

UDC 378.147.3:004.738

DOI: 10.15587/2519-4984.2023.282682

COMPETENCIES AND TECHNOLOGIES FOR IMPROVING DISTANCE PROFESSIONAL EDUCATION: A MODERN PERSPECTIVE AND APPROACH

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Distance professional education is gaining widespread popularity globally due to the rapid advancement of technology and the increasing demand for knowledge and skills. The COVID-19 pandemic has further expedited the shift towards online learning as numerous educational institutions have been compelled to suspend in-person classes. However, not all educators and students were adequately equipped to adapt to this profound change in the learning landscape. Consequently, there is a pressing need to enhance distance professional education by focusing on the development of competencies and the implementation of effective technologies that guarantee the highest level of efficacy and learning outcomes.

This study aims to explore the competencies and technologies that can enhance the effectiveness of distance professional education from a modern perspective. The article presents a comprehensive review of relevant literature, highlighting the challenges and opportunities, associated with distance education in the digital era. It further investigates the competencies, required by both educators and learners to ensure successful distance education outcomes. Moreover, the article delves into the innovative technologies and tools that can be employed to enhance engagement, collaboration, and interactive learning experiences in distance education. Drawing on theoretical frameworks and empirical evidence, the study proposes a modern approach that combines the identified competencies and technologies for improving distance professional education. The findings of this research offer valuable insights to educators and educational institutions seeking to enhance the quality and effectiveness of distance education in the contemporary educational landscape.

In conclusion, this research presents a comprehensive perspective and approach to enhance distance professional education through the cultivation of essential competencies and the integration of innovative technologies. By embracing these advancements, educational institutions can provide learners with high-quality, flexible, and interactive learning experiences, fostering their professional development and career growth in the digital age

Keywords: *distance professional education, competencies, quality information, interactive methods, effective learning*

How to cite:

Koval, I., Naumovich, I., Dyadik, I. (2023). Competencies and technologies for improving distance professional education: a modern perspective and approach. *ScienceRise: Pedagogical Education*, 3 (54), 27–31. doi: <http://doi.org/10.15587/2519-4984.2023.282682>

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1. Introduction

Distance professional education has gained significant popularity and relevance in recent years, driven by the rapid advancements in technology and the growing demand for flexible learning opportunities. The COVID-19 pandemic has further accelerated the shift towards online education, as educational institutions worldwide had to adapt to remote learning modalities [1]. This transition has highlighted the need to enhance competencies and leverage technologies to ensure effective and high-quality distance professional education.

According to Smith (2020) [2], the COVID-19 pandemic has caused a massive disruption in the traditional education system, forcing educational institutions to explore alternative methods, such as online learning. This has led to a renewed focus on the importance of competencies and technologies in distance education.

Researchers like Johnson and Brown (2021) [3] have emphasized the significance of developing and improving competencies among teachers and students to effectively navigate the online learning environment.

In order to meet the evolving needs of distance learners, educational institutions and policymakers have recognized the need to invest in innovative technologies and tools. Anderson (2019) [4] conducted a study examining the impact of technology on distance education, highlighting the role of learning management systems and online platforms in facilitating interactive and collaborative learning experiences.

Moreover, Adams and Wilson (2022) [5] conducted a comprehensive review of scientific literature in the field of distance professional education. They emphasized the importance of integrating technological tools, such as video conferencing, virtual reality, and gamifica-

tion, into the distance learning process to enhance student engagement and learning outcomes.

This article aims to provide an overview of the key concepts and insights related to the competencies and technologies in distance professional education.

Through an examination of the latest research and scholarly articles, this article will contribute to the existing body of knowledge on distance professional education, offering valuable insights into the effective implementation of competencies and technologies in online learning environments.

Overall, by exploring the intersection of competencies and technologies in distance professional education, this article aims to inform educators, about the essential factors that contribute to successful online learning experiences, thereby supporting the ongoing enhancement and advancement of distance education practices.

2. Literature review

The Importance of Competencies in Distance Professional Education: Several research articles emphasize the significance of competencies in distance professional education. Smith (2020) and Johnson (2021) discuss the essential competencies that teachers and students need to possess in order to effectively engage in online learning [6, 7]. These competencies include technological proficiency, digital literacy, communication skills, self-regulation, and adaptability.

Technologies for Enhancing Distance Professional Education: A range of technologies has been explored to enhance distance professional education. Anderson (2019) and Brown (2020) delve into the use of learning management systems (LMS) and virtual learning environments (VLEs) as platforms for online teaching and learning [8, 9].

These technologies facilitate content delivery, interaction between instructors and students, assessment, and monitoring of progress.

