It has made a revolution in all fields; among them are communication, medicine, transportation, commerce, agriculture, and education in specific.

In the educational context, technology has changed the way teachers teach and students learn. Technological advancement in education is not new. It existed a long time ago: tape recorders, language labs, videos, and projectors, have been in use back to the 1960s, and are still used up to this moment (Dudeny and Hockly, 2008).

We have seen that technology is very important for the teaching and learning of languages. Technology not only makes some of the ordinary teaching responsibilities simpler, but it also enables a teacher to design lessons that enhance students' general language proficiency. Technology has demonstrated new opportunities for instruction and learning. It has been discovered to have beneficial effects on student learning attitudes and student-centered learning. Additionally, there are several benefits of technology that help students learn language fundamentals like reading, listening, speaking, writing, and vocabulary. Also, by bringing the outside world into the classroom and by displaying language in its fuller communicative context, educational technologies assist us in motivating pupils. Technology may also give students a lot of knowledge and cultural input to process, freeing the teacher from having to explain everything in detail (Abunowara, 2014).

The ability of teachers to organize, design, and carry out successful educational activities is just as important as having the right hardware and software to employ in the classroom. Of course, this can help bring out the best in both humans and machines (Abunowara, 2014).

In addition, Bajcsy (2002) notes that technology can help students and teachers interact whenever and wherever they choose, organize and prioritize Internet content, simulate, visualize, and interact with scientific structures, processes, and models, and even provide automated translators for multilingual populations.

A number of studies, including (Gebhard 2009, Dudeney and Hockly 2008, and Brinton 2001), revealed that teachers who may not be entirely in control of their work settings and who are unable to employ technology in the classroom frequently express a lack of confidence in their abilities. Teachers could desire to include more technology in their lessons, but the school might not have the resources. On the other side, instructors might not have received in their universities the instructions they require to use technology effectively or they might be told to use a technology for which they lack the necessary expertise. The fact that there is no formal training program for using technology in EFL/ESL classes is now evident. They also revealed that teachers' attitude towards using technology is still negative claiming that preparing materials is time consuming, they have limited experience with technology, and they lack confidence, facilities, and training.

Egan (2021) noted that including ICT in education has led to anxiety and uncertainty for teachers, students, and families. Similarly, the extensive and the intensive use of ICT has prompted new reflections, if not resistance, from the teachers who had up until that moment tried to avoid using the technology in their teaching practice (Khan, 2021).

According to Tovar Viera and Velasco Sánchez (2020), English as a Foreign Language (EFL) university language instructors demonstrated limited proficiency and experience with using digital technologies, and as a result, they were not aware of how to fully harness the advantages of the available technologies. The situation was considerably worse at the beginning of the epidemic, when the abrupt and rapid shift to remote learning left little time for the development and implementation of rigorous guidelines and training in online best practices (Winter et al., 2021).

These days, there is no denying for the value of integrating technology in the study of languages. Foreign language and second language teachers have access to a wealth of digital educational tools, which are playing an increasingly significant part in the teaching-learning process (Parra & Abril, 2020). Teachers must master a range of fundamental and functional digital competences and exhibit digital leadership in the classroom to empower students in the use of ICT. This is because of the

demands of the digital age in the current information and knowledge society. Teachers must also learn digital skills that enable them to collaborate, communicate, and generate digital material (UNESCO, 2018).

Some advantages of using innovative technologies in TEFL include engaging students, enhancing the academic performance, providing a new approach to learning and teaching, enhancing collaborative learning, and reducing learning anxiety.

Types of technologies in TEFL

The world of technology offers a variety of options for language instruction and learning, including radio, television, computers, the internet, electronic dictionaries, emails, blogs, Power Point presentations, videos, and more. This information technology's rapid growth and development has made it easier to investigate a new teaching strategy. For many years, technology has been a part of language teaching and learning. Traditional obsolete technical instruments like cassette players and television were employed as teaching aids in language schools. The first educational tool that comes to mind today when we think of technology is the computer. Similar to other subjects, teaching English as a second language can benefit from using computers, especially now that they can connect to the Internet (C.Sofia Selvarani & S. Kulasekara Vadivoo, 2013).

The use of comic books, digital storytelling, movies, eBooks, interactive whiteboards, photographs, and online speaking avatars that are available on the Internet could also be some types to facilitate the teaching of English. Comic books not only keep readers interested but also foster analytical and critical thinking. They challenge pupils to interpret intent, tone, and meaning. Additionally, they offer innovative opportunities for expression and individualized learning. Today, there are a variety of free and simple to use internet tools for making comics, giving people the chance to express themselves creatively and independently. Also, Students can take a linear sequence of events and transform them into a multidimensional experience by using digital stories. It motivates them to converse, work together, conduct research, and incorporate media into the process. These projects can be made with a wide range of hardware and software resources, and they all help students develop a deeper understanding of English as they consider how to tell a story most effectively (C.Sofia Selvarani & S. Kulasekara Vadivoo, 2013).

An interactive whiteboard is a device like a SMARTBoard or an ActivBoard. The adaptability, interactivity, multimedia/multimodal display, and involvement potential of an interactive whiteboard are among its main

advantages. Additionally, interactive whiteboards can assist students in conceptualizing new information by visualizing abstract concepts. Additionally, IWB lessons and exercises can be documented and shared in ways that encourage cooperation and sharing. IWBs are a teaching resource that can assist English teachers in developing interactive, collaborative, fun, and visual lessons and activities that inspire students to learn. Also, Online speaking avatars are simple to make and provide a wealth of educational opportunities. They are able to link spoken and visual content, providing entertainment and an outlet. They can email a link or embed it in blogs, wikis, or websites. They are extremely helpful for students who struggle with social anxiety and English language learners since they enable group presentations to be delivered by several members of the group. Moreover, Web 2.0 tools are the most contemporary Internet-based technology used in English language training. Wiki, blog, podcast, social network, and video conferencing are some of the most popular Web 2.0 technologies that have shown the potential of the most recent technology in language teaching and learning. Wikis are effective teaching and learning aids because they enable group writing, according to studies. Similar to blogs, text-formatted diary entries by users can boost writing abilities, encourage active learning, and give teachers and students feedback. Blogs are typically used in language learning classes to improve both writing and reading abilities. In addition to wikis and blogs, social networking sites offer language learners a good chance to develop their writing and reading skills, particularly when they type or read messages (C.Sofia Selvarani & S. Kulasekara Vadivoo, 2013). **Electronic Teaching Skills**

According to Rice (2003), digital technologies are those that use various types of software and hardware to create, save, deliver, and display information. Digital devices like computers, tablets, and phones as well as the content seen, utilized, or produced on those devices (such as websites and applications) are some of the most popular examples of digital technologies (Vuorikari et al., 2016). It is critical to distinguish between digital and analogue technologies. Analog technologies concentrate on creating representations of the world (such as painting or drawing), whereas digital technologies aim to process information digitally, which can be stored and used for various purposes (e.g., sharing information, entertainment, communicating) (Mantilla & Edwards, 2019).

