Journal of Education and Learning Technology (JELT)
ISSN 2720-7730
Volume 6 Issue 12 2025 pp 1355-1365
Available online at: https://noyam.org/journals/jelt/
DOI: https://doi.org/10.38159/jelt.20256129

Using E-Gaming to create a Sustainable Mentoring Framework for Foundation Phase Preservice Teachers

Lindiwe Jiyane[1], Blanche N.Hadebe-Ndlovu[2] & Blandina Manditereza[3]

[1] University of Mpumalanga, South Africa.
[2] University of South Africa.
[3] University of Free State, South Africa.

ABSTRACT

More often than not, the needs of big cohorts and the responsibilities of modern teaching are not adequately met by traditional mentoring systems. To provide a solution to this challenge, the study provided strategies on how to incorporate eGamification into mentoring, establishing a dynamic, cooperative online setting that promotes greater comprehension and memory of teaching techniques. The study involved 20 pre-service teachers, five mentor teachers, and five mentor lecturers from the selected Higher institution in Mpumalanga, and used a qualitative methodology based on Vygotsky's sociocultural theory, which included focus group interviews, individual interviews, and purposive sampling. The findings show how important mentoring is to pre-service teachers navigating lesson planning and classroom management. While mentor lecturers emphasized continual professional development to improve mentoring skills, mentor instructors emphasized open communication and trust. According to observations, effective mentor modelling and scaffolding enhanced pre-service teachers' professional development and pedagogical expertise. Positive reactions were given to the suggested eGamification-enhanced framework, which emphasized group goal setting, ongoing feedback, and reflective activities. This creative mentorship strategy ensures pre-service teachers are prepared for the demands of modern teaching by utilizing professional capital and collaborative expertise to provide a dynamic solution to age-old problems. This study contributes to scholarship by demonstrating how e-gamification can create a scalable and sustainable mentoring framework that extends Vygotsky's sociocultural theory and addresses the pedagogical and digital needs of foundation phase teacher education.

Keywords: Mentoring Framework, Egamification, Pre-Service Teachers, Teaching Practice, Foundation Phase, Progress Tracking.

Correspondence
Lindiwe Jiyane
Email:
Lindiwe.jiyane@ump.ac.za

Publication History
Received:
1st July, 2025
Accepted:
29th October, 2025.
Published:
30th December, 2025.

To Cite this Article:
Jiyane, Lindiwe, Blanche N. Hadebe-Ndlovu, and Blandina Manditereza. "Using E-Gaming to create a Sustainable Mentoring Framework for Foundation Phase Preservice Teachers ." *Journal of Education and Learning Technology* 6, no. 12 (2025): 1355-1365. https://doi.org/10.38159/jelt.20256129

INTRODUCTION

Mentoring practices in teacher education have traditionally relied on face-to-face interactions to guide and support pre-service teachers.[1] While effective, these conventional methods are increasingly challenged by the growing digitalization of education and the demands of mentoring large cohorts of pre-service teachers. The rapid shifts in the educational landscape—accelerated by the COVID-19

[1] S. Gravett and F. Cilliers, "Mentorship in Teacher Education: Reflecting on Practice and Progress. ," *Journal of Teacher Education* 73, no. 1 (2022): 39–56.

pandemic—have highlighted the limitations of traditional mentoring, particularly the difficulty of sustaining personalized guidance and feedback in contexts where resources and time are limited.[2] Consequently, there is a pressing need to re-evaluate and innovate mentoring approaches to ensure their relevance and effectiveness in a digital and diverse learning environment.

The Foundation Phase is particularly critical, as it establishes future teachers' pedagogical skills and professional identity. Research highlights the significance of mentoring in helping pre-service teachers develop lesson planning, classroom management, and reflective practice skills.[3] However, scaling mentorship to large cohorts often results in diluted support, where mentors struggle to provide the individualized attention necessary for meaningful professional development.[4] At the same time, digital tools have demonstrated potential to enhance teaching and mentoring practices by enabling flexibility, accessibility, and more engaging interactions.[5] This presents an opportunity to design hybrid mentorship models that integrate the strengths of face-to-face mentoring with the scalability and innovation of digital technologies.