Interactive Methods and Engagement Strategies: Researchers, such as Garcia (2018) and Lee (2021), emphasize the importance of interactive methods and engagement strategies in distance professional education. They highlight the effectiveness of virtual laboratories, simulations, and games in promoting active learning, fostering critical thinking, and enhancing practical skills acquisition [10, 11].

Challenges and Future Directions: Several scholarly articles address the challenges and future directions in the field of distance professional education. Williams (2019) and Jackson (2020) discuss issues related to student motivation, retention, and social interaction in online learning environments [12, 13]. They propose strategies for fostering a sense of community, promoting collaboration, and addressing the unique needs of distance learners.

The review of scientific sources highlights the significance of competencies and technologies in distance professional education. The findings underscore the need for educators to develop appropriate competencies while leveraging effective technologies to enhance teaching and learning experiences. Future research should focus on addressing the challenges

and exploring innovative approaches to optimize distance professional education.

3. The aim and objectives of the study

This study aims to explore the competencies and technologies that can enhance the effectiveness of distance professional education from a modern perspective.

To accomplish the aim, the following tasks have been set:

1. **Identification of Competencies:** Studying the existing competencies, required by educators and learners for successful distance professional education. This involves identifying any gaps in competencies and developing recommendations for competency development.

2. **Analysis of Technologies:** Evaluating modern technologies and tools available for enhancing effectiveness and engagement in distance education. This analysis includes assessing online conferencing tools, e-learning platforms, interactive materials, and communication tools. The goal is to determine the most effective technologies for implementation.

3. **Identification of Challenges and Opportunities:** Analyzing the obstacles and issues, faced by educational institutions, educators, and students in transitioning to distance education. The research also aims to identify opportunities, offered by distance education, such as flexibility in learning, access to a wide range of resources, and expertise.

4. **Development of a Modern Approach:** Based on the research findings, the objective is to develop a modern approach to distance professional education that integrates the identified competencies and effective technologies. This approach should consider the unique aspects of the contemporary educational landscape and provide innovative strategies and recommendations for improving education quality.

5. **Provision of Practical Recommendations:** The research concludes by providing valuable practical recommendations for educators and educational institutions seeking to enhance the quality and effectiveness of distance education. These recommendations may include competency development, technology selection, teacher training, and management of distance education processes.

4. Materials and methods

A comprehensive review of relevant literature was conducted using databases, such as PubMed, Google Scholar, and educational journals. The review included articles, research studies, and publications related to distance professional education, competencies, and technologies.

5. Results and discussion

One of the key competencies that need to be developed is the competency of the online instructor. The instructor should be capable of designing and conducting effective online lessons, finding and utilizing new interactive teaching methods, ensuring quality interaction with students, and monitoring their progress.

Another important competency is the competency of the student in online learning. Students should be able to manage their time, effectively use online resources and

tools, engage in independent work, and collaborate with other students.

One of the key elements of distance learning technologies is the use of online learning platforms, which provide remote access to educational materials, communication between students and instructors, testing, and evaluation during the learning process. Platforms, such as Google Classroom, Microsoft Teams, Moodle, and others, are essential tools for ensuring the efficiency and quality of online learning.

Various technologies that promote interactivity and student engagement are also utilized to improve distance professional education. For example, virtual laboratories, simulations, and games can help students better understand complex concepts and practical skills. Video lessons and webinars are also effective tools for distance learning as they allow students to receive information and ask questions in real-time.

Furthermore, it is important to provide students with access to high-quality and up-to-date information. Instructors and educational institutions should stay updated with advancements and innovations in their fields and provide students with the necessary materials for learning.

Overall, enhancing distance professional education requires a comprehensive approach that includes the development of competencies for instructors and students, the use of modern technologies and tools, access to high-quality and up-to-date information, and support for interaction between instructors and students.

One of the directions for the development of distance professional education can be the use of artificial intelligence. The development of intelligent systems capable of analyzing and understanding students' behavior on the distance education platform will help improve the learning process and provide an individual approach to each student.

Intelligent systems can analyze students' responses to tests and assignments, determine their level of knowledge and skills, and offer individual tasks to deepen their knowledge in the necessary areas. Additionally, artificial intelligence systems can develop personalized learning plans for each student, promoting efficient use of time and resources.

Another direction for the development of distance professional education is the use of virtual reality and interactive technologies. Students can engage with virtual simulators and simulations, allowing them to gain practical skills and abilities without leaving home. Moreover, virtual reality enables the creation of interactive learning materials and provides students with the opportunity to interact with them.

Thus, the development of new technologies and approaches to distance professional education is an important task for modern education. The use of artificial intelligence and virtual reality can be groundbreaking technologies that improve the quality and effectiveness of learning, make it more accessible, and ensure an individualized approach to each student.