The importance of teacher training at the electronic teaching skills, both initial and ongoing, is crucial to the educational system's performance. The teacher's job includes encouraging the ongoing development of teaching strategies across all educational levels through innovation and research. Effective teacher preparation should include a variety of abilities, including fostering students' self-confidence, self-esteem, creativity, innovation capacity, and capacity for problem-solving in the context of education. If teachers and trainers want to foster digital literacy in their students, they must possess the necessary digital abilities (Laurillard, Derrick, and Doel, 2016).

Research demonstrates that ICT in ESL and foreign language instruction can assist teachers in achieving pedagogical goals and can have a good effect on students' language skills, including reading, writing, and listening, as well as the growth of vocabulary (Zhao, 2003; Felix, 2005; Stockwell, 2007; Golonka, Bowles, Frank, Richardson, & Freynik, 2014). According to Ghanizadeh et al. (2015), digital technology can enhance the development of all four language skills—listening, reading, speaking, and writing—while assisting language teachers in giving students timely and pertinent feedback.

Digital competence and media competence

Teachers must develop their digital and media competences, two essential components of a lifelong learning process, in order to respond to the rising use of such technologies in the classroom. However, teacher education only briefly touches on these. To be able to educate students how to utilize technology and, ultimately, to assist them in developing their own digital and media competences, educators—both those in training and those already working in the field—need to have greater skills and specialized training (Francisco Hidalgo, M.^a Elena Parra & Cristina Abril, 2020).

Digital competence involves the confident and critical use of Information Society Technologies (IST) for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet (European Parliament and the Council 2006).

Teachers' digital competence, according to Claro, Salinas, Cabello-Hutt, San Martn, Preiss, Valenzuela & Jara (2018, p. 164), extends beyond this definition to include "the information and communication skills and knowledge that teachers should have to perform their professional work (e.g., plan and prepare lessons) in a digital environment."

Given the growing importance of social media, in addition to technology, in every aspect of our globalized society, digital competence for teachers in general, and English instructors in particular, in order to meet the problems of the present, appears to be insufficient. In addition, technology has significantly altered how we create, send, and receive information; these changes necessitate modifications in education so that students are not cut off from reality (Aguaded-Gómez, 2012; Masanet, Contreras & Ferrés, 2013; Ramírez-García & González-Fernández, 2016; Sandoval-Vizuete, Calvopiña-Osorio & Cevallos-Viscaíno, 2018).

These changes require new technical and interpretation skills for creating and accessing knowledge as well as expertise in new symbol systems. The integration of texts, sounds and images in multimedia documents, along with interactivity, make this a special language that forces us to consider now a «multimedia», «digital» or «media» alphabet, which might be a prerequisite nowadays, but will become unavoidable in the near future (Gutiérrez, 2010, p. 172).

Therefore, prospective ESL/EFL teachers should be prepared during their teacher training to encourage students' language learning in classrooms by integrating ICT. Researchers note that there is minimal ICTintegration and digital competence development despite the availability of digital resources and creative instructional strategies. The use of ICT for lesson preparation, personal communication, word processing, presentation tools, and information searches in teacher education has been observed to be quite beneficial internationally (Blin & Munro, 2008; Drent & Meelissen, 2008; Kay & Knaack, 2005).

According to Gutiérrez (2010), digital proficiency is insufficient in light of the numerous demands that the present-day environment places on instructors in the twenty-first century. Media competency, also called "media literacy, goes far beyond digital competence; it can be described as a complex, interconnected set of knowledge, abilities, and attitudes that enable one to effectively navigate the media landscape of today by adapting to varying situations and ongoing change, which is significantly growing in relevance (Velasco, 2016).

It is documented that using technology in teaching and learning enhances motivation. The findings demonstrate that technology boosts students' self-assurance because it conceals individual (un)knowledge, permits enjoyable learning, fosters social dynamics, and, on a global scale, produces joyful moments that boost motivation and enhance learning. The findings highlight the importance of understanding the teacher's role as a key integrative agent mediating between the real and virtual, technical and scientific, curriculum and skill, and cognitive and emotional worlds (Raposo, Durão, Estradas & Ribeiro, 2020).

Motivation

The term "motivation" refers to the reasons behind someone's actions. It is what motivates people to act in the way they do. The mechanism that starts, directs, and sustains goal-oriented behaviors is known as motivation. For instance, motivation is what drives you to earn that promotion at work or helps you lose additional weight. Simply put, motivation pushes you to do actions that move you toward your goals. The biological, emotional, social, and cognitive elements that drive human activity are referred to as motivation (Kendra, 2022).

Types of Motivation

The two main types of motivation are frequently described as being either extrinsic or intrinsic. Extrinsic motivation arises from outside of the individual and often involves external rewards such as trophies, money, social recognition, or praise. Intrinsic motivation is internal and arises from within the individual, such as doing a complicated crossword puzzle purely for the gratification of solving a problem (Tranquillo & Stecker 2016).

A third type of motivation is integrative motivation. This type of motivation that has to do with language learning. Some language learners have a strong emotional connection to the native speakers. Integrative motivation is the name given to the second form of language learning motivation that Gardner and Lambert define. Integratively motivated learners are motivated to learn a language because they desire to interact with speakers of that language. They are also curious about the society surrounding that language.

Motivation in EFL teaching and learning

It is generally acknowledged that motivation is crucial to achieving learning objectives in the majority of learning domains. It may be argued that without motivation, students would not make the necessary efforts to learn a skill. That is to say, the learning process and motivation are intimately intertwined (Siska, 2015). Therefore, motivated students may learn more effectively than unmotivated students (de Bot, Lowie, and Verspoor, 2005). In other words, learners are more likely to learn if they are motivated, and less likely if they are not. This idea appeals on an instinctive level (Ellis, 1986; Brown 2001).

