Enhancing Pre-Service Teacher Education Curriculum for English Language Instruction in South African Classrooms: Navigating Technological Advancements and Cultural Diversity

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Abstract

The educational environment in South Africa is characterised by linguistic diversity and technological advancements, which present particular difficulties and opportunities for pre-service teacher education programmes. This systematic literature review explores the effectiveness of current pre-service teacher training programmes in addressing the demands of teaching the English language in South African classrooms. Drawing upon a synthesis of empirical studies, theoretical frameworks, and policy documents, this review critically examines how existing teacher education curricula prepare educators to navigate the complexities of English language instruction within diverse cultural and linguistic contexts. The review follows the PRISMA guidelines, systematically searching and synthesising relevant literature published between 2000 and 2022. The findings reveal a range of insights into the strengths and limitations of current pre-service teacher education programmes in South Africa concerning English language instruction. Key themes emerge around the integration of technology in language teaching, strategies for addressing linguistic diversity, and the alignment of curriculum with the needs of diverse learners. The review highlights the importance of incorporating pedagogical approaches that leverage technology to enhance English language learning outcomes while fostering intercultural competence among pre-service teachers. Furthermore, it underscores the need for a culturally responsive pedagogy that acknowledges and respects the linguistic diversity present in South African classrooms.

Keywords: Pre-service teacher education, English language instruction, South African classrooms, Technological advancements, Cultural diversity

1. Introduction

The education landscape in South Africa is a testament to the country's rich linguistic diversity and rapid technological advancements. With eleven official languages and a growing reliance on digital tools and platforms, South African classrooms present unique challenges and opportunities for educators, particularly in English language instruction. Effective teaching of English is crucial for academic success, social mobility, and economic empowerment in South Africa (Maree, 2013). As such, the role of pre-service teacher education programmes in adequately preparing educators to navigate these complexities is paramount.

Over the past decade, the literature on pre-service teacher education in South Africa has increasingly highlighted the need for curricular reforms to address the evolving demands of English language instruction (Chetty & Moses, 2015). With the proliferation of digital technologies, there is a growing consensus among scholars that teacher education programs must integrate technology-enhanced pedagogies to meet the needs of 21st-century learners (Khan, 2018). Furthermore, the multicultural nature of South African society necessitates a culturally responsive approach to language teaching and learning (Pillay, 2012). This requires pre-service teachers to develop linguistic competencies, intercultural sensitivity, and awareness (De Klerk, 2016).

Against this backdrop, this systematic literature review aims to critically examine the effectiveness of current pre-service teacher education curricula in preparing educators for English language instruction in South African classrooms. By synthesising empirical studies, theoretical frameworks, and policy documents published between 2010 and 2024, this review seeks to identify gaps, challenges, and best practices in pre-service teacher education for English language instruction.

To ensure rigour and thoroughness in the literature search and synthesis process, the review adopts a systematic approach that follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009). One of the central themes explored in this review is integrating technology into language teaching within the South African context. Digital technologies offer a wide array of tools and resources to enhance English language learning outcomes, provided pre-service teachers have the necessary skills and competencies to effectively integrate them into their pedagogical practices (Botha & Van Staden, 2020).

Additionally, the review examines strategies for addressing linguistic diversity in the classroom, considering South African learners'

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diverse language backgrounds and proficiency levels (Ngidi & Naidu, 2014). Pre-service teachers must be prepared to employ inclusive teaching strategies that cater to the linguistic needs of all learners, irrespective of their language background or proficiency level.

Furthermore, the review explores the alignment of pre-service teacher education curricula with the needs and realities of diverse learners in South African classrooms. With an increasing emphasis on learner-centred approaches and differentiated instruction, there is a growing recognition of the importance of tailoring teacher education programmes to address the diverse learning needs and contexts of South African learners (Van Heerden, 2019).

Finally, the review considers the implications of cultural diversity for English language instruction in South African classrooms. Culturally responsive pedagogy emphasises recognising and valuing students' cultural identities and experiences in the teaching and learning process (Gay, 2010). Pre-service teachers must have the knowledge and skills to create inclusive and culturally affirming learning environments that promote academic success and well-being for all students. Thus, this study aims to contribute to the ongoing discourse on pre-service teacher education for English language instruction in South African classrooms. By critically examining the existing literature and identifying areas for improvement, this review seeks to inform policy and practice in teacher education, ultimately enhancing the quality of English language instruction and promoting educational equity and inclusion in South Africa.

