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INVESTIGATING FIRST-YEAR STUDENTS' ENGAGEMENT WITH BLACKBOARD IN THE HUMANITIES FACULTY AT A SOUTH AFRICAN UNIVERSITY OF TECHNOLOGY

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Abstract

This study investigated the opinions, difficulties, and recommendations for enhancements of first-year students at a South African University of Technology regarding their use of Blackboard. The study used a phenomenological methodology and interpretivist paradigm to document students' lived experiences, guided by the Technology Acceptance Model 3 (TAM3). Ten first-year Faculty of Humanities students were purposefully chosen to participate in a focus group in order to gather data. The results showed that although Blackboard was largely seen by students as useful and user-friendly, a number of contextual barriers prevented successful involvement. These included limited Wi-Fi access, expensive mobile data, poor loading times, frequent system crashes, a shortage of computers, and inadequate user training. Students recognised the value of Blackboard in enhancing communication and academic performance, but persistent involvement was undermined by uneven instructor participation and insufficient instruction in digital literacy. According to the study's findings, maximising the use of LMSs requires institutional investment in infrastructure, reasonably priced connectivity, and organised digital skills training. In order to close the gap between behavioural intention and actual use, it suggests improving pedagogical integration through interactive material and regular instructor use. Universities may encourage more egalitarian digital learning and stronger student involvement in technology-mediated environments by removing these obstacles.

Keywords: Blackboard, First-year students; Student engagement, Technology Acceptance Model 3 (TAM3), South African higher education

Introduction

The transition from secondary school to college is a critical period that necessitates intellectual, social, and technical adaptability. During this shift, first-year students at South African technical universities are using learning management systems (LMSs) like Blackboard more and more. These platforms seek to enhance teaching and learning by promoting communication, enabling resource availability, and supporting flexible learning environments. According to Uwizeyimana et al. (2024), their effectiveness is contingent upon the pedagogical practices of lecturers, institutional support, and students' readiness for digital learning. However, student engagement with LMS has multiple dimensions, such as behavioural, cognitive, and emotional elements. According to research, the effective integration of learning management systems (LMS) into instructional practices can positively affect student engagement and academic achievement (Alotaibi, 2024).

However, due to deficits in digital literacy, many first-year students still have a difficult time accessing online platforms (Ndibalema, 2025). To bridge these gaps, specific actions are required, like improved ICT infrastructure and training in digital skills (Nel, 2025). Higher education institutions commonly utilise Blackboard and other Learning Management Systems (LMSs) to enhance instruction, learning, and communication between instructors and students. By providing users with access to interactive resources, course materials, and tests, these platforms support blended and online learning. However, first-year students often find it difficult to engage with LMSs because of their inexperience with online learning environments, erratic internet connections, and low levels of digital literacy (Uwizeyimana et al., 2024).

Many first-year students at South African technology universities struggle to engage with Blackboard in meaningful ways, even if the platform has been adopted by the institutions. These difficulties may negatively

impact their general transfer to higher education, sense of community, and academic performance (Motaung, 2024). Furthermore, there is a dearth of information regarding the lived experiences of first-year students in the Faculty of Humanities at South African universities of technology due to the majority of research on the use of learning management systems (LMS) in higher education focussing on either historically privileged institutions or general student populations. This gap restricts the creation of focused interventions to help first-year students in circumstances where resources are scarce (Sithole & Mbukanma, 2024).

Learning Management Systems (LMSs), like Blackboard, have been used in higher education lately for content distribution, communication, and assessment. Numerous research have demonstrated that student engagement and performance rise when LMS use is pedagogically deliberate (Akpen et al., 2023). In South Africa, however, recent data is less clear. A public university's multi-program study indicated that first-year students preferred in-person instruction while finding Blackboard easy to use. This suggests that usability by itself does not translate into higher engagement (Uwizeyimana et al., 2024).

