DIGITAL LITERACY TRAINING FOR AL-KHOIR FOUNDATION TEACHERS IN WELCOMING INNOVATIVE EDUCATION TO IMPROVE TECHNOLOGY-BASED LEARNING

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Abstrak

Pelatihan literasi digital bagi guru Yayasan Al-Khoir bertujuan untuk meningkatkan kompetensi digital guru dalam menghadapi tantangan pendidikan inovatif dan pembelajaran berbasis teknologi. Metode pelatihan yang digunakan meliputi penyediaan materi daring dan luring tentang dasar-dasar literasi digital, serta aplikasi teknologi pendidikan yang relevan. Selain itu, pelatihan juga meliputi simulasi dan diskusi kelompok untuk mengeksplorasi penerapan teknologi dalam pembelajaran yang efektif. Peserta juga diperbolehkan untuk melakukan praktik langsung menggunakan berbagai platform digital untuk meningkatkan keterampilan interaksi dan mengajar. Hasil pelatihan ini menunjukkan peningkatan yang signifikan dalam pemahaman dan penerapan teknologi dalam proses pembelajaran oleh guru. Kontribusi dari pelatihan ini adalah untuk memperkuat kesiapan guru untuk menyambut pendidikan berbasis teknologi yang inovatif, mendukung terciptanya pembelajaran yang lebih efektif dan menarik bagi siswa.

Kata Kunci: Pelatihan Literasi Digital, Pendidikan Inovatif, Berbasis Teknologi Pembelajaran, Kompetensi Digital Guru

Abstract

The digital literacy training for teachers of the Al-Khoir Foundation aims to improve teachers' digital competencies in facing the challenges of innovative education and technology-based learning. The training methods used include providing online and offline materials on the basics of digital literacy, as well as relevant educational technology applications. In addition, the training also includes simulations and group discussions to explore the application of technology in effective learning. Participants were also allowed to conduct hands-on practice using various digital platforms to improve interaction and teaching skills. The results of this training show a significant increase in the understanding and application of technology in the learning process by teachers. The contribution of this training is to strengthen teachers' readiness to welcome innovative technology-based education, supporting the creation of more effective and interesting learning for students.

Keywords: Digital Literacy Training, Innovative Education, Technology-Based Learning, Teacher Digital Competency

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INTRODUCTION

Education today faces great challenges in the face of increasingly rapid technological developments. The accelerated technological progress observed in recent years has introduced considerable challenges to the educational domain, thereby necessitating a fundamental transformation in pedagogical strategies and learning paradigms. The incorporation of digital instruments and platforms has become imperative, particularly in light of the COVID-19 pandemic, which expedited the transition towards virtual education. This shift, although presenting numerous opportunities, concurrently introduces various obstacles that educators and educational institutions must adeptly navigate to guarantee the effective delivery of education. The subsequent sections will examine these challenges alongside the strategies required to address them. The transition to electronic learning has emerged as a pivotal element of contemporary education, providing flexibility and accessibility for students on a global scale. Nevertheless, it necessitates substantial adaptation from both educators and learners to proficiently employ these digital tools (Dr. Bhavna U. Choudhary & Dr. Reema Kamlani, 2022). Educators are now anticipated to amalgamate conventional pedagogical techniques with cutting-edge technological methods, which necessitates ongoing professional development and training to keep abreast of technological innovations (Dr. Komal Kumari, 2022). The advancement of digital competencies is of paramount importance for acclimatizing to swift technological transformations and constitutes a central focus in pedagogical training initiatives to guarantee that educators are equipped to proficiently convey these skills to learners (Nowak, 2019). Digital education demands students to develop new skills like critical thinking, information literacy, and digital communication to thrive in a technology-driven world.

One of the important aspects of improving the quality of education is through technology-based learning, which utilizes digital tools to enrich the student learning experience. Technology-based learning significantly enhances educational quality through digital tools. This method is increasingly utilized across diverse educational fields. It not only aids knowledge acquisition but also promotes critical thinking, creativity, and skill development. Subsequent sections examine the implementation and effects of technology-based learning on educational quality. In medical education, interactive technologies improve training quality for future physicians. At Poltava State Medical University, these technologies have notably enhanced students' clinical reasoning and professional competencies, reflecting an improvement in material assimilation (Niemchenko et al., 2023). Likewise, in architecture education, immersive technologies have been created to bolster spatial comprehension. Instruments like the Architectural Spatial Experience Simulation (ASES) have demonstrably enriched spatial experience for learners, especially those with limited prior experience (Ummihusna & Zairul, 2022). In architecture education, immersive technologies, such as the Architectural Spatial Experience Simulation (ASES), enhance spatial understanding, benefiting learners, particularly those with limited prior experience.

