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E-Portfolios in South African Higher Education: Fostering Autonomy and Lifelong Learning in Remote Contexts

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Purpose: This study explores the transformative role of e-portfolios in South African higher education, particularly in promoting lifelong learning and fostering self-directed, autonomous students. It addresses the gap in understanding academics' perceptions of e-portfolios' effectiveness in remote learning environments.

Study design/methodology/approach: A qualitative interpretive systematic review was conducted, grounded in experiential learning theory, to analyse existing literature on e-portfolios and their impact on student development in remote contexts.

Findings: E-portfolios enhance learning by encouraging goal-setting, progress tracking, and critical self-reflection, which support the development of both soft and technical skills. Academics view them as valuable tools for promoting student independence. However, challenges such as limited digital literacy and inadequate support systems hinder adoption, especially in under-resourced areas.

Originality/value: This study contributes to the limited body of research on academic perspectives of e-portfolios in remote learning. It highlights their potential to enrich educational experiences and foster autonomy, while also identifying barriers that must be addressed to ensure equitable access and effectiveness.

Introduction

The transformative potential of electronic portfolios (e-portfolios) in South African higher education lies in their ability to promote lifelong learning and foster autonomous, self-directed students. E-portfolios are digital repositories that allow students to compile and present a variety of academic and professional artefacts, such as research papers, certificates, project reports, and internship reflections (Lievens, 2015). As universities increasingly adopt blended learning models, the integration of e-portfolios into educational frameworks is gaining momentum, aiming to enhance student engagement and academic outcomes (Saurombe et al., 2024; Janse van Rensburg & Oguttu, 2022).

The COVID-19 pandemic brought about significant disruptions to global education systems, prompting a rapid shift to remote learning. In this context, e-portfolios emerged as a flexible and innovative alternative to traditional assessment methods. They have reshaped how students document their learning journeys and articulate their competencies, offering a more comprehensive and personalised approach to assessment (Maphoto & Suliman, 2024).

Traditional assessments often fall short in capturing the full range of student abilities, particularly in remote learning environments. E-portfolios, by contrast, provide a dynamic platform for students to showcase both academic achievements and essential soft and technical skills (Yadav, 2024). This holistic representation of learning is increasingly valued in a world where adaptability and continuous skill development are critical for employability.

The flexibility of e-portfolios supports continuous updates and reflective practices, which are essential for cultivating a growth mindset. Myrtsioti (2024) highlights the importance of such reflective engagement in preparing students for the demands of a rapidly evolving job market. Through these digital tools, educators can offer personalised learning experiences that align with industry expectations, thereby enhancing students' readiness for future challenges (Ajani, 2024). In South Africa, the rapid transition to remote learning during the pandemic necessitated a critical reassessment of pedagogical practices (Hadebe et al., 2024). E-portfolios have since gained prominence as tools that support student learning, reflection, and professional development. They also serve as platforms through which students can present their competencies to prospective employers, bridging the gap between academic learning and workplace readiness (Mbatha, 2024).

E-portfolios are widely recognised for their ability to support reflective learning and self-assessment. Le Quang and Vuong (2023) note that these tools enable students to curate their work, monitor their progress, and engage in critical self-reflection. This process deepens engagement with educational content and fosters the development of essential skills required in both academic and professional contexts.

The incorporation of multimedia elements within e-portfolios further enhances creativity and adaptability—skills that are increasingly valued in the modern workforce. Van Vuuren Marais (2016) argues that such features contribute to a richer, more engaging learning experience. As South African institutions continue to integrate technology into their teaching practices, e-portfolios are becoming central to efforts aimed at reshaping traditional assessment methods and promoting lifelong learning. Pedagogically, e-portfolios foster active student participation by creating dynamic learning environments where students collaborate with peers, receive feedback, and track their academic development over time (Syzdykova et al., 2021; Chatham-Carpenter et al., 2010). These features are particularly beneficial in remote learning settings, where opportunities for interaction and feedback may otherwise be limited.

In addition to supporting both formative and summative assessments, e-portfolios offer a flexible and comprehensive means of demonstrating learning outcomes (Yastıbaş & Yastıbaş, 2015; Sarwandi et al., 2022). The pandemic underscored the need for adaptable educational tools, and e-portfolios have proven effective in facilitating continuous learning and skill development (Adedoyin & Soykan, 2020; Vintere et al., 2021). Despite the growing body of literature on e-portfolios, there remains a notable gap in understanding how academics perceive their effectiveness in remote learning environments (Ajani, 2023). While e-portfolios are often associated with self-regulated learning and skill acquisition, the practical experiences of educators who implement these tools are underexplored (Tubaishat, 2015; Honra, 2022). This lack of insight may hinder their effective integration into curricula and limit their potential impact on student development and employability (Sarkar et al., 2022).

