



Transforming Pre-Service Economic and Management Sciences Teacher Education with Blackboard: A Blended Learning Tool for Engagement

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Abstract. Blended learning platforms, like Blackboard, offer transformative potential in the realm of pre-service Economic and Management Sciences teacher education. This qualitative study engaged twenty-one pre-service teachers to examine the efficacy and challenges of integrating Blackboard into their educational journey. Employing the connectivism theory and the technology acceptance model as guiding paradigms, the research illuminated the profound impact of Blackboard on enhancing engagement, collaboration, and peer interaction, and bridging theoretical knowledge with practical applications. However, challenges emerged in terms of navigation, technical glitches, and the occasional disconnect between online and face-to-face interactions. The paper recommends prioritization of comprehensive training, support for teacher educators and pre-service teachers, and the development of a more user-centric platform design tailored to the specific needs of pre-service teachers. The study concludes with an emphasis on the continuous refinement of blended learning approaches, striking a balance between technological advantages and the essence of traditional teaching methodologies. The insights gained hold implications for institutions, educators, and technology developers, pointing toward a more dynamic, engaging, and effective future for pre-service teacher education in Economic and Management Sciences.

Keywords: Pre-service Teachers, Blended Learning, Connectivism Theory, Blackboard, Post-secondary Education

1 Introduction

Rapid change Technology is revolutionizing teaching and learning as we know it, opening new horizons. Mphuthi and Tshelane [1] suggest that pre-service teacher education, particularly in the field of Economic and Management Sciences (EMS), serves as a crucial pillar in the process of shaping and reshaping the Economics and Accounting teachers of tomorrow. Manchishi and sani Mwanza [2] describe pre-service teachers as

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students who enroll in a teacher education program in higher education, studying to be qualified as professional teachers. Consequently, this pivotal stage of teacher preparation is now transforming, driven by the integration of technology and innovative instructional methods. Complementary to this, scholar's observations have made findings over a decade suggesting that the educational landscape has witnessed a transformative shift, brought about by technological advancements [3][4][5][6][7]. Economic and Management Sciences education plays a vital role in shaping the next generation of educators. However, modern pre-service EMS teachers have diverse needs, which may not be fully addressed by traditional teaching methods that focus primarily on face-to-face instruction. As a result, blended learning, which combines online and offline methods, has been hailed as a promising way to increase engagement and effectiveness for pre-service EMS teachers [8].

To better navigate this evolving educational terrain, Rambe [9] recommends Blackboard and positions it as a premier blended learning platform, which emerges as a beacon. In addition, Nkonki and Ntlabathi [10] noted that Blackboard provides a combination of face-to-face and online pedagogical tools, thus redefining the dynamics of teacher education essentially in the fields of Economic and Management Sciences. Van Niekerk [11] also found that Blackboard may be an effective tool for teaching and learning when sufficient training and support are provided. The integration of such innovative online tools may transcend conventional teaching paradigms, providing pre-service teachers with more engaging, versatile, and collaborative learning environments [12]. However, Seanego [13] opines that, like with any revolutionary activity, it is critical to fully appreciate its ramifications. This needs an increased knowledge of the challenges inherent in traditional teaching paradigms, as well as a comprehensive knowledge of how platforms such as Blackboard may address these challenges. For this reason, there is a need to investigate the perceptions of pre-service teachers regarding such blended learning tools and their potential impact on their educational journey.

As a result, the study intends to respond to the following research question: "How does the integration of Blackboard, as a blended learning tool, influence engagement, efficiency, and collaboration in pre-service EMS teacher education?". Not only is answering this question crucial to gauging the potential benefits of Blackboard, but also to chart the future of teacher education. The purpose of this study is to explore the transformative potential of Blackboard in reshaping pre-service teacher education, drawing insights from the experiences and perceptions of those at the heart of this transition, the pre-service teachers themselves.

2 Problem Statement

The field of pre-service teacher education in Economic and Management Sciences (EMS) faces complex challenges in meeting the diverse needs of today's learners [2]. It

is possible that traditional pedagogical approaches, which emphasize face-to-face instruction, do not adequately prepare pre-service teachers for the demands of the contemporary classroom. Conventional pedagogical models in the field of pre-service EMS teacher education primarily depend on face-to-face instruction [14]. They further argue that despite the face-to-face instructional benefits, these approaches might not perfectly meet the ever-evolving needs of modern learners. According to Pandy [15], learners are often perceived to be passive recipients of knowledge, underserved with opportunities to engage in active learning, collaboration, and personalized learning involvements. This identified misalignment between face-to-face teaching methods and the expectations of modern education can lead to a gap between what pre-service EMS teachers are prepared for and the realities they will encounter in their future classrooms.