To support this, teachers need to have strong digital competencies to be able to use technology effectively in the learning process. Educators are required to possess substantial digital competencies to proficiently leverage technology within the educational sphere, as these capabilities are vital for the seamless integration of digital instruments into pedagogical practices and the enhancement of student engagement. The advent of the digital age has substantially altered the educational environment, mandating

that educators adjust and cultivate skills that are congruent with technological progressions. This encompasses not only technical proficiencies but also the capacity for innovation and adaptability to novel instructional methodologies. The significance of digital proficiency is accentuated by its influence on the efficacy of learning processes and the overall calibre of education. The following delineates critical dimensions of digital competencies for educators: Digital proficiency is imperative for educators to effectively incorporate technology into the curriculum, thereby augmenting student interactivity and engagement (Okti et al., 2024). It entails not merely an understanding of digital tools but also the capability to employ them in addressing educational challenges and fulfilling learning objectives (Zaripov et al., 2024). It requires not only understanding digital tools but also the ability to use them to solve educational challenges and achieve learning goals.

Digital literacy training for teachers, such as the one conducted at the Al-Khoir Foundation, focuses on developing teachers' digital competencies to welcome innovative education that can improve the quality of technology-based learning. Digital literacy training for educators, exemplified by the initiative at the Al-Khoir Foundation, is indispensable for equipping instructors with the requisite skills to augment technology-mediated learning. This instructional program emphasizes the cultivation of digital competencies that correspond with the dynamic educational milieu, propelled by technological innovations. The incorporation of digital literacy within teacher training curricula is vital for promoting innovative pedagogical practices and enhancing the quality of education. Below are pivotal elements of digital literacy training for educators, substantiated by findings from the referenced literature. Digital literacy is fundamental to the digital transformation of educational systems, aligning pedagogical frameworks with technological progress and equipping students for participation in the digital economy (Vaskov et al., 2021). Educators must cultivate competencies such as information literacy, digital content production, and the proficiency to navigate and resolve issues within digital environments (Vaskov et al., 2021). Educators need to develop skills in information literacy, digital content creation, and problem-solving in digital environments.

Digital literacy training for teachers in many places is often overlooked, although it is crucial to prepare them for the era of technology-based education. Digital literacy training is essential for educators in the technology-driven education landscape. Its neglect results in a deficiency in teachers' proficiency in integrating digital tools. This deficiency is observable in various educational levels, from pre-university to higher education. The urgency for thorough digital literacy training is highlighted by swift technological advancements and the growing use of digital resources in education. Key elements of digital literacy training for educators are discussed in the referenced research. Digital competence is vital for teachers to utilize technology effectively in educational environments. It includes various skills, such as technological, pedagogical, and content knowledge, along with attitudes towards technology use (Skantz-Åberg et al., 2022). Self-assessments by teachers often indicate low to moderate levels of digital competence, highlighting the necessity for specific training initiatives to improve these skills (Basilotta-Gómez-Pablos et al., 2022). The lack of a definitive framework for developing digital competence further hinders the training efforts. Although frameworks like DigiCompEdu and ICT CFT offer guidance, they lack detailed instructions for the practical application of digital tools (Mezentceva et al., 2020). The absence of a clear framework for building digital competence hampers training efforts. While frameworks

like DigiCompEdu and ICT CFT provide guidance, they lack practical instructions for using digital tools effectively.

Innovative education that leverages digital technology can create a more engaging learning experience, but it is only effective if teachers have a deep understanding of how to use the tools. Innovative education through digital technology enhances engagement, contingent on teacher proficiency. Effective integration of digital platforms necessitates educators' adeptness in customizing learning experiences. This proficiency promotes differentiated instruction and boosts student engagement and achievement. The subsequent sections detail key aspects of this discourse. Innovative educational methods improve pedagogical technologies and incorporate project-based learning, aligning with business needs (Miroshnikova, 2020). Such methods enhance institutional competitiveness and foster socio-economic development by equipping students with vital competencies (Miroshnikova, 2020). Technological solutions like hybrid teaching flipped classrooms, and gamification improve innovative practices, emphasizing educators' mediating role (Farias Batista & Paulina de Assis, 2019). These practices are crucial for creating an engaging and interactive learning atmosphere (Farias Batista & Paulina de Assis, 2019). Teachers require sufficient training and support to cultivate essential digital literacy skills. Without comprehensive proficiency, the advantages of digital tools may remain unrealized.