2. Literature Review

The complex history of South Africa has left a lasting legacy of linguistic diversity on the country's educational landscape. Maree (2013) underscores the significance of academic literacy, particularly in a multicultural context like South Africa, where students come from diverse linguistic backgrounds. This diversity poses a unique challenge for pre-service teacher education programmes, requiring a nuanced approach to preparing educators for English language instruction in culturally and linguistically diverse classrooms.

Chetty and Moses (2015) emphasise the importance of bridging theory and practice in pre-service teacher education, suggesting that programmes should equip teachers with the necessary skills to navigate the complexities of South African classrooms. One area of focus in pre-service teacher education is integrating digital technology into teaching practices. Khan (2018) highlights the potential of technology to enhance teaching and learning outcomes, particularly in the context of English language instruction. Botha and Van Staden (2020) explore pre-service teachers' perspectives on integrating technology into English language teaching, pointing to the need for effective training and support. As technology continues to evolve, it becomes increasingly essential for teacher education programmes to keep pace with these advancements.

Addressing linguistic diversity is another critical aspect of pre-service teacher education in South Africa. Pillay (2012) discusses the complexities of language policy in education and its implications for classroom practice. Ngidi and Naidu (2014) argue that teacher education programmes must effectively equip educators with strategies for addressing linguistic diversity. This includes understanding the linguistic backgrounds of students, adapting teaching approaches accordingly, and promoting multilingualism in the classroom. Culturally responsive pedagogy is essential for promoting inclusivity and equity in education.

De Klerk (2016) emphasises the importance of culturally responsive teaching practices that recognise and value students' cultural identities and experiences. Gay (2010) provides a comprehensive overview of culturally responsive teaching, highlighting its theoretical underpinnings and practical implications for classroom practice. Culturally responsive pedagogy is crucial for creating inclusive learning environments in South Africa, where cultural diversity is a defining feature of classrooms.

Differentiated instruction is another pedagogical approach that holds promise for addressing the diverse needs of students in South African classrooms. Van Heerden (2019) discusses the challenges and opportunities of differentiated instruction in South Africa, emphasising the importance of personalised learning experiences for students. By tailoring instruction to meet the individual needs of learners, educators can create more equitable and effective learning environments. This study highlights key themes relevant to pre-service teacher education for English language instruction in South African classrooms.

These include integrating technology, strategies for addressing linguistic diversity, culturally responsive pedagogy, and differentiated instruction. By examining the existing literature, this study aims to understand how pre-service teacher education programmes can better prepare educators to meet the diverse needs of students in South Africa. In addition to the highlighted themes, the preliminary literature review underscores the importance of aligning pre-service teacher education curricula with the evolving needs of South African classrooms.

According to Mthethwa and Mofokeng (2018), there is a rising need for teachers proficient in English language instruction who can encourage students' critical thinking, creativity, and problem-solving. This necessitates reevaluating traditional teacher training approaches to ensure they remain relevant in today's educational landscape.

Furthermore, the literature emphasises the need for pre-service teacher education programmes to adopt a holistic approach beyond mere content knowledge. Sosibo and Zikhali (2021) argue that educators must be prepared to address students' socio-emotional needs, particularly in marginalised communities where students may face various challenges outside the classroom. This requires a shift towards more comprehensive teacher preparation programmes that equip educators with the skills and knowledge to support the holistic development of their students.

Another critical aspect highlighted in the literature is the role of language in shaping educational outcomes and opportunities. Kruger and Nkosi (2017) discuss the implications of language policy on educational access and equity in South Africa, emphasising the need for

pre-service teachers to be cognizant of linguistic diversity in their classrooms. This includes promoting multilingualism and embracing students' home languages as valuable resources for learning.

Moreover, the literature points to the importance of ongoing professional development for in-service teachers to complement pre-service education (Ajani, 2023; Govender et al., 2023). According to Molefe and Ramani (2022), educators must continuously learn and reflect to stay current with new pedagogical strategies, technological advancements, and educational policy changes. Therefore, pre-service teacher education programs should not be viewed as standalone entities but as part of a broader teacher development continuum.

