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A STUDY ON DIGITAL TEACHING COMPETENCY AND SELF-DIRECTED LEARNING AMONG HIGHER EDUCATION TEACHERS

Ms. Susmita Das, Dr. C. Arundhathi Bai Research Scholar, Assistant Professor Faculty of Education
ICFAI University Agartala, India

Abstract

In the context of India's rapid technological advancement, the integration of digital technology into education is both a necessity and an opportunity for transforming the educational landscape. This study observes the need for self-directed learning (SDL) to enhance digital teaching competency among higher education teachers. The digital revolution, driven by liberalization, privatization, and globalization, demands that educators develop digital competencies to meet the evolving educational priorities and manage information effectively. Digitalization in education encompasses the use of digital tools for assessment, teaching, learning, and administration, making education more accessible and efficient. This research underscores the importance of SDL, where educators take charge of their professional growth by identifying learning needs, setting goals, and utilizing resources independently. SDL not only fosters autonomy and motivation but also aligns with lifelong learning principles, essential for adapting to technological advancements and modern educational demands. By engaging in SDL, teachers can continuously update their digital skills, creating dynamic, personalized learning environments that enhance student's outcomes. The study reveals that digital teaching competencies are crucial for effective education in the 21st century. Teachers were support self-directed learners by enhancing their digital skills, design personalized learning paths, and create engaging digital classrooms. The findings indicate that continuous professional development, digital competency and the ability to adapt to changing educational environments are vital for educators.

Keywords: Self-Directed Learning, Digital Competency, Digitalization, Professional Development.

Introduction

Developing countries like India seem to be in urgent need of this digital revolution. The Indian educational system is facing numerous challenges as well as an abundance of new educational opportunities as a result of the rapid growth of technology. The emergence of digitalization in education has been advanced by the liberalization, privatization, globalization, and easy access phenomena that characterize the new millennium. This is significant for the Indian educational system and has led to a rapid creation of educational priorities. Due to advances in technology, we today live in an information society that has no limits, defined by an explosion of readily available information and knowledge. These technologies have changed how the educational system functions and is managed through the use of digital data and its storage, retrieval, manipulation, and transmission. It is now a tool for saving money and time. In order to meet the increasing demands on education, we must use the most effective strategies for integrating digital technology into our educational framework. This will enable our educational institutions to become potential hubs for learning, meeting the needs of students around the world. Integrating digital technology into the educational system could be beneficial and help India become a developed nation. Universities are the repositories of knowledge, and higher education serves as a nation's public face. The idea of digitalizing the educational system via the

use of ICT and related technologies can help the governing bodies provide better services to all stakeholders and supervise the implementation of management and educational plans and reforms throughout the nation. In an increasingly digitalized environment, it is imperative to improve the computer and information technology abilities of educators and their capacity to make the most use of digital resources. The development of digital technology has caused a paradigm shift in educational systems around the world. In education, the more traditional teacher-centered methods are being replaced by more contemporary learner-centered methods. Via computers, the internet, and social media, students learn facts, skills, attitudes, and knowledge. Technology has significantly changed a number of education-related processes. The term "digitalization of education" describes the application of digital tools and technologies to assessment, research, teaching and learning procedures, administrative tasks, and extension activities. Digital technology is becoming an increasingly significant tool for teaching and learning as it helps teachers satisfy many of the demands of today's technological environment. It has aided in the advancement of education in many nations by providing innovative teaching resources, information access, chances for international cooperation, and alternative paths for professional growth. Technology has significantly changed a number of education-related processes. The term "digitalization of education" describes the application of digital tools and technologies to assessment, research, teaching and learning procedures, administrative tasks, and extension activities. Digital technology is becoming an increasingly significant tool for teaching and learning as it helps teachers satisfy many of the demands of today's technological environment. It has aided in the advancement of education in many nations by providing innovative teaching resources, information access, chances for international cooperation, and alternative paths for professional growth. Technology-based learning offers customized learning experiences and is technologically advanced, substantive, content-focused, and flexible enough to meet the specific needs of every student. These learning opportunities use a range of vibrant, spectacular, stunning, and animated text resources that are usually supplemented by photos, graphics, animations, and videos to give students both intrinsic motivation and a rich and complex learning environment. Students have unrestricted access to these freely updated educational materials. Students can engage in learning activities according to their requirements, interests, and convenience by using these resources. Digital learning encourages lifelong learning and gives people who might not be able to attend traditional classrooms. Digitalization of Education: Technology has made education more accessible in a number of ways. These include online learning, blended learning, blogs, online platforms for knowledge and resource exchange, Massive Open Online Courses (MOOCs), virtual universities, Open Educational Resources (OERs), videoconferencing, webinars, smart classrooms, cloud computing, online research tools, and Web Based Learning (WBL). Technology is always changing education, and incorporating technology into the curriculum is essential to education keeping up with its rapid growth. A strong foundation, enhanced digital technology knowledge, and creative problem-solving techniques are necessary for success in the global society of the 21st century.

