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Voices from the Rural Classroom: A Qualitative Exploration of Undergraduate Student Perceptions of Learning Management Systems

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Abstract

Learning Management Systems are becoming increasingly indispensable in higher education, but their adoption in rural universities presents very different challenges and opportunities, influenced by geographical location, infrastructure, and socio-cultural factors. The qualitative research here aims to analyse undergraduate students' perspectives on Learning Management Systems at a rural university in South Africa, with the aim of understanding how these digital tools are perceived in a resource-poor setting. Using the Unified Theory of Acceptance and Use of Technology as the underpinning theory, a phenomenological method was employed, with semi-structured interviews conducted with 40 students from four faculties. Thematic analysis outlined four main themes as follows: (1) the two-sided nature of the access to digital technology, Learning Management Systems act as a barrier to the educational gap but on the other hand, it stresses the existence of the digital divide; (2) the battle between the promise of technology and the reality of the teaching process; (3) the necessity of helping tools that are responsive to both culture and context; and (4) the influence of Learning Management Systems on the academic community, the issue is whether it will be the case of boosting or bottlenecking. The study not only reveals that the Learning Management System is a promising solution to the learning problems of rural institutions, but it also calls for the tackling of issues that cause the success of these solutions to be dependent on such prevalent factors as unstable connectivity, varying degrees of digital literacy, and the need for more gentle and inclusive instructional design. Thus, the present research contributes to the discussion of digital equity in rural higher education and offers practical insights for educators, administrators, and policymakers seeking to implement Learning Management Systems in meaningful, sustainable, and fair ways.

Keywords: *rural education, Learning Management Systems, qualitative research, student perceptions, digital divide, higher education, South Africa, phenomenology*

Introduction

Learning management systems (LMSs) in contemporary higher education contexts play an important role in organising teaching and learning. They control the distribution of content, mediate exchange between teachers and students, and aid assessment and oversight of the academic process (Starz & Jagun, 2024; Zheng et al., 2021). Their significance was further enhanced during the COVID-19 pandemic, as universities worldwide came to depend on digital platforms to maintain academic continuity during the emergency switch to remote teaching (Siyaya & Ajani, 2026; Gamede et al., 2021; Rapanta et al., 2020). In dominant narratives, LMSs are often framed as tools for flexibility, access, and innovation, capable of mediating blended and online pedagogies to improve student engagement and autonomy (Martin & Bolliger, 2018; Wang et al., 2021). However,

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the critical scholarship warns against technologically deterministic assumptions and posits that the educational value of digital systems is socially, institutionally, and economically determined (Selwyn, 2016; Molokomme et al., 2025).

They become more pronounced in rural and historically disadvantaged settings. Universities located in the periphery of the Global South develop within uneven connectivity, unstable power availability, and constrained institutional resources frameworks (Mpungose, 2020; Nyahodza & Higgs, 2017; Ajani, 2025). For students, interaction with the LMS may be affected by limited device access, high data costs, and different levels of digital literacy (Starz & Jagun, 2024; Mpungose, 2020; Mukuna & Aloka, 2020). In the South African context, these constraints are further deeply embedded in historically disadvantaged institutions that sustained our past during Apartheid (Mzangwa & Dede, 2019). The installation and operation of such LMSs in rural universities in South Africa should therefore not be understood solely as a matter of their technical emergence. Nonetheless, sociotechnical processes, shaped by material and historical contexts, are playing out in experiences and appropriations across the digital layers.

Existing theoretical applications of technology adoption theory seek explanations for usage and intention patterns in varied landscapes. The Technology Acceptance Model has been widely used in educational research and has identified performance expectancy, effort expectancy, social influence, and facilitating conditions as the main attributes of technology usage (Venkatesh et al., 2003). Earlier works have tested this model in relation to LMSs usage in higher education, and they have found the usefulness and ease of use in combination with institutional support predictive of satisfaction and behavioural intentions in students (Almaiah et al., 2020; Hadi et al., 2022; Phan & Nguyen, 2025). However, most survey-driven research is conducted in institutionalised, highly populated environments. Such studies can inform knowledge examinations; however, these views might fall short of the actual depth of lived-story experiences. Such experiences might be resource-constrained and difficult in poorly facilitated situations; hence, a dynamic context might be essential for efficacy, thereby explaining the uneven implementation of potent facilitating conditions amongst hesitant learners.