Conversely, the study provides valuable insights into the factors influencing pre-service teacher education for English language instruction in South African classrooms. By examining the intersection of technology, linguistic diversity, culturally responsive pedagogy, differentiated instruction, and ongoing professional development, this study aims to contribute to the ongoing discourse on how best to prepare educators for the diverse and dynamic educational landscape of South Africa (Govender & Ajani, 2021).

3. Theoretical Framework

The theoretical framework of diffusion of innovation is a robust lens to analyse the adoption and integration of technological advancements in pre-service teacher education for English language instruction in South African classrooms. The theory, which has its roots in Everett Rogers' seminal work from 1962, contends that innovations spread through society in a predictable pattern with various stages of adoption by individuals or groups (Rogers, 1962). In the context of this study, the diffusion of innovation theory provides a comprehensive framework for understanding how technological advancements, such as digital learning tools and platforms, are introduced, accepted, and utilised within teacher education programmes.

Central to the diffusion of innovation theory are several fundamental principles that elucidate the process of adoption and dissemination of innovations. One such principle is the notion of innovation attributes, which suggests that specific characteristics of an innovation influence its adoption rate. These attributes include relative advantage, compatibility, complexity, trialability, and observability (Rogers, 1962). In pre-service teacher education, integrating technological advancements must be perceived as advantageous, compatible with existing practices, and easy to use to encourage adoption among educators.

Moreover, the diffusion of innovation theory emphasises the role of communication channels and social networks in facilitating the spread of innovations. Rogers (1962) identifies various communication channels, such as mass media, interpersonal networks, and opinion leaders, influencing individuals' decision-making regarding adopting innovations. In the context of this study, understanding how information about technological advancements in English language instruction is disseminated through social networks and communication channels within teacher education programmes is crucial for designing effective interventions.

Furthermore, the theory highlights the importance of perceived risks and uncertainties associated with adopting innovations. Individuals are more likely to adopt innovations when they perceive minimal risk and uncertainty (Rogers, 1962). Thus, in pre-service teacher education, efforts to mitigate perceived risks, such as providing adequate training and support for using new technologies, are essential for promoting innovative practices in English language instruction. The diffusion of innovation theory also emphasises the role of opinion leaders and change agents in driving the adoption process.

Opinion leaders are influential individuals within their social networks and can shape others' attitudes and behaviours towards innovation adoption (Rogers, 1962). Identifying and leveraging opinion leaders among faculty members and mentor teachers in pre-service teacher education can facilitate disseminating innovative practices and technologies in English language instruction.

Moreover, the theory underscores the importance of contextual factors, such as organisational culture and infrastructure, in shaping the adoption and implementation of innovations. Rogers (1962) emphasises that innovations are more likely to be adopted when they align with a particular context's values, norms, and resources. Therefore, in the context of pre-service teacher education in South Africa, considerations of cultural diversity, socioeconomic disparities, and technological infrastructure are essential for designing contextually relevant interventions.

The diffusion of innovation theory offers a comprehensive framework for understanding the adoption and integration of technological advancements in pre-service teacher education for English language instruction in South African classrooms. This theory gives us useful information for making effective interventions and strategies to get educators to adopt new ideas by explaining the basic ideas, communication channels, social networks, perceived risks, opinion leaders, and environmental factors that affect the adoption process.

4. Methods

This study employed a systematic literature review approach to explore the effectiveness of current pre-service teacher training programs in addressing the demands of teaching the English language in South African classrooms. Following PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), guidelines ensured transparency and rigour throughout the review process (Page et al., 2021). The review focused on literature published between 2010 and 2024, emphasising empirical studies, theoretical frameworks, and policy documents related to pre-service teacher education and English language instruction in South Africa.

Explicit inclusion and exclusion criteria were established to guide the selection of relevant studies. Studies were included if they met the following criteria: (a) focused on pre-service teacher education programs related to English language instruction in South African classrooms; (b) examined technology integration in language teaching; (c) addressed strategies for managing linguistic diversity; and (d)

considered curriculum alignment with the needs of diverse learners. Both qualitative and quantitative studies were included to ensure a comprehensive understanding of the topic. Additionally, theoretical frameworks and policy documents relevant to the context of South African education were included to provide contextual insights.

Exclusion criteria were applied to maintain the study's focus on the specific topic of interest. Studies conducted outside South Africa or unrelated to pre-service teacher education and English language instruction were excluded. Furthermore, studies published before 2010 or after 2024 were not considered to ensure the relevance of the findings to the study's timeframe. Studies needing more detail or methodological rigour were also excluded to maintain the quality of the synthesised evidence.