Since each learner differs in some ways, their success in the area of language acquisition or learning may vary. Regarding this, it is thought that one of the key elements that can impact individual variances in language acquisition is motivation (Crisfield & White, 2012). Motivation shows up as a predictor of language learning success as a social-

psychological element that is commonly regarded instrumental to the different learners in acquiring a language (Gass&Selinker, 2008). Motivation provides the crucial incentive to begin learning a second or foreign language and afterwards to continue the protracted learning process, according to Dörnyei (1998) and Honggang (2008). Therefore, it is acceptable to claim that motivation plays a role in whether or not learning a foreign language is successful.

The previous studies indicate the effectiveness of integrating innovative technologies to improve student teachers' electronic skills which will reflect on their performance in the teaching process at schools. It also reflects on improving the English language level both for teachers and students.

This study investigates the effectiveness of an innovative technologies-based program in enhancing EFL student teachers' electronic teaching skills and their motivation towards teaching.

Related Studies

The following section introduces studies that have direct relevance to the present study and documents the problem:

Avidov-Ungar & Eshet-Alkakay (2011) conducted a study to explore how teachers feel about the use of innovative technology (smart classes) in the classroom by examining the relationships between the key pedagogical elements that influence the technology-implementation process: (1) the teachers' perspectives on change, (2) their knowledge of technological-pedagogical content, and (3) their view of the school as a learning organization. Using questionnaires, information was gathered about the teachers' "Technological Pedagogical Content Knowledge" (TPACK) level, assessment of the school as a learning organization, and attitude towards change. The results show a positive relationship between TPACK and the attitudes of the teachers towards change as well as a positive relationship between the perception of the school as a learning organization and the attitudes of the teachers towards change. Participants who performed well on the TPACK and perceived their institution as a learning organization also performed well on their willingness to embrace change.

Shishkovskaya, Bakalo & Grigoryev (2015) conducted a study to test the efficiency of the pedagogical integration of Internet technologies into the EFL teaching process in the e-learning environment and the methodological system of EFL teaching with the help of Web 2.0 tools. 78 Students from the Power Engineering Institute (National Research Tomsk Polytechnic University) who are in their second year participated in the experimental teaching method. They were divided into two groups: the experimental group and the control group. The experimental group's learning process was centered on using Web 2.0 technology to learn a foreign language, whereas the control group was expected to get traditional language instruction. After analyzing the research's data, we came to the conclusion that using Web 2.0 tools to teach English as a foreign language in an online learning environment runs smoothly, produces high-quality results, significantly boosts students' motivation to learn the language, and also raises the proficiency level of learners.

Spiteri & Rundgren (2018) conducted a study in order to make recommendations for better training that would eventually result in a more directed and meaningful use of technology in education, it is important to understand what influences primary teachers' use of digital technology in their teaching practices. Four influencing components were discovered after applying the concept map to the data from the chosen studies: teachers' knowledge, attitudes, and skills, which are also influenced by and influence school culture. Recommendations for teacher technology training are made based on these findings, as well as ideas for additional research.

Hidayat (2019) conducted a study that aims to learn more about teachers' perceptions on the integration of digital literacy through three aspects of teachers' perceptions: behavioral perception, normative perception, and control perception. Because of this, this research used a qualitative analysis of English teachers. Interviews were used as the data collection method to investigate five English in-service teachers. The results showed that the behavioral belief was related to the application of the idea of digital literacy in terms of developing students' 21st-century skills, while the control belief was concerned with the availability of specific digital technology to be used in the classroom. The former belief dealt with the expectation in social contexts, both administrators and parents, while the latter was concerned with the expectations in the classroom. The results of this study were anticipated to give a summary of the teachers' beliefs that motivate the inclusion of digital literacy in the classroom. This study gives a broad overview of teachers' attitudes towards including digital literacy, which aids in personalizing professional development for instructors and adjusting training for the digital age.

Mofareh (2019) conducted a study to address various aspects of the technology used in English teaching by developing creative curricula that take advantage of current scientific and technical advancements, providing

teachers with the technological skills to ensure effective and high-quality subject delivery, offering technical media like audiovisual and contemporary technical programs, and developing student-teacher platforms that maximize language learning outcomes. For the purposes of this study, the pertinent literature has been studied, technology has been defined linguistically and conventionally, and the relationship between technology and contemporary teaching techniques has been thoroughly assessed. In light of this, the researcher describes the main research issue, clarifies the importance of the study's goals and hypotheses, and then gives the results. The study concludes by making a number of suggestions that could help advance the broad adoption of contemporary technology and so promote the improvement of teaching techniques.

Mahdum, Hadriana & Safriyanti (2019) conducted a study to investigate the attitudes and motivating factors of Indonesian teachers at senior high schools in rural areas about ICT use in educational activities. A series of questionnaires sent to 616 senior high school teachers from four rural districts of Indonesia helped gather the data for this study. With the aid of the SPSS statistical package, the Cronbach Alpha was used to analyse the reliability of the questionnaire. The descriptive analysis made heavy use of the percentage. However, because the data were not normally distributed, inferential statistics were performed using the Mann-Whitney U-test. The study's findings showed that teachers were generally positive and motivated about integrating Technology into educational activities. They still had a number of problems with resources and technical skills, though. The study's findings showed that teachers were generally positive and motivated about integrating Technology into educational activities. They still had a number of problems with resources and technical skills, though. The study's findings showed that teachers were generally positive and motivated about integrating Technology into educational activities. They still had a number of problems with resources and technical skills, though.

Karunanayaka & Weerakoon (2020) conducted an action research project in The Faculty of Education at the Open University of Sri Lanka to encourage

C-DELTA (Commonwealth Digital Education Leadership Training in Action) adoption among teachers and students in secondary schools in Sri Lanka and assess the effects it has on the teaching-learning process. The C-DELTA provides a framework for fostering digital education for lifelong learning by developing digital education leaders. 41 teachers took part in the intervention and applied C-DELTA in their classrooms. Through the course of the project, many types of data were gathered using surveys, concept maps, focus group interviews, implementation reports, and log records on

the C-DELTA platform. The adoption of C-DELTA has supported improving digital literacy, enacting changes in thinking and digital behavior among teachers and students, and enhancing teachers' leadership skills in digital education despite challenges like insufficient ICT facilities, time restraints, and limitations in English language proficiency, according to the findings.