Similar to this, a study conducted on a Blackboard Collaborate campus in a rural area found that despite the tool's availability, participation was limited by financial and technical barriers (Motaung, 2024). Additionally, a qualitative study conducted at a historically disadvantaged institution (HDI) found that lecturers' uptake was low and uneven, and that there were difficulties aligning institutional plans with classroom realities (Maluleke, 2024). Broader evaluations that caution that many of the "engagement effects" documented in LMS studies rely on behavioural click stream proxies rather than multidimensional involvement further exacerbate the complexity of causal claims (Bergdahl et al., 2024). This ambiguity is reinforced by international syntheses during and after COVID-19: Despite the fact that LMSs can provide flexibility and accessibility, a lack of social presence and engagement frequently reduces perceived efficacy, particularly among novices (Akpen et al., 2024).

Investigating how first-year students in the Faculty of Humanities at a South African University of Technology use Blackboard is the aim of this qualitative study. The study's specific goal is to comprehend students' viewpoints, obstacles, and chances to improve LMS integration in their learning process.

Theoretical framework

The purpose of this study was to investigate the modelling elements and factors using the TAM3 standard framework. Twenty years ago, technology adoption models were created, and in the last two decades, TAM3 has been established. It was intended to use complementary components that were added to the original model (Klaic & Galea, 2020). TAM3 is particularly relevant to first-year students at South African universities of technology because it takes into account both individual-level factors like digital literacy, self-efficacy, and anxiety as well as institutional-level influences like infrastructure, lecturer support, and social norms.

Since TAM3 provides a more comprehensive network of determinants and factors in the adoption and use of information technology across the three theoretical formats, it is more thorough than the earlier models, specifically TAM2 and the ease-of-use model determinants (Venkatesh & Bala, 2008). Four primary structures comprise the TAM3 standard framework: behavioural intention, use behaviour, perceived utility, and perceived ease of use. The relationship between an independent variable and a dependent variable (behavioural intention) is depicted by the variables perceived usefulness and perceived ease of use, according to this model. There are six independent elements that can influence perceived usefulness: subjective norm, image, work relevance, output quality, productivity, and voluntariness.

Recent models of technology acceptance suggest that individual differences (e.g., self-efficacy), emotional states (e.g., anxiety), and facilitating factors (e.g., usability and enjoyment) all have a significant impact on how easy people perceive technology systems to be to use (Noriega Del Valle, Łaba & Mayer, 2024). The approach enables a greater awareness of students' views, challenges, and growth recommendations to guide more targeted, contextually sensitive actions. In doing so, TAM3 provides a theoretical framework and a practical application for examining the use of technology in higher education settings that are marked by digital inequality and pedagogical variety.

Method

The interpretivist paradigm, which seeks to understand people's lived experiences and subjective meanings within specific social contexts, is where this study fits in. The importance of qualitative and interpretivist paradigms in capturing contextual meaning and complexity was highlighted in a study on their emergence in social science and education research (Bozkurt & Ozturk, 2022). A phenomenological approach was employed because the study's objective is to examine and evaluate first-year students' actual experiences while they utilise Blackboard. The study was carried out in the Department of Educational and Professional Studies at the Central University of Technology, Free State, during the first semester of the 2025 academic year.

Purposive sampling was used to select ten first-year students who satisfied particular study-related criteria. Purposeful sampling (PS) is one of the most widely used non-probability sampling strategies in qualitative research (Patton 2015; Ahmad & Wilkins, 2025). However, the differences between purposive sampling and other nonrandom sample procedures in qualitative research remain unclear despite its popularity and extensive use (Hood 2006; Etikanet al. 2016; Anderson 2017; Ahmad & Wilkins, 2025). They were picked in order to guarantee a variety of perspectives and experiences, particularly with relation to digital literacy and institutional assistance. Two male and two female participants were under the age of twenty, two male and one female participants were between the ages of twenty and twenty-two, two male and one female participants were between the ages of twenty-three and twenty-five, and two male and one female participants were over the age of twenty-five.