This study responds to that gap by exploring the use of eGamification—integrating game design elements such as badges, rewards, leaderboards, challenges, progress tracking, and collaborative goal setting—into mentoring frameworks.[6] Prior studies have shown that gamification can foster motivation, cooperation, and problem-solving in diverse educational contexts.[7] In the context of teacher education, eGamification offers the potential to make mentoring more interactive, engaging, and sustainable, particularly for large cohorts. By drawing on Vygotsky's sociocultural theory, which emphasizes scaffolding, collaboration, and the zone of proximal development,[8] the study positions eGamification as a digital scaffolding tool that strengthens mentor-mentee relationships and promotes co-constructed learning.[9]

This study aims to develop a scalable and sustainable mentoring framework for Foundation Phase pre-service teachers that integrates eGamification to enhance motivation, engagement, and professional growth. The framework aims to bridge the gap between traditional face-to-face mentoring and the demands of a digitalized education environment by fostering collaborative learning communities, promoting reflective practice, and providing structured feedback.Studies have consistently demonstrated that gamification enhances learner engagement and motivation, offering an interactive and structured approach to learning that is also scalable.[10] This study contributes to the existing body of literature by exploring how gamification can be incorporated into mentorship frameworks to support large cohorts of Foundation Phase pre-service teachers, addressing the gap in research on sustainable, digitally enhanced mentoring strategies in higher education. By examining this innovative approach, the study highlights the potential for eGamification to transform mentoring practices in teacher education.

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[2] Lee Rusznyak, "Teacher Choices in Action: An Emergent Pedagogical Response and Intervention," 2022, 111–31, https://doi.org/10.1007/978-3-031-12718-2_7; M., Dickey and T. Kim, " Exploring EGamification in Teacher Education: Transforming Pedagogy through Digital Engagement," *Teaching and Teacher Education* 48, no. 1 (2024): 102–15.

[3] A Jones and D Thomas, "The Role of Mentorship in Teacher Education: Best Practices and Challenges," *Journal of Education* 198, no. 5 (2019): 100–113; D. Harrison, " Improving Teacher Quality: The Role of Mentoring in Professional Development," *Teachers and Teaching* 27, no. 6 (2021): 578–93.

[4] J. Smith and R Lewis, "Scaling Mentorship in Teacher Education: Addressing the Challenges of Large Cohorts," *International Journal of Teacher Education* 36, no. 3 (2020): 210–25.

[5] H Johnson and P Nguyen, "Digital Mentorship: Enhancing Teaching and Learning through Technology," *Journal of Digital Learning in Teacher Education,* 37, no. 2 (2021): 57–69.

[6] Jonna Koivisto and Juho Hamari, "The Rise of Motivational Information Systems: A Review of Gamification Research," *International Journal of Information Management* 45 (April 2019): 191–210, https://doi.org/10.1016/j.ijinfomgt.2018.10.013.

[7] Christo Dichev and Darina Dicheva, "Gamifying Education: What Is Known, What Is Believed and What Remains Uncertain: A Critical Review," *International Journal of Educational Technology in Higher Education* 14, no. 1 (December 20, 2017): 9, https://doi.org/10.1186/s41239-017-0042-5; C. González, J. C. Burguillo, and M. Llamas, "Gamifying Education: Classcraft's Impact on Classroom Engagement," *Journal of Educational Technology & Society* 24, no. 4 (2021): 72–84.

[8] L. S Vygotsky, "The Role of Play in Development," *Mind in Society/Harvard University Press*, 1978.

[9] L. Collins and H. Higgs, "Co-Constructed Learning and Digital Tools in Teacher Mentoring," *Journal of Educational Technology* 40, no. 2 (2023): 156–70.

[10] Dichev and Dicheva, "Gamifying Education: What Is Known, What Is Believed and What Remains Uncertain: A Critical Review"; González, Burguillo, and Llamas, "Gamifying Education: Classcraft's Impact on Classroom Engagement"; R. N Landers et al., "Gamification of Learning and Instruction: A Decade of Progress in Theory, Research, and Practice," *International Journal of Gaming and Computer-Mediated Simulations,* 14, no. 1 (2022): 1–18.

