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BLENDED TEACHING AND LEARNING IN SOUTH AFRICAN SECONDARY SCHOOLS IN THE POST-COVID-19 PANDEMIC ERA

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ABSTRACT

This study explored the multifaceted landscape of secondary education following the COVID-19 pandemic. The pandemic brought about a shift in education worldwide, necessitating a rapid transition from traditional classroom teaching to remote and blended learning modalities. This conceptual paper explores the emerging landscape of blended teaching and learning in South African secondary schools in the post-COVID-19 era. While South Africa's educational system was not immune to the disruptions caused by the pandemic, unique challenges and opportunities also presented themselves. This study reviewed journal articles and book chapters focused on the nature of blended teaching and learning in South African secondary schools following the COVID-19 pandemic. First, to ensure an in-depth exploration, we conducted a generic search on the challenges posed by transitioning to blended learning, supportive measures to mitigate these challenges and the benefits of a blended learning environment. This resulted in more than 90 journal articles being found. We then customised our search, subsequently identifying 14 reports that satisfied our inclusion criteria. Our analysis of these studies highlighted a multifaceted and dynamic landscape characterised by teachers' technological adaptation, pedagogical shifts, challenges posed by the digital divide and the pursuit of student engagement. The paper underscores the critical importance of ongoing professional development, equitable access to technology, as well as pedagogical support in shaping the future of education in South Africa and addressing broader issues of equity and inclusivity in a post-pandemic world. The insights from this research offer valuable guidance for educational policymakers, institutions and educators seeking to enhance the quality and accessibility of education in a digital age.

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Background.

The COVID-19 pandemic swept the globe in 2020 and disrupted every facet of society, including education systems. In South Africa, as in many other countries, the abrupt closure of schools necessitated an unprecedented shift to remote teaching and learning. This transition exposed the education system's resilience and fragility, presenting educators with new challenges and opportunities. The coronavirus (COVID-19) pandemic damaged the global economy and significantly impacted

schooling worldwide (Nkhi, Mofana & Moqasa, 2023). The pandemic similarly affected South Africa, with schools closing temporarily to comply with lockdown regulations. These devastating conditions caused most schools to transition from face-to-face to hybrid teaching and learning, forcing teachers and learners to adjust rapidly to this dramatic social change. Hence, this pandemic forced the implementation of blended teaching and learning in most schools in the country, as teachers had to transition from traditional teaching and learning methods to online-based methods such as Google Classrooms, Zoom meetings, Google Meet and Microsoft Teams (Alimyar & Lakshmi, 2021). Despite its many benefits, e-learning has shortcomings that limit its effectiveness; for example, it lacks the direct communication and actual interaction expected to occur between teachers and learners (Diab & Elgahsh, 2020).

Prior to the pandemic, traditional face-to-face teaching dominated the South African secondary school landscape. However, the need to adhere to social distancing guidelines and lockdown measures compelled educational institutions to swiftly adopt blended teaching and learning approaches, which combine in-person and online modalities. This transition was not without its complications, as it required educators to adapt to new technologies, revamp their pedagogical strategies and navigate the digital divide, disproportionately affecting underserved communities. Regardless of how significant e-learning is, it cannot replace traditional learning, which continues to have the most significant impact despite the variety and development of current learning methods.

As a result, blended learning is built on maximising the benefits of traditional learning and e-learning while attempting to avoid the disadvantages of both (Diab & Elgahsh, 2020). Hence, blended learning is more than just using technology; it is a redesign of all the pillars of the educational process, as well as a reorganisation of the roles of each learner and teacher and the educational position as a whole (Saboowala & Manghirmalani-Mishra, 2020).

Despite numerous studies demonstrating that blended learning can improve learning, teachers face challenges in promoting student learning through e-learning. Thus, the teacher's digital competency to facilitate online teaching and learning is questioned. Many teachers have found moving from the physical to the virtual mode by changing their teaching approaches challenging and trying to manage their time (Sharin, 2021). Facilitating the teaching–learning process in a virtual classroom presents several obstacles for these teachers as they struggle to adjust to practices in an online teaching environment (Korkmaz &Toraman, 2020). Some teachers have reported recording difficulties, including concerns with the large class size, videos, voice quality and learners' inability to question (Atwa et al., 2022). According to Lee and Ogawa (2021), online lessons are more complex than face-to-face instruction because teachers must interact and connect virtually with learners. However, Mese and Dursun (2019) discovered that blended learning is more efficient than the traditional way of teaching. Although blended learning offers various benefits, such as access to materials, teamwork, flexibility and learner inspiration, Bingimlas (2009) found obstacles that hinder teachers' willingness to integrate technology, including a lack of self-reliance, competency and access to resources. Buabeng-Andoh (2012) and Maimun et al. (2017) also highlighted these factors in their studies. The expansion of digital teaching capability remains a challenge for the educational system that has to be addressed because it is a crucial pillar for supporting a new way of teaching (Garzón et al., 2020).