The purpose of this study is to investigate the integration of e-portfolios in higher education, with a particular focus on remote learning contexts. By examining the perceptions of academics, the study seeks to identify the factors that influence successful implementation and uncover the challenges that may impede adoption. Ultimately, the findings aim to inform educators and policymakers on how best to leverage e-portfolios to enhance student engagement, bridge the gap between theory and practice, and support the development of essential skills in a rapidly changing educational landscape.

Hence, this study adopts a qualitative interpretive systematic review approach to explore academics' perceptions of e-portfolios as tools for enhancing both soft and technical skills in remote learning environments. By focusing on the experiences and insights of educators, the study aims to contribute to the optimisation of remote education strategies and the development of more effective learning outcomes. Based on the aims and scope of the study, here are three key research questions that can guide the investigation and provide clearer direction:

1. How do South African academics perceive the role of e-portfolios in enhancing soft and technical skills in remote learning environments?
2. What are the pedagogical, technological, and institutional factors that influence the successful implementation of e-portfolios in higher education?
3. What challenges and opportunities do academics identify in using e-portfolios to support lifelong learning and student autonomy in remote contexts?

Literature Review

The integration of electronic portfolios (e-portfolios) into higher education has gained increasing attention as a transformative pedagogical tool. E-portfolios are digital repositories that allow students to collect, curate, and reflect on their academic and professional work over time (Lievens, 2015). Their use has been associated with enhanced student engagement, deeper learning, and the development of both soft and technical skills (Yadav, 2024). In the South African context, the shift towards blended and remote learning, particularly following the COVID-19 pandemic, has accelerated the adoption of e-portfolios as an alternative to traditional assessment methods (Saurombe et al., 2024; Maphoto & Suliman, 2024).

E-portfolios are grounded in experiential learning theory, which posits that knowledge is constructed through active engagement and reflection (Kolb, 1984; Smith, 2001). This theoretical foundation supports the use of e-portfolios as tools that enable students to document their learning experiences, reflect on their progress, and apply theoretical knowledge in practical contexts (Terkowsky et al., 2012). The alignment between e-portfolios and experiential learning is particularly relevant in disciplines that emphasise applied learning, such as teacher education, engineering, and social work (Alam et al., 2015). In addition to experiential learning, e-portfolios are closely linked to self-regulated learning theory. This framework emphasises the importance of learner autonomy, goal setting, and self-assessment in the learning process (Yastıbaş & Yastıbaş, 2015). E-portfolios facilitate these behaviours by providing students with a structured platform to monitor their development, reflect on their learning strategies, and take ownership of their educational journey (Tubaishat, 2015). This is particularly valuable in remote learning environments, where students must navigate their learning with limited direct supervision (Honra, 2022).

The literature also highlights the role of e-portfolios in fostering lifelong learning. By encouraging continuous reflection and iterative improvement, e-portfolios help students develop a growth mindset and adaptability—skills that are essential in a rapidly changing job market (Myrtsioti, 2024). Van Vuuren Marais (2016) argues that the inclusion of multimedia elements in e-portfolios enhances creativity and digital fluency, further supporting students' readiness for the demands of the 21st-century workplace. Numerous studies have demonstrated the effectiveness of e-portfolios in enhancing both soft and technical skills. Syzdykova et al. (2021) found that e-portfolios support the development of scientific literacy, communication, and critical thinking. Similarly, Misdi (2020) emphasised the value of e-portfolios in promoting authentic assessment and student agency. In the South African context, Mudau (2022) and Robinson (2021) reported that e-portfolios contribute to student success by fostering responsibility, self-esteem, and reflective learning.

The historical evolution of e-portfolios reflects a shift from static collections of student work to dynamic, interactive platforms that support personalised learning pathways. Initially used to showcase academic achievements, e-portfolios have expanded to include a broader range of competencies, including creativity, collaboration, and problem-solving (Xe et al., 2019). This transformation has been driven by technological advancements and the growing emphasis on student-centred learning (Yang, Tai & Lim, 2016). In blended and remote learning environments (Ajani, 2025), e-portfolios offer a flexible and scalable solution for assessment. They enable both formative and summative evaluation by capturing diverse evidence of learning, such as written assignments, multimedia projects, and reflective journals (Sarwandi et al., 2022). This flexibility is significant in contexts where traditional examinations may not adequately capture student competencies (Adedoyin & Soykan, 2020; Vintere et al., 2021).