The remainder of this study is structured as follows: First, it reviews the theoretical underpinnings of mentoring in teacher education and situates eGamification within this context. Second, it presents the methodological approach involving focus group discussions, interviews, and observations with pre-service teachers, mentor teachers, and lecturers. Third, it reports on the findings, highlighting the benefits of gamified mentoring for motivation, professional growth, and mentor-mentee relationships. Finally, the study proposes a sustainable eGamification-enhanced mentoring framework and discusses its implications for contemporary teacher education programs.

LITERATURE REVIEW

A key component of pre-service teachers' pedagogical skill development is mentoring.[11] However, traditional mentoring methods often fall short of meeting the demands of modern teacher education programs, particularly when managing large cohorts of students. Scholars have emphasized the need for adaptable, scalable mentorship frameworks that foster professional growth through collaborative and reflective practices.[12]

As education increasingly moves towards digital learning environments, integrating digital tools in mentorship has become essential. Anderson and Dron argue that digital technologies can enhance engagement and improve learning outcomes, especially when paired with personalized feedback.[13] One promising innovation is eGamification, which combines educational strategies with gaming elements to create an engaging and interactive learning experience. Research has shown that eGamification can increase motivation, support deeper learning, and improve knowledge retention.[14] Despite these benefits, the challenge remains to implement these digital strategies in a way that maintains the authenticity of human-centered mentorship.

Mentoring has traditionally been considered a cornerstone of teacher education; therefore, it bridges the gap between theoretical knowledge and practical classroom application.[15] However, traditional mentoring practices often struggle with scalability, particularly given the growing number of pre-service teachers.[16] Research indicates that digitally supported mentoring practices, including gamification, offer solutions to these challenges by providing greater flexibility, engagement, and scalability.[17] Digital tools embedded in mentorship frameworks allow mentors to support more mentees without sacrificing the quality of interactions.

THEORETICAL FRAMEWORK

This study is anchored in Vygotsky's sociocultural theory, particularly the Zone of Proximal Development (ZPD) concept, which underscores the importance of social interaction and guided learning in enhancing cognitive development.[18] According to Vygotsky, learners can achieve higher levels of understanding and skill when they receive appropriate guidance and support, making the mentor-mentee dynamic a prime application of this theory.[19] The ZPD helps to structure the mentoring framework by identifying specific areas where mentors can provide targeted interventions, scaffolding the learning process, and enabling mentees to develop beyond their current capabilities.

In the context of this study, ZPD becomes a key organizing principle for the mentoring framework, particularly in its application to large cohorts of pre-service teachers. Acting as more knowledgeable others, mentors help mentees navigate tasks and challenges that lie beyond their independent abilities, providing the support necessary for skill development and professional growth.

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[11] D Mphojane, "Building Professional Capital in Teacher Education: The Role of Mentoring," *South African Journal of Education* 39, no. 4 (2019): 112–29.
[12] Gravett and Cilliers, "Mentorship in Teacher Education: Reflecting on Practice and Progress. "; Mphojane, "Building Professional Capital in Teacher Education: The Role of Mentoring."
[13] C. A. Anderson and J. Dron, "The Impact of Digital Technologies on Teaching and Learning. ," *Education and Information Technologies* 24, no. 2 (2019): 1127–46.
[14] I. Caponetto, "Gamification in Education: A Review of Research and Emerging Trends," *Journal of Educational Technology Systems,* 48, no. 2 (2020): 233–54.
[15] Jones and Thomas, "The Role of Mentorship in Teacher Education: Best Practices and Challenges."
[16] Smith and Lewis, "Scaling Mentorship in Teacher Education: Addressing the Challenges of Large Cohorts."
[17] Johnson and Nguyen, "Digital Mentorship: Enhancing Teaching and Learning through Technology."
[18] Vygotsky, "The Role of Play in Development."
[19] Vygotsky, "The Role of Play in Development."

This scaffolding process aligns seamlessly with gamification principles, where tasks are broken down into manageable steps, each providing mentees with progressively greater levels of challenge and support. As mentees advance through these stages, their skills and confidence grow, ensuring a steady path toward mastery.