Self-directed learning is a process where individuals take responsibility for identifying their own learning needs, setting goals, finding resources, choosing learning methods, and tracking their progress. This approach enables learners to take control of their education, enhancing their knowledge, skills, and performance. For teachers, self-directed learning offers the freedom to select their own learning paths, promoting autonomy, motivation, and a sense of ownership over their professional development. By embracing self-directed learning, teachers can grow in a dynamic and impactful way. This method equips teachers to stay adaptable, motivated, and continuously improve their instructional techniques, benefiting both their personal and professional growth. Consequently, this leads to better educational experiences and outcomes for their students. Self-directed learning enables teachers to discover new concepts and information, thereby improving their instructional methods. Teachers engaging in self-directed learning set their own professional growth objectives and goals. In this process, educators independently choose their goals, tools, and strategies, leading to more effective teaching and learning practices. They employ various self-directed strategies such as participation, action research, journal writing, self-monitoring, teaching portfolios, and critical events to enhance their teaching and learning activities. In self-directed learning, educators diagnose their own students' learning requirements, set objectives, locate resources, choose and apply the best learning

techniques, and assess their own development. This idea is essential for ongoing professional development and comes from theories of adult learning. Teachers employ self-directed learning to raise their professional performance, stay up to date with the rapidly developing body of knowledge in their field, and improve the quality of their instruction. Throughout this process, teachers must manage their own learning, actively look for ways to satisfy their students' needs, and accept accountability for their own education. Self-directed learning is a key component of teachers' professional development, linked to improved teaching experiences and outcomes. It demands that educators be self- motivated, proactive, and committed to their professional growth. The advancement of information and communication technologies and the rise of virtual learning have transformed how people perceive learning. Traditionally, the teacher was regarded as the sole source of knowledge. However, today, information sources are much more varied, making information more accessible and altering the nature of learning. Memorizing information was once crucial, but now, the focus has shifted to developing skills in locating and learning new information. Teachers should first become self-directed learners to effectively model the lifelong learning mindset they aim to instill in their students. By adopting self-directed learning, teachers highlight the importance of curiosity, critical thinking, and adaptability in a rapidly evolving world. This approach enables teachers to continuously update their knowledge and skills, keeping pace with educational advancements and technological innovations. It also fosters a profound understanding of the learning process, allowing teachers to create more effective, personalized learning experiences that meet diverse student needs. Additionally, as self-directed learners, teachers gain greater autonomy and experience professional growth, which enhances their motivation and job satisfaction. Ultimately, when teachers embody the principles of self-directed learning, they cultivate a dynamic and inspiring educational environment that encourages students to take charge of their own learning and develop the skills essential for success in the 21st century.

Some of the Emerging Issues like

Self-directed learning: Teachers are placing a growing amount of focus on self-directed learning, which entails being in charge of one's own education and career advancement.