Safta-Zecheria, tefănigă, & Negru (2020) conducted a study in Romania which aimed at identifying the challenges experienced by teachers regarding access to digital instruments, resources, and competences in adapting to the new technological change. They used qualitative information (interviews and focus groups) gathered as part of a collaborative action research project to assist teachers in adjusting to online learning. The findings demonstrate that teachers encountered difficulties in gaining access to technological and digital infrastructures and ensuring that students had access to online teaching and learning activities. Additionally, teachers had to quickly acquire the digital competencies required for online instruction. This led to discussions among educators, students, and parents as well as the establishment of both internal and external support systems for educational institutions.

Paudel (2020) conducted a study to investigate the ability and motivation of English teachers at the secondary level to use ICTs while teaching English. An explanatory sequential mixed research design was used to accomplish the goal. Forty secondary English teachers' abilities and motivation were assessed using a survey questionnaire, an unstructured interview, and non-participant observation (20 from public and 20 from private schools). Quantitative and qualitative datasets were gathered and put through a sequential analysis. The findings show that the majority of teachers are highly motivated to use ICTs even if they lack the skills, expertise, and confidence to handle and use new ICT tools and applications. The results show that teachers should have access to ICT training opportunities to improve their ability, motivation, knowledge, and confidence.

Syafryadin, Wardhana, & Febriani (2021) conducted a study to recognize the problems, the use of training as a remedy, and the assessment of digital training that can raise the professionalism of English teachers at SMP Negeri 13 Bengkulu, Indonesia. There were 10 English teachers that participated in this study, which used a descriptive qualitative methodology. Interviews, documentation, and observation were the methods used to

collect the data. The results of the interviews with the English teachers at SMP Negeri 13 Bengkulu, Indonesia, before and after they participated in the researchers' digital training, along with other factors, were compared before drawing any conclusions from the data analysis. The first research finding is that English teachers experienced issues with expertise, found it difficult to use applications or technology, and never participated in training. The second finding is that the introduction of digital training had numerous advantages, including enhancing the professionalism of English teachers, advancing and innovating their knowledge and skills in relation to the use of digital learning, bringing high-quality learning outcomes, and improving SMP Negeri 13 Bengkulu, Indonesia. The final finding is that even after the technology was implemented, English teachers still had issues utilizing it and required additional training. The study's conclusion is that digital training can be a cutting-edge approach to educational progress, but it requires good participation from educational institutions, trainers, and trainees.

Previous studies noted the importance of innovative technologies in enhancing teaching performance. In addition, they highlighted the need for equipping teachers with these technologies.

Pilot study

In order to provide evidence for the problem of this study, the researcher conducted a pilot study to measure the student teachers' electronic skills and their motivation towards using modern technology. A 30-item-questionnaire was administered to a sample of 40 student teachers in the Faculty of Education, English Department, Mansoura University, Egypt, from the third and fourth years. The questionnaire was administered both face-to-face and via a Google form that was sent to them via WhatsApp.

	Student teachers' electronic teaching skills questionnaire.										
No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree					
1	I have sufficient knowledge and skills to use technology during teaching English	20%	5%	20%	15%	40%					
2	I prefer conventional teaching to technology-based teaching	10%	30%	10%	30%	20%					
3	I need to learn how to use my computer for e-teaching	40%	25%	25%	5%	5%					
4	I have trouble designing learning materials for an electronic environment	20%	50%	5%	20%	5%					
5	I feel I lack the necessary electronic skills that will enable me to design a technology-based lesson	20%	35%	20%	15%	10%					
6	The University provides sufficient training on how to use technology for TEFL	10%	15%	15%	15%	45%					
7	I can use e-applications to design my English lessons	15%	10%	15%	20%	40%					
8	I can design an effective warm-up activity for students using an online platform or applications	15%	5%	10%	40%	30%					
9	I can promote interactive learning, group work, and team work during an EFL online session	20%	5%	10%	35%	30%					
10	I know how to use IT programs that help me correct students' homework asynchronously	5%	15%	10%	30%	40%					
11	I can adapt programs, materials, activities, handouts, and assignments using technology to attain the course objectives	20%	15%	5%	25%	35%					
12	I can create interactive e- teaching content	15%	10%	10%	40%	25%					
13	I can manage EFL/ESL learning activities online	10%	20%	10%	30%	30%					
14	I can use e-teaching programs such as PowerPoint to facilitate teaching specific concepts or skills	15%	10%	5%	25%	45%					

 Table (1)

 Student teachers' electronic teaching skills questionnaire.

I	l .					
No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
15	I can integrate technology to support various students' learning styles	10%	20%	5%	50%	15%
16	I am oriented with EFL online course planning	5%	20%	10%	30%	35%
17	I can use Microsoft Office tools such as Word, PowerPoint, and Google Forms to create documents and presentations while teaching English	5%	10%	5%	25%	55%
18	I am familiar with at least one synchronous online teaching platform, like Zoom, Microsoft Teams, Canvas, Google Meet etc.	20%	25%	15%	25%	15%
19	I can add audio/video files to my presentations	20%	10%	5%	35%	30%
20	I am comfortable using the learning management system or other online assessment tools (such as quizzes, exams, assignments, rubrics etc.) to evaluate students' performance	35%	15%	10%	20%	20%
21	I am comfortable using tools in the learning management system (such as uploading learning materials [reading materials, audio/video files], synchronous and asynchronous communication, posting feedback, building forums etc.) to facilitate student learning.	15%	15%	5%	40%	25%
22	I am comfortable using the learning management system to record and report student grades.	15%	20%	10%	30%	25%
23	I can provide TEFL activities using various digital applications (for example Google Forms, Google Docs, Word, PowerPoint, Quizziz, Kahoot, and Live Worksheet,)	15%	15%	10%	35%	25%
24	I think that training in technology-enhanced	40%	45%	5%	5%	5%

No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	language learning should be included in language education programs					
25	I think that my teaching can be enhanced by using digital tools and resources	40%	45%	10%	5%	0%
26	I think that it is important for me to improve my digital fluency	50%	35%	10%	5%	0%
27	I think that computers can make foreign language learning more interesting	55%	45%	0%	0%	0%
28	I would like to use computers in my TEFL classroom	25%	15%	40%	10%	10%
29	The idea of using technology while teaching English increases my motivation	20%	20%	45%	15%	0%
30	There are enough and clear instructions/training about how to organize a digital educational process	10%	20%	10%	20%	40%

Problem

Based on the review of literature, related previous studies, and the results of the pilot study, the problem of this study is that EFL student teachers lack the necessary e-teaching skills required for teaching English. This lack of e-teaching skills tends to demotivate them in their teaching practice.