South African studies have begun to explore the pedagogical value of e-portfolios in distance education. Modise and Mudau (2023) conducted a systematic review of e-portfolio use in developing countries and found that these tools support critical thinking, self-directed learning, and lifelong learning. However, they also noted that e-portfolios remain underutilised in many institutions due to technical and infrastructural challenges. Modise (2021) further highlighted the mixed experiences of postgraduate students using e-portfolios, particularly in relation to institutional support and digital readiness.

Mapundu and Musara (2019) examined the use of e-portfolios among entrepreneurship students and identified key themes such as flexibility, engagement, and collaboration. Their findings suggest that e-portfolios not only enhance academic learning but also foster entrepreneurial skills and behaviours. This aligns with broader efforts to integrate employability into higher education curricula and prepare students for complex, real-world challenges (Todeschini & Sollberger, 2023). Despite the growing body of literature, there remains a notable gap in understanding academics' perceptions of e-portfolios, particularly in the South African context. While student experiences have been well documented, the views of educators—who play a critical role in designing and implementing e-portfolio activities—are less frequently explored (Sarkar et al., 2022). This gap is significant, as academic buy-in is essential for the successful integration of e-portfolios into teaching and assessment practices.

The digital divide presents a persistent challenge to the equitable implementation of e-portfolios. Studies have shown that students from under-resourced backgrounds often face barriers such as limited internet access, a lack of devices, and low digital literacy (Papageorgiou et al., 2024; Mesuwini & Mokoena, 2024). These disparities can hinder student participation and exacerbate existing inequalities in higher education. Addressing these challenges requires targeted institutional strategies, including infrastructure investment and digital skills training. Resistance to change is another barrier identified in the literature. Some educators and students are hesitant to adopt e-portfolios due to unfamiliarity with the technology, concerns about workload, and scepticism about their pedagogical value (Matarirano et al., 2021). Effective change management strategies—including stakeholder engagement, professional development, and clear communication of benefits—are essential to overcoming these obstacles and fostering a culture of innovation.

E-portfolios also raise important considerations around data privacy and assessment validity. Ensuring the security of student data is critical, particularly in digital environments vulnerable to cyber threats. Moreover, developing consistent and transparent criteria for evaluating e-portfolios can be complex and time-consuming (Mudau, 2022). Institutions must establish robust policies and support systems to address these concerns and ensure the integrity of e-portfolio-based assessment. Conversely, the literature affirms the pedagogical value of e-portfolios in enhancing student learning, promoting reflective practice, and supporting skill development. However, successful implementation depends on a range of contextual factors, including institutional readiness, educator engagement, and student support. Further research is

needed to explore the perspectives of academics, identify best practices, and develop sustainable models for integrating e-portfolios into South African higher education.

Theoretical Framework

This study is underpinned by two complementary theoretical perspectives: Experiential Learning Theory (ELT) and Self-Regulated Learning Theory (SRL). These frameworks provide a robust foundation for understanding how e-portfolios can enhance both soft and technical skills in remote learning environments. Their integration offers a comprehensive lens through which to explore the pedagogical value of e-portfolios in fostering autonomy, reflection, and lifelong learning.

Experiential Learning Theory, as articulated by Kolb (1984), posits that learning is a process whereby knowledge is created through the transformation of experience. This cyclical model involves four stages: concrete experience, reflective observation, abstract conceptualisation, and active experimentation. E-portfolios align closely with this model by enabling students to document their learning experiences, reflect on them, conceptualise new understandings, and apply these insights in future tasks (Terkowsky et al., 2012; Smith, 2001). In the context of higher education, experiential learning is particularly relevant for bridging the gap between theoretical knowledge and practical application. E-portfolios serve as a medium through which students can engage in authentic learning experiences, such as internships, projects, and collaborative tasks, and reflect critically on these engagements (Alam et al., 2015). This reflective process is essential for developing higher-order thinking skills and fostering a deeper understanding of subject matter.

Moreover, experiential learning supports the development of soft skills—such as communication, adaptability, and problem-solving—which are increasingly valued in the modern workforce (Van Vuuren Marais, 2016). By curating diverse artefacts and engaging in continuous reflection, students cultivate a sense of ownership over their learning, which is central to the experiential learning paradigm (Syzdykova et al., 2021). Complementing ELT, SRL provides further insight into how students manage and direct their own learning processes. SRL emphasises the importance of goal setting, self-monitoring, self-assessment, and strategic action (Yastıbaş & Yastıbaş, 2015). E-portfolios naturally support these behaviours by offering a structured platform for students to track their progress, evaluate their performance, and adjust their learning strategies accordingly (Tubaishat, 2015).