Although many teachers are familiar with technology, teachers' digital competencies related to the use of appropriate learning tools and applications are often still lacking. Teachers' digital competencies are essential for the integration of educational technologies in pedagogical practices. Despite being technologically adept, numerous educators encounter difficulties in applying these tools due to multiple obstacles. These obstacles comprise inadequate technological infrastructure, lack of professional training, and psychological impediments. Mitigating these concerns necessitates a holistic strategy that encompasses institutional backing, specialized professional development, and a constructive perspective towards technology. Key factors affecting teachers' digital competencies include the disparity in technological infrastructure access between urban and remote educators, which influences their competency growth (Rustandi et al., 2024). Effective professional development initiatives are vital for the advancement of teachers' digital skills. Such training should emphasize technological proficiency, pedagogical insights, and subject matter expertise (Ajani, 2024; Mayantao & Tantiado, 2024). The role of educational institutions and policies is crucial in fostering teachers' digital competencies through the provision of resources, technical support, and acknowledgement of their accomplishments (Mayantao & Tantiado, 2024). Educational institutions and policies play a key role in developing teachers' digital skills by providing resources, technical support, and recognition for their achievements.

The digital literacy training for Al-Khoir Foundation teachers specifically aims to develop teachers' digital competencies in technology-based learning, which will support the creation of innovative education in their classrooms. The digital literacy training for Al-Khoir Foundation educators seeks to enhance their technological integration in teaching. This initiative is vital as it reflects the global digital transformation trend in education, necessitating new pedagogical competencies. The training will equip educators with skills to use digital tools, promoting innovative classroom practices. The subsequent sections delineate the training program's key aspects. Digital literacy is imperative for educators to adapt to the 21st-century educational landscape, which encompasses technology integration in teaching and learning processes (Vaskov et al.,

2021). Although educator digital literacy levels are generally high, a shift in attitude towards fully embracing technological innovations is necessary (Vaskov et al., 2021). Effective digital literacy training should prioritize competencies in information literacy, digital content creation, and technical problem-solving (Vaskov et al., 2021). While the digital literacy training for Al-Khoir Foundation educators represents progress, it is essential to acknowledge that technology alone cannot achieve educational transformation. The efficacy of such initiatives is contingent on educators' willingness to embrace change and continually enhance their skills in alignment with technological advancements.

The urgency of digital literacy training for teachers is increasing in line with the rapid development of technology, which requires an increase in teachers' digital competence to create innovative education that is relevant and effective. The exigency for digital literacy training among educators has become increasingly paramount, attributable to the swift progression of technological developments that necessitate an elevated level of digital proficiency for the formulation of innovative and efficacious educational methodologies. Educators are anticipated to incorporate digital instruments into their pedagogical practices to adequately prepare learners for the exigencies of the 21st century. Nevertheless, prevailing teacher training initiatives frequently inadequately furnish educators with the requisite digital competencies. Digital literacy is essential in modern education, enabling educators to effectively use advanced technologies to improve learning outcomes and student involvement. It includes various skills necessary for students to thrive in a digital world, such as accessing, evaluating, and creating information through digital means. The integration of ICT skills into curricula highlights the importance of digital literacy in achieving educational goals and improving student success. (Kasemsap, 2018). Educators possessing robust digital skills can more effectively equip students for impending challenges by integrating digital tools into the curriculum, thereby augmenting students' digital proficiency and preparedness for the labour market (Mohalik, 2020; Yachina* & Khuziakhmetov, 2018). Educators with strong digital skills can better prepare students for future challenges by using digital tools in the curriculum, enhancing their digital proficiency and readiness for the job market.