Ideally, the curriculum practice in pre-service EMS teacher education should be a dynamic, engaging, and collaborative process that equips them with the skills needed to future-proof their education. Equally, Blaschke [16] argues that pre-service teachers should be empowered to think critically, adapt to evolving pedagogical techniques, and foster innovative thinking. Furthermore, Muhuro and Kangethe [17] opine that their curriculum should leverage technology and blended learning platforms to provide flexible and efficient learning experiences. The integration of platforms like Blackboard should serve as a bridge between traditional and digital teaching methods, creating an educational environment where pre-service teachers are better prepared to meet the demands of contemporary classrooms.

Failing to address the misalignment between the current state of pre-service teacher education and the ideal state can have significant consequences. Pre-service teachers who are ill-prepared for the modern classroom may struggle to engage and effectively instruct their learners, ultimately impacting the quality of education. Furthermore, institutions of higher learning risk falling behind in their mission to equip pre-service teachers with the tools necessary for the 21st century. Without a meaningful shift towards innovative approaches, the education sector may perpetuate a cycle of outdated practices, hampering the growth and development of both teacher educators and pre-service teachers.

3 Theoretical framework

The study leans on the triangulation of Connectivism Theory (CT) and the Technology Acceptance Model (TCM) to provide a theoretical framework for the exploration. Connectivism theory plays a significant role in the learning process, networks, technology, and digital information [18]. In the same breath, Tawafak et al.'s [19] adoption of TCM provides deeper insights into the factors that may affect pre-service teachers' adoption and use of Blackboard. For the reasons above integration of CT and TCM offers a robust theoretical framework for understanding the continuous relationship between pre-service teachers, technology, and learning in this study. CT emphasizes the availability of online resources that pre-service teachers may use in the digital era. It provides a lens

that guides the use of technology by pre-service teachers to create knowledge and learn collaboratively.

While TAM offers a structured framework to understand the cognitive and behavioral aspects of technology adoption. This model can provide the basis for the specific factors that influence pre-service teachers' acceptance of this tool with a focus on Blackboard as a learning tool. By combining these theories, the study is well-equipped to provide a comprehensive understanding of the complex dynamics at play in the context of pre-service teacher education and the integration of Blackboard.

4 Research methodology and design

4.1 Research Approach

The study preferred a qualitative research approach. The choice of qualitative research was determined by the intention of the study to explore and understand in-depth the perceptions, experiences, and feelings of pre-service teachers regarding the integration of Blackboard as a blended learning tool in their educational journey. Qualitative research designs, such as free attitude discussions, are well-suited for gaining an in-depth understanding of individuals' experiences, perceptions, and attitudes [20]. Looking at the study of EMS teacher education and the integration of Blackboard, it is essential to capture the deep experiences of pre-service teachers. Their perspectives on how Blackboard affects their engagement, learning, and preparation are crucial for identifying both challenges and opportunities for improvement.

4.2 Population and Sampling

The study was conducted with the pre-service economic and management sciences (EMS) teachers who are enrolled in a teacher education program in one of the universities of technology in South Africa. Pre-service EMS teachers enroll in teachers' education program at the institution of higher learning to be qualified as professional teachers specializing in economic and management sciences at the senior phase level (Grades 7 to 9) and Accounting, Economics, and Business Studies at the further education and training phase (Grades 10 to 12).

A purposive sampling method was employed to recruit participants. This non-randomized selection strategy was used because it guarantees that the participants that were chosen to have particular traits, have used Blackboard, or possess knowledge that will be useful for the study. A total of twenty-one pre-service EMS teachers were selected based on their exposure and experience with Blackboard. The participants ranged from first years in the education program to seasoned veterans in the field of EMS. The study benefited from each participant's unique perspective and insights. As the recruitment process unfolded, it became clear that these pre-service teachers were enthusiastic about exploring the potential of Blackboard as a learning tool.