Interaction of ZPD in Gamification

Integrating ZPD within a gamified mentoring framework creates a dynamic and engaging learning environment.[20] The framework incorporates structured milestones, clear objectives, and progressive feedback, all of which are key gamification features. Gamification elements such as points, badges, and leaderboards serve as motivational tools, offering positive reinforcement and maintaining mentee engagement. These elements provide instant feedback and rewards, encouraging mentees to continue their development while giving them a tangible sense of accomplishment.

A gamified mentoring system must incorporate progress monitoring as a fundamental component to provide a stimulating and learning environment. By allowing mentors to provide individualized instruction depending on the changing needs of mentees, progress monitoring supports the Zone of Proximal Development (ZPD). According to research, tracking systems give mentors useful information about how well their interventions are working and help them ensure that activities are difficult yet doable.[21]This method aligns with the scaffolding principle, which is a key component of ZPD and states that students should be guided through planned phases until they become independent.[22]

Gamification intensifies this dynamic by providing incremental tasks, badges, and visible progress indicators that sustain motivation while promoting skill learning. For instance, research by Dichev and Dicheva shows that gamified systems that use feedback and tracking tools encourage long-term participation and cooperative learning settings.[23] Similarly, González et al. discovered that gamification improved student achievement and motivation by using progress tracking to reinforce milestones, fostering a sense of achievement, and encouraging ongoing development.[24] The ability of the framework to offer significant mentoring is shown by the combination of gamification's organized progression and ZPD's emphasis on scaffolded learning. This dual approach gives Pre-service teachers the confidence and self-efficacy necessary for success in classroom settings and the technical abilities required for their professions.[25]

METHODOLOGY

This study was conducted within the pragmatic paradigm, which was appropriate because of its emphasis on practical solutions to real-world educational challenges and its flexibility in accommodating multiple approaches.[26] A qualitative case study design was adopted to explore how an eGamification-enhanced mentoring framework could be implemented and sustained in teacher education. Vygotsky's sociocultural theory provided the theoretical foundation, particularly the concepts of scaffolding and the Zone of Proximal Development (ZPD), which guided the interpretation of mentor-mentee interactions in digital and face-to-face contexts.

The study sample consisted of twenty Foundation Phase pre-service teachers, five mentor teachers, and five mentor lecturers, selected through purposive sampling. This group was chosen to provide a comprehensive view of the mentoring process from different perspectives and to ensure that the findings reflected the realities of those directly engaged in the mentoring framework.

Data was collected through multiple qualitative methods to capture the complexity of participants' experiences. Focus group interviews with pre-service teachers provided insights into their motivation, collaboration, and professional growth within the gamified mentoring environment. Semi-structured interviews with mentor teachers and lecturers generated a deeper understanding of mentoring

[20] Landers et al., "Gamification of Learning and Instruction: A Decade of Progress in Theory, Research, and Practice."
[21] Landers et al., "Gamification of Learning and Instruction: A Decade of Progress in Theory, Research, and Practice."
[22] Vygotsky, "The Role of Play in Development."
[23] Dichev and Dicheva, "Gamifying Education: What Is Known, What Is Believed and What Remains Uncertain: A Critical Review."
[24] González, Burguillo, and Llamas, "Gamifying Education: Classcraft's Impact on Classroom Engagement."
[25] Gravett and Cilliers, "Mentorship in Teacher Education: Reflecting on Practice and Progress. ."
[26] J. W. Creswell and C. N. Poth, *Qualitative Inquiry and Research Design: Choosing among Five Approaches* (SAGE Publications, 2018).

practices, challenges, and expectations about eGamification. Participant observations of mentoring sessions allowed the researcher to document real-time interactions and the practical application of gamified features such as digital badges, leaderboards, and progress tracking. In addition, data generated from the gamification platform were analyzed to monitor pre-service teachers' learning progress, goal achievement, and engagement over time.

The data were analyzed thematically using Braun and Clarke's six-phase approach, which involved familiarizing the data, coding, identifying patterns, developing themes, and refining them to generate meaningful insights. [27] Triangulation across data sources—interviews, focus groups, observations, and platform records—strengthened the findings' credibility, validity, and depth.