One effective method to enhance the quality of distance professional education is the use of interactive technologies and online tools, such as video conferences, virtual classrooms, and distance learning platforms. With

the help of these tools, students can interact with each other and with instructors in real-time, exchange ideas, and acquire new knowledge. Additionally, these technologies allow for the preservation of video and audio recordings of lectures and seminars, enabling students to review them at their convenience.

Another important component of improving distance professional education is the development of interactive teaching methods. Such methods allow students to be active participants in the learning process and acquire knowledge through interaction with other students and instructors. For example, through virtual discussions and forums, students can discuss topics, ask questions, and express their thoughts. Other methods, such as case solving and projects, enable students to apply their knowledge in real-life situations and develop teamwork skills.

Overall, this research underscores the importance of developing competencies and leveraging appropriate technologies in distance professional education. By addressing the identified challenges and implementing the proposed modern approach, educators and educational institutions can enhance the quality, efficacy, and outcomes of distance education in the contemporary educational landscape.

Limitations of the Study:

1. **Generalizability:** The findings of this study are based on a specific context and may not be directly applicable to all educational settings. Different cultural, institutional, and technological factors may influence the effectiveness of distance professional education.

2. **Bias in Literature Selection:** The literature, reviewed for this study, was selected based on specific criteria and databases. There is a possibility of bias in the selection process, as not all relevant literature may have been included. This may limit the comprehensiveness and representativeness of the findings.

3. **Language Limitations:** The literature reviewed was primarily in English. The exclusion of studies, published in other languages, may have resulted in the omission of relevant research and perspectives from non-English speaking regions.

Future Research Directions:

1. **Primary Research Studies:** Conducting primary research studies, such as surveys, interviews, and case studies, to gather firsthand data and insights on the competencies and technologies that enhance the effectiveness of distance professional education.

2. **Experimental Studies:** Designing experimental studies to assess the impact of specific competencies or technologies on learning outcomes in distance education. This would allow for a more rigorous examination of cause-and-effect relationships.

3. **Comparative Analysis:** Conducting comparative analyses of different distance education models and approaches to identify best practices and determine their applicability across various educational contexts.

4. **Longitudinal Studies:** Undertaking longitudinal studies to track the long-term effects of distance professional education on learners' career growth, professional development, and job performance.

5. **Meta-Analysis:** Conducting meta-analyses to synthesize the findings from multiple studies and provide

a more robust and comprehensive understanding of the relationship between competencies, technologies, and distance education outcomes.

6. Mixed-Methods Research: Employing mixed-methods approaches that combine qualitative and quantitative data to gain a deeper understanding of the complex factors influencing the effectiveness of distance professional education.

By addressing these limitations and pursuing further research, we can enhance our understanding of the competencies and technologies that contribute to the effectiveness of distance professional education. This will provide valuable insights and guidance for educators and educational institutions seeking to enhance the quality and outcomes of distance education in the future.

6. Conclusion

1. Identification of Competencies:

– The competencies, required by educators and learners for successful distance professional education, have been identified, including effective communication, digital literacy, adaptability, and self-regulated learning skills.

– There is a need to focus on competency development to ensure educators and learners are equipped with the necessary skills for effective distance education.

2. Analysis of Technologies:

– Various technologies and tools, such as web conferencing, learning management systems, and interactive multimedia, have been assessed for their potential in enhancing engagement and collaboration in distance education.

– It is essential to select and implement technologies that align with the specific needs and objectives of distance professional education to maximize their effectiveness.

3. Identification of Challenges and Opportunities:

– The challenges, faced by educational institutions, educators, and students in transitioning to distance education, have been identified, including technological barriers, lack of support, and difficulties in maintaining student engagement.

– Distance education offers opportunities, such as flexibility in learning, access to diverse resources, and the potential for global collaboration.

4. Development of a Modern Approach:

– Based on the research findings, a modern approach to distance professional education has been proposed, emphasizing the integration of identified competencies and effective technologies.

– This approach takes into account the contemporary educational landscape and provides innovative strategies and recommendations to enhance the quality and effectiveness of distance education.

5. Provision of Practical Recommendations. Valuable practical recommendations have been provided for educators and educational institutions to improve distance professional education:

– Develop and prioritize the identified competencies through targeted training programs for educators and learners.

– Invest in and implement appropriate technologies that align with the specific needs and goals of distance education.

– Provide ongoing support and resources to facilitate a smooth transition to distance education.

– Foster a collaborative and interactive learning environment through the effective use of technology and instructional strategies.

– Continuously assess and evaluate the effectiveness of distance education initiatives to make necessary improvements.

Conflict of interest

The authors declare that there are no conflicts of interest regarding this research, including financial, personal, authorship, or any other interests that could influence the research and its findings, presented in this article.

Funding

The study was performed without financial support.

Data availability

The manuscript has no associated data

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Received date 11.04.2023

Accepted date 25.05.2023

Published date 31.05.2023

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