Integration of technology: Teachers are using technology more and more to assist with self- directed learning and reflective practices this involves giving teachers access to chances for professional development. **Need for ongoing professional development:** For educators to stay current with the shifting demands of education and fulfil the varied requirements of their pupils.

Digital Literacy and Training: Continuous professional development is essential, to updated with the rapid pace of technological advancements.

Engagement and Motivation: Self-directed learning requires a high level of intrinsic motivation and discipline, which can be challenging for some teachers.

Support Systems: Effective self-directed learning often depends on supportive networks and communities of practice.

Adaptation to Changing Educational Environments: Instructors must be flexible and eager to keep learning new things, which can be extremely demanding.

It is being stated that over the past few decades, instructors' roles have drastically changed from being knowledge providers to student facilitators. The shifting demands of society in all of its transitional phases have consistently tested teachers' efficacy. Everyone often mentions the effectiveness of teachers as the single most important component when discussing the quality of education. In the modern, globally interconnected world of knowledge, digital media and technologies are used to share knowledge to such an extent that digital competency is now required for efficient knowledge transfer. Teachers must become proficient in digital competences since students are studying through internet-based technology and smart classrooms. Teachers are now required to be capable to apply technological elements into their lessons, which expands on their own pedagogical choices and helps students learn. They also need to have a basic understanding of digital tools. Therefore, by serving as role models for their students, higher education instructors can help their

students develop the moral qualities, subject-matter expertise, social intelligence, emotional maturity, and other qualities needed for a balanced life. Overall, this research has demonstrated that in order for educators to satisfy the demands of the technology age, they must possess sufficient digital competencies. More than just fundamental digital skills, this competency allows them to enhance both their professional development and the teaching they do. Self-directed learning empowers teachers to take control of their learning, which is crucial for developing digital teaching competencies. Teachers who are self-directed learners are more likely to seek out and engage with digital tools and resources, keeping themselves updated with the latest technological advancements and teaching strategies. When teachers actively pursue Self Directed Learning, they demonstrate the value of lifelong learning to their students and create a classroom environment that emphasizes curiosity, critical thinking, and continuous improvement, among students. By continually developing their skills and knowledge, teachers can create more effective, engaging, and personalized learning experiences that significantly enhance student outcomes.

Objective:

To understand the need of Self Directed Learning to enhance Digital Teaching Competency among the Higher Education Teachers.

Research Question

Do Self-Directed Learning motivate the Digital Teaching Competency among Higher Education Teachers?

Review of Related Literature

Mappah (2024) carried out a study on the relationship between teachers' reflective teaching techniques and self-directed learning. In order to ensure that their pupils advance to the fullest extent possible for that reflective teaching practices require teachers to go through a methodical review process. Teachers can gain an understanding of the variables that influence and obstruct learning by evaluating the aspects of their instruction that work well and poorly. In contrast, self- directed learning entails educators taking the initiative to assess their own learning requirements, establish learning objectives, locate resources, select and apply the best teaching methods, and monitor learning results.

A study was carried by Dar & Rather (2024) to examine the effects of high and low digital literacy on prospective teachers' teaching competencies. With multi-stage random sample strategy, 350 prospective instructors made up the study's final sample, demonstrating that differences in teaching ability among aspiring teachers were significantly influenced by their levels of digital literacy.

Moreira et al. (2023) conducted a study on the Digital Education Action Plan (2021-2027) initiated by the European Commission, which aims to modernize education systems by fostering a stable digital education environment and enhancing teachers' digital skills. The study used the Digital Competence Framework for Educators (DigCompEdu) to evaluate the digital proficiency of teachers at Universidad Aberta in Portugal, highlighting their strengths and areas for improvement. The Unit for Lifelong Learning, along with the four UAb departments, invited teachers to participate, resulting in 107 completed surveys. Findings revealed that, overall, teachers possessed a very high level of digital competence. However, certain areas, particularly the fundamental pedagogical components of DigCompEdu—Digital Technologies Resources and Assessment— were identified as needing further development.

