

**Research Article**

# Enhancing Teachers' Professional Competence through E-Learning Programs: Challenges and Benefits in the 21<sup>st</sup> Century Digital Era

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## Abstract

The current study discusses how to enhance teachers' professional competence through E-learning programs: challenges and benefits in the 21<sup>st</sup> century digital era. E-learning is more valuable for teachers to improve their professional competence. E-learning is still in its infancy to assist teachers in their professional development. E-learning is a teaching-learning approach based on the use of digital tools. It employs technology to ensure teachers' professional competency at all moments and in every location. Teachers are trained and urged to engage with one another and accept alternative views as part of the learning process in e-learning in the 21<sup>st</sup> century digital era. Within the paper, we look at how e-learning might enhance teachers' professional development while also recognizing the challenges they face in today's digital world. The study is based on the idea that a future digital era is being raised through e-learning. This proposed study hopes to provide an insight into teachers' professional competencies in e-learning in today's digital age. As an outcome of their professional competence development programs, teachers can work more successfully. In addition to measuring their development and benefits, teachers who had completed the program's e-learning training were tested to participate in an ongoing study. When teaching students who have grown up with digitalization, teachers encounter various new challenges. To overcome the obstacles in e-learning programs, teachers' professional competence is rapidly turning to e-learning techniques in ongoing developmental programs. In the e-learning process, teachers' professional competency and lack of cooperation or contact all play a part. To reduce the challenges of e-learning, one must have a strong sense of purpose and robust professional competence skills in the digital era. There are many challenges in 21<sup>st</sup>-century educational systems. Still, teachers' professional competence and respect for teaching-learning in e-learning has enabled the author to overcome these challenges and benefit from their efforts in the 21<sup>st</sup> century digital era.

## Keywords

Teacher's professional development, competency, e-learning, challenge, benefits, 21<sup>st</sup> century and digital era

## Introduction

E-learning, whether in school systems or for individuals, has become increasingly relevant thanks to innovations such as e-learning, open educational resources, and new forms of web-based teaching. E-learning effectiveness is on the rise, and concerns possible problems in e-learning setups. E-learning is not an adequate substitute for classroom teaching (Palloff and Pratt, 2013). Multiple teacher professional development strategies are created, planned, and launched to prepare teachers to work in an e-learning atmosphere. Most of the current study on e-learning teacher professional development focuses on the meaningful changes teachers face (Megalou et al., 2010), related benefits of e-learning.

ing-focused teacher professional development, and why they are thought essential. As an outcome of the study, a strong foundation for e-learning teacher professional development is explored and offered. The original study's initial purpose, technique, outcomes, discussion and problems, and the conclusion are extensive explanations of the main conceptual underpinning connected to teacher professional development for e-learning. Teachers' professional challenges are vibrant for enhancing teacher skills using e-learning. When observing, teachers' teaching methods and performance after joining the program are evaluated. This study looks at a teacher's daily foundation to ensure today's digital era. The role of teachers in the twenty-first century has become exceedingly challenging in today's modern dynamic world, where information is practically limitless. Teachers need to become more computer savvy and accountable for their pupils' academic and personal success. E-learning has become an increasingly important aspect of teachers' professional development in the digital world of the 21<sup>st</sup> century. As stated previously, ICTs can be used in e-learning in various ways. Technology-enabled educational resources and perspectives fall under this broad category. An array of tools and resources are integrated into e-learning (Sife et al., 2007). The development of the societal information structure has led to new progress in e-learning, according to Kahiigi (Kahiigi et al., 2008). Teachers and students can benefit from the effectiveness of e-learning by employing its highlights (Kruse, 2002). Teachers must now serve as facilitators, assisting students in making judgments about the quality and continuity of alternate sources, accessible and considerable skilled professionals, involved pioneers, partner organizations, and critical suppliers among students and those who need and want to comprehend and refer to a particular provider. To ensure that his students use the most relevant e-learning, the teacher must record how much time they spend on the Internet. The teacher must address social and emotional issues that block pupils' learning, and be willing to make changes if their growth stagnates. The digital era is transforming the financial system. High-tech and "collective" abilities are becoming increasingly vital in the profession and e-learning development in the 21<sup>st</sup> century digital era.