The integration of SRL into the use of e-portfolios is particularly significant in remote learning contexts, where students often face reduced direct supervision and increased responsibility for their own learning. E-portfolios empower learners to become more autonomous and intrinsically motivated, fostering habits of lifelong learning and adaptability (Honra, 2022). These qualities are essential for success in both academic and professional settings, especially in digitally mediated environments. Furthermore, SRL theory highlights the role of metacognition in effective learning. Through the reflective components of e-portfolios, students are encouraged to think about their thinking, evaluate their learning strategies, and make informed decisions about how to improve. This metacognitive engagement enhances both academic performance and personal development (Misdi, 2020).

The synergy between ELT and SRL provides a robust framework for understanding the pedagogical value of e-portfolios. While ELT focuses on learning through experience and reflection, SRL emphasises the learner's active role in managing their educational journey. Together, these theories underscore the potential of e-portfolios to support holistic skill development, particularly in remote and blended learning environments (Yang, Tai & Lim, 2016). In the South African context, where remote learning has become increasingly prevalent

due to infrastructural and socio-economic challenges, these theoretical perspectives are especially pertinent. E-portfolios offer a flexible and accessible means of engaging students in meaningful learning experiences while promoting self-regulation and reflective practice (Mudau, 2022; Modise & Mudau, 2023). They also provide educators with valuable insights into student progress and areas for support, thereby enhancing teaching effectiveness.

By grounding this study in ELT and SRL, the research aims to illuminate how e-portfolios can be strategically implemented to enhance both soft and technical skills in South African higher education. This theoretical foundation not only informs the research design but also guides the interpretation of findings and the development of practical recommendations for educators and policymakers.

Methodology

This study employed a qualitative interpretive systematic review methodology to explore South African academics' perceptions of e-portfolios as tools for enhancing soft and technical skills in remote learning environments. The interpretive nature of the review allowed for a nuanced understanding of the subjective experiences and insights of academics, aligning with the study's aim to uncover deeper meanings and contextual influences (Modise & Mudau, 2023). The systematic review focused on literature published between 2010 and 2024, ensuring both historical depth and contemporary relevance. Sources were drawn from a range of academic databases, including Google Scholar, ResearchGate, Scopus, Open Access platforms, and South African academic journals. This broad search strategy was designed to capture diverse perspectives and ensure the inclusion of both global and local insights into the use of e-portfolios in higher education.

The literature search was conducted using a combination of keywords to ensure comprehensive coverage of relevant studies. Keywords included: 'teacher professional identity', 'mathematics pedagogy', 'number concept instruction', 'Foundation Phase education', 'South African primary schools', 'pedagogical content knowledge', and 'qualitative research'. These keywords were applied across multiple academic databases and journals to identify studies that aligned with the research objectives. To ensure rigour, the study applied explicit inclusion and exclusion criteria. Included articles specifically addressed the use of e-portfolios in higher education and discussed their impact on skill development, particularly within remote or blended learning contexts. Studies that did not focus on higher education or failed to address academic perceptions were excluded. This filtering process ensured that the final selection of literature was directly relevant to the research objectives (Mudau, 2022; Modise, 2021). The review process followed a structured protocol involving data extraction, coding, and thematic analysis. Key themes were identified through iterative reading and coding of the selected texts. This approach enabled the researchers to identify recurring patterns, contradictions, and gaps in the literature, particularly concerning academics' experiences with e-portfolio implementation and their perceived impact on student learning (Mapundu & Musara, 2019).

The study was grounded in experiential learning theory (Kolb, 1984) and self-regulated learning theory (Yastıbaş & Yastıbaş, 2015), which informed both the selection of literature and the interpretation of findings. These theoretical frameworks provided a lens through which to understand how e-portfolios support reflective practice, autonomy, and the integration of theoretical and practical knowledge—key components of effective remote learning (Tubaishat, 2015; Honra, 2022). To enhance the credibility of the findings, the researchers employed triangulation by comparing insights across multiple studies and contexts. This method helped validate the emerging themes and ensured that the conclusions drawn were not based on isolated or anomalous findings. The use of multiple data sources also allowed for a

richer and more comprehensive understanding of the phenomenon under investigation (Syzdykova et al., 2021). Ethical considerations were observed throughout the review process. Although the study did not involve direct interaction with human participants, it adhered to principles of academic integrity by accurately representing the findings of the reviewed studies and acknowledging all sources. The researchers also remained sensitive to the contextual challenges faced by South African institutions, particularly those related to digital access and equity (Mesuwini & Mokoena, 2024). Hence, the chosen methodology enabled a systematic and interpretive exploration of how academics in South African higher education perceive e-portfolios.