This impartial portrayal provided a solid foundation for evaluating students' Blackboard usage. These trends suggest that the sample is representative of first-year students at a university of technology in South Africa, offering a solid foundation for examining their Blackboard usage. Views on Blackboard's general utility, usability, and engagement were gathered mostly through focus group discussions. An informal gathering of six to twelve people to discuss a topic selected by the researcher is called a focus group (Longhurst & Johnston, 2023). Open-ended questions in the focus group discussion allowed for both structured and narrative responses, allowing for follow-up for more detailed findings. Based on the Technology Acceptance Model 3 (TAM3) constructs, this instrument ensured theoretical congruence with the organisation of the study. The focus group was a non-intrusive, friendly way to get personal insights. By using in-class announcements and instructor recommendations, recruitment was made easily accessible and contextually relevant.

After being informed of the purpose of the study, students were permitted to actively engage. The Central University of Technology's Research Ethics Committee gave its ethical approval. Informed consent was given by each participant, and precautions were made to guarantee confidentiality, anonymity, and voluntary involvement. Participants received guarantees that their responses would only be utilised for academic study and that they would not face any consequences for leaving at any point.

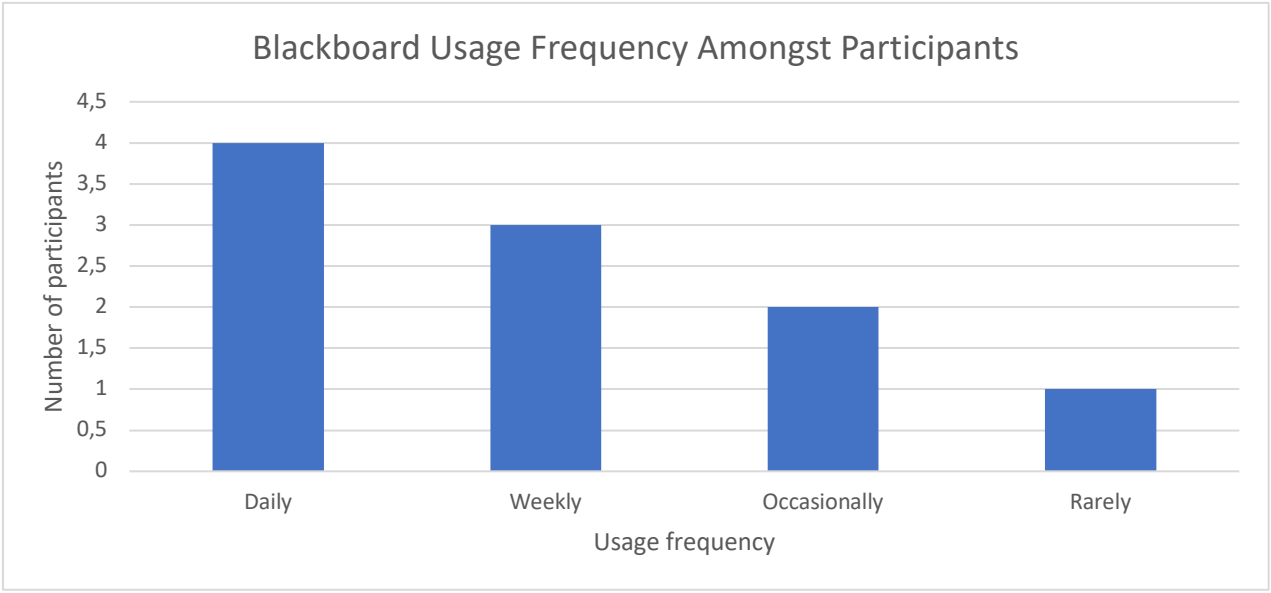
3. Findings and Discussion

In this section, the study presents and interprets the findings derived from both quantitative and qualitative data, aligning them with the research objectives and the Technology Acceptance Model 3 (TAM3) framework. The discussion integrates descriptive statistics, thematic analysis, and visual representations to explain how first-year students perceive and engage with Blackboard, the challenges they encounter, and the role of lecturers in facilitating its use. Table 1 and Graph 1 below present a summary of students' engagement with Blackboard.