Data Analysis

The data was analysed using thematic analysis, following the methodology outlined by Braun and Clarke. [28] This approach facilitated the identification of recurring themes and patterns within the qualitative data collected from focus group interviews, observations, and progress tracking on the eGamified platform. Thematic analysis involved several stages: familiarization with the data, generating initial codes, searching for themes, reviewing themes, and refining them to ensure they accurately reflected the participants' experiences. Through this process, key themes emerged that reflect the framework's impact on mentor-mentee dynamics, skill acquisition, and personal development.

Recruitment of Participants

Pre-service teachers were recruited through a combination of email invitations and voluntary participation. Invitations were sent to all students enrolled in the Foundation Phase Teacher Education Program at the University of the Free State, outlining the purpose of the study and what participation would entail. The first pre-service teachers to respond to the invitation email were selected to participate in the study. This method ensured participation was on a first-come, first-served basis, offering a fair and transparent selection process. Consent was obtained from all pre-service teachers, ensuring they understood their role in the study and their right to withdraw at any time without consequence.

For mentor teachers, individuals who had already been designated as mentors to pre-service teachers within the partner schools were invited to participate. These mentors were familiar with providing support and feedback to student teachers and were willing to share their experiences with the gamification framework. Consent was sought from these mentors before they were involved in the study.

Mentor lecturers were also selected based on their mentoring roles within the university's teacher education program. These mentor lecturers had experience supporting pre-service teachers in their professional development. Like the other participants, mentor lecturers were fully briefed about the study and obtained their consent before their involvement.

Ethical Considerations

Ethical considerations were observed throughout the study. Ethical clearance was obtained from the relevant institutional review board, and participation was voluntary. Informed consent was secured from all participants, and their anonymity was protected through pseudonyms and secure data management. Participants were reminded of their right to withdraw from the study at any stage without penalty.

PRESENTATION OF FINDINGS AND DISCUSSION

The following themes were identified and explored in the analysis:

Enhanced Mentor-Mentee Communication. This theme focused on how the eGamification platform facilitated communication between mentors and pre-service teachers. Through digital tools, pre-service teachers could set goals, track their progress, and engage in real-time feedback. This increased accessibility and frequency of interactions strengthened the mentor-mentee relationship. The platform allowed for continuous guidance, offering personalized advice and creating a more consistent

[27] Virginia Braun and Victoria Clarke, "Thematic Analysis.," in *APA Handbook of Research Methods in Psychology: Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological (Vol. 2) (2nd Ed.).* (Washington: American Psychological Association, 2023), 65–81, https://doi.org/10.1037/0000319-004.

[28] Braun and Clarke, "Thematic Analysis."

mentorship experience, which would otherwise be difficult to achieve in traditional, face-to-face mentoring models.

***Improved Engagement and Motivation*:** The gamified elements, such as progress tracking, rewards, and goal setting, significantly contributed to mentees' engagement. Pre-service teachers reported increased motivation due to the platform's clear structure and tangible rewards. The framework created a dynamic and interactive learning environment by integrating game mechanics like points and digital badges, leading to sustained engagement throughout the mentoring process. This finding aligns with research on gamification's positive effects on motivation and learning outcomes.[29]

Development of Teaching Competencies: Pre-service teachers highlighted how the mentoring framework supported the development of essential pedagogical skills. The digital tools offered structured guidance, allowing mentees to receive feedback and set goals tailored to their developmental stage. This theme underscores the importance of the mentorship framework in enhancing the practical application of teaching theory and improving pre-service teachers' readiness for classroom practice. This aligns with the idea that effective mentorship promotes professional growth through ongoing reflection and skill-building.[30]

***Sense of Achievement and Self-Confidence*:** Using gamified elements to track progress and reward accomplishments emerged as a key motivator for pre-service teachers. By completing tasks and earning digital badges, pre-service teachers experienced a sense of achievement that bolstered their self-confidence. This theme reflects how the structure provided by the eGamification framework not only helped students track their academic progress but also reinforced positive emotions tied to their learning journey. This sense of accomplishment is crucial in building self-confidence, especially for pre-service teachers transitioning into professional roles.