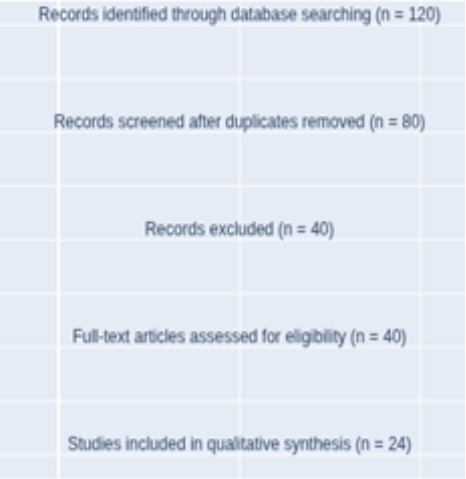

Fig.1: ***PRISMA flow chart for the reviewed studies*** **(Authors, 2025).**

By synthesising insights from a wide range of studies, using PRISMA flow chat, for this systematic review of relevant studies (**Fig. 1** above**)**, the process resulted in analysis of the identified 24 studies to generate in-depth data for the study, with some of these indicated in the **Table 1** below, the research provides a robust foundation for understanding the pedagogical value of e-portfolios and offers practical recommendations for their effective implementation in remote learning environments.

Author(s)	Year	Title	Journal/Source	Key Findings
Ajani & Govender	2019	Teachers' Perspectives of In-service Professional Development	Gender & Behaviour	Professional development influences identity and classroom practices.
Mockler	2011	Beyond 'what works': Understanding teacher identity	Teachers and Teaching	Teacher identity is a practical and political tool shaping pedagogy.
Sachs	2001	Teacher professional identity: Competing discourses	Journal of Educational Policy	Identity dissonance leads to professional inertia and rigid pedagogy.
Beijaard et al.	2004	Reconsidering research on teachers' professional identity	Teaching and Teacher Education	Identity is multidimensional and dynamic, influencing teaching quality.

Van De Walle et al.	2010	Elementary and middle school mathematics: Teaching developmentally	Allyn & Bacon	Effective math teaching requires alignment of identity and pedagogical strategies.
Trede et al.	2012	Professional identity development	Studies in Higher Education	Coherent identity supports pedagogical inventiveness and resilience.
Li & Khairani	2025	Social support and pedagogical beliefs in China	Teaching and Teacher Education	Social support and beliefs shape TPI in early education.
Fry et al.	2025	Inquiry-based pedagogies in the UK	Mathematics Education Research Journal	Inquiry-based learning fosters identity and improves instruction.

Table 1: Summary of the reviewed literature (Authors, 2025).

Results

In total, 24 articles were included in the final analysis after applying the inclusion and exclusion criteria. These articles were thematically analysed and grouped under four dominant themes. Specifically, 6 articles contributed to the theme "Understanding Remote Learning in the South African Higher Education Context," 7 articles informed the theme "Academics' Perceptions of E-Portfolios in Higher Education," 5 articles supported the theme "E-Portfolios as Tools to Enhance Lifelong Learning," and 6 articles were relevant to the theme "Challenges of Implementing E-Portfolios in Higher Education." These thematic groupings were based on recurring patterns and insights across the selected literature, ensuring that each theme was grounded in multiple sources to enhance the credibility and depth of interpretation. Hence, this section presents the key findings of the study, derived from a qualitative interpretive systematic review of literature on South African academics' perceptions of e-portfolios in remote learning environments. The analysis revealed four dominant themes that encapsulate the multifaceted role of e-portfolios in higher education: understanding remote learning in the South African context, academics' perceptions of e-portfolios, their potential to enhance lifelong learning, and the challenges associated with their implementation. Each theme is discussed in detail to provide a comprehensive understanding of how e-portfolios are perceived and utilised within the evolving landscape of digital education. These findings offer valuable insights into the pedagogical, technological, and institutional factors that influence the integration and effectiveness of e-portfolios in fostering both soft and technical skills.

Theme 1: Understanding Remote Learning in the South African Higher Education Context

Remote learning has become a defining feature of South African higher education, particularly following the disruptions caused by the COVID-19 pandemic. The shift to online platforms was necessary to maintain academic continuity, but it also exposed deep-rooted inequalities in access to digital infrastructure (Hadebe et al., 2024). Many students, especially those in rural and under-resourced areas, struggled with limited internet connectivity, a lack of devices, and insufficient digital literacy. Despite these challenges, remote learning has opened new avenues for innovation in pedagogy. E-portfolios, in particular, have emerged as tools that can enhance digital competencies and provide flexible, student-centred learning experiences (Mbatha, 2024). Their integration into remote learning environments has allowed students to document their learning journeys, reflect on their progress, and demonstrate their competencies in diverse

formats. However, the success of remote learning strategies, including the use of e-portfolios, depends heavily on institutional readiness and support systems. Without adequate infrastructure and training, both students and educators may find it difficult to engage meaningfully with digital tools (Mesuwini & Mokoena, 2024). This highlights the importance of context-sensitive approaches that consider socio-economic disparities and technological limitations. Thus, understanding the complexities of remote learning in South Africa is essential for designing inclusive and effective educational strategies. E-portfolios offer a promising solution, but their implementation must be accompanied by targeted interventions to bridge the digital divide and support all learners equitably.