Table 1: Summary of usage

BLACKBOARD USAGE FREQUENCY	
Usage Frequency	**Count**
Daily	4
Weekly	3
Occasionally	2
Rarely	1
Total	**10**

Graph 1: Summary of Blackboard usage



Graph 1 above confirms that Blackboard adoption is generally strong as presented in Table 1, but the gap between daily and occasional users highlights contextual challenges (e.g., infrastructure, digital literacy) that moderate TAM3 relationships.

Below is a full thematic analysis framework for the study's research questions, aligned with TAM3 constructs and enriched with sub-themes and example coding categories:

Table 2: Summary of TAM3 themes, sub-themes and descriptions

Main Theme	Sub-theme	Description
Perceived Usefulness (PU)	Academic performance improvement	Blackboard helps improve grades and understanding
	Task efficiency	Completing tasks faster and easier
	Learning effectiveness	Enhances learning experience
	Overall usefulness	General value of Blackboard
Perceived Ease of Use (PEOU)	Ease of use	Simple to navigate
	Ease of learning	Quick to learn system
	Clarity & understandability	Clear instructions and layout
	Becoming skilful	Confidence in using features
Behavioral Intention (BI)	Encouragement	Lecturers motivate students to use Blackboard
	Guidance	Support in navigation and usage
	Feedback	Timely responses and grading
Usage Behavior (UB)	More training	Additional workshops or tutorials
	Consistent use	All lecturers should use Blackboard
	Interactive content	Videos, quizzes, discussion forums
	Clear communication	Announcements and deadlines

5.1 Challenges first-year students experienced during their engagement with Blackboard

Students reported several challenges that hindered effective use of Blackboard, including frequent system crashes, slow loading, and limited access to a reliable internet connection. The data below presents verbatim quotations from the participants highlighting these challenges that students faced when using Blackboard:

Student 4: "Blackboard crashes", "Slow loading"
Student 7: "No Wi-Fi at home", "Data is expensive"
Student 9: "No proper training", "Had to figure it out myself"
Student 10: "Hard on phone", "No laptop"

The findings indicate that when it comes to efficiently utilising Blackboard, students encounter a number of challenges. Technical issues like delayed loading and system failures make access challenging, and participation is

further hampered by a shortage of Wi-Fi, costly data plans, and a dependence on mobile devices. Additionally, inadequate instruction forces students to rely on self-directed learning, which diminishes platform confidence and raises unhappiness. Collectively, these challenges draw attention to serious digital inequities and the necessity of better infrastructure access, technical support, and user education to boost e-learning participation.

5.2 First-year students' perception towards their engagement with Blackboard.

Theme 1 below presents verbatim quotations from the participants highlighting their perceptions of Blackboard's usefulness:

Theme 1: Perceived Usefulness (PU)

Student 1: "Improves my marks", "Better comprehension"
Student 4: "Saves time", "Quick submission"
Student 8"Helps me learn better", "More resources"
Student 2&3: "Very useful", "Essential for studies"

Most students agreed that Blackboard improves academic performance, work completion, and learning effectiveness. These findings corroborate TAM3's assertion that perceived utility has a major impact on technology adoption (Venkatesh & Bala, 2008). Blackboard was regarded as a useful tool for accessing resources and turning in assignments, which is consistent with previous study done in South African universities that emphasised LMS platforms as crucial to academic achievement (Mlitwa & Van Belle, 2011). However, some students pointed out that the system's efficacy dropped when instructors stopped routinely uploading content, indicating that active pedagogical integration is required for its usefulness.