Recently, especially in resource-poor contexts, findings from qualitative research are beginning to reveal the extent of complexity, so that infrastructural insecurity and pedagogical instability can potentially influence how students view the learning inherent in digital technology (Ajani, 2025; Maluleke & Maake, 2025; Maphalala & Adigun, 2020). Works have begun to espouse the view that digital engagement is influenced by cultural expectations of learning, relationship dynamics, and forms of social presence beyond technical mechanisms (Chen, 2024; Garrison & Kanuka, 2004; Hadi et al., 2022). These research findings point to the need for an approach that goes beyond adoption rates to understand how students meaningfully engage with digital platforms in their everyday academic lifeworld.

This study, therefore, adopted a phenomenological orientation. Phenomenology seeks to explore how individuals experience and make meaning of phenomena within specific contexts by foregrounding perception, interpretation, and embodied engagement (Creswell et al., 2023; Patton, 2022). Here, the LMS is not merely treated as a tool but is invested with meaning as a lived space through which students encounter institutional expectations, infrastructural constraints, and possibilities for participation and belonging. Their stories spotlight how abstract constructs such as facilitating conditions and performance expectancy are realised in practice in a rural university setting.

The Unified Theory of Acceptance and Use of Technology (UTAUT) offer an interpretive lens for viewing the important dimension of engagement. In this sense, its constructs act as sensitising concepts for understanding students' perceptions of usefulness, effort, social influence, and social support whilst facing the challenges of a lack of technology education. The study pursues a phenomenological attempt to unveil, as the basis for lived experiences, how these dimensions were already built and extended to heretofore underrepresented contexts before the technology acceptance literature.

The study aims to investigate undergraduate students' lived experiences of an LMS in a rural South African university. Specifically, the inquiry into the students' use of the platform will bring into perspective the context- and pedagogically bound engagement with the system and their sense of academic community. Therefore, this research contributes to ongoing debates on digital equity in a university context and further analyses the Unique Environments of Learning in rural South African settings. Guiding the study are the following three research questions:

1. How do undergraduate students at a rural South African university perceive the role and value of the LMSs in their academic lives?
2. What are the major contextual challenges, infrastructural, socio-economic, and pedagogical, that guide the experiences and engagements of these students using the LMS?
3. To what extent do students think the LMSs can be adapted to fit their learning needs and, perhaps, foster a more all-inclusive academic community?

Literature Review

The digital enhancement of higher education is closely related to LMSs, which support course administration, content delivery, and individual interaction between faculty and students under a single umbrella (Maluleke & Maake, 2025; Al Aufi & Rao Naidu, 2020). Studies suggest that LMSs provide some support for blended and online learning models, offer flexibility, and help individualise educational processes to a certain extent (Martin & Bolliger, 2018; Wang et al., 2021). The consensus about LMS's feasible benefits has acquired unwavering impetus with the global COVID-19 health crisis, which resulted in an almost instant global adoption of LMS for temporary online teaching, underscoring their pivotal role in preserving continuity in academic instruction during such crises (Gamede et al., 2021; Rapanta et al., 2020). On the other hand, detractors like Selwyn (2016) sound a stern word of caution against technologically deterministic narratives, in which the actual application and efficacy of digital tools are largely moulded by broad social, economic, and institutional ideals.

A plethora of literature supports neglecting theoretical aspects of adoption in light of the UTAUT construct. The constructs of performance expectancy, effort expectancy, and facilitating conditions have been established as strong predictors of user intention and behaviour (Venkatesh et al., 2003; Almaiah et al., 2020). Studies on UTAUT disseminate a more-or-less uniform, untainted truth: perceived usefulness and ease of use can serve as the bedrock of student satisfaction (Ajani, 2025). It has been unearthed by the research that facilitating conditions, the institutional and technical infrastructure supporting use, are quintessential and yet quite fragile variables, mainly in under-resourced environments (Hadi et al., 2022). This, by extension, indicates that while an acceptance model can be a heuristic, supporting variables can become critical in contexts otherwise characterised by constraints.