4.3 Data Collection process and tools

Free attitude round the table discussions were used to collect data. Participants in free attitude discussions are encouraged to express their thoughts and opinions openly. Yildiz [21] alludes to this methodology as ideal for investigating the aspects of teacher education and technology integration. It allows participants to discuss their experiences, provide anecdotes, and elaborate on their points of view, resulting in rich and extensive qualitative data. These discussions were recorded for analysis using a quality-assured recording device. Below are the questions that were adopted by participants for the free attitude discussions.

Research questions:

- What are the challenges that pre-service EMS face in traditional education approaches?
- How do pre-service teachers EMS perceive the potential of Blackboard to enhance their learning experiences?
- How does Blackboard facilitate improved engagement, efficiency, and collaboration among pre-service EMS teachers?
- What are the identified implications of utilizing Blackboard for the future of teaching and learning in institutions of higher education?

4.4 Data Analysis

Critical Discourse Analysis (CDA) as a qualitative research method is used to analyze and interpret language use in various forms of text to uncover underlying power structures, ideologies, and social inequalities [22]. CDA guides an understanding of how language is used to construct knowledge, shape perceptions, and influence behavior in the context of Pre-service EMS teacher education. CDA provides insights into how power dynamics, cultural biases, and institutional values are embedded in the discourse used in educational environments, thus providing a deeper understanding of Blackboard's potential for transformation.

5 Findings and discussions

The findings in the study through critical discourse analysis provide an overview of the current state of pre-service teacher education, highlighting the challenges associated with traditional approaches. The findings further introduce Blackboard, an online tool that combines online and face-to-face instruction as a panacea for transforming teaching and learning in pre-service EMS teacher education. Furthermore, it discusses perceptions of pre-service EMS teachers on how Blackboard can be used to enhance engagement and efficiency in pre-service teacher education.

5.1 Traditional pre-service teacher education

The findings in the study provide an overview of the current state of pre-service teacher education, highlighting the challenges associated with traditional curriculum.

Challenges in Traditional Pre-Service Teacher Education: The data suggests that traditional pre-service teacher education is facing a number of challenges that are experienced in the traditional face-to-face curriculum. These challenges are significant as they directly impact the efficacy of teacher training and the readiness of pre-service teachers to enter the profession as novice teachers.

Engagement issues: Pre-service teachers often struggle to stay actively involved in their learning, which can hinder their overall preparation for the classroom. It is essential that pre-service teachers actively participate in their education. Engagement has an impact on prospective teachers' ability to apply what they have learned in real-world contexts as well as how well they retain the information. Insufficient engagement among pre-service teachers can result in low motivation and diminished efficacy in their instruction.

Ineffective preparation for real-world challenges: The findings assume that pre-service teachers may feel ill-equipped to address the complex and dynamic challenges of modern classrooms, which require adaptability, technology integration, and innovative teaching strategies. The dynamic learning environments of today's classrooms demand a high level of adaptation, including the use of innovative teaching techniques and technological integration. Pre-service teachers may not be adequately prepared for the challenges that they will confront if they are not exposed to these aspects during their education. This could result in a disconnect between their training and the demands of the job.

5.2 Blackboard as a tool for learning

The introduction of Blackboard as an online platform that combines online, and face-to-face instruction could be seen as a strategic response to these challenges. Blackboard is seen to offer a more interactive and flexible learning environment, enabling pre-service teachers to engage with content and pedagogical strategies more actively.

Advantages of using Blackboard

Enhanced flexibility: The findings emphasize the adaptability of Blackboard to various learning environments, highlighting a priority for flexibility in pre-service teacher education. Through CDA as a tool of analysis, the scrutiny of this flexibility reflects broader educational values and the potential impact on traditional educational structures. The emphasis on flexibility also mirrors contemporary educational trends that prioritize student-centered learning and adaptability to diverse learning needs.

Efficient resource management: By promoting Blackboard as a tool for centralizing resources, this statement can be seen as aligning with a more streamlined, efficiency-driven approach to education. CDA would explore how this emphasis on efficiency might influence educational practices and potentially marginalize traditional, less tech-centric approaches. It also raises questions about accessibility and the digital divide.

Enhanced interaction: The focus on interactive features of Blackboard, such as discussion boards and chat rooms, aligns with a constructivist approach to learning, where knowledge is built through interaction.

Perceptions of using Blackboard

Furthermore, the findings reveal the perceptions of pre-service EMS teachers on how Blackboard can be used to enhance engagement and efficiency in pre-service teacher education through CDA. Pre-service EMS teachers seemed to acknowledge the relevance of the Blackboard as an engagement tool in their learning. This was evidenced in their comments:

PST 1 “use of Blackboard should extend beyond campus; it is a fun way to learn I should be able to use it with learners during teaching practice”.