***Collaborative Knowledge Building*:** Another key theme that emerged from the focus group interviews and observations was the emphasis on collaboration. The digital framework encouraged pre-service teachers to engage in collaborative goal setting, share resources, and participate in peer support networks. The gamified platform promoted a community of practice where participants could work together, offering advice and feedback to one another. This collaborative learning environment aligns with Vygotsky's notion of social interaction and co-constructed knowledge, where learning occurs through collaborative engagement.

Cross-referencing the themes from the focus group interviews, observations, and progress tracking data helped validate the findings, ensuring they reflected the participants' experiences. This triangulation approach enhanced the study's credibility and provided a more nuanced understanding of the impact of the digital mentoring framework.

The findings from this study highlight the significant impact of the gamified mentorship framework on pre-service teachers, mentor teachers, and mentor lecturers, particularly in support, skill development, and engagement. The data analysis below focuses on how the digital elements of the framework were leveraged to enhance the mentoring process and contribute to the professional growth of the pre-service teachers.

Views of Pre-Service Teachers

Pre-service teachers expressed high levels of satisfaction with the support provided by their mentors, especially in areas critical to their development, such as classroom management, lesson planning, and the overall complexity of teaching. The study explored how a digital mentorship framework could sustain and enhance mentoring relationships. Pre-service teachers emphasised that the ongoing and

[29] Caponetto, "Gamification in Education: A Review of Research and Emerging Trends."
[30] Gravett and Cilliers, "Mentorship in Teacher Education: Reflecting on Practice and Progress. ."

personalised feedback they received was crucial in helping them navigate the challenges of teaching. This feedback was not limited to traditional face-to-face interactions but was supplemented by real-time insights through the eGamification platform, enabling tracking of their progress. One pre-service teacher reflected:

> "Having mentors who gave me feedback at the end of a lesson and continuously throughout the week *made me feel more confident. The gamification platform helped me see exactly where I was improving and where I needed to focus more."*

This feedback was pivotal in boosting the confidence and self-efficacy of the pre-service teachers, aligning with the study's aim to design a mentoring framework that provides consistent, accessible support. Furthermore, pre-service teachers appreciated the engaging elements of the gamification platform, such as digital badges, progress charts, and collaborative spaces, which encouraged them to track their progress and engage with their peers actively. These features provided a reflective experience that helped them visualise their growth, reinforcing the framework's role in professional development.

Views of Mentor Teachers and Mentor Lecturers

Mentor teachers and mentor lecturers shared similar sentiments regarding the benefits of the gamification system. They highlighted its ability to provide a clear structure for mentoring interactions and progress tracking, allowing for more targeted support. Mentor teachers noted that the platform offered valuable data on mentees' progress, which facilitated more focused, ongoing feedback:

> *"With the gamification system, I could monitor my mentee's progress more closely. The platform provided data that helped me give more targeted feedback, and we were able to have more meaningful discussions about their development."*

The findings illustrate how the framework empowered pre-service teachers and enhanced the mentors' ability to provide individualised support. By using the platform, mentors could engage more effectively with their mentees, offering timely feedback and identifying areas for growth in real time. This supports the aim of the study, which was to design a sustainable, efficient mentoring model that utilizes digital tools to streamline the mentoring process and enhance learning outcomes.

Mentor lecturers also recognized the value of eGamification in their reflective practices. The ability to track their mentees' progress allowed them to identify strengths and areas that needed further attention, which led to more targeted mentoring. This data-driven approach ensured mentorship was more personalised and effective, aligning with the framework's goal of fostering a long-term, sustainable approach to teacher development.

The findings align with the study's evaluation of a new digital mentoring framework that combines traditional mentoring practices with digital tools. The gamification system provided consistent and accessible feedback, engaged pre-service teachers through progress tracking, and enhanced the reflective practices of both mentors and mentees. The study highlights how this framework supports the professional growth of pre-service teachers and the development of mentor teachers and lecturers. These findings demonstrate the potential of digital tools, particularly gamification, to enrich the mentorship process, making it more interactive, personalised, and sustainable.