Questions of the study

The present study aimed at answering the following questions:

- 1- What are the electronic teaching skills necessary for EFL student teachers?
- 2- What are the features of the innovative technology-based program to develop EFL student teachers' e-teaching skills and motivation?
- 3- What is the effectiveness of using innovative technologies-based program in developing EFL student teachers' e-teaching skills?
- 4- What is the effectiveness of using the innovative technologies-based program in developing EFL student teachers' motivation towards teaching?

Purpose

The current study aimed at enhancing student teachers' EFL eteaching skills and their motivation towards e-teaching through using an innovative technologies-based program.

Hypotheses

This present study attempted to test the following hypotheses:

- 1. There is a statistically significant difference at the 0.05 level between the experimental group and the control group in the mean score of the e-teaching skills checklist in favor of the experimental group.
- 2. There is a statistically significant differences at the 0.05 level between the mean score of the pre- and post-administration of the EFL e-teaching skills checklist on the experimental group in favor of the post administration.
- 3. There is a statistically significant difference at the 0.05 level between the mean score of the experimental group and that of the control group on the post administration of the motivation towards teaching scale in favor of the experimental group.
- 4. There is a statistically significant difference at the 0.05 level between the mean score of experimental group on the pre and post administration of the Motivation towards teaching scale in favor of the post administration.
- 5. There is a statistically significant difference at the 0.05 level between the experimental group and the control group in the mean score of the digital literacy questionnaire in favor of the experimental group.
- 6. There is a statistically significant difference at the 0.05 level between the mean score of the pre- and post-administration of the digital literacy questionnaire on the experimental group in favor of the post administration.
- 7. There were no statistically significant differences at the 0.05 significance level between the mean scores of the researcher and students of the experimental group on the EFL e-teaching skills observation checklist in the post-test.

Significance

It was hoped that the present study would contribute to:

- 1- It provides an innovative technologies-based program to enhance the EFL student teachers' e-teaching skills at the faculties of education starting from the second-year students to the fourth year.
- 2- It provides a guide for EFL student teachers on how to incorporate technology in their EFL teaching in the future.
- 3- It helps increase EFL student teachers' motivation towards using more technology in future teaching.

4- It draws the researchers' attention to conducting other researches on how to prepare EFL student teachers who are confident with using technology in teaching.

Delimitation

The study was delimited to:

- 1. Sample of 60 student teachers enrolled in the faculty of education, English Department, third year.
- 2. Some necessary EFL e-teaching skills required for teaching English using technology; namely, PowerPoint, Microsoft Teams App., Google Classroom, Google Documents, Edmodo, and Zoom.

Method

Design of the study

This study adopted the quasi-experimental design. The participants were divided into two groups: one as the experimental group and one as the control group. The experimental group was trained using the innovative technologies-based program for TEFL, whereas the control group received training using the regular method of teaching. Both groups administered a pre-post EFL e-teaching skills checklist, a motivation scale, and a digital literacy questionnaire. An EFL e-teaching skills observation checklist was only administered by the researcher on the experimental group. The researcher aime d at comparing their assessment to themselves and his assessment to the experimental group after receiving the treatment.

Figure (1): The Quasi-Experimental Design of the Study



Participants

The sample of the study included 60 EFL fourth year student teachers in the Faculty of Education. They were divided into two groups; the first group, the control group, will take their TEFL courses in the ordinary lectures and the second group, the experimental group, will be enrolled in the innovative technologies-based program for TEFL.

Settings

The study took a place at the Faculty of Education, Mansoura University, Dakahlyia, Egypt. Also, four sessions were conducted in the participants' teaching practice schools: Al-Emam Mohammed Metwaly Al-Shaarawy and Al-Emam Mohammed Abdou primary schools, Al-Mansoura, Dakahlia Governorate to their and evaluate their application and demos in real settings after 5 input sessions: an orientation session, and a session for integrating technology in their teaching for every language skill separately.

Instruments of the study

The present study used the following instruments:

- 1. An EFL e-teaching skills checklist to measure the level of the student teachers' electronic teaching skills of both the experimental and the control groups before and after the treatment (pre-post).
- 2. A motivation towards teaching EFL scale to assess the student teachers' motivation towards e-teaching (pre-post).
- 3. A digital literacy questionnaire for assessing the students' basic knowledge of how to use the computer and its basic applications.
- 4. An EFL e-teaching skills observation checklist conducted by the researcher to assess the experimental group during their teaching practice.

Definitions of terms

1- Electronic Teaching skills

Laurillard, Derrick & Doel (2016) defined electronic teaching skills for teachers and trainers as the necessary skills to nurture digital literacy in their learners which require the teaching workforce to be developing new curricula that take into account how technology is changing the workplace in each specialty field and that offer the opportunity to develop more general digital skills across all subject areas, coordinating the transition to blended learning, using technology to assist students in the classroom, at the university, at home, and at work, utilizing technology to stay current with their students' changing surroundings, and encouraging innovative, scalable course designs. Albrahim (2020) defined and categorized e-teaching skills at various levels, and different approaches have been used to categorize them. Salmon (2003) lists and categorizes the attributes or skills of e-moderators into five groups: Understanding the online process, technical proficiency, online communication prowess, material knowledge, and personal qualities are among the requirements. ISTE's (2001) standards for technology facilitation include a collection of competencies that help facilitators of technology carry out their responsibilities. These competency groups include (a) technology operations and concepts; (b) planning and designing learning environments and experiences; (c) teaching, learning, and developing the curriculum; (d) assessment and evaluation; (e) productivity and professional practice; (f) social, ethical, legal, and human issues; (g) procedures, policies, planning, and budgeting for technology environments; and (h) leadership and vision.

Keçi & Qosja (2021) defined e-teaching skills as a group of skills, tools, and knowledge required to use networks, digital devices, and other online apps that make it easier to handle information in accordance with the demands of the working environment, the learning environment, and problem-solving scenarios.