## **Data and methods**

### **The Concept of E-Learning**

For one thing, it helps students move from memorizing facts to actively participating in classroom discussion and acquiring new skills. The most up-to-date technology is used in the entertainment and education of students and the general public. A student's motivation and capacity to study are directly linked to their self-perception created by technological breakthroughs. For those interested in e-learning or any other method that uses computers, e-learning is the most recent development. Without computers and networks, there is no efficient exchange of information. This new technology can be used for various locations, including classrooms and e-learning groups. In recent decades, there seems to have been notable growth in the usage of e-learning (Salmon, 2011). E-learning is a cross between conventional classroom instruction and the latest technological innovation. A pencil or notebook in the classroom is just as effective as cutting-edge technology. Because it is a mental ability, learning necessitates the use of technology. Because of its lack of technical complexity, a pencil may feel more comfortable in many people's hands. Technologies impact a wide range of issues, despite their numerous applications. Writing, interplay, visual imagery, and stocking up are just a few of the tools used in e-learning. Technology is required to generate and deliver e-learning. Digital tools and technologies are employed to enhance teaching-learning and evaluation. A range of e-learning technologies, equipment, platforms, and programs have made learning more flexible and adaptable. We can also say that e-learning is easy to grasp. Students can access educational

information via digital equipment while not in the school environment. An e-learning class, training course, or degree can be completed in digital form. E-learning, digitalized e-learning, web-based learning are just some of the words used to describe online, internet-based education. When referring to classes that can only be taken online, “e-learning” is used. As per the studies, they are using e-learning to enhance learning efficiency, which is challenging since teachers use various strategies to avoid making significant changes to their working conditions. Moreover, the study demonstrates that focusing solely on the fulfillment of post-learning goals as a usefulness measure inhibits developers from seeing unintended and unplanned changes in practice due to e-learning initiatives. This study aims to develop models that are used to explore the relationships among different factors that determine usefulness. Several categories are established under the framework: the context in which the e-learning solutions are utilized, the item (the e-learning solution actually), and the item’s consumers. Developing an e-learning program, e-learning content must be generated and delivered quickly to succeed. Processes in the movement must be used creatively to create various intriguing and appealing compositions. This section will teach you how to develop interactive e-learning content, including gathering intelligence, employing learning approaches and media, and building an active output utilizing appropriate technology and e-learning programs in the 21<sup>st</sup> century digital era.

## **Study and Results**

### **Professional Development for Teachers**

The need for competencies in the development of future leaders has skyrocketed around the world, and the educational industry is scrambling to satisfy it. As a result, professional growth, which includes training and education to gain practical experience, has become a major focus. To have a positive impact on developing these skills in young people, teachers must have a strong understanding of 21<sup>st</sup> century capabilities and be well equipped to impart such abilities to students. The outcomes of an initial study on professional development for 21<sup>st</sup> century skills education, especially for teachers, are unsatisfactory. Teachers with experience anywhere at the educational level should remain up-to-date on scientific advances in a range of areas, and they must continue their professionalism as an outcome (Guskey 2000; 2002). As an outcome, several teachers will be needed to have a basic understanding of e-learning in parallel with a thorough mastery of instructional strategies and curriculum (Chikasanda et al., 2013; Salmon, 2011; Tschida et al., 2016). This is a severe problem since teachers who were trained and instructed using the traditional education paradigm in decades past lack the necessary abilities to establish a 21<sup>st</sup> century e-learning environment for their students’ success. They have not yet gained adequate prominence in the study of the specific areas where they are lacking. This study has identified the skills and capabilities that teachers lack, then suggests ways to obtain or enhance these skills to stay current with educational reform, intending to provide better training and assistance to interested and involved parents, and the adoption of 21<sup>st</sup> century e-learning skills. These include new information into what teachers had previously stated as essential aspects of professional development to bolster enhancing those features. For instance, teacher education and the current leader’s importance are highlighted more (Desimone and Garet, 2015). This is a significant worry since teachers who were trained and instructed using the old academic approach in previous decades lack the necessary abilities to develop 21<sup>st</sup> century e-learning environments to help their students succeed. They have not developed sufficient focus in the study for the precise areas they lack. This study has highlighted the skills and abilities that instructors need and strategies for teachers to acquire or improve these talents to keep up with educational reforms and to provide better support and education for fully integrated and 21<sup>st</sup> century

e-learning skills. An operation and maintenance theory should be considered when looking into teacher professional development. The first section of the study focuses on career development. Whenever it comes to the most critical features of collaborative learning, the focus should be on content, active education, and course cohesion (Desimone, 2009). It has been found that professional teacher development that includes models of effective practice enhances teacher development and student achievement. Teachers could integrate e-learning and teaching-learning using instructional and pedagogical frameworks and interactive models to develop a paradigm of strategies on which to base their development and performance in the twenty-first century digital era.

