



## E-teaching Competencies to Enhance Teaching Learning Process: A Systematic Review

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### Abstract

*E-teaching Competencies is defined as the master in information and communication technology of teachers which is used in teaching learning. In online mode, this can be understood as a teacher's role in defining objectives and methods for the teaching learning process devising strategies on how to teach and making the process accessible and smooth for students. The purpose of this study is to understand teacher's E-teaching Competencies through a systematic review of the literature, in this research published journal research paper have been analysed. Research findings indicates that E-teaching Competencies encompassing pedagogical, technological communicational related competencies are essential for teachers in online teaching.*

**Keywords:** teachers, E-teaching, teaching, learning

### Introduction

Teaching is a two-way process where teachers teach students and students learn. E-teaching is a process where teacher teaches students with using information and communication technology like digital board, digital pen speakers, microphone, computer, internet and so more. In today's rapidly changing technological landscape, the integration of technology into education is opening up avenues for teaching, shifting the educational paradigm away from traditional methods and towards technology-based instructions. The integration of technology in education has extended access to students in even the most remote areas. With the help of technology teacher can simultaneously teach students located in different places while being anywhere. The integration of technology in to education has made learning accessible even to students who were previously unable to receive an education due to geographical barriers. Now, students can learn from any teachers of their choice, regardless of where the teacher and students are located in the country. For a teacher to impart education to students are using technology, possessing technical knowledge is absolutely essential. In this study the researcher has attempted to enhance the E-



teaching Competencies of teachers through a systematic review of the literature which is based on national and international journals papers. For the first study researcher selected (Yachina, et al, 2016) paper which aimed to understand e-teaching materials in the humanities and the method of within the training system for future teachers. findings revealed that students recognized the importance of the effectiveness of computer technology, this indicates that incorporating creation and use of e-teaching materials in to the future training of teachers will help to enhance the quality of professional education and foster the ability to achieve professional and educational goals.(Rao,2016) stated that the framework of the e-environment for the education of students with specific learning disabilities incorporates assistive technology and e-teaching techniques. Highlighting the role of teachers within this e-environment , it is stated that they should implement new teaching assistive technologies and e-teaching methods. (Subramanian,2017) said that e-teaching requires distinct e-roles; it is essential for teachers to acquire adequate knowledge for e-teaching and e-learning capabilities provide teachers with a powerful means to manage challenges and master e-teaching competencies. (Ogbuanya,2017) stated that expert determined the appropriate content for e-teaching strategies, training facilities and training processes require to build the technical capabilities of lecturers, thereby ensuring the effective use of e-teaching in education. (Adelaja&Muraina,2018) proposed that the need of the e-teaching competencies of lecturers should be identified so that effective teaching can be conducted. (Guri-Rosenblit,2018) said that e-teaching is a prerequisite for achieving effectiveness and fruitful e-learning in higher education. (Sarfaraz et al,2020)stated that faculty members of the medical department were competent in e-teaching- specifically regarding student engagement, instructional strategies, technical communication and time management skills.(Iffat Rahmatullah et al,2020) proposed that there is a need for appropriate training for e-teachers to enable them to handle challenging and unexpected situations; it was also noted that engaging students through various activities proved beneficial. The experience of e-teaching using digital media allows teachers to evaluate their digital proficiency and teaching capabilities. (Bakare et al,2020) said that developing e-competencies requires skills, facilities and tools. While as (Bierne&Titko,2020) presented a theoretical foundation for further researcher and stated that higher education institutions can help to improve teaching activities and quality within the Moodle platforms. (Alvi et al, 2021) said that teachers also had to face numerous challenges when suddenly switching to online teaching. While as (Thamburaj,2021) proposed that in the time ahead, teachers must be prepared for new trends and strategies; they need to be competent enough to handle local, national and international contexts. attention must be focused o building capabilities and fostering commitment within the realm of e-education and e-teaching, as this will also lead to an improvement in the quality of teacher education. (Batra,2021) stated that the use of various methods in teaching learning process enhance the interest of both students and teachers; alongside the use of technology in instruction, the traditional teaching-learning process also has a positive impact on student success. (Mata,2021) explain that there are an immense strength



and opportunity; therefore, institutions and teachers should develop available resources to enhance the implementation of better e-teaching.

As well as (Wong et al,2021) said that psychological factors such as stress, anxiety and depression among teachers were at a moderate level and e-teaching competencies was also moderate. (Moh Bakare et al) explain that lecturers in technical education should undergo retraining through seminars, workshops and short duration courses so that technical education curricula in universities can be effectively transferred to students. (Ede& Nwaogazie,2022) proposed that the government should prepare teachers for the implementation of e-teaching and organize workshops and seminars for them so that they can acquire the necessary technical skills and capabilities. (Barari et al,2022) said that e-learning literature by highlighting the pedagogical standards need to be met in order to get the best out of learning technologies. These standards and indicators can be either used as a guide to design or evaluate e-learning initiatives from a pedagogical perspective. (Almulla,2022) suggested that attention should be paid to digital usage to improve online teaching competencies.

(Huang et al,2022) explained that among the identified options, sharing technology with other organizations and integrating technology into the curriculum were pathways to improving e-learning. (Ismaeel,2022) explained that both traditional and technological methods are important for developing technological pedagogical content knowledge skills. (Košta&Vrsaljko,2023) said that e-teaching can also be used in language and music classes, making instructions simpler and more accessible. (Adigun et al,2024) explained that during COVID-19, pre-service teachers showed less engagement with e-teaching due to the limited availability of e-teaching resources at the institutions. (Wiyono et al,2025) said that STEM-based physics teaching materials have been developed during the planning, preparation, and evaluation phases. After analysing numerous studies, researcher found that 21<sup>st</sup> century technology-based education, it has become crucial for teachers to be proficient in e-teaching. Education has historically been imparted through traditional methods, with students initially acquiring knowledge in Gurukuls, over time, education has undergone numerous transformations, and in the 21<sup>st</sup> century it is becoming based on the integration of technology. To provide technology-based education to students, it is essential for teachers to possess technical knowledge; this enables instruction to be delivered through technology and enhance the teaching- learning process.

## Results

In the 21<sup>st</sup> century, teaching in the classroom using e-resources or teaching via online modes falls under the category of e-teaching. E-teaching can be synchronous, asynchronous or blended. In this research paper, e-teaching refers to education conducted via the online mode. In the context of e-teaching competencies, a teacher's role is not limited merely to teaching; rather, they perform multiple roles simultaneously- playing role as an e-instructor who directs students in their tasks, and as an e-mentor who provides them with guidance. And also become a technical expert, as one resolves technical glitches that arise while studying in online mode. The teacher is also a good e-communicator who conducts the online class smoothly and politely. A teacher plays



numerous roles in e-teaching; collectively, these roles enhance the teaching and evolve into e-teaching competencies.

## Conclusion

E-teaching competencies are essential for every teacher who conducts the teaching learning process with the help of technology. Every teacher teaching in any field of education needs to engage in e-teaching. A teacher should be an expert in their subject and possess the ability to prepare subject-specific content. Educational institutions should provide e-teaching materials so that teachers can fully utilize their e-teaching competencies and make teaching simple, convenient and accessible for students. E-teaching competencies are helpful in areas where sources of income are limited.

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