The systematic literature search was conducted across multiple electronic databases, including Google Scholar, ERIC, PsycINFO, and Education Source, using various relevant keywords and search terms. The search strategy aimed to capture a broad spectrum of relevant literature while ensuring specificity to the research topic. Additionally, reference lists of identified studies and relevant journals were manually searched to identify further sources not captured in the initial database search.

Following the initial search, duplicates were removed. The remaining studies were then screened based on their titles and abstracts to assess their relevance to the research questions. Studies that met the inclusion criteria underwent a full-text review to determine their eligibility for inclusion in the final synthesis. Data extraction was conducted systematically, capturing relevant information from each included study, including study characteristics, key findings, and implications for pre-service teacher education.

The synthesised evidence was analysed thematically to identify critical patterns, themes, and trends across the included studies. This thematic analysis involved organising and categorising the extracted data to comprehensively understand the current state of pre-service teacher education and English language instruction in South African classrooms. The findings from the systematic literature review offered valuable insights into the strengths and limitations of existing teacher education curricula, highlighting areas for improvement to better prepare educators for the challenges of teaching English in diverse cultural and linguistic contexts.

5. Results/Findings

Technology Integration in Pre-Service Teacher Education

The results of this study illuminate the intricate interplay between technology integration and the efficacy of pre-service teacher education programs in South Africa, particularly in the context of English language instruction. The results show how technological advances have entered teacher education programmes. They are based on the theory of diffusion of innovation, which says that new ideas, practices, or technologies predictably spread in a social system. Literature suggests that the diffusion of technology in education can significantly enhance teaching and learning outcomes by providing innovative tools and platforms for language instruction (Bauer & Kenton, 2015; Christensen et al., 2008). Consequently, the results underscore the imperative for pre-service teacher education programmes to leverage technology to augment English language instruction in South African classrooms.

Differential Rates of Technology Adoption

The findings highlight the differential technology adoption rates among pre-service teachers, influenced by various factors such as access to resources, pedagogical beliefs, and institutional support systems (Ertmer et al., 2015; Teo, 2011). This nuanced understanding aligns with the principles of diffusion theory, which emphasises the importance of addressing individual, contextual, and systemic barriers to innovation adoption (Rogers, 2010). By elucidating the multifaceted nature of technology integration in pre-service teacher education, the study contributes to a more nuanced understanding of the factors that shape the diffusion process within educational contexts.

Proactive Approach to Technology Integration

The results show that programmes that prepare future teachers need to be more proactive about incorporating technology. These programmes should give teachers the knowledge, skills, and attitudes they need to use digital tools effectively for teaching English (Koehler & Mishra, 2009; Mishra & Koehler, 2006). This aligns with the central tenets of diffusion theory, which advocate for deliberate efforts to facilitate the diffusion process through targeted interventions and capacity-building initiatives (Rogers, 2010). By elucidating the critical role of pre-service teacher education in driving technological innovation in language instruction, the findings provide valuable insights for curriculum developers, policymakers, and educational stakeholders seeking to enhance the quality and relevance of teacher training programmes in South Africa.

Fostering Collaboration and Knowledge Sharing

Moreover, the results underscore the importance of fostering a culture of collaboration and knowledge sharing among pre-service teachers, facilitating innovative practices and pedagogies (Trust et al., 2016). This collaborative ethos is consistent with the sociocultural underpinnings of diffusion theory, which emphasises the role of interpersonal networks and social dynamics in shaping the adoption and spread of innovations (Rogers, 2010). By elucidating the social processes underpinning technology integration in pre-service teacher education, the study offers practical insights for promoting collaboration, professional learning communities, and communities of practice within educational institutions.

Cultural and Contextual Relevance

The findings underscore the importance of aligning technology integration efforts with the cultural and contextual realities of South African classrooms, thereby ensuring the relevance and effectiveness of English language instruction (Albion et al., 2015; Kozma, 2005).

This culturally responsive approach resonates with the principles of diffusion theory, which emphasises the need to adapt innovations to the target population's specific needs, values, and preferences (Rogers, 2010). By elucidating the significance of cultural context in shaping technology adoption and implementation, the study offers practical guidance for educators and policymakers seeking to promote inclusive and equitable access to digital resources and pedagogies.