### **Teacher's Professional Competencies**

Education is a personality development process for improving one's style by making one more rational, competent, responsive, and intellectual. It is a character-building method that enhances a person's character by making him/her more reasonable, thoughtful, responsive, and intelligent. Competence requirements are based on a teacher's professional principles and include the capacity to apply knowledge and skills. In the realm of education, there is a clear link between such a teacher's professional competence and student performance, and competence is usually associated with high outstanding competency. We must first determine competence before investigating the concept of teacher competency. Because competency is a term used by a wide range of people in a wide range of situations, it is defined in various ways. This word has two definitions: trainee teachers and quality of work. Competencies are the skills, information, and attitudes that a future teacher must possess to successfully finish a "competency-based" teaching method (Houston, 1987). According to some studies, "competence" is defined as skills, talents, and behaviours that can improve performance and the state or quality of being suitably qualified and capable of completing a task. The Professional Competence-based Action plan, initiated by David McClelland in the 1960s, aiming to move away from the traditional efforts to define basic competence in terms of understanding, skills, and behaviours, and instead focus on specific values, qualities, and motivating factors that continuously differentiate excellent performance from ordinary work performance. In a 1970 study titled "Planning the Executive Development Program", Craig C. Lundberg coined the term "competency", which was promoted by David McClelland in his famous 1973 book *Testing for Competence rather than Intelligence*. Richard Boyatzis and others have argued for it since then. Professional competence is frequently connected with outstanding high-level skills, and there is a clear correlation between a teacher's professional competence and educational performance. The word "competence" has two different connotations in education. From a theoretical standpoint, competence is defined as a framework for assisting with specific tasks. Competence appears to encompass a wide variety of higher-level work skills and abilities that demonstrate the ability to deal with complex and unusual circumstances. This concept, which requires an intentional decision judgment, encompasses knowledge, abilities, feelings, understanding of concepts, and creative preparation (Westera, 2001). Professional competence refers to a teacher's ability to perform certain professional activities and other specific tasks as required by the nature of their job. Skills in instructional approaches, student and classroom management, interpersonal interactions, evaluation and monitoring, and other areas establish a teacher's proficiency. Only in the context of effective learning should a teaching method be evaluated. As per the majority of studies, a competent teacher must have subject matter mastery, teaching abilities, and personal attributes such as excitability, inventiveness, and a great sense of humour. In any educational environment, the value of a teacher's skills and performance cannot be overstated. A range of performance standards for teachers might be beneficial in helping them become more competent and effective. Professional competency is the set



of information, abilities, beliefs, dispositions, capabilities, and ideas required by a group of individuals to excel in their chosen profession. Good teaching, economic, sociological, essential communication, personal, cognitive, and other professional competencies are needed in the twenty-first century digital era.

### **The Challenges in E-Learning**

E-learning is a challenging system with many forms and varying student attention levels. To make e-learning more interactive, the teacher must make decisions at every stage of the process of learning. A potential challenge to e-learning is that it may not be as efficient in terms of things like clarifying and explaining concepts. Students benefit from having one-on-one time with their teachers. It's challenging for teachers in the digital era to improve their professional competence using e-learning in the twenty-first century digital era.

**Technical Challenges:** E-learning institutions face significant technological challenges. E-learning materials must be developed with the needs of the public in mind. E-technological learning challenges can be divided into two major classifications.

**There is a lack of understanding of the strengths of e-learning:** The importance of e-learning varies depending on students being aware of the tools' usage (Bhuasiri et al., 2012). Learners are usually unaware of good e-learning resources (Maldonado et al., 2011; Mirza & Al-Abdulkareem, 2011). The fact that so many of those we surveyed had no prior knowledge about e-learning resources was an eye-opening discovery of this study.