Theme 2 below presents verbatim quotations from the participants highlighting their perceptions of Blackboard's ease of use:

Theme 2: Perceived Ease of Use (PEOU)

Student 6 & 10: "User-friendly", "Easy to find content"
Student 5: "Didn't need much training", "Self-explanatory"
Student 7: "Instructions are clear", "Layout makes sense"
Student: 9: "I can upload assignments easily", "I know how to check grades"

The majority of respondents said Blackboard was easy to use and comprehend, supporting TAM3's theory that behavioural intention is indirectly influenced by perceived utility (Venkatesh & Bala, 2008). Notwithstanding challenges such as inadequate computer literacy and a lack of official instruction, pupils commended the platform's intuitive design. These challenges corroborate research showing that insufficient orientation hinders LMS adoption (Al-Busaidi & Al-Shihi, 2012). Device restrictions, especially dependency on mobile phones, also had an impact on usability, which is consistent with findings about the disadvantages of mobile-based LMS access (Ngampornchai & Adams, 2016).

5.3 The role of lecturers in supporting Blackboard engagement

Theme 3: Behavioural Intention (BI)

The data below shows the BI for Lecturer involvement in promoting the use of Blackboard, based on Encouragement, Guidance, and Feedback.

Student 2: "Lecturer insists on Blackboard, "sometimes reminds us to check announcements.
Student 5: "Shows us how to upload", "Explains features in class"
Student 8: "Quick feedback on assignments", "Comments on submissions"

Students' strong intentions to continue using Blackboard and their recommendations to their peers demonstrated their positive attitudes towards continued participation. However, inconsistent professor behaviours undermined the goal; when lecturers underused Blackboard, students saw less benefit from frequent use. This aligns with TAM3's emphasis on social influence and enabling circumstances as factors that determine behavioural intention (Venkatesh & Bala, 2008). The e-learning literature's best practices are reflected in the recommended improvements, which include engaging content and consistent platform usage across modules to encourage long-term adoption (Sun et al., 2008).

5.4 Suggested strategies for improvement

Theme 4: Usage Behaviour (UB)

The verbatim quotes below show the outcome of users interacting with the technology. This table shows how participants perceived the ultimate usage behaviour, highlighting the following: Training, Consistent use, Interactive content and communication.

Student 1: “Need more training sessions”, “Step-by-step guides”
Student 3: “Some lecturers do not use it”, “Consistency needed”
Student 6: “Add videos”, “More interactive activities”
Student 10: “Post deadlines clearly”, “Update announcements regularly”

Although many students claimed to use Blackboard often, real engagement was hindered by infrastructural and contextual concerns. High data costs, sporadic system failures, and connectivity issues were common, facilitating research in developing countries where access to technology is still a challenge (Mtebe & Raisamo, 2014). These constraints draw attention to the disconnect between intention and behaviour, highlighting the necessity of institutional investment in dependable device support and internet access.

Conclusions

According to the survey, first-year students generally consider Blackboard to be useful and easy to use, which is consistent with the core principles of TAM3. Since they see how it can improve their learning and academic performance, most students intend to continue using it. However, insufficient training, unequal professor engagement, and infrastructural problems reduce its efficacy and cause a gap between its intended use and its actual implementation. To overcome these challenges, institutions should prioritise capacity building through planned digital literacy programs, improving connectivity through affordable data plans and campus Wi-Fi, and pedagogical integration through interactive content design and regular professor use (Sithole & Mbukanma, 2024). By taking these steps, Blackboard's potential as a revolutionary learning tool will be fully realised, engagement will increase, and learning outcomes will be optimised.

References

Ahmad, M., & Wilkins, S. (2025). Purposive sampling in qualitative research: A framework for the entire journey. *Quality & Quantity*, *59*(2), 1461-1479.