Theme 2: Academics' Perceptions of E-Portfolios in Higher Education

South African academics generally view e-portfolios as valuable tools for enhancing student learning, particularly in terms of promoting self-directed learning and reflective practice. Many believe that e-portfolios enable students to take ownership of their learning, document their achievements, and receive meaningful feedback (Mapundu & Musara, 2019). These features align well with the goals of higher education in fostering independent, lifelong learners. However, academics also expressed concerns about the practical challenges of implementing e-portfolios. Limited technical support, lack of training, and inadequate infrastructure were frequently cited as barriers to effective adoption (Matarirano et al., 2021). These issues are especially pronounced in historically disadvantaged institutions, where resource constraints hinder the seamless integration of digital tools. Another concern raised by academics is the digital divide among students. Disparities in access to technology and varying levels of digital literacy can exacerbate existing inequalities, making it difficult for all students to benefit equally from e-portfolio initiatives (Papageorgiou et al., 2024). Academics emphasised the need for comprehensive strategies to address these disparities and ensure equitable learning opportunities. Despite these challenges, the overall perception of e-portfolios remains positive. Academics recognise their potential to enhance both soft and technical skills, particularly in remote learning environments where traditional assessment methods may fall short. Their feedback underscores the importance of institutional support and professional development to maximise the impact of e-portfolios.

Theme 3: E-Portfolios as Tools to Enhance Lifelong Learning

E-portfolios are increasingly recognised as powerful tools for promoting lifelong learning. By encouraging students to reflect on their experiences, set goals, and track their progress, e-portfolios foster habits of self-regulation and continuous improvement (Tubaishat, 2015; Honra, 2022). These skills are essential for success in both academic and professional contexts, particularly in a rapidly changing global economy. In South African higher education, e-portfolios have been used to bridge the gap between academic knowledge and real-world application. Students can showcase their competencies through multimedia artefacts, including project reports, internship reflections, and collaborative work (Yadav, 2024). This not only enhances their employability but also supports deeper engagement with learning content. Academics noted that e-portfolios support personalised learning by allowing students to tailor their portfolios to their individual goals and interests. This flexibility encourages creativity and adaptability—key attributes for lifelong learners (Van Vuuren Marais, 2016). Moreover, the iterative nature of e-portfolios promotes a growth mindset, as students are encouraged to revisit and revise their work over time. The emphasis on lifelong learning aligns with broader educational goals in South Africa, where there is a growing recognition of the need to prepare students for dynamic and uncertain futures. E-portfolios offer a practical means of achieving this by embedding reflective practice and self-assessment into the learning process (Modise & Mudau, 2023).

Theme 4: Challenges of Implementing E-Portfolios in Higher Education

While the benefits of e-portfolios are widely acknowledged, their implementation in South African higher education is not without challenges. Technical issues, such as unreliable internet access and a lack of compatible devices, remain significant barriers, particularly in under-resourced institutions (Mesuwini & Mokoena, 2024). These infrastructural limitations can hinder both student participation and educator engagement. Another major challenge is the lack of training and support for both students and academics. Without adequate guidance, users may struggle to navigate e-portfolio platforms effectively, leading to superficial engagement and underutilisation of the tool's potential (Uddin & Bailey, 2024). This underscores the need for comprehensive training programmes and ongoing technical support. Resistance to change also emerged as a barrier. Some educators and students are hesitant to adopt new technologies, preferring traditional methods of assessment and instruction. This resistance can be mitigated through change management strategies that involve stakeholders in decision-making and clearly communicate the benefits of e-portfolios (Matarirano et al., 2021). Finally, concerns about data privacy and assessment complexity were also noted. Ensuring the security of student data is critical, especially in digital environments vulnerable to cyber threats. Additionally, developing consistent and fair criteria for assessing e-portfolios can be time-consuming and complex. Addressing these challenges is essential for the successful and sustainable integration of e-portfolios in South African higher education.

Discussion

The findings of this study affirm the transformative potential of e-portfolios in South African higher education, particularly in remote learning contexts. E-portfolios have proven to be more than mere digital repositories; they are pedagogical tools that support reflective learning, skill development, and student autonomy (Syzdykova et al., 2021; Yadav, 2024). Their alignment with experiential and self-regulated learning theories underscores their capacity to foster deeper engagement and lifelong learning (Kolb, 1984; Tubaishat, 2015).