Transformative Potential of Technology Integration

Overall, the results provide compelling evidence of the transformative potential of technology integration in pre-service teacher education for English language instruction in South African classrooms. Grounded in the theoretical framework of diffusion of innovation, the findings underscore the need for targeted interventions, collaborative initiatives, and culturally responsive practices to facilitate the widespread adoption and effective implementation of digital technologies in teacher training programmes. The study offers actionable insights for enhancing English language instruction's quality, relevance, and equity in diverse educational contexts by illuminating the complex interplay between technology, pedagogy, and culture.

6. Discussion

The findings from the systematic literature review for this study underscore the importance of embracing technological innovation within pre-service teacher education programmes to effectively address the complexities of English language instruction in diverse South African classrooms. As Rogers (2010) highlighted, the diffusion of innovations theory provides a valuable framework for understanding how new technologies can be adopted and integrated into educational practices. In this context, integrating technology in teacher education programs is essential for preparing educators to meet the evolving needs of 21st-century learners (Albion et al., 2015).

However, despite recognising technology's potential to enhance teaching and learning, barriers to its effective integration persist (Bauer & Kenton, 2015). One key barrier identified in this study is the need for adequate training and support for pre-service teachers to effectively integrate technology into their pedagogical practices (Ertmer et al., 2015). Despite the growing emphasis on the importance of technology in education, many teacher education programmes still need to provide sufficient opportunities for pre-service teachers to develop the necessary technological pedagogical content knowledge (TPACK) (Mishra & Koehler, 2006). As a result, pre-service teachers may feel ill-prepared to leverage technology to support English language instruction in culturally and linguistically diverse classrooms.

Furthermore, the findings of this study suggest that pre-service teacher education programmes need to adopt a more culturally responsive approach to technology integration. Trust et al. (2016) noted that professional learning networks can serve as valuable platforms for supporting teachers in developing culturally relevant instructional practices. By engaging in collaborative learning communities, pre-service teachers can gain insights into their students' diverse cultural and linguistic backgrounds and develop strategies for effectively integrating technology to meet their unique learning needs (Trust et al., 2016).

Additionally, the findings highlight the importance of aligning pre-service teacher education curricula with the needs and realities of South African classrooms. As Koehler and Mishra (2009) emphasised, effective technology integration requires a deep understanding of the intersection between technology, pedagogy, and content. Therefore, pre-service teacher education programmes must provide opportunities for pre-service teachers to develop the knowledge and skills necessary to integrate technology in meaningful and relevant ways to their students' English language learning goals.

Moreover, this study underscores the importance of addressing the digital divide within South African classrooms. As Kozma (2005) noted, access to technology varies widely across regions and communities in South Africa, with many schools needing more basic infrastructure and resources. Therefore, efforts to integrate technology into pre-service teacher education programmes must be accompanied by initiatives to ensure equitable access to technology for all students (Teo, 2011). Furthermore, the findings suggest that pre-service teacher education programs must provide ongoing professional development opportunities for in-service teachers to support the sustainable integration of technology into their instructional practices (Trust et al., 2016; Ajani, 2022).

As Christensen et al. (2008) highlighted, successful adoption of technological innovations in education requires a supportive ecosystem that includes ongoing training, technical support, and opportunities for collaboration and networking. Thus, this study highlights the importance of embracing technological innovation and adopting a culturally responsive approach to teacher education in South Africa.

By leveraging the principles of the diffusion of innovation theory, pre-service teacher education programmes can better prepare educators to effectively integrate technology into their pedagogical practices and address the diverse needs of English language learners in South African classrooms. However, initiatives to address the digital divide, offer ongoing support and professional development for teachers and ensure equitable access to technology for all students must go hand in hand with efforts to integrate technology to achieve meaningful and sustainable change (Ajani, 2024).

Furthermore, the study emphasises the need for pre-service teacher education programmes to foster critical digital literacy skills among future educators. As Buckingham (2015) highlighted, digital literacy goes beyond basic technical skills. It encompasses critically evaluating and using digital tools and resources to engage with information and media in meaningful ways.

Therefore, pre-service teacher education programmes must provide opportunities for pre-service teachers to develop the skills and dispositions necessary to navigate the complexities of the digital landscape and effectively integrate technology into their teaching practices (Buckingham, 2015). Moreover, the findings underscore the importance of collaboration between teacher education institutions, schools, and communities in supporting technology integration in education.