In the context of rural universities, the concept of 'facilitating conditions' is of immense significance in underdeveloped regions such as sub-Saharan Africa. Here, the digital divide is not only recognised as the absence of devices but rather is demonstrated by an enormously complex web of erratic access points to devices, unreliability of connectivity, unstable power supply, and, nearly always, some financial constraints that are limitations to consistent engagement (Starz & Jagun, 2024; Ajani, 2025). Specific researchers in South Africa argue that historical inequities, reflected in the apartheid education legacy and the struggles faced by Historically Disadvantaged Institutions (HDIs), create lasting infrastructure deficits (Mpungose, 2020; Nyahodza & Higgs, 2017). This thus places immense burdens on students at rural universities: the provision of rigorous academic content intertwined with arduous technical challenges, which increased during the COVID-19 pandemic (Ajani, 2025; Maluleke & Maake, 2025).

The process of integrating LMSs into the educational program is a viable idea: it involves allocating resources, discussing the advantages and limitations of LMS operations, exploring both direct and indirect opportunities available through LMSs, and leveraging numerous ways to customise a specific LMS to achieve the best outcomes. Cultural and human factors serve as the final channel through which LMS growth, common evaluation metrics, and results related to studies, study programs, and program content are determined. This is in reference to the artefacts created by Madelung, who has only recently started conducting surveys on LMS applications. The widespread growth of Information and Communication Technology (ICT) continues to have a significant influence across various educational avenues, mainly because our educators are disproportionately mismatched with many new systems that enable significant changes in educational practices.

Engagement and students' perceptions, hence, become pivotal yardsticks for gauging the success of the LMS. The study shows that successful integration and support of LMSs may foster a community born through collaborative applications, ensuring student engagement and enabling timely feedback and access to resources (Hadi et al., 2022; Veluvali & Surisetti, 2022). In contrast, poor usability, application errors, and a lack of instructor presence may increase student frustration, reduce engagement, and foster a negative perception that affects students' learning (Lonn & Teasley, 2009; Nguyen, 2019). This is particularly pronounced in rural settings, where technical problems quickly smother motivation and evoke feelings of educational marginalisation (Mukuna & Aloka, 2020). Hence, appreciating the qualitative dimensions of students' perceptions, such as their real experiences, frustrations, and coping strategies, is requisite to assessing the real influence of LMS in that environment.

The existing literature, therefore, strongly suggests that LMS hold enormous potential but that their implementation is a socio-technical event riddled with contextual challenges. A structural view of acceptance models like UTAUT and studies from the Global North, shedding some light on engagement drivers, has also been given a chance. The void still remains, begging for a finely crafted qualitative research study that will gather the voices of students tackling very specific, constricted environments characteristic of rural South African universities. This research must go beyond simply measuring adoption statistics and provide a look into the experience of working with an LMS where ‘facilitating conditions’ are mostly absent, numerous digital literacies exist, and integration is kind of present. This paper thereby seeks to bridge this gap by giving an in-depth contextual study into the perceptions of undergraduate students from the rural Global South to lend its weight to the discourse on equitable digital educational outcomes at the global level.

Theoretical Framework

In this report, the study used the UTAUT model as a framework for qualitative research on how students assess LMSs in the rural university setting. The original version of this model was developed by Venkatesh and colleagues (2003), drawing on key concepts from eight technology acceptance models to formulate a highly robust framework for understanding users' intention and use. The model proffers that four basic constructs: *performance expectancy* (perceived performance benefit corresponding to job tasks), *effort expectancy* (perceived ease of use), *social influence* (the perceived influence of others' views on use), and *facilitating conditions* (the technological and organizational support to exert effort), are determinant for intention of technology use and actual use. UTAUT has been validated in the context of educational technology for LMS adoption and is a potentially very usable, well-validated framework for this study (Almaiah et al., 2020; Ajani, 2025).