The novelty of this training lies in its approach that integrates the latest technology in technology-based learning, providing teachers with practical skills that can be directly applied in the classroom to support more modern and interactive learning methods. The amalgamation of sophisticated technological advancements with pedagogical strategies is revolutionizing the framework of modern interactive educational environments. This pioneering methodology endows educators with the requisite competencies to augment student participation and academic performance. Through the utilization of interactive technological tools, educators are capable of formulating dynamic and inclusive educational contexts that address the diverse requirements of learners. The subsequent sections will examine the critical components of this amalgamation. Interactive technologies, including digital whiteboards and educational software, have been empirically demonstrated to significantly bolster student engagement and comprehension (Al-Sindi et al., 2023). The implementation of augmented reality (AR) within educational settings enhances the efficiency of learning and stimulates motivation by offering immersive and interactive experiences (Deng et al., 2024). Information and communication technologies, encompassing digital platforms and cloud services, facilitate the incorporation of interactive learning methodologies in the realm of higher education (Molodovska et al., 2024). Information and communication technologies,

including digital platforms and cloud services, enable interactive learning methods in higher education.

The purpose of this training is to equip Al-Khoir Foundation teachers with the digital competencies needed to welcome innovative education, as well as to improve their ability to implement technology-based learning effectively in the school environment. The pedagogical development of educators at Al-Khoir Foundation is designed to augment their digital proficiency, thereby facilitating innovative pedagogical methodologies and the efficacious application of technology in educational settings. This initiative encompasses the provision of essential digital competencies alongside pedagogical frameworks that empower educators to seamlessly integrate technological resources into their instructional practices. The training program must emphasize both the technical proficiencies and the pedagogical dimensions of digital literacy, thereby ensuring that educators harness technology as a mechanism for the enhancement of educational outcomes. The incorporation of technological advancements, such as immersive virtual reality experiences, has the potential to profoundly enrich the teaching and learning continuum. Professional development initiatives should prioritize the cultivation of educators' technological acumen and self-efficacy, thereby equipping them to proficiently employ novel instructional tools (Estes et al., 2016). Support structures for educators in formulating a pedagogical approach conducive to technology integration are imperative, as they incentivize continuous engagement with emerging technological innovations (Estes et al., 2016). Support structures for educators in developing teaching methods that incorporate technology are essential, as they encourage ongoing engagement with new technological advancements.

METHODS

Digital literacy training begins with an introduction to the basics of using technology in education, including digital tools that can be used for technology-based learning. Digital literacy training in education initiates with fundamental technology use, vital for 21st-century educators and students. This foundational training involves mastering digital tools to improve technology-driven learning. The incorporation of digital literacy into educational systems is essential for cultivating competencies necessary for success in digital landscapes. This training encompasses not only technical abilities but also the encouragement of critical thinking, ethical conduct, and social accountability in digital settings. Key elements of digital literacy training in education include: Digital literacy is imperative for educators to provide superior instruction and shape their professional identities in rapidly changing educational contexts (Ali & Schier, 2024). Students must operate ethically, securely, and effectively in digital realms, necessitating a systematic approach to curriculum design (Erdyneeva1 et al., 2024). Digital literacy encompasses technical skills, critical analysis, and ethical conduct, essential for productive engagement in digital environments (Alom & R, 2024). Digital literacy includes technical skills, critical thinking, and ethical behaviour, all of which are crucial for effective participation in digital environments.

Furthermore, participants will take part in a practicum session that teaches how to integrate technology into innovative education, where teachers can develop interactive and engaging teaching materials using various digital platforms. The integration of technology within innovative educational frameworks necessitates the provision of

requisite competencies to educators, enabling them to develop interactive and stimulating instructional materials via digital platforms. This undertaking is paramount for the metamorphosis of conventional didactic approaches into vibrant, learner-centred educational experiences. The practicum session is designed to equip educators with pragmatic skills and methodologies for the effective assimilation of technology into their pedagogical practices, ultimately augmenting student engagement and educational outcomes. The subsequent sections delineate essential components of this integration endeavour. The transition from passive to active learning methodologies is underscored, wherein students actively engage with content through interactive online modalities (Yeboah et al., 2022). Additionally, asynchronous learning instruments, including collaborative efforts and self-assessment techniques, are accentuated as mechanisms to promote student interaction and engagement (Yeboah et al., 2022). Asynchronous learning tools, such as collaborative activities and self-assessment methods, are highlighted as ways to enhance student interaction and engagement.