PST 18 “Post-secondary institutions can utilize it for ongoing professional development programs for teachers, ensuring that educators stay updated with the latest EMS teaching methodologies and resources”.

5.3 Collaborative Engagement and Inquiry

The emphasis on collaborative engagement and inquiry reflects a shift in educational discourse towards a more interactive and participatory form of learning. This shift suggests a democratization of the learning process, where students are not just passive recipients but active participants in their education. It also reflects a broader societal trend of valuing collaborative skills and critical thinking. This narrative was reflected in the comments by one of the participants who said: “The Blackboard enables me to collaboratively engage in inquiry, reasoning, justification especially looking at blackboard discussions”.

Furthermore, respondents seemed to have a positive perception of online lectures using Blackboard Collaborate, but internet connectivity and a decline in comprehension compared to face-to-face learning were cited as barriers. The positive perception of Blackboard for online lectures, tempered by concerns about internet connectivity and comprehension, highlights the digital divide and the challenges of technology-mediated education. This points to a discourse that recognizes the potential of technology in education but also acknowledges its limitations, particularly in terms of accessibility and the effectiveness of online versus face-to-face learning.

These findings frame Blackboard as a tool for professional development, implying that it is a vehicle for academic success. The term "utilize" suggests a deliberate and strategic use of blackboard for the specific purpose of enhanced engagement. A transformative thinking approach encourages a shift from passive consumption of resources to active engagement in professional development. Instead of merely providing access to Blackboard, institutions should empower pre-service teachers to take ownership of their learning journey. This can lead to more transformative outcomes as future educators become self-directed learners.

6 Implications of the study

The study highlighted significant implications for the evolution of teaching and learning within higher education institutions. It highlights a move towards pedagogical transformation in the field of (EMS) teacher education. Integration of Blackboard as a key tool for blended learning, encourages a move away from the conventional, didactic lecture model, urging teacher educators to adopt more dynamic, interactive, and student-focused teaching strategies. This technological integration provides more than just the facilitation of a more engaging educational environment but also holds the promise of elevating the depth and quality of student engagement. Using both CT and TAM to enhance engagement is critical, as it can lead to a more enriching learning experience and is instrumental in equipping pre-service EMS teachers with the practical and theoretical acumen needed for the demands of modern classrooms. The insights from the findings have the potential to shape the future trajectory of EMS teacher education, setting a precedent for innovative teaching practices that are responsive to the evolving needs of learners and the educational landscape.

7 Conclusion

The 21st century in education is characterized by rapid technological advancements and continuous pedagogical innovation, and the domain of teacher education is on the cusp of meaningful change. The paper confirms the transformative possibilities that Blackboard as a sophisticated blended learning platform offers for pre-service Economic and Management Sciences (EMS) teacher education. The research presented herein makes a compelling case for the profound impact that integrating such digital tools can have on engagement and instructional efficacy within this field.

To encapsulate, the adoption of Blackboard in the realm of EMS teacher education transcends mere technological enhancement. It heralds a foundational shift in educational paradigms, indicating a move towards more interactive, student-centered learning environments. This shift is not just about leveraging modern technologies; it is about reimagining and reshaping the educational landscape to better prepare future ed-

ucators for the dynamic and diverse challenges of contemporary classrooms. The findings of this study suggest that by embracing this evolution, we can redefine the contours of teacher education, making it more relevant, responsive, and resonant with the needs of both educators and learners in the twenty-first century. To gain a deeper understanding of this evolution, further research in this area is necessary.