An investigation by Radhamani & Kalaivani (2023) digital competence of secondary teachers. The sample of 155 secondary teachers was selected for the present study. Teacher‟s Digital Competence Scale which was developed by Ramakrishna (2017). The data collected were analyzed by using descriptive and inferential analysis. The findings indicate that demographic factors, including age, degree of computer education, and primary topic studied, have a substantial impact on secondary teachers' digital competency.

Kallas & Pedaste (2022) investigated on Strategies to Increase Digital Proficiency for Online Education. The study involved 24 classes of pupils from four schools in Estonia among them 202 were men and 224 were women. The results showed that the only element that predicts the acquisition of digital skills and knowledge

is behavioural willingness to use digital devices.

Bindu & Allamneni (2022) Heutagogy is self-directed learning, when we apply this principle to meet the present day demands of teachers, it would prove to be an effective method for professional development, especially now when learning online, new technologies and distance learning are the methods of education. Through a heutagogical approach, teachers can best identify teaching learning challenges, formulate effective solutions based on their convenience and available resources. Methods and reasons as to why and how the concept of heutagogy as a learning strategy, may be an efficient way of professional development for teachers are discussed by way of incorporating literature review. The paper serves as a basis for developing and enriching, existing training or professional development programmes - specifically for the governmentteachers of 21st century.

A Systematic Review of Digital Teaching Competence, by Revuelta-Domínguez et al. (2022) aimed to determine the concept of developed digital teaching competency, using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology. To meet the requirement, the investigator preferred Web of Science (WoS) and Scopus databases as the sources of scientific research publications, considering teachers as samples from primary, secondary, baccalaureate, and beginning teacher training. After applying inclusion criteria and doing a duplication check, the results of the database search, which produced 127 articles, were reduced to 26 articles. The systematic review from 26 articles, based on inclusion criteria, concluded that "more attention is being paid to the crucial issue of enhancing pre-service and in- service teachers' digital competency through models of training and evaluation".

Dias-Trindade et al. (2021) undertook a study on the areas of primary and secondary education's (ISCED) digital abilities by portugal teachers. The investigation was a quantitative methodological approach, with a sample of 434 teachers emphasising teachers' perceptions of their digital skills on professional, pedagogical, and student competences. The study concluded that the level of digital competency is moderate among the teachers, and they were found to be weaker in students' and pedagogical competence compared to that of other dimensions. The study emphasised on specific training to improve educators' digital competency for healthy digital classrooms.

Cabero-Almenara et al. (2021) looked into the study to assess teacher proficiency in using digital tools to support students with disabilities. A sample of 1194 active instructors from Andalusia were selected using non- probability sampling method and snowball sampling. The results showed that the teaching at the higher education level, had medium-low proficiency.

Cebi1 & Reisoglu (2020) This study aimed to determine how pre-service teachers perceive their own digital competency and whether these views vary depending on branch, gender, and perceived competency level. The study using a cross-sectional survey model. Engaging in the survey were 587 pre-service teachers enrolled in 63 different universities, representing 51 Turkish provinces. After the data was analysed, it was found that pre-service teachers reported varying degrees of digital competency depending on their gender, branch, and overall level of ability, observed to be moderate.

An investigation on the Organised Causal Model on Digital Proficiency and University Teachers' Teaching Conceptions was carried out by Mirete et al. (2020). Following the quantitative descriptive survey approach, the investigator applied two questionnaires on a sample of 186 university professors at the University of Murcia. The investigation found a strong and favourable correlation between using ICTs and a teaching strategy that emphasises knowledge building, and, in a different sense, a statistically significant but unfavourable correlation between the approach to education that emphasises information transfer and the usage of ICTs.