The application of UTAUT in this study is particularly relevant to the context of rural higher education under consideration, as the model's facilitating conditions provide a valuable reference to the significant infrastructural and supportive challenges often evident in these settings. This is pertinent in these settings because, in the face of erratic internet connectivity, unstable power supply, and limited institutional resources, facilitating conditions become the central, rather than peripheral, constructs in technological acceptance decisions and use. Also, performance and effort expectancies tell of the degree to which students perceive the LMS as a relatively useful and easy-enough tool that will substantially improve their learning outcomes, or as just another extra burden complicating their academic pathway. By using UTAUT, one can delve into the deep relationships among the key drivers drawn from this theoretical framework within the restricted circumstances of a rural South African university, thus moving beyond generic adoption studies into a fine-grained, contextual analysis.

But the positivist application, pure and simple, of UTAUT often seeks to predict and quantify acceptance, yet falls short of capturing the depth and subtlety of lived experience sought by this qualitative study. While UTAUT provides the framing language for exploring how the constructs of expectations, effort, social dynamics, and institutional support condition their use, the study rests methodologically on a phenomenological approach. Far from thin, this qualitative strand allows a rich, interpretive exploration of how abstract constructs of UTAUT are experienced and transformed into meaning through students' academic practices. This theoretical-methodological synergy allows detection of whether facilitating conditions are perceived as inadequate, and also enables a deeper understanding, from students' perspectives, of how they interact with these shortcomings and what this means for the LMS within the broader educational and socio-cultural context.

To conclude, implementing UTAUT within a qualitative paradigm provides a powerful double lens. First, it ensures coherence with a well-established trajectory of acceptance literature. Second, it articulates a lucid and sound understanding and embrace of user experiences in a context that is widely overlooked in research.

Methodology

A qualitative phenomenological approach was used to examine undergraduate students' use, experiences, and perceptions of the LMSs in their daily academic lives at a South African rural university. Thus, the methodology was grounded in interpretive phenomenology. Further,

experience is embodied in a social, historical, and material lifeworld. Regarding the methodological approach, it should not be confused with studies purporting to attempt to uncover or define ‘experience’ itself but rather to present an insight into the participants’ lifeworld and lived meanings-in-use, that is, an examination of the participants' views on how to access, interpret, and attach with the LMSs in the hands-on practices of learning constrained by infrastructure. Phenomenology, in this sense, does not represent a loose reference to experience but rather a coherent interpretive framework that addresses meaning in context and embodiment. (Poth, 2018; Patton, 2022).

In a rural public university, the analysis examines how students experience different dimensions of ICT use: those of performance expectancy, effort expectancy, social influence, and perceived use. Following UTAUT, the scenario of sensitising variables, such as performance expectancy and facilitating conditions, at this point became heuristic entry points for the investigation of the use of ICT. An interpretation saturated with heuristic entry points was adopted to further hermeneutic theory; in this dialectic, proposed on the one hand, between what theory says theoretically and what an experiential reality is legitimised to say in an alternative fashion. Attributes of technology engagement are thus embedded within the rural world of socioeconomic precariousness and the digital divide, which was neither in line with itself nor with more established structures.

A cross-sectional purposive sampling strategy was used to ensure adequate distribution of experiences across various faculties and years of study. The purposive sampling technique is used in phenomenological research to achieve a proper level of depth rather than statistical generalisation, and participants are recruited based on their direct involvement in the phenomenon under investigation. (Patton, 2022; Creswell et al., 2023). For this study, they recruited 40 undergraduate students from various faculties and year levels at this institution. The cross-sectional design is also a strength of the study, as it allows for capturing variation in disciplinary expectations, digital pedagogies, and familiarity with the LMS. Variation is methodologically beneficial in interpretive phenomenology, as it allows for the investigation of common experiential structures alongside contextual nuance (Patton, 2022).