Each participant will also be allowed to collaborate in small groups, where they can share experiences and devise technology-based learning plans that suit the needs of students in the classroom. Collaborative learning within small groups, particularly in the context of formulating technology-driven educational frameworks, has the potential to markedly improve the quality of educational experiences by promoting peer engagement and collective comprehension. The incorporation of technology in such environments can facilitate collaboration; however, it necessitates meticulous planning and implementation. The subsequent sections will investigate the methods through which technology can be optimally employed to bolster collaborative learning in small groups. Technological tools can enhance collaboration by offering communal spaces and instruments that encourage interaction and discourse among learners. When utilized appropriately, interactive whiteboards and tablets can augment situational awareness and control within group dynamics, yet they also possess the potential to foster isolated working conditions if not adeptly supervised (Yuill, 2021). When used properly, interactive whiteboards and tablets can improve group dynamics and awareness, but if not well supervised, they may lead to isolated work conditions.

Finally, teachers' digital competencies will be evaluated through simulations of the use of technology in learning, and participants will get feedback to improve and optimize the application of technology in their teaching. Assessing the digital competencies of educators through simulated environments and delivering constructive feedback constitutes a pivotal measure in advancing the proficient utilization of technology within the educational sphere. This methodology facilitates educators' participation in experiential, scenario-driven learning, which can markedly enhance their digital proficiency and pedagogical approaches. The investigation underscores the significance of such assessments, as they furnish critical insights into the existing competencies of educators and the specific domains necessitating enhancement, ultimately fostering more effective technology assimilation within educational settings. The digital competence of educators is paramount for the efficacious integration of technology in education, as it embodies the requisite knowledge, skills, and attitudes vital for the employment of digital tools in instructional contexts (Basilotta-Gómez-Pablos et al., 2022; Cattaneo et al., 2022). Evaluative measures are instrumental in pinpointing deficiencies in digital capabilities, including those pertinent to the assessment of educational practices and digital security, which are frequently deficient among educators (Basilotta-Gómez-Pablos et al., 2022; García-Vandewalle García et al., 2023). Evaluative measures are essential

for identifying gaps in digital skills, including those related to assessing educational practices and digital security, which are often lacking among educators.

RESULTS AND DISCUSSION

Results

Digital literacy training has succeeded in improving teachers' understanding of the use of technology in learning, allowing them to integrate digital tools more effectively in teaching and learning activities. Digital literacy training has been empirically validated as a potent mechanism for enhancing educators' understanding and utilization of technology within instructional settings. Such training equips educators with essential skills to proficiently navigate and utilize digital resources, thereby augmenting their pedagogical approaches and fostering student involvement. The efficacy of these programs is evident across various educational levels and contexts, as corroborated by a multitude of scholarly investigations. Below are pivotal aspects illustrating how digital literacy training has impacted the professional competencies of educators. Training initiatives have significantly elevated educators' digital competencies, particularly in the realm of primary education, by emphasizing conceptual, procedural, and attitudinal dimensions. This comprehensive strategy ensures that educators are sufficiently prepared to assimilate digital tools into their teaching methodologies (Munawaroh et al., 2022). Within the sphere of early childhood education, enduring professional development programs have proven effective in enhancing teachers' capabilities to generate and manage digital content, thereby cultivating innovation in pedagogical practices (Farisia & Syafi'i, 2024). In early childhood education, long-term professional development programs have been effective in improving teachers' ability to create and manage digital content, fostering innovation in teaching practices.

After participating in the training, the teachers of the Al-Khoir Foundation showed higher abilities in designing technology-based learning following innovative educational principles, creating a more interactive and engaging classroom atmosphere. The pedagogical training imparted to educators at the Al-Khoir Foundation markedly augmented their capacity to construct technology-enhanced learning environments, which is congruent with contemporary innovative educational paradigms. This enhancement aligns with empirical evidence from numerous scholarly investigations that underscore the critical role of professional development in the assimilation of technology within instructional methodologies. Such educational training not only endows educators with essential technological competencies but also cultivates a more interactive and stimulating classroom environment. Interactive pedagogical methodologies, encompassing collaborative initiatives, discursive practices, and simulation-based exercises, have demonstrated a marked capacity to augment student engagement while concurrently mitigating passivity within educational environments. The implementation of collaborative learning methodologies, including but not limited to group projects and peer-assisted learning, has been identified as a mechanism that accelerates students' comprehension of intricate concepts and enhances academic achievement. Such methodologies promote cooperative endeavours amongst students, facilitating the delegation of responsibilities and fostering effective communication to accomplish shared objectives (Zitha et al., 2023). The integration of digital educational technologies,

encompassing multimedia resources and virtual platforms, significantly enhances educational quality by enabling remote instruction and fostering innovative pedagogical approaches (Zheentaeva et al., 2024). The use of digital educational technologies, including multimedia resources and virtual platforms, greatly improves educational quality by supporting remote learning and encouraging innovative teaching methods.