**There is a lack of clarity as to what e-learning is:** Students must identify their goals and select the new technology they will use to finish the work when taking an online course. E-learning systems' past success has been attributed partly to their ethnic applicability in the classroom (Rosenberg, 2001). Significant changes have been made to the way students are taught in public elementary and secondary schools (Al-Halabi & Al-Hawari, 2010). E-learning is impacted by people's reluctance to change from old-fashioned content delivery methods to the new e-learning foundation (Ali & Magalhaes, 2008).

**There is indeed an issue with the e-learning website:** E-learning systems that are simple, operational, and consistent have a tremendous effect on customer satisfaction, according to some studies (Motaghian et al., 2011; Bhuasiri, et al., 2012). Another significant issue with their college's e-learning was the non-contiguous ease of access to the webpage.

**In e-learning courses, teachers and students do not have the same sense of contact or interaction:** The teacher needs to be highly motivated and well-organized to mitigate potential implications.

### **The Benefits of e-learning**

The potential benefits of e-learning make it an excellent method of instructing young adults in any subject area or field of study. Various studies and authors have found massive benefits to using e-learning technologies in the classroom (Klein & Ware, 2003; Algahtani, 2011; Hameed et al. 2008; Rosenberg, 2001; Downey et al. 2000; Nichols, 2003). E-learning has been seen in numerous studies to be adaptable to the unique learning styles of each student. Rosenberg believes that e-learning is more effective when it focuses on the students' needs rather than educational teachers and administrators. Research shows that classroom e-learning provides these benefits.

- It is very flexible in terms of when and where it happens. Classroom learning at any time and location is an option for every student. For both teachers and students or learners, Smedley (Al-Adwan et al., 2013) says, e-learning provides a great deal more flexibility regarding when and where information is conveyed or obtained.

- Besides making it easy to obtain vast amounts of information, e-learning enhances comprehension and professional certification attainment.

- Students can form new friends through internet discussion boards. E-learning eliminates obstacles to involvement, such as the apprehension of talking in front of a group of peers. The ability for learners to participate with each other while they are learning in an e-learning environment nurtures social contact and admiration for a wide variety of viewpoints. Educational securities are strengthened because of the ease with which people can exchange information via the Internet. According to Wagner (Wagner et al., 2008), e-learning provides new opportunities for interaction between teachers and students.

- Educators do not have to leave their homes to take advantage of the lower cost of e-learning. As a reward, it can save money by enabling more students to take advantage of educational opportunities with fewer facilities.

- E-learning acknowledges that each young person is unique. A course can be critiqued in its entirety by some educators, while others want to focus on just one or two aspects of it.

- The use of e-learning is assisting in helping relieve the shortage of academic staff, such as teachers, accomplices, and lab technicians.

- Students can go at their own pace with e-learning. The adaptive method, for instance, allows students to study at their own pace and speed. Stress is decreased, and joy increased (Amer, 2007; Urdan and Weggen, 2000; Algahtani, 2011; Rosenberg, 2001; Klein and Ware, 2003).

## Conclusion

Despite the numerous advantages of e-learning, teachers do not use it as much as they should to improve their professional competence. The ability to properly handle significant challenges is pivotal to the development of e-learning in the classroom. Technical troubles, teacher concern about adopting e-learning techniques, and a lack of knowledge of the purpose and benefits of e-learning have all been challenges. Given the relevance of design challenges in e-learning systems, teachers have placed a high value on incorporating creative social media network design trends into e-learning systems in a way that continues to encourage students to use and engage with such processes. In the near future, a large-scale study will be conducted to understand better the challenges and facilities of e-learning in order to assure teachers' professional competency at all times and in all settings. The amount of technology experience and knowledge that teachers have has a big impact as to whether or not they can use e-learning to improve their professional competence. In under-developed nations, there is a strong desire to use e-learning. Education in poor countries suffers significant challenges, despite the fact that it faces major challenges such as a lack of relevant modern technologies, infrastructure and technology, and economic support. It is important to keep in mind that the way e-learning is adopted in classrooms is influenced by a variety of factors. These variations may occur due to various perspectives on how instruction must be provided. Due to the universal flexibility of the digital era, teachers can continue their professional growth while saving time and effort. Teachers can use their spare time on more vital activities using e-learning, often known as virtual learning. Digital classrooms, and also e-learning approaches with studies that catch their attention and motivate them to learn more, could provide teachers with vital professional development and competence through e-learning programs in the twenty-first century digital era.

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