I generated data through semi-structured individual interviews of thirty minutes to forty-five minutes in length. The interview guide aimed to elicit detailed descriptions of students’ daily engagement with the LMS, including difficult moments, perceptions of the value of LMS use, institutional support, and feelings of connectivity/disconnectivity. Open-ended questions helped participants recall concrete situational experiences rather than learners’ stated opinions, aligning with the phenomenological interviewing practice of staying close to lived experience as it unfolds (van Manen, 2014). Interviews were conducted face-to-face, recorded with consent for referrals, and transcribed to accurately represent respondents' views.

Data analysis methodology followed the reflexive thematic analysis of Braun and Clarke (2006), applied within an interpretative phenomenological framework. Thematic analysis is a methodology grounded in phenomenology, allowing the search for and identification of patterned meanings within single narratives while also considering the depth and complexity of the accounts themselves. The analytical process comprised systematically reading and rereading the transcripts, forming initial codes, developing recurring themes, and refining. coding was induced by participants' language, with the development of memo writing to interrogate one's assumptions, linking back to broader socio-material landscapes that mark out the rural higher-education terrain (Braun & Clarke, 2006; Shenton, 2004). The themes that emerged were not treated as real entities

to be discovered; rather, they were looked at as constructed interpretations through which the shared student engagement with the LMS materialises.

Trustworthiness was enhanced in a manner consistent with qualitative rigour by the implementation of several strategies. Keeping an audit trail of analytic decisions increased transparency and trustworthiness (Creswell et al., 2023). Reflexive engagement with positionality in data collection and analysis was maintained to acknowledge interpretive lenses that shaped the reading of participants' narratives. Thick description was utilised in reporting to ensure transferability and readers' ability to assess the resonance of findings within comparable contexts (Shenton, 2004).

Prior to data collection, permission was taken from the host institution's research ethics committee. Participants were asked to provide written consent to participate in the study and were assured of confidentiality, anonymity, and that they could drop out at any time with impunity. Transcripts identified the participants using pseudonyms and were then stored digitally in accordance with the institution's guidelines. Ethics were vital when considering the study's location within potentially vulnerable socio-economic circumstances.

The study's approach is heavily influenced by the idea of the so-called 'lifeworld' and by a random, purposive, cross-sectional sampling methodology. The themes were identified through a rigorous, reflexive thematic analysis process aligned with the ethnographic data generated from the depths of rural South Africa. By virtue of the integration, the process enabled capturing an understanding of how students experience being with and in the LMSs, rather than just operating it.

Biographical Information of Participants

The study sample consisted of 40 undergraduate students purposively selected from the university's primary faculties to ensure a cross-sectional representation of the student body. The distribution across faculties and years of study is detailed in Table 1 below.

Table 1: ***Distribution of Interview Participants by Faculty and Year of Study***

Faculty	Year 1	Year 2	Year 3	Year 4	Total
Education	2	2	2	2	8
Commerce, Arts and Law	3	4	3	2	12
Science, Agriculture & Engineering	2	2	1	1	6
Humanities and Social Sciences	2	3	2	1	8
Other/Unspecified	1	2	2	1	6
TOTAL	10	13	10	7	40

This stratification was intended to capture a wide spectrum of academic contexts and potential variations in LMS usage patterns, from foundational first-year courses to more specialised final-year projects.

Results

The research investigated how rural South African university students perceive and interact with LMSs, as their ability to access and use the system depends on various situational factors. The researchers identified four experiential themes which their study used to track student learning experiences. The themes selected for this study directly connect to three main research areas: student perceptions of value, student perceptions of contextual constraints, and student perceptions of learning support through the LMS.

Research Aim 1: How do Students Perceive the Value and Role of the LMS in Their Academic Lives?

The Paradox of the Digital Divide. Students described the LMS as both essential to their studies and a barrier to their learning. The participants viewed the platform as an essential educational resource which provided continuous learning support during campus shutdowns. The LMS was necessary equipment because students indicated they would miss important announcements, learning materials, and assessment details. One student said, "*If not for the LMS, I would have totally missed all the updates and the notes during the strike*" because the platform kept students engaged in their studies.