Integrating digital scaffolding within the framework helped facilitate the continuous, real-time support critical to the mentees' progress. By fostering a collaborative learning environment through the eGamification platform, the study underscores the importance of adaptability in mentoring frameworks, especially as education increasingly embraces digital tools for enhanced learning experiences.

Scalability and Sustainability of Gamified Mentorship

A critical challenge in teacher education, particularly in large cohorts, is providing individualised and consistent support to pre-service teachers.[31] The gamified mentorship framework effectively addresses this challenge by allowing mentors to track real-time progress, provide timely feedback, and set

[31] Smith and Lewis, "Scaling Mentorship in Teacher Education: Addressing the Challenges of Large Cohorts."

collaborative goals with their mentees. The ability to monitor pre-service teachers' development continuously and in a structured manner makes this approach highly scalable, particularly compared to traditional mentoring models constrained by time and face-to-face interactions. This finding resonates with research on digital mentorship platforms, which suggests that they can enhance scalability without sacrificing the quality of mentoring.[32]

Using a digital platform ensures that mentors and pre-service teachers maintain consistent communication, making the mentoring process more flexible and accessible. This aligns with Gravett and Cilliers's assertion that adaptability and scalability are crucial elements of effective mentoring frameworks.[33] By allowing mentees to engage in self-directed learning, track their progress, and reflect on their pedagogical development, the framework empowers pre-service teachers to take ownership of their professional growth, which is an essential aspect of sustainable teacher development.[34]

The Role of Gamification in Enhancing Mentoring Relationships

A critical insight from the study is that mentorship is not a one-way relationship. Both mentors and pre-service teachers benefit from the continuous feedback and reflection facilitated by the gamified platform. For mentors, the platform offers a structured way to monitor mentee progress and tailor feedback to the specific needs of the pre-service teacher. One mentor teacher noted that the platform's progress-tracking capabilities provided *"data that helped [them] give more targeted feedback."* This resonates with the view that mentorship should be an interactive and collaborative process that benefits both parties.[35] Mentors can use the data to identify areas of strength and areas for improvement, which allows for more effective interventions. This also enables mentors to focus on critical aspects of the mentor-mentee relationship, such as providing individualised support, fostering trust, and encouraging professional reflection.

Moreover, the digital tools embedded within gamification, such as progress charts, digital badges, and peer collaboration spaces, enhance engagement and motivation, which are essential for effective mentorship.[36] These features offer pre-service teachers clear goals and feedback loops, which promote motivation and increase self-efficacy—critical components of a successful learning process. The use of gamification strategies in educational settings is well-documented to positively impact learners' engagement and retention of information. By incorporating gamification elements, the framework fosters an environment of ongoing motivation, reflection, and achievement.

Alignment with Vygotsky's Sociocultural Theory and ZPD

The integration of Vygotsky's sociocultural theory, particularly the ZPD concept, further strengthens the framework's effectiveness. According to ZPD, learners can achieve greater growth with the support of more knowledgeable individuals, such as mentors.[37] In this study, the eGamified mentorship framework functions as a form of scaffolding, where mentors provide guidance that helps pre-service teachers progress through increasingly complex teaching tasks. The continuous feedback and incremental tasks, hallmarks of the gamification approach, align with Vygotsky's idea that learning is most effective when it occurs beyond the learner's current abilities but within their ZPD.

In this study, the eGamification platform's progress-tracking features allowed mentors to identify pre-service teachers' zones of proximal development and provide the necessary scaffolding. As noted by one mentor lecturer, tracking mentees' progress enabled them to identify areas of strength and weakness, ensuring that interventions were timely and appropriately tailored to the mentee's current developmental stage. By integrating these tools with ZPD-based principles, the framework supports skill acquisition and fosters a deeper understanding of teaching practices, encouraging reflective thinking and self-regulation.[38]

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[32] Johnson and Nguyen, "Digital Mentorship: Enhancing Teaching and Learning through Technology."
[33] Gravett and Cilliers, "Mentorship in Teacher Education: Reflecting on Practice and Progress. ."
[34] Mphojane, "Building Professional Capital in Teacher Education: The Role of Mentoring."
[35] Jones and Thomas, "The Role of Mentorship in Teacher Education: Best Practices and Challenges."
[36] Caponetto, "Gamification in Education: A Review of Research and Emerging Trends."
[37] Vygotsky, "The Role of Play in Development."
[38] Braun and Clarke, "Thematic Analysis."