The improvement in teachers' digital competence is evident, with many participants now able to use a variety of educational apps to support their teaching and increase student engagement. The enhancement of educators' digital proficiency is conspicuous, as a considerable number of instructors now exhibit adeptness in utilizing a diverse array of educational applications to augment their pedagogical practices and elevate student involvement. This advancement is pivotal in equipping learners for the digital era, as it necessitates not only technological acumen but also the capacity to foster interactive and collaborative educational environments. The incorporation of digital instruments into instructional methodologies has been demonstrated to amplify student engagement by rendering the learning experience more individualized and participatory. Below are several salient facets of this enhancement: Educators' digital proficiency encompasses far more than mere computational abilities; it encompasses the design of interactive learning opportunities and the application of digital resources for evaluation and collaboration (Diachuk, 2024). A substantial proportion of educators have attained either proficient or competent levels of digital capability, albeit challenges such as inadequate familiarity with specialized software and the absence of systematic training persist (Diachuk, 2024). Many educators have reached proficient or competent levels of digital skills, but challenges remain, such as limited knowledge of specialized software and a lack of structured training.

Overall, this training has successfully facilitated the creation of a classroom that is more adaptive to technological changes, which in turn improves the quality and effectiveness of learning at the Al-Khoir Foundation. The pedagogical initiatives undertaken at the Al-Khoir Foundation have proficiently facilitated the establishment of a classroom milieu that exhibits heightened adaptability to technological advancements, consequently augmenting the quality and efficacy of the educational experience. Adaptive learning environments, which harness technology to customize instructional delivery, have been empirically demonstrated to enhance educational outcomes by aligning learning experiences with the unique needs of individual learners. This pedagogical strategy resonates with contemporary educational paradigms that underscore the significance of personalized learning experiences and the integration of technological tools within the educational framework. The subsequent sections provide a comprehensive examination of how adaptive learning methodologies contribute to the enhancement of educational outcomes. The incorporation of educational technology, specifically virtual reality (VR) and augmented reality (AR), has been instrumental in the development of immersive pedagogical experiences that significantly bolster student engagement and comprehension (Roy et al., 2024). Islamic educational establishments, exemplified by the Al-Khoir Foundation, have embraced Learning Management Systems (LMS) and digital learning platforms, thereby enhancing both the educational process and administrative efficacy (Holilah Holilah & Wafi Ali Hajjaj, 2024). A significant number of educators have developed proficient or competent digital skills, yet challenges like limited familiarity with specialized software and the lack of structured training continue to exist.

Discussion

Digital literacy training has successfully answered the existing gap by providing teachers with a strong understanding of the importance of teachers' digital competencies in facing the demands of technology-based learning. Digital literacy training has emerged as an indispensable element in reconciling the discrepancies between conventional pedagogical approaches and the exigencies of technology-mediated education. This form of training endows educators with the requisite digital proficiencies to adeptly incorporate technology into their teaching methodologies, thereby augmenting student involvement and educational achievement. The significance of digital literacy for educators is accentuated by the necessity to proficiently navigate and employ a diverse array of digital tools and platforms within educational environments. This metamorphosis is vital for equipping students to flourish in a technology-centric society. Digital literacy training has assumed an increasingly pivotal role in modern educational paradigms, as it equips both educators and learners with the requisite competencies to proficiently navigate the complexities of the digital environment. The importance of digital literacy is highlighted by its multifaceted characteristics, which encompass a range of competencies including information literacy, media literacy, and technological literacy, all of which are indispensable for effective teaching and learning in the digital era (Anggraeni et al., 2023; Probowati, 2023). The following delineates essential facets of how digital literacy training mitigates this disparity: Teacher preparation programs must familiarize candidates with a spectrum of technologies and furnish opportunities for the application of these tools within academic frameworks (Lawrence et al., 2020). Teacher preparation programs should expose candidates to various technologies and provide opportunities to apply these tools in educational settings.