The post-COVID-19 era presents an intriguing juncture for South African secondary school education. While the pandemic has undoubtedly brought hardships and exposed inequalities, it has also catalysed innovation and encouraged the exploration of novel teaching methods. According to Scavarda et al. (2021), the pandemic provided an opportunity to rearrange and improve the education system. Morley and Clarke (2020), meanwhile, recognised that the pandemic necessitated the innovative usage of technologies, as well as new capabilities and proficiencies from teachers. According to Niemotko and Tolan (2020), even after the pandemic, there was a chance to investigate more effective ways of teaching.

For several reasons, understanding the nature of blended learning in secondary schools in this context is essential, as the pandemic has accelerated the digital transformation of education. To effectively navigate this transformation, gaining insights into how teachers have adapted and integrated technology into their teaching practices is crucial. Hence, technology is a tool that may be useful for different learning outcomes and may assist in developing higher-order thinking, innovation and research skills (Alimyar & Lakshmi, 2021). Furthermore, this shift has enabled teachers to adapt readily to new teaching methods and approaches, and the integration of technology into teaching practices makes it easier for students to learn (Akram et al., 2021; Oliva-Córdova et al., 2021).

The move to blended learning has highlighted disparities in access to technology and digital resources, particularly in marginalised communities. According to Azevedo and Azevedo (2020), despite all of the recognised benefits of using new technology in learning, the digital gap raises issues about fairness. A robust internet connection and the accessibility of tools are required to ensure that the teaching process is constant and unbiased. Hence, schools with effective ICT infrastructure will advance their educational services more swiftly than schools with weak ICT infrastructure. The greater the digital divide, the greater the difference in educational opportunities (Kang, 2021).

Examining the nature of blended learning in schools can shed light on these disparities and inform strategies to bridge the digital divide. Blended learning necessitates adjustments in pedagogy and instructional design. Our study aimed to contribute to the ongoing discourse on educational transformation and equitable access to quality education by gathering their perspectives, challenges and successes. The findings of this research will not only benefit educators but also inform educational policymakers and stakeholders seeking to shape the future of secondary education in South Africa. In the next section, the paper looks at the theoretical framework, research methodology, findings and recommendations that emerged from this study into the changing landscape of secondary education in South Africa post-COVID-19.

This study, therefore, sought to answer the following research questions:

1. How has the COVID-19 pandemic transformed the landscape of secondary education in South Africa, particularly in adopting blended teaching and learning approaches?
2. What were the key challenges and successes experienced by teachers and students in South African secondary schools during the transition to blended learning in response to the pandemic, and what can be learned from these experiences?
3. To what extent does the adoption of blended learning modalities in South African secondary schools post-COVID-19 address existing educational disparities and promote greater equity and inclusivity in education?
4. What measures can be put in place to ensure that the transition to blended learning maintains a focus on student engagement, motivation and a holistic educational experience in secondary schools?

Research Methodology.

This conceptual paper primarily relied on an extensive literature review. The research methodology involved systematically searching, analysing and synthesising existing literature on blended teaching and learning in South African secondary schools, focusing on the post-COVID-19 era. The primary data source for this research was existing literature, which was gathered from various reputable academic databases, journals, government reports, policy documents, research papers and books. Online academic repositories and institutional libraries were extensively explored to ensure comprehensive coverage of the relevant literature. A systematic search strategy was employed to identify relevant literature. This involved a combination of keywords and phrases such as "blended learning", "South African secondary schools", "post-COVID-19", "educational technology", "e-learning" and "teaching methods". Boolean operators (AND, OR, NOT or AND NOT) were used to refine the search and ensure the retrieved literature was specific to the research topic. The only literature included pertained to the subject matter, was published after the onset of the COVID-19 pandemic and is specific to the South African educational context. The collected literature was analysed thematically. Themes and patterns were identified, and key insights, challenges and opportunities related to blended teaching and learning in South African secondary schools post-COVID-19 were synthesised. The quality and reliability of the selected literature were evaluated during the screening and full-text review process. Only credible, peer-reviewed sources and documents from reputable institutions were included in the analysis. The findings from the extensive literature search were synthesised, and a conceptual framework was developed to provide a comprehensive overview of the phenomenon under investigation. This framework guided the development of this conceptual paper.