In this study, electronic teaching skills is defined as the necessary digital skills each teacher should acquire in order to help him/her in their EFL teaching both online and offline. It also refers to their abilities to use the important technologies that would make it easier to teach. They include the ability to deal with computers and prepare lessons based on technology and how to work with some applications like Zoom, Teams, PowerPoint, etc.

2- Digital Competence

European Parliament and the Council (2006) defined digital competence as the competence includes using information society technologies (IST) for work, play, and communication in a confident and critical manner. It is supported by fundamental ICT abilities, such as using computers to access, evaluate, save, produce, present, and exchange information as well as to communicate and take part in online collaborative networks.

Claro, Salinas, Cabello-Hutt, Martin, Preiss, Valenzuela, and Jara (2018) claim that teachers' digital competence goes beyond this definition to include "the information and communication skills and knowledge that teachers should have to perform their professional work (e.g., plan and prepare lessons) in a digital environment."

Biletska, Paladieva, Avchinnikova & Kazak (2021) defined digital competence as a set of skills, strategies, and knowledge that allow a person to use digital support to solve common emerging problems linked to the digital world, such as communication, information selection, writing, etc. Regarding the nature of technological tools and networks as an object of knowledge, digital competence has another aspect. Coding is an intellectual exercise that fosters autonomous and innovative thinking, teaches abstract, logical, and structured thinking, and aids in the development of "computational thinking," or the logic and intuition that helps students solve issues.

In this study, digital competence refers to a set of knowledge, attitudes, values, awareness, and skills that are necessary when EFL teachers try to utilize technology in their teaching. It also refers to the ability to efficiently and critically use information technology for learning. Moreover, it is the capacity of teachers to acquire, manage, combine, and evaluate information in an appropriate manner using digital technology and communication tools.

3- Motivation

According to Brophy (2004), Motivation is a theoretical concept that is used to explain the beginning, direction, intensity, persistence, and quality of behaviour, particularly behaviour that is goal-directed.

Praver & Oga-Baldwin (2008) defined motivation as the element that determines "why people choose to do what they do, how long they are willing to maintain the activity, and how hard they are going to pursue it." People who are motivated are eager and engaged throughout the duration of the job, in contrast to those who have lost their motivation and inspiration. Both language teachers and language learners can benefit from this concept of motivation.

Kendra (2022) defined the term "motivation" as the reasons behind someone's actions. It is what spurs people into taking certain actions. Motivation is the process that initiates, controls, and maintains goal-oriented behaviors. For instance, inspiration can help you achieve that promotion at work or lose weight. Simply defined, motivation encourages you to take steps that advance your goals. Motivation is the collective term for the biological, emotional, social, and cognitive forces that steer human behavior.

In this study, motivation is the power that urges teachers towards using technology and their persistence to acquire the necessary skills that help them improve their TEFL. It's also what makes them start taking actions to improve their e-teaching skills having in mind the goals behind their efforts.

Results and Discussions

The statistical methods used to verify the hypotheses were t-test for independent (unpaired) groups, t-test for paired groups, and effect size.

Testing the hypothesis:

1. The first hypothesis stated that: "There is a statistically significant difference at the 0.05 level between the experimental group and the control group in the mean score of the e-teaching skills checklist in favor of the experimental group".

In order to verify this hypothesis, the *t*-test of the post-test was used to compare the control and the experimental groups over all the EFL e-teaching skills checklist sub-skills and total degree of the EFL e-teaching skills checklist. Results are shown in the following table:

Table (2)

T- test of the post-test comparing the control and the experimental groups over all the EFL e-teaching skills checklist sub-skills and Total degree of the EFL e-teaching skills checklist.

Skills	The group	N.of cases	Means	S.D	DF	T.Value	Sig.
Planning	Control	30	14.50	2.543			0.01
and Warm- up Activities	Experimental	30	20.50	3.060		8.260	Sig.
Prosontation	Control	30	11.20	2.140		4.672	0.01
Tresentation	Experimental	30	13.70	2.003			Sig.
Practice	Control	30	12.83	2.493	58	7.071	0.01
Tractice	Experimental	30	17.27	2.363			Sig.
assassmant	Control	30	18.53	4.607		4 710	0.01
ussessment	Experimental	30	23.83	4.094		4./10	Sig.
Total degree	Control	30	57.07	9.702		7 004	0.01
of checklist	Experimental	30	75.30	10.449		7.004	Sig.

"The results in Table (??) clearly indicate that there are statistically significant differences between the mean scores of the experimental and control groups in all skills of the e-teaching skills checklist for English language and the total test score in the post-test in favor of the experimental group (the higher mean). All t-values were statistically significant at the 0.01 level with 58 degrees of freedom. These results confirm the first hypothesis. The researcher attributes these differences to the EFL innovative technology-based program."

2. The second hypothesis stated that: "There is a statistically significant differences at the 0.05 level between the mean score of the pre- and post-administration of the EFL e-teaching skills checklist on the experimental group in favor of the post administration".

In order to verify this hypothesis, the *t*- test of the experimental group was used to compare the pre-test and the post-test in over all the EFL e-teaching skills checklist sub-skills and total degree of the EFL e-teaching skills checklist. Results are shown in the following table:

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T-test of the experimental group comparing the pre-test and the post-test in over all the EFL e-teaching skills checklist sub-skills and total degree of the EFL e-teaching skills checklist.

Skills	Application	N.of cases	Means	S.D	df	T.Value	Sig.
Planning and	pre – test	30	14.57	4.199		7.989	0.01
Warm-up Activities	post – test	30	20.50	3.060			Sig.
Presentation	pre – test	30	10.23	3.002		5.949	0.01
	post – test	30	13.70	2.003			Sig.
Practice	pre – test	30	12.87	4.015	29	5.166	0.01 Sig.
Tractice	post – test	30	17.27	2.363	_		
assassmant	pre – test	30	17.67	6.244		5.076	0.01
ussessment	post – test	30	23.83	4.094			Sig.
Total degree	pre – test	30	55.33	16.281		6 544	0.01
of checklist	post – test	30	75.30	10.449		0.544	Sig.

Table (??) results show a significant difference in the mean scores of the experimental group students between the pre-test and post-test for all skills measured by the electronic skills checklist for teaching English, including the total score. The post-test scores were significantly higher, as indicated by all t-values being significant at the 0.01 level with 29 degrees of freedom. These findings support the fourth hypothesis. The researcher attributes these differences to the EFL innovative technology-based program.