References

1. Mphuthi, M. & Tshelane, M. (2022). Reflections by pre-service economic and management sciences teachers on their experiences of remote learning in curriculum practice. *Education and New Development Conference*. 375-376. <https://doi.org/10.36315/2022v1end084>
2. Manchishi, P. C., & sani Mwanza, D. (2018). Reforming School Experience in Pre-Service Teacher Preparation for Quality Teacher Graduates. *Multidisciplinary Journal of Language and Social Sciences Education*, 1(2), 1-26.
3. Torrisi-Steele, G., & Drew, S. (2013). The literature landscape of blended learning in higher education: The need for better understanding of academic blended practice. *International journal for academic development*, 18(4), 371-383.
4. Barth, M. (2014). *Implementing sustainability in higher education: Learning in an age of transformation*. New York: Routledge.
5. Mbatha, B. (2015). A paradigm shift: Adoption of disruptive learning innovations in an ODL environment: The case of the University of South Africa. *The International Review of Research in Open and Distributed Learning*, 16(3). <https://doi.org/10.19173/irrodl.v16i3.2165>
6. Ali, W. (2018). Transforming Higher Education Landscape with Hybrid/Blended Approach as an evolving Paradigm. *Journal of Advances in Social Science and Humanities*, 3(7), 143-169. DOI 10.15520/jassh47334
7. Mphuthi, M., & Tshelane, M. (2023). Online educational technologies as a curriculum approach in teaching and learning for first year pre-service teachers. In *EDULEARN23 Proceedings* (pp. 8582-8589). IATED. doi: 10.21125/edulearn.2023.0655
8. Howard, N. J. (2021). Navigating blended learning, negotiating professional identities. *Journal of Further and Higher Education*, 45(5), 654-671. <https://doi.org/10.1080/0309877X.2020.1806214>
9. Rambe, P. (2016). The role of educational technology in design and delivery of curricula programmes: A case of STEPS at a University of Technology, 8(2):85-113
10. Nkonki, V., & Ntlabathi, S. (2016). The Forms and Functions of Teaching and Learning Innovations on Blackboard: Substantial or Superficial?. *Electronic Journal of e-Learning*, 14(4), 257-265.
11. Van Niekerk, E. (2020). *Lecturers' perceptions and use of a Learning Management System (Blackboard) at a rural university in the Eastern Cape, South Africa*. University of Johannesburg (South Africa).
12. Odularu, A. T., Khalo, X., Mashiyi, N. F., & Nkohla, M. B. (2023). Exploring COVID-19 Pandemic Impact, Online Engagement, and Digital Divide on Disadvantaged Undergraduate Students in South African Universities. <https://doi.org/10.20944/preprints202305.0573.v1>
13. Seanego, J. (2023). Teaching And Learning Sepedi Using Blackboard: Challenges And Opportunities In The Age Of Covid-19 And Beyond. *Journal of Positive Psychology and Well-being*, 7(3), 381-390.

14. Sokal, L., & Sharma, U. (2022). How effective is online pre-service teacher education for inclusion when compared to face-to-face delivery?. *International Journal of Inclusive Education*, 1-15. <https://doi.org/10.1080/13603116.2022.2046191>
15. Pendy, B. (2023). From Traditional to Tech-Infused: The Evolution of Education. *BULLET: Jurnal Multidisiplin Ilmu*, 2(3), 767-777.
16. Blaschke, L. M. (2021). The dynamic mix of heutagogy and technology: Preparing learners for lifelong learning. *British Journal of Educational Technology*, 52(4), 1629-1645.
17. Muhuro, P., & Kangethe, S. M. (2021). Prospects and pitfalls associated with implementing blended learning in rural-based higher education institutions in Southern Africa. *Perspectives in Education*, 39(1), 427-441. <http://dx.doi.org/10.18820/2519593X/pie.v39.i1.26>
18. Dziubaniuk, O., Ivanova-Gongne, M., & Nyholm, M. (2023). Learning and teaching sustainable business in the digital era: a connectivism theory approach. *International Journal of Educational Technology in Higher Education*, 20(1), 1-23.
19. Tawafak, R. M., Al-Rahmi, W. M., Almogren, A. S., Al Adwan, M. N., Safori, A., Attar, R. W., & Habes, M. (2023). Analysis of E-Learning System Use Using Combined TAM and ECT Factors. *Sustainability*, 15(14), 11100. <https://doi.org/10.3390/su151411100>
20. Anas, N. A. S. I. R. U., & Ishaq, K. A. M. I. L. U. (2022). Qualitative Research Method in Social and Behavioural Science Research. *International Journal of Management, Social Sciences, Peace and Conflict Studies*, 5(1).
21. Yildiz, A. (2020). A Discussion on Accurate and Effective Data Collection for Qualitative Research. *Online Submission*, 10(2), 17-24.
22. Tshelane, M. D. (2022). Reimagining Responsible Research Innovations Regarding Professional Teaching Standards for Curriculum Practice. *Journal of Culture and Values in Education*, 5(1), 92-105. <https://doi.org/10.46303/jcve.2022.8>

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