Theoretical Framework.

The study drew upon three theoretical perspectives that provided a foundation for understanding the phenomenon under investigation.

Replacement–Amplification–Transformation (RAT) Model.

The Replacement–Amplification–Transformation (RAT) model was developed by Hughes et al. (2006). The model emphasises integrating technology into education (Kimmons, Graham & West, 2020). According to the RAT model, technological tools can be used for one of three purposes: (a) as a direct replacement for traditional learning activities (e.g. simply taking the place of another activity). Teachers who are just starting to use technology to help their teaching sometimes substitute digital flashcards for paper flashcards, electronic slides for an overhead projector, or an interactive whiteboard for a chalkboard; that is, they transfer an existing teaching practice to a contemporary medium without improving its functionality; (b) to amplify learning (e.g. making an educational activity more efficient or impactful); amplification entails the use of technology by teachers to improve learning practices or outcomes. Using technology in these amplification settings enhances teachers' practice progressively; however, it does not fundamentally alter their pedagogy; and (c) the transformation level of RAT employs technology to empower, rather than strengthen, the pedagogical methods that are implemented (e.g. resulting in new types of learning not previously possible) (Anderson et al., 2022; Aurangzeb, 2020).

Technological Pedagogical Content Knowledge (TPACK).

The Technological Pedagogical Content Knowledge (TPACK) framework, proposed by Mishra and Koehler (2006), was the central theoretical lens in this study. TPACK emphasises the interplay of three essential knowledge domains: technological knowledge (TK), pedagogical knowledge (PK) and content knowledge (CK). In the context of blended teaching and learning, TPACK offers insights into how teachers integrate technology into their pedagogical practices while considering the specific content they teach.

TPACK is the best approach for a teacher in a pandemic era because a lack of awareness of technology will hamper the transmission of knowledge from teachers to learners (Nurhayati et al., 2020). The TPACK approach incorporates teacher–student interactions, teaching–learning processes and technology-enhanced systems to uphold shared and active learning, knowledge and resource sharing, and resourceful communication (Akram et al., 2021). Additionally, TPACK is a construct that values the problems solved by deploying online classrooms (Par, 2022). The TPACK framework emphasises incorporating technology with methodological and topic knowledge, making teachers' instructional practices more applicable to 21st-century demands and engaging learners (Lie et al., 2020). As such, this study allowed us to examine how teachers' TPACK evolves in response to the challenges and opportunities presented by the post-COVID-19 educational landscape.

Community of Inquiry Framework.

The Community of Inquiry (CoI) framework, proposed by Garrison, Anderson and Archer (2000), provides a lens for understanding the collaborative and interactive nature of online and blended learning environments. CoI emphasises three critical presences: cognitive presence, social presence and teaching presence. We employed this framework to explore how secondary school teachers facilitate meaningful learning experiences within blended environments, emphasising the role of social interaction, cognitive engagement and teaching strategies. The teaching methods component highlights the teacher's position as a teaching expert who fosters social interaction and cognitive engagement during the online learning and teaching process (Kupczynski et al., 2010). Furthermore, successful learning arises when teachers vigorously and successfully frame the subject matter to lead to higher-order learning, which then leads to practical inquiry (Pool et al., 2017). These three components are equally important in shaping deeper levels of learning since they support student learning to attain the desired learning outcomes (Szeto, 2015).

These theoretical perspectives, collectively employed in our research, provide a comprehensive framework for examining secondary school teachers' experiences in South Africa as they navigate the complex terrain of blended teaching and learning in the post-COVID-19 pandemic era. By drawing on these theories, we aim to gain a nuanced understanding of blended education's challenges, innovations and implications for teachers and students, contributing to the broader discourse on educational transformation and equity.

Findings.

The findings of the study reveal a multifaceted and dynamic landscape characterised by the challenges, adaptations, innovations and opportunities that secondary school teachers have encountered in the wake of the COVID-19 pandemic. The following themes emerged from the extensive literature review.

Theme 1: Technological Adaptation.

Following the COVID-19 pandemic, most schools in the country agreed to implement blended learning by incorporating interactive technologies to improve the teaching–learning process. The study found that teachers faced a steep learning curve during the rapid transition to blended teaching and learning. Many had limited prior experience with digital tools and had to acquire new technological skills quickly; Callaghan, Joubert and Engelbrecht's (2023) study findings show that teachers perceived their exposure to technology as generating an environment that they anticipated would have a long-term impact on their teaching practice. In their study, participants emphasised the significance of using educational technology as a thoughtful means that permits students to learn with technology rather than from it; this influences the importance of learner-centred teaching strategies and the expansion of high-cognitive level collaborative learning activities.