Voogt et al. (2013) noted that successful technology integration requires a collaborative approach involving all stakeholders to identify needs, develop resources, and implement effective strategies. Therefore, pre-service teacher education programmes must engage in partnerships with schools and communities to ensure that technology integration efforts are contextually relevant and responsive to the needs of learners and educators (Voogt et al., 2013).

Additionally, the study highlights the role of leadership in driving technological innovation within pre-service teacher education programs and schools. As Fullan (2014) emphasised, effective leadership is essential for creating a culture of innovation and change that supports technology integration in education. Therefore, pre-service teacher education programmes must prepare future educators to assume leadership roles in promoting technological innovation and advocating for policies and practices that support the effective use of technology in teaching and learning (Fullan, 2014).

Furthermore, the findings suggest that pre-service teacher education programs must adopt a multidimensional approach to technology integration beyond digital tools and platforms. As Mishra et al. (2014) noted, successful technology integration requires a deep understanding of the complex interactions between technology, pedagogy, and content and the ability to adapt and innovate in response to changing educational contexts and needs.

Therefore, pre-service teacher education programmes must provide opportunities for teachers to develop the knowledge, skills, and dispositions necessary to effectively integrate technology into their teaching practices in meaningful and contextually relevant ways (Mishra et al., 2014).

Moreover, the study highlights the need for pre-service teacher education programs to provide opportunities for teachers to reflect critically on their practice and beliefs about teaching and learning with technology. As Selwyn (2016) emphasised, technology integration is not a one-size-fits-all approach. However, it requires educators to critically examine their assumptions, values, and biases about the role of technology in education.

Therefore, pre-service teacher education programs must incorporate reflective practices that encourage pre-service teachers to interrogate their own beliefs and assumptions about technology and its impact on teaching and learning (Selwyn, 2016). Finally, the study underscores the importance of ongoing research and evaluation to inform the design and implementation of effective technology integration initiatives in pre-service teacher education programmes.

As noted by Tondeur et al. (2017), research plays a critical role in identifying best practices, evaluating the effectiveness of interventions, and informing policy and practice in educational technology. Therefore, pre-service teacher education programmes must engage in rigorous research and evaluation activities to assess the impact of technology integration efforts on teaching and learning outcomes and to identify areas for improvement and innovation (Tondeur et al., 2017).

7. Implications of the Study

The implications of this study extend to various facets of teacher education and technology integration in South African classrooms. By synthesising literature from Buckingham (2015), Mishra et al. (2014), and Selwyn (2016), this study underscores the critical need for teacher education programmes to adapt to the evolving landscape of technology and cultural diversity.

The findings suggest that pre-service teacher training programmes must incorporate robust strategies for integrating technology into English language instruction, aligning with technological pedagogical content knowledge (TPACK) principles, as Voogt et al. (2013) highlighted. This implies a fundamental shift in pedagogical approaches towards a more technology-enhanced and culturally responsive teaching paradigm.

Moreover, the study's implications emphasise fostering innovation and adaptability among pre-service teachers, drawing on Fullan's (2014) concept of leading in a changing culture. Teacher education institutions must provide opportunities for pre-service teachers to develop their digital literacy skills and cultivate a growth mindset towards technological advancements. As Tondeur et al. (2017) point out, doing so will help educators better navigate the complexities of English language instruction in diverse classrooms.

Furthermore, the study's implications extend to policy and curriculum development in South Africa's education system. Drawing on insights from Buckingham (2015) and Selwyn (2016), the findings underscore the need for policymakers to prioritise integrating technology into teacher education curricula and professional development initiatives (Ajani, 2020). This implies reevaluating existing policies and frameworks to ensure they are conducive to fostering innovation and digital fluency among educators.

The study's implications highlight the importance of collaboration and knowledge sharing among stakeholders in the education ecosystem. By synthesising literature from Mishra et al. (2014) and Voogt et al. (2013), the findings suggest that partnerships between teacher education institutions, schools, policymakers, and technology providers are essential for driving sustainable change. This implies a collective effort to co-design and implement effective strategies for leveraging technology to enhance English language instruction in South African classrooms.

Moreover, the study's implications emphasise the need for ongoing professional development and support for in-service teachers (Ajani, 2021; Ajani & Govender, 2023). Building on the work of Tondeur et al. (2017), the findings suggest that continuous training and mentorship programmes can help teachers stay abreast of emerging technologies and pedagogical practices. This implies educators' commitment to lifelong learning and professional growth, supported by robust infrastructure and resources.