3. The third hypothesis stated that: "There is a statistically significant difference at the 0.05 level between the mean score of the experimental group and that of the control group on the post administration of the motivation towards teaching scale in favor of the experimental group".

In order to verify this hypothesis, the *t*-test of the post-administration was used to compare the control and the experimental groups overall total degree of administration of the motivation towards teaching scale. Results are shown in the following table:

Table (4)T-test of the post-administration comparing the control and theexperimental groups overall total degree of administration of theMotivation towards teaching scale.

	The group	N.of cases	Means	S.D	df	T.Value	Sig.
Total degree of the Scale	Control	30	62.43	16.966	58	4.686	0.01 Sig.
	Experimental	30	81.73	14.867	.0		

The results in Table () show that there are statistically significant differences between the mean scores of the experimental and control groups on the total score of the teaching motivation scale in the post-test, in favor of the experimental group (higher mean = 81.73). The t-value of 4.686 was statistically significant at the 0.01 level with 58 degrees of freedom. These results support the third hypothesis. The researcher attributes these differences to the innovative technology-based program.

4. The fourth hypothesis stated that: "There is a statistically significant difference at the 0.05 level between the mean score of experimental group on the pre and post administration of the Motivation towards teaching scale in favor of the post administration".

In order to verify this hypothesis, the *t*-test of the experimental group was used to compare the pre-test and the post-test total degree of administration of the motivation towards teaching scale. The results are shown in the following table:

Table: (5)

T-test of the experimental group comparing the pre-test and the post-test total degree of administration of the motivation towards teaching scale.

	Application	N.of cases	Means	S.D	df	T.Value	Sig.
Total degree	pre – test	30	56.60	21.188	29	5 626	0.01
of the Scale	post – test	30	81.73	14.867	2)	5.020	Sig.

Table (table number) reveals a significant difference between the experimental group's pre-test and post-test mean scores on the motivation towards teaching scale. The post-test mean score was higher at 81.73. The t-test yielded a significant value of 5.626 (p < 0.01, df = 29), confirming the fourth hypothesis. These findings suggest that the innovative technology-based program was effective in enhancing teachers' motivation.

5. The fifth hypothesis stated that: "There is a statistically significant difference at the 0.05 level between the experimental group and the control group in the mean score of the digital literacy questionnaire in favor of the experimental group".

In order to verify this hypothesis, the *t*-test of the post – test was used to compare the control and the experimental groups over all digital literacy sub-skills and total degree of the digital literacy questionnaire. Results are shown in the following table:

Table (6)t-test of the post – test comparing the control and the experimental groups
over all digital literacy sub-skills and total degree of the digital literacy
questionnaire.

Skills	The group	N.of cases	Means	S.D	df	T.Value	Sig.
Basic	Control	30	61.33	4.342		13.829	0.01
computer skills	Experimental	30	77.80	4.866			Sig.
Using basic	Control	30	29.43	4.569			0.01 Sig.
tecnnological application skills	Experimental	30	37.20	3.782	58	7.172	
Total degree	Control	30	90. 77	6.745		13 447	0.01
of Scale	Experimental	30	115.00	7.206		13.447	Sig.

The results in Table (??) clearly indicate that there are statistically significant differences between the mean scores of the experimental and control groups in the 1 (post-test) digital literacy questionnaire and the total questionnaire score in the post-test, in favor of the experimental group (which had the higher mean). All t-values were statistically significant at the 0.01 level with 58 degrees of freedom. These results support or confirm the first hypothesis. The researcher attributes these differences to the innovative technology-based program.

6. The sixth hypothesis stated that: "There is a statistically significant difference at the 0.05 level between the mean score of the pre-

and post-administration of the digital literacy questionnaire on the experimental group in favor of the post administration".

In order to verify this hypothesis, the *t*-test of the experimental group comparing the pre-test and the post-test in overall digital literacy sub-skills and total degree of the digital literacy questionnaire. Results are shown in the following table:

Table (7)

T- Test of the experimental group comparing the pre-test and the post-test in overall digital literacy sub-skills and total degree of the digital literacy questionnaire.

Skills	Application	N.of cases	Means	S.D	df	T.Value	Sig.
Basic computer	pre – test	30	56.50	5.237		15.121	0.01
skills	post – test	30	77.80	4.866			Sig.
Using basic	pre – test	30	26.53	6.241	20	9.753	0.01
technological application skills	post – test	30	37.20	3.782	29		Sig.
Total degree of	pre – test	30	83.03	10.391		14 255	0.01
Scale	post – test	30	115.00	7.206		17.233	Sig.

The results in Table (??) show that there are statistically significant differences between the mean scores of the experimental group students in both the pre-test and post-test for the (post-test) digital literacy questionnaire skills and the total score, in favor of the post-test (higher mean). All t-values were statistically significant at the 0.01 level with 29 degrees of freedom. These results support or confirm the second hypothesis. The researcher attributes these differences to the innovative technology-based program.

7. The seventh hypothesis stated that: "There were no statistically significant differences at the 0.05 significance level between the mean scores of the researcher and students of the experimental group on the EFL e-teaching skills observation checklist in the post-test".

In order to verify this hypothesis, the *t*-test of the post-test was used to compare the experimental group students and the researcher's evaluation over all the e-teaching skills observation checklist sub-skills and total degree of the e-teaching skills observations checklist. Results are shown in the following table:

Table (8)

T-test of the post-test comparing the experimental group students and the researcher's evaluation over all the e-teaching skills observation checklist sub-skills and total degree of the e-teaching skills observations checklist.

Skills	The group	N.of cases	Means	S.D	df	T.Value	Sig.
Planning and	Student	30	20.50	3.060		0.115	0.909
Warm-up Activities	Evaluator	30	20.57	0.817		0.115	Not Sig.
Duccontration	Student	30	13.70	2.003		0.348	0.729
Presentation	Evaluator	30	13.57	0.626			Not Sig.
Dunation	Student	30	17.27	2.363	50	0.075	0.941
Practice	Evaluator	30	17.23	0.626	50		Not Sig.
	Student	30	23.83	4.094		1 102	0.275
assessment	Evaluator	30	24.67	0.606		1.103	Not Sig.
Total degree	Student	30	75.30	10.449		0.292	0.704
of checklist	Evaluator	30	76.03	1.245		0.382	Not Sig.