According to Lie et al. (2020), although teachers experienced challenges adjusting to new technologies, integrating technology into sound pedagogy will turn present practices into quality learning. Furthermore, Akram et al. (2022) discovered that teachers have positive attitudes toward technology integration in teaching–learning activities. Hence, teachers reported integrating various digital tools and platforms into their teaching practices, including learning management systems (LMS), video conferencing tools and educational apps. These tools are used for content delivery, student assessment and communication. As such, these tools have resulted in learners having a more engaging learning experience, allowing them to stay more attentive to the subject content without being distracted (Haleem et al., 2022).

Theme 2: Pedagogical Shift and Adaptation.

Teachers highlighted a shift from traditional teaching to more student-centred, interactive approaches, as blended learning encourages the use of multimedia resources and collaborative activities. The findings of Chandha and Chowdury (2023) support the notion that technology has enhanced the number of options for learners to collaborate on collaborative projects by providing greater certainty and access to sharing and communication. Moreover, as traditional teaching and learning transitioned to online teaching and learning due to COVID-19, teachers and learners were persuaded to adapt promptly. As a result, learners have more authority over their own learning, and their learning time extends beyond school hours because their learning location is inclusive (Oranga & Matere, 2022). Furthermore, based on COVID-19 experiences, a hybrid of online and in-person learning alternatives may be the most effective mode of instruction delivery. According to Oranga and Matere (2022), well-designed mixed-mode online and face-to-face education delivery should be more helpful in post-COVID-19 learning circumstances.

Theme 3: Digital Divide.

The digital divide remained a significant challenge, with teachers reporting disparities in student access to technology and the internet. This divide often exacerbated existing inequalities. Technical issues, such as connectivity problems and device compatibility, frustrated teachers and students, with these issues disrupting the learning process. Maintaining student engagement in a blended learning environment proved challenging. Teachers noted that some students struggled with self-motivation and time management. Furthermore, according to Tumen-Akyildiz's (2020) research findings, the challenges faced by students in the online mode of education include a lack of interaction and communication, which leads to isolation, exam problems, traditional educational habits, a heavy workload of assignments and poor time management. This is also supported by the studies of Daniel (2020) and Yan (2020), who indicated that learners faced other challenges such as isolation, frustration, pressure, additional costs, health issues and higher exposure to cyberbullying and online violence. This indicates that the immediate shift from face-to-face to online learning has presented significant issues for both teachers and learners (Heng & Sol, 2021).

Alimyar and Lakshmi's (2021) findings indicated that issues related to the digital divide and technological skills resulted in difficulties for teacher education and educational institutions. A lack of suitable digital resources, such as internet access and Wi-Fi connections, poses problems because many learners tend to miss out on learning opportunities (Dhawan, 2020). The concept of the digital divide underscores the disparities in access to and use of digital technologies by different societal groups. Given the significant challenges of the digital divide in South Africa, particularly in underserved communities, this concept helps us examine how teachers navigate and mitigate the effects of this divide in the context of blended teaching and learning. This allows us to understand how socioeconomic factors influence teachers' experiences and the educational outcomes of their students.

Theme 4: Professional Development.

Teachers strongly desire ongoing professional development in educational technology and blended learning strategies, recognising the need for constant support to enhance their digital pedagogical skills. Hence, in order for teachers to gain professional development, they need to attend seminars and training on blended learning, as well as updates on pedagogies utilising new technologies; to be flexible, resourceful and innovative in adjusting to the needs of the learners; and to maintain a positive outlook on life despite the COVID-19 crisis (Batac et al., 2021). Attard and Holmes (2022) argued that providing professional development that enables teachers to build the effective teacher–student communication skills required for online and blended learning should be prioritised. Furthermore, the study findings of An et al. (2021) indicate that more professional development training for online teaching and blended learning should be offered so that teachers may transition to online learning and provide exciting and relevant learning experiences. Hol and Aydin (2020) believe that a teacher education programme on using technology effectively for lesson purposes should be prioritised. According to Massouti (2023), providing professional development for teachers through virtual practice and online settings can produce results that are accessible and durable in a variety of regional and cultural contexts.

Discussion.