Beach (2017) investigated elementary teachers' online self-directed learning strategies. Using a technique that blended a retrospective think-aloud with screen recording technology, the thought processes of 15 instructors were captured as they utilised a professional development website. The think aloud procedures that were created as well as two additional data sources were analysed using qualitative methods. A conceptual framework elucidating the utilisation and advantages of a professional development website for educators.

Teacher professional growth has been found to be significantly impacted by self-direction by Mushayikwa et

al. (2009). Using information from 55 A-level science and maths teachers in Zimbabwe, this research creates a model for self-directed professional development through interview data. In terms of using ICT for professional development, it focuses on the choices made by educators. Two main drivers of self-directed professional development are suggested by the seven themes that emerge from a grounded theory investigation of such decision-making. Professional efficacy, or the capacity to relate well with others in the teaching profession, and classroom efficacy, or the capacity to teach well, have been identified. Studies showed that teachers who were on a professional platform felt more respected, empowered, and self-assured among their peers. It can be concluded that their professional efficacy was increased.

Interpretation:

Self-Directed Learning and Digital Teaching Competency are two interconnected concepts that are essential in the modern educational landscape. Digital teaching tools can empower self-directed learners by providing access to a vast array of resources and learning opportunities. For example, online courses, educational apps, and virtual simulations can support self-paced learning and exploration. Educators with strong digital teaching competencies can create environments that encourage and support Self-directed learning (SDL). This might include designing personalized learning paths, offering online discussion forums, and providing digital resources tailored to individual learning needs. Both Self-directed learning (SDL) and digital teaching competency emphasize the importance of digital literacy. Digital tools can streamline the assessment process, providing self-directed learners with immediate feedback and opportunities for self-assessment, thereby fostering continuous improvement. When teachers embrace self-directed learning, they not only enhance their own professional growth but also create a classroom environment that nurtures independent, motivated, and lifelong learners. By modeling self-directed learning, teachers can instill these values in their students, preparing them for success in an ever-changing world. This approach aligns with the goal of fostering a dynamic and engaging educational experience that promotes both teacher and student development. Teachers need to be continuous learners for several compelling reasons that ensure they remain effective, innovative, and capable of fostering a dynamic learning environment. Teachers must prioritize their own learning to stay current, enhance their effectiveness, inspire students, meet diverse classroom needs, advance professionally, and continuously improve their practices. By doing so, they ensure that they can provide the highest quality education and create a dynamic, engaging, and supportive learning environment for their students. From the previous studies it is identify Digital Teaching Competency is essential for modern educators to enhance student engagement, support diverse learning needs, prepare students for the future, facilitate remote and hybrid learning, improve teaching efficiency, encourage collaboration, foster creativity, enhance communication, and support their professional growth. As technology continues to evolve, educators equipped with digital teaching skills will be better prepared to create dynamic, inclusive, and effective learning environments.

Findings:

Modern education requires Self Directed Learning and digital teaching capability. Online courses and educational apps enable self-directed learners by providing resources and learning opportunities. Digitally proficient teachers can construct personalised learning paths and online discussion groups to enhance SDL. Continuous improvement and streamlined assessment require digital literacy. To motivate students, satisfy various needs, and progress professionally, teachers must prioritise their own learning. Digital teaching competency boosts student engagement, diversity, distant and hybrid learning, instructional efficiency, cooperation, creativity, communication, and professional advancement.

Conclusion:

In the swiftly changing educational landscape of today, digital teaching competency and self directed learning are indispensable and complementary competencies for educators in higher education. The incorporation of these competencies allows educators to effectively utilise digital tools to improve their teaching practices and

cultivate a dynamic learning environment. Digital teaching competency helps teachers use digital resources to improve instruction and evaluation. It encourages lifelong learning, helping teachers adapt to technology. Institutions provide professional growth, tools, and collaborative learning. Effective teachers help students to build these abilities for digital success. This alignment keeps educators at the forefront of educational innovation, improving higher education.

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