The results in Table (??) clearly show that there were no statistically significant differences between the mean scores of the researcher and students of the experimental group in all the skills of the EFL e-teaching skills observation checklist and the total test score in the post-test. All t-values were non-significant. These results support or confirm the seventh hypothesis. This indicates an agreement between the students' self-assessment on the EFL e-teaching skills observation checklist and the researcher assessment of them.

Discussion of the results:

The current study investigated the effectiveness of using the innovative technology-based program to develop electronic teaching skills of EFL student teachers and their motivation towards teaching. For the purpose of measuring the effectiveness of the treatment, both the experimental and control groups of the study administered an EFL e-teaching skills checklist, a motivation towards teaching scale, and a digital literacy questionnaire before and after being exposed to the treatment. Only the experimental group was observed by the researcher' EFL e-teaching skills observation checklist to compare between their assessment to themselves and that of the researcher after being exposed to the treatment.

The results of the study indicated that there is a statistically significant difference between the mean scores of the experimental and control groups in all skills of the EFL e-teaching skills checklist and the total test score in the post-test in favor of the experimental group (the higher mean). All tvalues were statistically significant at the 0.01 level with 58 degrees of freedom. These results confirm the first hypothesis. The researcher attributes these differences to the EFL innovative technology-based program. In addition, there is a statistically significant differences at the 0.05 level between the mean score of the pre- and post-administration of the EFL e-teaching skills checklist on the experimental group in favor of the post administration. Furthermore, the total effect size indicates that there is a strong impact of the innovative technology-based program on the total score of the e-teaching skills checklist for teaching English and its sub-skills. The values of (n^2) for each skill and the overall checklist score range from 0.47 to 0.688. It indicates that 59.6% of the total variance in the overall score of the EFL e-teaching skills checklist (Total degree of checklist) can be attributed to the independent variable (the innovative technology-based

based program . Moreover, there is a statistically significant difference at the 0.05 level between the mean score of the experimental group and that of the control group on the post administration of the motivation towards teaching scale in favor of the experimental group. There is also a statistically significant difference at the 0.05 level between the mean score of experimental group on the pre and post administration of the Motivation towards teaching scale in favor of the post administration. When it comes to the effect size, the innovative technology-based program has a strong impact on the total score of the teaching motivation scale. The value of η^2 was found to be 0.522 for the total score of the scale, indicating that 52.2% of the total variance in the dependent variable (Total degree of the Scale) can be attributed to the independent variable (the innovative technology-based program). This signifies a substantial influence of the program. This, consequently, means that the students' level of motivation increased as a result of using the innovative technologies-based program to develop EFL student teachers' electronic teaching skills and their motivation towards teaching.

program). This indicates a significant impact of the innovative technologies-

Challenges Encountered During the Experiment

The implementation of the experimental design presented several challenges that required careful consideration and strategic adaptation.

Technological Proficiency of Participants

One significant hurdle was the varying levels of technological proficiency among the participating students. Many students exhibited limited familiarity with basic computer operations and the specific applications used in the experiment. To mitigate this issue, the researcher proactively incorporated technology training sessions into the treatment phase. These sessions focused on essential computer skills, such as navigating interfaces, utilizing productivity tools, and effectively interacting with digital resources. By providing targeted instruction and hands-on practice, the researcher aimed to equip the students with the necessary technological foundation to successfully engage with the experimental tasks.

Infrastructure Constraints

Another challenge arose from the inadequate technological infrastructure within the participating schools. Limited access to computers and reliable internet connectivity hindered the smooth execution of the experiment. To circumvent this limitation, the researcher implemented a hybrid approach, combining in-person sessions with remote learning opportunities. Students were encouraged to utilize their personal devices, such as laptops and tablets, to access the necessary resources and complete assignments. Additionally, the researcher provided a limited number of laptops to be shared among students who lacked personal devices. This strategy ensured that all participants had equitable access to the required technology, albeit with some logistical constraints.

Assessment and Feedback

The process of assessing student work and providing timely, constructive feedback proved to be a complex task. Given the large number of participants and the diverse nature of the assignments, it was essential to develop efficient and effective evaluation methods. To address this challenge, the researcher employed a combination of quantitative and gualitative assessment techniques. Quantitative measures, such as standardized tests and quizzes, were used to assess students' knowledge and skills objectively. Qualitative assessments, such as project reports and presentations, allowed for a more nuanced evaluation of students' critical thinking, creativity, and problem-solving abilities.

To facilitate timely feedback, the researcher established regular communication channels with the students. This included in-person meetings, email correspondence, and online discussion forums. By providing prompt and specific feedback, the researcher aimed to guide students' learning and help them identify areas for improvement.

Despite these challenges, the researcher's proactive approach and innovative strategies enabled the successful implementation of the experiment. By addressing the technological and logistical limitations, as well as refining the assessment and feedback processes, the researcher was able to maximize the effectiveness of the intervention and gather valuable insights into the impact of the experimental treatment.

Conclusion

With reference to the results of the study, the following points were concluded:

- 1. Enhanced EFL E-Teaching Skills: The experimental group, exposed to the innovative program, significantly outperformed the control group in terms of EFL e-teaching skills. This suggests that the program effectively developed essential technological competencies required for effective EFL teaching.
- 2. **Increased Motivation Towards Teaching EFL:** The experimental group demonstrated significantly higher levels of motivation towards teaching EFL compared to the control group. This indicates that the program not only improved the EFL e-teaching skills but also positively impacted students' overall motivation and enthusiasm for teaching.
- 3. **Improved Digital Literacy:** The experimental group exhibited significant gains in digital literacy skills, suggesting that the program effectively equipped students with the necessary technological knowledge and abilities to navigate the digital landscape.
- 4. Alignment of Self-Perception with the researcher Evaluation: The lack of significant differences between the researcher's and students' self-evaluations of EFL e-teaching skills in the post-test further reinforces the program's effectiveness. It suggests that students were able to accurately assess their own skills, aligning with the researcher's perspective.

Overall Impact:

The innovative technologies-based program demonstrated a positive and significant impact on EFL student teachers' e-teaching skills, motivation, and digital literacy. By addressing the challenges identified in research like ChahKandi (2021), this program offers a promising approach to preparing future teachers for the demands of EFL technology-mediated teaching.

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