The findings shed light on the profound changes and challenges that secondary school teachers in South Africa navigated as they transitioned to blended teaching and learning in the post-COVID-19 era. The study underscores the critical importance of technological adaptation in the face of the pandemic. Teachers were confronted with the rapid transformation of their teaching methods, necessitating the swift acquisition of new technological skills. This learning curve was particularly steep for those with limited prior experience in using digital tools. The findings highlight the need for comprehensive and ongoing training and support for teachers to integrate technology effectively into their pedagogical practices. Schools and educational institutions should invest in professional development programmes that equip teachers with the digital competencies required for contemporary education. The findings of other researchers support these findings. Nugroho and Mutiaraningrum (2020) found that teachers faced challenges implementing online teaching in their classrooms. Alimyar and Lakshmi (2021) pointed out that teachers had to suddenly change their pedagogical methods to adopt technology without proper systematic training.

Literature reveals that teachers reported a shift from traditional teaching methods to more student-centred, interactive approaches when embracing blended learning. The incorporation of multimedia resources and collaborative activities represents a positive pedagogical adaptation. However, it is essential to note that such shifts require intentional planning and support. Teachers need guidance and resources to design and implement engaging, interactive learning experiences that fully harness the potential of blended education. Furthermore, the successful adoption of these pedagogical changes should be recognised and celebrated as they contribute to the evolution of teaching practices. Hol and Aydin's (2020) results showed that in terms of the importance, use, knowledge and context, teachers expressed positive opinions on using digital technology in the classroom.

The concept of the digital divide underscores the disparities in access to and use of digital technologies among different societal groups. Given the significant challenges of the digital divide in South Africa, particularly in underserved communities, this concept helps us examine how teachers navigate and mitigate the effects of this divide within the context of blended teaching and learning. This

allows us to understand how socioeconomic factors influence teachers' experiences and the educational outcomes of their students.

According to the findings of Alimyar and Lakshmi's (2021) study, teachers thought that technology had widened the gap between the haves and have-nots due to the availability of better gadgets and improved internet connectivity. Dhawan (2020) indicated that teachers and learners should have access to digital technologies to reduce the digital divide effectively. As such, teachers and students shift their perspectives and behaviours as they gain new teaching and learning competencies to combat the digital divide and nurture the broadest possible social inclusion to promote long-term sustainability (Sá et al., 2021).

The persistent digital divide among students is a significant and concerning finding. The pandemic has exacerbated existing disparities in access to technology and the internet, perpetuating educational inequalities. Addressing this issue should thus be a top priority for educational policymakers. Strategies to bridge the digital divide may include providing devices and internet connectivity to underserved communities and ensuring that all students have equitable access to online learning resources. Furthermore, efforts to create inclusive learning environments for students with varying degrees of digital literacy should be intensified, acknowledging the diverse needs of learners.

Technical issues, such as connectivity problems and device compatibility, disrupt the learning process. These challenges underscore the importance of reliable infrastructure and technical support for both teachers and students. Moreover, maintaining student engagement in a blended learning environment emerged as a complex issue. Teachers need strategies and resources to foster student motivation and participation in online and hybrid settings. Addressing this challenge necessitates a deeper understanding of student needs and preferences in the blended learning landscape. Technological tools and a proper internet connection are needed for successful technological integration in the classroom (Alimyar & Lakshmi, 2021; Hol & Aydin, 2020). Teachers would, therefore, require ongoing professional development in educational technology and blended learning to enhance their pedagogical practices. The Department of Basic Education and schools should actively invest in providing teachers with growth and skill development opportunities. In addition, professional development programmes should align with the evolving needs of educators in the digital age, equipping them with the knowledge and tools to thrive in blended learning environments. Hol and Aydin (2020) state that technology-related training should be obligatory for teachers so that they can integrate technology in their classrooms. Teachers will be able to use technology more effectively and efficiently in their future professional lives if their digital abilities and innovativeness are developed (Filiz & Kurt, 2022).

This study illuminates the multifaceted nature of teachers' experiences with blended teaching and learning in South Africa post-COVID-19. While challenges exist, teachers have shown resilience, adaptability, and dedication to improving their students' educational experience. These findings emphasise the critical role of ongoing professional development, equitable access to technology, and pedagogical support in ensuring the success of blended education initiatives. Addressing these issues is pivotal to advancing the quality and inclusivity of education in South Africa and beyond. Teachers expressed concerns about the worsening educational inequalities resulting from the digital divide, highlighting the need for government and school-level interventions to bridge this gap.

Conclusion.