A key insight from the study is the role of e-portfolios in promoting self-directed learning. Academics highlighted that e-portfolios enable students to set goals, monitor progress, and reflect critically on their learning experiences—behaviours central to self-regulated learning (Yastıbaş & Yastıbaş, 2015). This is particularly valuable in remote learning environments, where students must take greater responsibility for their learning due to reduced face-to-face interaction (Honra, 2022). Moreover, the study confirms that e-portfolios facilitate the development of both soft and technical skills. Soft skills such as communication, adaptability, and critical thinking are cultivated through reflective writing and peer feedback, while technical skills are enhanced through the use of digital tools and multimedia artefacts (Van Vuuren Marais, 2016; Misdi, 2020). This dual focus aligns with the demands of the modern workforce, where employers increasingly seek graduates who are both technically competent and emotionally intelligent (Todeschini & Sollberger, 2023).

The integration of e-portfolios into remote learning also supports authentic assessment practices. Unlike traditional exams, e-portfolios allow students to demonstrate their competencies through real-world tasks and projects, thereby bridging the gap between academic theory and practical application (Yang, Tai & Lim, 2016). This approach is consistent with experiential learning theory, which emphasises learning through doing and reflection (Smith, 2001; Terkowsky et al., 2013). However, the study also reveals significant challenges in the implementation of e-portfolios, particularly in under-resourced institutions. Academics reported that limited access to reliable internet, digital devices, and technical support hindered both student and staff engagement with e-portfolio platforms (Mesuwini & Mokoena, 2024). These infrastructural barriers reflect broader socio-economic inequalities in South Africa and must be addressed to ensure equitable access to digital learning tools.

Another critical issue is the digital divide among students. Disparities in digital literacy and access to technology can exacerbate existing inequalities, limiting the effectiveness of e-portfolios in promoting inclusive education (Papageorgiou et al., 2024). Academics stressed the need for targeted interventions, such as digital skills training and the provision of devices, to support students from disadvantaged backgrounds. Resistance to change also emerged as a barrier to e-portfolio adoption. Some educators and students were reluctant to move away from traditional assessment methods, citing concerns about workload, unfamiliarity with digital tools, and scepticism about the pedagogical value of e-portfolios (Matarirano et al., 2021). This highlights the importance of institutional leadership and professional development in fostering a culture of innovation and digital transformation.

Despite these challenges, the study found that when implemented effectively, e-portfolios significantly enhance the learning experience. They provide a platform for continuous assessment, personalised feedback, and student reflection, all of which contribute to improved academic outcomes and greater learner satisfaction (Mudau, 2022; Robinson, 2021). These benefits are particularly pronounced in blended and remote learning environments, where traditional forms of engagement are limited. The findings also suggest that e-portfolios can play a strategic role in preparing students for the world of work. By curating a digital showcase of their skills, achievements, and experiences, students are better positioned to articulate their value to potential employers (Lievens, 2015; Mapundu & Musara, 2019). This aligns with the growing emphasis on employability and career readiness in higher education policy and practice.

The findings of this study directly respond to the three guiding research questions by illuminating how South African academics perceive e-portfolios as tools for enhancing soft and technical skills, identifying pedagogical and institutional factors influencing their implementation, and exploring their role in promoting lifelong learning and autonomy. These insights are deeply rooted in the study's theoretical framework, which integrates Experiential Learning Theory (Kolb, 1984; Terkowsky et al., 2012) and Self-Regulated Learning Theory (Yastıbaş & Yastıbaş, 2015; Tubaishat, 2015). The themes that emerged—such as reflective practice, student agency, and contextual challenges—demonstrate how e-portfolios operationalise experiential learning through documentation, reflection, and application of knowledge. Simultaneously, they foster self-regulated learning by enabling goal-setting, progress tracking, and strategic adaptation, particularly in remote learning contexts where autonomy is essential (Honra, 2022; Misdi, 2020). Thus, the study's conceptual grounding is reinforced by the alignment between the empirical findings and the theoretical constructs, affirming the pedagogical value of e-portfolios in transforming higher education practices in South Africa.

Implications of the study

The findings of this study have significant implications for higher education institutions in South Africa, particularly in the context of remote and blended learning. The demonstrated potential of e-portfolios to foster self-directed learning, critical reflection, and skill development suggests that they should be more widely integrated into curricula. Institutions must therefore consider embedding e-portfolios not merely as assessment tools, but as integral components of pedagogical design that support holistic student development (Syzdykova et al., 2021; Yadav, 2024).