The students showed that the LMS system created new barriers to educational access which already existed before its implementation. The combination of restricted device access, unreliable internet connections, and expensive data plans made it difficult for students to access the system. The Arts student stated that "*I have assignments to do, but I don't know how to even start*". The student said, "*I cannot download a 50 MB textbook when I leave campus*". The situation made the student more anxious because she experienced two specific problems: she feared that a power failure would interrupt her upload process, and she worried that Wi Fi service would stop working. Students compared their access to resources with that of their peers who had continuous internet access, leading them to believe their situation was unfair. The final year student explained that "my friend in residence with Wi Fi is ahead. I am in the village watching my phone buffer and my marks showing the difference". The LMS provides formal access to students through its system access points, yet students still experience limitations to their learning access because their physical circumstances determine their access to educational resources.

Research Aim 2: What Contextual and Pedagogical Factors Shape Students' Engagement With the LMS?

Disjuncture Between Technological Promise and Pedagogical Reality. The students discovered a major difference between the LMSs which their education used and the system which the LMS students had been told about. The platform offered interactive features, but most users used it primarily as a permanent content storage system. A third-year Education student described the LMS as "*just a noticeboard and a PDF dump. The user downloads documents to read and then submits work*". The limited application made students doubt whether the system delivered actual educational benefits. One participant said that "*they call it powerful, but they have not shown me any actual power because I have not taken any quizzes or participated in any discussions. The folder only exists as an extravagant storage space*".

The lack of standardised practices across courses created difficulties for students. The students reported that teachers used different teaching methods across courses, with one course featuring

video and forum content, while another provided minimal opportunities for interaction. The Law student said, "*You never know what to expect, so you stop expecting anything*". The students showed reduced motivation to study due to inconsistencies in the learning system they encountered. The student explained his frustration by saying that "*we own a sports car but only drive it at first gear*". The study results show that students failed to perceive educational value from the system because the teaching methods used did not provide enough practical learning experiences.

Research Aim 3: How do Students Experience Institutional Support and Community Through the LMS?

The Need for Culturally and Contextually Responsive Support. The students believed that their actual life experiences showed them what they needed from institutional support services. The platform's training sessions showed users generic interface features without explaining the software's actual limitations. The student explained that "*IT shows us how to use Collaborate, but not how to use it with 200 MB of data for the whole month*". The other users reported that the system directions required prior computer skills to operate, which made the LMS difficult to use. The user said that "*without prior experience with computers, you will find it hard to understand the manual, which operates like a foreign language book*".

Support systems received additional cultural input through social aspects. The students who participated in the study wanted to study through interactive relationships but found the platform distant and uninviting. The student said that "*we learn through sharing and talking because at home our learning process operates through interaction*". The student wanted to talk about his problems because he needed help with assessment work that needed to be done during power outages. The study results show that successful support requires hardware resources, as well as a deep understanding of local cultural practices, financial constraints, and daily life challenges.

Research Aim 4: To What Extent Does the LMS Foster or Hinder a Sense of Academic Community?

The LMS serves as a Dual-Function Space That Enables Academic Community Development. Students showed mixed feelings about using the LMS for their social learning activities. Some participants acknowledged its capacity to reduce isolation, particularly through asynchronous interaction. One first-year student noted that "*seeing others submit gives you a push, like you are not alone*". Another described online forums as enabling participation for those who were shy in face-to-face settings.

The positive experiences of users faced stronger competition from reports about disconnection and restricted conversational ability. Many students described communication as one-directional. "*It is a monologue, not a dialogue*," one participant stated. Students identified specific online elements which they believed were absent in face-to-face classroom environments. "*In class, you see passion and hear questions. On the LMS, it is just dead text*," another explained. The absence of relational interaction weakened students' sense of belonging. As one final year student summarised, "*it keeps us connected to the work, but disconnected from each other and from our lecturers*".