This paper explored the complexities of blended teaching and learning in South African secondary schools in the wake of the COVID-19 pandemic. Our findings have shed light on the myriad changes and challenges that secondary school teachers in South Africa faced as they adapted to this new educational landscape. The research underscores the pivotal role of technological adaptation in the face of the pandemic, as teachers were compelled to swiftly embrace new digital tools and skills, often with limited prior experience. The findings have underscored the urgency of comprehensive and ongoing training and support for teachers, ensuring they are equipped with the necessary digital competencies for contemporary education. This adaptation represents a profound shift from traditional teaching methods to more student-centred and interactive approaches, marked by the integration of multimedia resources and collaborative activities. However, this shift necessitates careful planning and guidance in designing and implementing engaging interactive learning experiences.

One of the critical challenges emphasised in our study is the digital divide, which highlights the disparities in digital technology access among different societal groups. In South Africa, this divide is particularly pronounced, profoundly influencing teachers' experiences and students' educational outcomes in the context of blended teaching and learning. The persistent digital divide among students is a cause for concern, as it perpetuates educational inequalities. Addressing this issue should, therefore, be a top priority for educational policymakers, with strategies to bridge this divide and provide equitable access to online learning resources. Additionally, addressing technical issues, ensuring reliable infrastructure and fostering student engagement are vital considerations for effective blended learning. The teachers' desire for ongoing professional development in educational technology and blended learning reflects their commitment to enhancing their pedagogical practices. Thus, the Department of Basic Education and schools must invest in providing teachers with opportunities for growth and skill development that align with the evolving needs of educators in the digital age.

In conclusion, this research has illuminated the multifaceted nature of teachers' experiences with blended teaching and learning in South Africa post-COVID-19. While challenges exist, teachers have shown resilience, adaptability and dedication in improving the educational experience for their students. These findings emphasise the critical role of ongoing professional development, equitable access to technology and pedagogical support in ensuring the success of blended education initiatives. Addressing these issues is pivotal to advancing the quality and inclusivity of education in South Africa and beyond. The concerns raised by teachers regarding the exacerbation of educational inequalities resulting from the digital divide serve as a poignant reminder of the collective responsibility to bridge this gap and provide equal opportunities for all learners.

REFERENCES

1. Akram, H., Abdelrady, A. H., Al-Adwan, A. S., & Ramzan, M. (2022). Teachers' perceptions of technology integration in teaching-learning practices: A systematic review. *Frontiers in Psychology*, *13*, 920317. doi.org/10.3389/fpsyg.2022.920317.
2. Akram, H., Yingxiu, Y., Al-Adwan, A. S., & Alkhalifah, A. (2021). Technology integration in higher education during COVID-19: An assessment of online teaching competencies through technological pedagogical content knowledge model. *Frontiers in Psychology*, *12*, 736522. doi.org/10.3389/fpsyg.2021.736522.
3. Alimyar, Z., & Lakshmi, S. G. (2021). A study on language teachers' preparedness to use technology during COVID-19. *Cogent Arts & Humanities*, *8*, 1.
4. An, Y., Kaplan-Rakowski, R., Yang, J., Conan, J., Kinard, W., & Daughrity, L. (2021). Examining K-12 teachers' feelings, experiences, and perspectives regarding online teaching during the early stage of the COVID-19 pandemic. *Educational Technology Research and Development*, *69*, 2589–2613. doi.org/10.1007/s11423-021-10008-5.
5. Anderson, H. L., Kurtz, J., West, D. C., & Balmer, D. F. (2022). Replace, amplify, transform: A qualitative study of how postgraduate trainees and supervisors experience and use telehealth for instruction in ambulatory patient care. *BMC Medical Education*, *22*(1), 1–8. doi.org/10.1186/s12909-022-03175-3.
6. Attard, C., & Holmes, K. (2022). An exploration of teacher and student perceptions of blended learning in four secondary mathematics classrooms. *Mathematics Education Research Journal*, *34*(4), 719–740. doi.org/10.1007/s13394-020-00359-2.
7. Atwa, H., Shehata, M. H., Al-Ansari, A., Kumar, A., Jaradat, A., Ahmed, J., & Deifalla, A. (2022). Online, face-to-face, or blended learning? Faculty and medical students' perceptions during the COVID-19 pandemic: A mixed-method study. *Frontiers in Medicine*, *9*, 791352. doi.org/10.3389/fmed.2022.791352.
8. Aurangzeb, W. (2020). Analysis of e-leadership practices in ameliorating learning environment of higher education institutions. *Pakistan Journal of Distance and Online Learning*, *5*(2).
9. Azevedo, A., & Azevedo, P. (2020). Digital transformation of educational institutions: Challenges, opportunities and needs caused by the Covid-19 pandemic. In *EDEN Conference Proceedings*, 275–286.
10. Batac, K. I. T., Baquiran, J. A., & Agaton, C. B. (2021). qualitative content analysis of teachers' perceptions and experiences in using blended learning during the COVID-19 pandemic. *International Journal of Learning, Teaching and Educational Research*, *20*(6), 225–243. *doi.org/10.26803/ijlter.20.6.12.*
11. Bingimlas, K. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics, Science and Technology Education*, *5*(3), 235–245. doi.org/10.12973/ejmste/75275.
12. Buabeng-Andoh, C. (2012). An exploration of teachers" skills, perceptions and practices of ICT in teaching and learning in the Ghanaian second cycle schools. *Contemporary Educational Technology*, *3*(1), 36–49.