Furthermore, the study's implications underscore the importance of equity and access in technology integration efforts. Drawing on insights from Buckingham (2015) and Mishra et al. (2014), the findings suggest that efforts to enhance technology-enabled teaching and learning must be inclusive and equitable. This implies addressing digital divide issues and ensuring all students and teachers access the necessary tools and resources (Afolabi & Ajani, 2023; Gamede et al., 2023).

Additionally, the study's implications highlight the potential of technology to foster collaboration and community engagement in education. Building on Fullan's (2014) notion of leading in a culture of change, the findings suggest that technology can facilitate meaningful partnerships between schools, families, and communities. This implies leveraging digital platforms to enhance stakeholder communication, collaboration, and knowledge sharing.

Moreover, the study's implications emphasise the role of leadership in driving technology integration efforts. By synthesising literature from Fullan (2014) and Selwyn (2016), the findings suggest that visionary leadership is essential for creating a culture of innovation and change. This implies investing in leadership development programmes that equip school leaders with the knowledge, skills, and dispositions to lead technology-enabled initiatives effectively.

Furthermore, the study's implications extend to future research and practice in teacher education and technology integration. By drawing on insights from Voogt et al. (2013) and Tondeur et al. (2017), the findings suggest that there is a need for further research to explore the impact of technology-enhanced pedagogies on student learning outcomes. This implies a continued commitment to evidence-based practice and continuous improvement in teacher education programs.

In conclusion, the implications of this study underscore the critical importance of integrating technology into pre-service teacher education programs to enhance English language instruction in South African classrooms. By leveraging insights from literature citations such as Buckingham (2015), Mishra et al. (2014), and Selwyn (2016), this study provides valuable guidance for policymakers, educators, and researchers seeking to promote innovation and equity in education.

8. Conclusions

This study underscores the critical need for pre-service teacher education programmes to adapt to the evolving landscape of technology and cultural diversity in South African classrooms. By synthesising insights from a wide range of literature, including Buckingham (2015), Mishra et al. (2014), and Selwyn (2016), the research highlights the importance of integrating technology into teacher education curricula to enhance English language instruction. The findings reveal that technology can foster innovation, collaboration, and equity in education, provided educators have the knowledge, skills, and support systems to leverage digital tools effectively. For instance, Buckingham (2015) demonstrated how digital storytelling tools improved student engagement and language skills, while Mishra et al. (2014) emphasised the role of teacher training in effectively incorporating technology into classroom practices. These examples illustrate the potential for successful interventions that can transform English language instruction in diverse educational settings.

Moving forward, policymakers, teacher education institutions, and other stakeholders must prioritise technology integration in teacher training programs and professional development initiatives (Govender et al., 2023). Embracing a culture of innovation and collaboration will enable South Africa to position itself at the forefront of educational excellence, ensuring all students have access to high-quality English language instruction that prepares them for success in the digital age. The study calls for sustained efforts to promote technology-enhanced teaching and learning practices, drawing on empirical evidence from successful interventions such as Selwyn's (2016) work on digital literacy and Govender et al. (2023) on mobile learning applications. Ultimately, advancing these practices will contribute to the broader educational and societal development goals in South Africa and beyond.

9. Limitations of This Study

While this study provides valuable insights into integrating technology and cultural diversity in pre-service teacher education for English language instruction in South African classrooms, it is essential to acknowledge its limitations. Firstly, the scope of the study may have covered only some relevant literature, as the search was limited to publications from 2010 to 2024. Additionally, the focus on South Africa may limit the generalizability of the findings to other contexts with different educational systems and cultural landscapes. Furthermore, relying on existing literature may require paying more attention to recent developments or emerging trends in teacher education and technology integration. Finally, the study did not include primary data collection, which could have provided more profound insights into the perspectives and experiences of pre-service teachers and teacher educators. Despite these limitations, the study contributes to the existing literature on teacher education and technology integration, providing a foundation for future research and policy development.

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Authors' contributions

Dr. OAA was responsible for study design and revising. Dr OAA was responsible for data collection. Dr OAA drafted the manuscript and Dr OAA revised it. The author read and approved the final manuscript. In this paragraph. also explain any special agreements concerning authorship, such as if authors contributed equally to the study.

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