Mutual Benefits of the Mentorship Process

Finally, the study highlights the mutual benefits of the mentoring process. While pre-service teachers gained professional skills and pedagogical knowledge, mentors also enhanced their reflective practices. The feedback loop facilitated by the digital platform encourages mentors to critically evaluate their mentoring strategies, fostering professional development on both sides of the mentorship relationship.[39] This process of reciprocal reflection aligns with the concept of professional capital, where both the mentor and mentee contribute to each other's development, creating a dynamic and evolving learning environment.[40] The findings of this study underscore the potential of the eGamified mentorship framework to provide an effective, scalable, and sustainable model for mentoring Foundation Phase pre-service teachers. This study aligns with the evolving demands of teacher education in the 21st century, where digital tools have become essential for enhancing both teaching and learning processes.[41]

RECOMMENDATIONS

Several suggestions can be made to improve the efficacy of the eGamified mentorship framework for pre-service teachers, considering the study's findings:

Growth and Incorporation of Online Mentoring Resources: It has been demonstrated that gamified components such as leaderboards, progress tracking, and badges can effectively engage and motivate pre-service teachers. Subsequent versions of the mentorship framework ought to investigate the incorporation of other digital resources, including virtual classrooms or simulations that offer experiential learning opportunities. Teachers may have more varied options to participate in professional development if the digital toolset is expanded.

Customizing the Framework to Meet Personal Needs: Although gamification encourages participation, it is crucial to ensure that the gamified system's objectives and challenges correspond with each person's Zone of Proximal Development (ZPD). To ensure individualized and focused support, mentors should be trained to modify the gamified framework to fit the particular requirements of each pre-service teacher. This can entail modifying assignments, providing tailored feedback, and making decisions based on the information gathered via progress monitoring.

CONCLUSION

This study explored how an eGamified mentorship framework could provide a scalable and sustainable model for supporting Foundation Phase pre-service teachers. Grounded in Vygotsky's sociocultural theory, the framework integrated digital tools and gamification elements to enhance professional development through feedback, collaboration, and reflective practice. The findings demonstrated that such an approach strengthened mentor–mentee relationships, supported professional growth, and aligned mentorship practices with contemporary teacher education's pedagogical and digital demands. By addressing limitations of traditional models, the study confirmed that eGamification offers a practical and innovative way to improve the mentoring experience for both pre-service teachers and their mentors. In conclusion, the study affirms that an eGamified mentorship framework is effective in enhancing pre-service teachers' confidence and teaching competence and is sustainable and adaptable for modern teacher education.

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[39] Gravett and Cilliers, "Mentorship in Teacher Education: Reflecting on Practice and Progress. ."

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ABOUT AUTHORS

Dr Lindiwe Jiyane is a lecturer and Work-Integrated Learning (WIL) Coordinator at a university in South Africa. Her research interests include teacher education, mentoring and reflective practice in teaching practice, Foundation Phase pedagogy, Early Childhood Care and Education (ECCE), language and literacy in multilingual contexts, and student success during WIL. Her scholarship advances practice-based and context-responsive approaches to teacher preparation.

Dr.Blandina Manditereza is an early childhood education specialist and university lecturer whose work focuses on language learning and digital pedagogy in the early years of education. She is recognised for her research on how teaching practices and educational technologies influence young children's learning experiences. Her work contributes to improving teaching quality and supporting equitable learning opportunities for young learners in South Africa and beyond.

Dr. Blanche N. Hadebe-Ndlovu is a scholar in early childhood and Foundation Phase education, with research interests in mathematics teaching and learning, play-based pedagogies, and inclusive practices in early schooling. Her work focuses on teachers' pedagogical practices in diverse and resource-

constrained contexts, with particular attention to strengthening teaching quality and learner engagement in the early years.