13. Callaghan, R., Joubert, J., & Engelbrecht, J. (2023). Using enaction to evolve from pre-Covid to post-Covid pedagogy: a case study with South African mathematics teachers. *ZDM–Mathematics Education*, *55*(1), 193-206. doi.org/10.1007/s11858-022-01416-9.
14. Chandha, F. Y., & Chowdury, M. A. U. (2023). Teachers' perception of using technology in a blended learning environment to facilitate collaborative learning in Bangladesh. In *19th International Conference of the Asia Association of Computer-Assisted Language Learning (AsiaCALL 2022)* (pp. 21–33). Atlantis Press.
15. Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects*, *49*, 91–96. doi.org/10.1007/s11125-020-09464-3.
16. Dhawan, S. (2020). Online learning: A panacea in the time of Covid-19 crisis. *Journal of Educational Technology Systems*, *49*(1), 5–22. doi.org/10.1177/004723952093.
17. Diab, G. M. A. E. H., & Elgahsh, N. F. (2020). E-learning during COVID-19 pandemic: Obstacles faced nursing students and its effect on their attitudes while applying it. *American Journal of Nursing*, *9*(4), 300-314.
18. Filiz, O., & Kurt, A. A. (2022). The effect of preservice teachers' experiences in a flipped course on digital competencies related to educational technology and innovativeness. *Journal of Educational Technology & Online Learning*, *5*(3), 655–675.
19. Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The internet and higher education*, *2*(2-3), 87-105.
20. Garzón Artacho, E., Martínez, T. S., Ortega Martin, J. L., Marin Marin, J. A., & Gomez Garcia, G. (2020). Teacher training in lifelong learning: The importance of digital competence in the encouragement of teaching innovation. *Sustainability*, *12*(7), 2852.
21. Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, *3*, 275–285.
22. Heng, K., & Sol, K. (2021). Online learning during COVID-19: Key challenges and suggestions to enhance effectiveness. *Cambodian Journal of Educational Research*, *1*(1), 3–16.
23. Hol, D., & Aydin, I. (2020). Is Technology in Our Classrooms? EFL Teachers' Beliefs and Engagement with Technology in the Classroom. *Journal of Educational Issues*, *6*(2), 38-58.
24. Hughes, J., Thomas, R., & Scharber, C. (2006). Assessing technology integration: The RAT–replacement, amplification, and transformation-framework. In *Society for Information Technology & Teacher Education International Conference* (pp. 1616–1620). Association for the Advancement of Computing in Education (AACE).
25. Kang, B. (2021). How the COVID-19 pandemic is reshaping the education service. In J. Lee, & S. H. Han (Eds.), *The future of service post-COVID-19 pandemic, Volume 1: Rapid adoption of digital service technology* (pp. 15–36). Springer Nature.
26. Kimmons, R., Graham, C. R., & West, R. E. (2020). The PICRAT model for technology integration in teacher preparation. *Contemporary Issues in Technology and Teacher Education*, *20*(1), 176-198.
27. Korkmaz, G., & Toraman, Ç. (2020). Are we ready for the post-COVID-19 educational practice? An investigation into what educators think as to online learning. *International Journal of Technology in Education and Science (IJTES)*, *4*(4), 293–309.
28. Kupczynski, K., Ice, P., Wiesenmayer, R., & McCluskey, F. (2010). Student perceptions of the relationship between indicators of teaching presence and success in online courses. *Journal of Interactive Online Learning*, *9*(1), 23e43.
29. Lee S., & Ogawa C. (2021). Online teaching self-efficacy: How English teachers feel during the Covid-19 pandemic. *Indonesian TESOL Journal*, *3*(1), 1–17.
30. Lie, A., Tamah, S. M., Gozali, I., Triwidayati, K. R., Utami, T. S. D., & Jemadi, F. (2020). Secondary school language teachers' online learning engagement during the Covid-19 pandemic in Indonesia. *Journal of Information Technology Education: Research*, *19*, 803–832.
31. Maimun, L. A., Wan, & Isa, M. (2017). The level of knowledge and the readiness of Islamic education teachers on the use of multimedia. *ASEAN Comparative Education Research Journal on Islam and Civilization*, *1*(11), 1–13.
32. Massouti, A. (2023). Reviewing teachers' competency for distance learning during COVID-19: Inferences for policy and practice. *The Canadian Journal for the Scholarship of Teaching and Learning*, *14*(1).
33. Mese C., & Dursun O. O. (2019). Effectiveness of gamification elements in blended learning environments. *Turkish Online Journal of Distance Education*, *20*(3), 119–142.
34. Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers college record*, *108*(6), 1017-1054.
35. Morley, C., & Clarke, J. (2020). From crisis to opportunity? Innovations in Australian social work field education during the COVID-19 global pandemic. *Social Work Education*, *39*(8), 1048–1057. doi. 10.1080/02615479.2020.1836145.
36. Niemotko, T. J., & Tolan, M. (2020). Online accounting courses: Transition and emerging issues. *The CPA Journal*, *90*(5), 11–11.