Akpen, C.N., Asaolu, S., Atobatele, S., Okagbue, H. and Sampson, S. (2024). Impact of online learning on student's performance and engagement: a systematic review. *Discover Education*, *3*(1), p.205.

Al-Busaidi, K.A. and Al-Shihi, H. (2012). Critical factors influencing instructors’ acceptance and use of learning management systems. In *Higher education institutions and learning management systems: Adoption and standardization* (pp. 116-140). IGI Global Scientific Publishing.

Alotaibi, N.S. (2024). The impact of AI and LMS integration on the future of higher education: Opportunities, challenges, and strategies for transformation. *Sustainability*, *16*(23), p.10357.

Bergdahl, N., Bond, M., Sjöberg, J., Dougherty, M. and Oxley, E. (2024). Unpacking student engagement in higher education learning analytics: a systematic.

Bozkurt, M., & Öztürk, F. (2022). Qualitative Research in Social Sciences: A Research Profiling Study. *Educational Policy Analysis and Strategic Research*, *17*(1), 247-277.

Klaic, M., & Galea, M. P. (2020). Using the technology acceptance model to identify factors that predict likelihood to adopt tele-neurorehabilitation. Frontiers in Neurology, 11, 580832. https://doi.org/10.3389/fneur.2020.580832

Longhurst, R., & Johnston, L. (2023). 10 Semi-Structured Interviews and Focus Groups. *Key methods in geography*, *168*.

Maluleke, M.J. (2024). English first additional language teachers’ attitudes on using e-learning in rural schools in the Vhembe East district in the Limpopo province. *South African Journal of Education*, *44*(1), pp.1-9.

Mlitwa, N. and Van Belle, J.P. (2011). Mediators for lecturer perspectives on learning management systems at universities in the Western Cape, South Africa.

Motaung, D.N. (2024). Students’ perspective on a Blackboard Collaborate virtual learning experience in a higher education rural campus.

Mtebe, J.S. and Raisamo, R. (2014). Challenges and instructors’ intention to adopt and use open educational resources in higher education in Tanzania. The International Review of Research in Open and Distributed Learning, 15 (1) http://doi.org/10.19173/irrodl.v15i1.1687

Ndibalema, P. (2025). Digital literacy gaps in promoting 21st-century skills among students in higher education institutions in Sub-Saharan Africa: A systematic review. Cogent Education, 12(1), 2452085. https://doi.org/10.1080/ 2331186X.2025.2452085

Nel-Sanders, D., & Aaron P. M. (2022). Challenges and best practices for e-municipalities. *Africa's Public Service Delivery and Performance Review, 10*(1), 646.

Ngampornchai, A., & Adams, J. (2016). Students' acceptance and readiness for E-learning in Northeastern Thailand. International Journal of Educational Technology in Higher Education, 13(1), 34.

Noriega Del Valle, M., Łaba, K., & Mayer, C. H. (2024). Unlocking technology acceptance among South African employees: A psychological perspective. *SA Journal of Industrial Psychology*, *50*, 2177.

Sithole, V. L., & Mbukanma, I. (2024). Prospects and challenges to ICT adoption in teaching and learning at rural South African universities: A systematic review. Research in Social Sciences and Technology, 9(3), 178-193. https://doi.org/10.46303/ressat.2024.54

Sithole, V.L. and Mbukanma, I. (2024). Prospects and Challenges to ICT Adoption in Teaching and Learning at Rural South African Universities: A Systematic Review. *Research in Social Sciences and Technology*, *9*(3), pp.178-193.

Sun, P.C., Tsai, R.J., Finger, G., Chen, Y.Y. and Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & education*, *50*(4), pp.1183-1202.

Uwizeyimana, D E, Mlambo, V.H., & Ma'am T. (2024). Assessing students' perceptions and preferences for Blackboard at a South African public university. July. Http://doing.org/10.25304/rlt.v32.3128

Venkatesh, V. and Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision sciences*, *39*(2), pp.273-315.