Although many teachers have basic technology knowledge, this training fills their skills gaps in implementing innovative technology-based education to create a more engaging and effective learning experience. The incorporation of cutting-edge technology-oriented education is imperative for the development of stimulating and efficacious learning experiences. Although numerous educators exhibit foundational technological proficiency, there exists a considerable necessity for professional development to close the competency gap in the effective application of these technologies. The subsequent sections will examine the principal facets of this professional development requirement. Technological advancements, including interactive software and artificial intelligence-enhanced tools, have the potential to revolutionize conventional pedagogical approaches by offering dynamic and adaptable educational environments. These instruments facilitate individualized learning experiences, permitting students to advance at their rhythm while receiving instantaneous feedback (Olanike Abiola Ajuwon et al., 2024). Digital educational games and various interactive platforms can markedly improve student engagement, especially in early childhood education, where educators frequently demonstrate insufficient digital literacy (Nurhayati & Novianti, 2024). Digital educational games and interactive platforms can significantly boost student engagement, particularly in early childhood education, where educators often lack strong digital literacy.

The gap in understanding the use of digital applications for technology-based learning is overcome by introducing various relevant tools and platforms, as well as providing hands-on opportunities to increase teachers' confidence in using technology in the classroom. Technology-mediated education has emerged as a fundamental element

of contemporary pedagogy, especially catalyzed by the COVID-19 pandemic. The assimilation of technological innovations into educational methodologies has revolutionized conventional learning settings, resulting in the extensive embrace of virtual education. This evolution is marked by the deployment of diverse technological instruments and platforms that promote learning, augment student participation, and afford access to a plethora of informational resources. Zhang elucidates that the progression of digital education has transitioned from static content dissemination to dynamic, interactive educational contexts, underscoring the significance of technology in enriching educational experiences (Zhang & Ramakrishnan, 2023). The efficacy of virtual education is dependent on the technological preparedness of both learners and educational institutions. The instructional strategies utilized in virtual education must evolve to capitalize on the advantages offered by technology. Huang accentuates the criticality of interactive modalities in live-streamed instruction, which can bolster student involvement and promote knowledge dissemination (Huang et al., 2023). Huang emphasizes the importance of interactive methods in live-streamed teaching, as they can increase student participation and enhance knowledge sharing.

This training also answers the shortcomings in the development of teaching strategies that are adaptive to technological developments, by equipping teachers with the skills to design and implement innovative and technology-based learning in a structured manner. Technological proficiency encompasses not merely the adeptness in utilizing instruments, but also necessitates a comprehensive comprehension of their relevance in addressing educational dilemmas, including the cultivation of critical thinking and creativity (Chelnokova, 2020). The alignment of teacher training with technological progress is essential for contemporary educational methodologies. This entails providing educators with the competencies required to effectively design and execute technology-enhanced learning experiences. The incorporation of digital literacy alongside innovative pedagogical approaches is vital to fulfilling the requirements of current educational frameworks. This training mitigates deficiencies by emphasizing immersive professional development, personalized learning technologies, and design thinking strategies, which together augment educators' capabilities in technology integration. The amalgamation of these technologies necessitates a judicious methodology that emphasizes pedagogical principles and modifies curricula to optimize their efficacy. The subsequent points elucidate how technological competency can resolve educational challenges: Digital Information and Communication Technologies (DICT) play a crucial role in enhancing critical thinking and fostering creativity. They empower learners to participate in collaborative and inventive educational encounters, which are vital for success in the 21st century (Paulo et al., 2024). Digital Information and Communication Technologies (DICT) significantly contribute to developing critical thinking and nurturing creativity. These technologies enable learners to engage in collaborative and innovative educational experiences, which are essential for thriving in the 21st century.

CONCLUSION

Digital literacy training for Al-Khoir Foundation teachers aims to improve **teachers' digital competencies** in facing **the challenges** of innovative technology-based education. Through this training, teachers are expected to master various digital tools that can be used in **technology-based learning** to increase teaching effectiveness. In addition,

this training also aims to introduce concepts and best practices in integrating technology with the existing curriculum. Another goal is for teachers to be able to design and implement more interactive and interesting learning, following the times. The contribution of this training includes strengthening teachers' technological competencies to create more relevant and challenging learning for students, as well as accelerating the adoption of innovative technology-based teaching methods. Thus, this training has the potential to improve the overall quality of education at the Al-Khoir Foundation. Nonetheless, the limitation of this training is the limited duration of time, which may not be possible to delve into all aspects of educational technology in depth.

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