37. Nkhi, S. E., Mofana, M., & Moqasa, N. (2023). Lecturers' perceptions of blended teaching in the post COVID-19 era: A case study of a university in Lesotho. *Interdisciplinary Journal of Education Research, 5*, 1–13.
38. Nugroho, A., & Mutiaraningrum, I. (2020). EFL teachers' beliefs and practices about digital learning of English. *EduLite: Journal of English Education, Literature, and Culture, 5*(2), 304–321.
39. Nurhayati, E., Rizaldi, D. R., & Fatimah, Z. (2020). The effectiveness of project-based learning with the blended learning system to improve 21st century skills during the COVID-19 pandemic. *Journal Scientia, 9*(2), 46–52.
40. Oliva-Córdova, L. M., Garcia-Cabot, A., & Amado-Salvatierra, H. R. (2021). Learning analytics to support teaching skills: a systematic literature review. *IEEE Access, 9*, 58351–58363.
41. Oranga, J., & Matere, A. (2022). Post COVID-19 education strategies: Envisaging learning in a post COVID-19 pandemic world. *Research Journal in Advanced Social Sciences*, *3*(2), 67–75.
42. Par, L. (2022). Integrating TPACK into English language teaching before and during covid-19 pandemic: The state of the art. *English Language Education Journal (ELEJ), 1*(2), 49–72.
43. Pool, J., Reitsma, G., & Van den Berg, D. (2017). Revised community of inquiry framework: Examining learning presence in a blended mode of delivery. *Online Learning, 21*(3).
44. Sá, M. J., Santos, A. I., Serpa, S., & Miguel Ferreira, C. (2021). Digitainability: Digital competences post-COVID-19 for a sustainable society. *Sustainability*, *13*(17), 9564.
45. Saboowala, R., & Manghirmalani-Mishra, P. (2020*). Perception of in-service teachers towards blended learning as the new normal in teaching-learning process post COVID-19 Pandemic.* Research Square. https://doi.org/10.21203/rs.3.rs-56794/v1.
46. Scavarda, A., Dias, A., Reis, A., Silveira, H., & Santos, I. (2021). A Covid-19 pandemic sustainable educational innovation management proposal framework. *Sustainability*, *13*(11), 6391. doi.org/10.3390/su13116391.
47. Sharin, A. N. (2021). E-learning during COVID-19: A review of literature. *Jurnal Pengajian Media Malaysia*, *23*(1), 15–28. doi.org/10.22452/jpmm.vol23no1.2.
48. Szeto, E. (2015). Community of inquiry as an instructional approach: What effects of teaching, social and cognitive presences are there in blended synchronous learning and teaching? *Computers & Education*, *81*, 191–201. doi. 10.1016/j.compedu.2014.10.015.
49. Tumen Akyildiz, S. (2020). College students' views on the pandemic distance education: A focus group discussion. *International Journal of Technology in Education and Science*, *4*(4), 322–334.
50. Yan, Z. (2020). Unprecedented pandemic, unprecedented shift, and unprecedented opportunity. *Human Behavior and Emerging Technologies*, *2*(2), 110–112. doi.org/10.1002/hbe2.192.