For educators, the study underscores the importance of professional development in digital pedagogy. Many academics expressed concerns about the lack of training and support in implementing e-portfolios effectively (Matarirano et al., 2021). This highlights the need for targeted capacity-building initiatives that equip lecturers with the skills to design, facilitate, and assess e-portfolio-based learning. Such initiatives should also promote a shift in mindset from

traditional assessment models to more reflective, student-centred approaches aligned with experiential learning theory (Kolb, 1984; Terkowsky et al., 2013).

From a policy perspective, the study calls for institutional strategies that address the digital divide. Disparities in access to technology and digital literacy among students remain a critical barrier to equitable participation in e-portfolio activities (Papageorgiou et al., 2024; Mesuwini & Mokoena, 2024). Universities must invest in infrastructure, provide access to devices and connectivity, and implement inclusive digital literacy programmes to ensure that all students can benefit from e-portfolio integration.

The study also has implications for curriculum design and employability. E-portfolios offer a platform for students to document and showcase both academic and professional competencies, thereby enhancing their career readiness (Todeschini & Sollberger, 2023; Lievens, 2015). Curriculum developers should therefore align e-portfolio tasks with graduate attributes and industry expectations, enabling students to build a digital narrative of their learning journey that is relevant to future employers.

Furthermore, the findings suggest that e-portfolios can play a transformative role in assessment practices. By enabling continuous, formative, and authentic assessment, e-portfolios support deeper learning and student engagement (Yang, Tai & Lim, 2016; Mudau, 2022). Institutions should consider revising assessment policies to formally recognise e-portfolios as valid and valuable tools for evaluating both soft and technical skills, particularly in remote learning contexts where traditional examinations may be less practical.

Finally, this study contributes to the growing body of literature on digital learning in the Global South by centring the perspectives of South African academics. Their insights reveal both the promise and the complexity of implementing e-portfolios in diverse educational settings. Future research should build on these findings by exploring student experiences, institutional case studies, and longitudinal impacts of e-portfolio use on academic success and employability. Such research will be essential for informing sustainable and contextually relevant digital education strategies across the region.

Conversely, the study contributes to the limited body of research on academic perceptions of e-portfolios in South Africa. While previous studies have focused primarily on student experiences (Modise, 2021; Modise & Mudau, 2023), this research provides valuable insights into the perspectives of educators, who play a critical role in the successful integration of e-portfolios into curricula. Their views highlight both the pedagogical potential and the practical constraints of e-portfolio implementation. The discussion also reinforces the importance of aligning e-portfolio initiatives with institutional strategies for digital transformation. Successful implementation requires not only technological infrastructure but also supportive policies, training programmes, and a shared vision for innovation in teaching and learning (Adedoyin & Soykan, 2020; Saurombe et al., 2024). Institutions must adopt a holistic approach that addresses both the technical and human dimensions of change.

Therefore, this study underscores the value of e-portfolios as tools for enhancing soft and technical skills, promoting lifelong learning, and supporting student autonomy in remote learning environments. While challenges remain, particularly in terms of access and adoption, the findings suggest that with appropriate support and strategic planning, e-portfolios can significantly enrich the educational experience in South African higher education.

Conclusion

This study has highlighted the transformative potential of e-portfolios in South African higher education, particularly within remote learning contexts. Drawing on experiential and self-regulated learning theories, the findings demonstrate that e-portfolios serve as powerful tools for fostering autonomy, reflective practice, and the development of both soft and technical skills. Academics perceive e-portfolios as valuable for promoting student engagement, enhancing employability, and bridging the gap between theoretical knowledge and practical application. However, the study also reveals persistent challenges, including digital inequality, limited institutional support, and resistance to change, which must be addressed to fully realise the benefits of e-portfolio integration. The implications of these findings are far-reaching. For e-portfolios to be effectively embedded in higher education, institutions must invest in digital infrastructure, provide comprehensive training for educators and students, and develop inclusive strategies that address socio-economic disparities. Furthermore, curriculum designers should align e-portfolio activities with graduate attributes and industry expectations to ensure relevance and impact. By addressing these structural and pedagogical considerations, South African universities can harness the full potential of e-portfolios to support lifelong learning, digital transformation, and equitable access to quality education in an increasingly digital world.

Limitations of the study

One key limitation of this study is its reliance on secondary data through a qualitative interpretive systematic review, which, while comprehensive, may not fully capture the nuanced, lived experiences of academics across diverse South African higher education institutions. The study is constrained by the availability and scope of existing literature, which may not reflect the most current institutional practices or the full range of academic perspectives, particularly from historically disadvantaged or under-resourced universities. Additionally, the exclusion of empirical data collection, such as interviews or surveys with academics, limits the depth of insight into contextual challenges and institutional dynamics that influence the implementation and perception of e-portfolios in remote learning environments.

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