Discussion

This study set out to explore how undergraduate students at a rural South African university experience and interpret their engagement with an LMS, drawing conceptually on the UTAUT while adopting an interpretive phenomenological orientation. The findings demonstrate that students' engagement with the platform is structured less by abstract attitudes towards technology and more by the material and institutional conditions of their lifeworlds (Garmpis et al., 2026). By foregrounding students' reported experiences of unstable connectivity, high data costs, limited device access, and inconsistent pedagogical design, the study extends technology acceptance scholarship into a context in which facilitating conditions are neither background variables nor moderating influences, but rather foundational determinants of meaningful engagement.

The first theme, described as the paradox of the digital divide, revealed that students experienced the LMS as both indispensable and exclusionary. Participants acknowledged its centrality in accessing announcements, materials, and assessments, particularly during disruptions. Yet their accounts of buffering screens, interrupted uploads during power outages, and unaffordable data packages illustrate how access is mediated by fragile infrastructural arrangements. In UTAUT terms, facilitating conditions are conceptualised as organisational and technical infrastructures that support system use (Venkatesh et al., 2003). The empirical findings suggest that, in this rural context, facilitating conditions are experienced not as stable enablers but as precarious and unevenly distributed resources. This resonates with research demonstrating that digital divides in higher education extend beyond mere access to devices and include affordability, quality of connectivity, and reliability of power supply (Starz & Jagun, 2024; Molokomme et al, 2025; Ajani, 2025). In line with critical scholarship, the data challenge technologically deterministic narratives by showing that the mere presence of a platform does not equate to equitable participation (Selwyn, 2016; Hadi et al., 2022). The LMS, while formally universal, is substantively stratified by socio-economic context.

The second theme, 'the disjuncture between technological promise and pedagogical reality', directly informs the interpretation of performance expectancy and effort expectancy within UTAUT. Students repeatedly described the platform as primarily a repository for documents rather than an interactive learning environment. This empirical finding complicates assumptions that perceived usefulness arises automatically from system availability. Performance expectancy, defined as the degree to which users believe that technology will enhance their performance (Venkatesh et al., 2003), was undermined by limited pedagogical integration. Where lecturers employed minimal interactive tools, students questioned the educational value of the system. This aligns with studies demonstrating that meaningful engagement with LMSs depends heavily on pedagogical design and teacher presence rather than technological features alone (Garrison & Kanuka, 2004; Maphalala & Adigun, 2020; Saufi, 2025). Effort expectancy was similarly shaped by inconsistency across modules. Participants reported uncertainty and frustration when navigating divergent practices, which diminished perceived ease of use. Thus, the empirical data indicate that expectancy constructs are co-produced through pedagogical practice and institutional coherence, not solely through interface design.

The third theme, concerning culturally and contextually responsive support, further extends the interpretation of facilitating conditions. Students reported that institutional training often assumed stable data access and prior digital competence, thereby misaligning support structures with lived realities. This finding underscores that facilitating conditions encompass not only technical

infrastructure but also contextually appropriate guidance and capacity-building. Prior research in under-resourced contexts similarly emphasises that digital literacy is situated and relational, shaped by cultural practices and material constraints (Chen, 2024; Mpungose, 2020). From a phenomenological perspective, students' accounts reveal that institutional support is experienced as meaningful only when it resonates with their everyday circumstances. The absence of such resonance reinforces feelings of marginalisation, suggesting that effective implementation requires alignment between institutional expectations and students' socio-material conditions.

The fourth theme, 'the LMS as a dual function space that both connects and disconnects', speaks directly to the role of social influence and community in technology engagement. While some students valued asynchronous forums and visibility of peer activity, many described communications as monologic and impersonal. These accounts illuminate how social presence and relational interaction shape students' experience of digital learning. Within UTAUT, social influence refers to the extent to which individuals perceive that important others believe they should use a system (Venkatesh et al., 2003). The findings suggest that social dynamics extend beyond normative pressure to include experiential dimensions of belonging and recognition. This resonates with community of inquiry scholarship, which emphasises that cognitive engagement in online environments depends upon the cultivation of social and teaching presence (Garrison & Kanuka, 2004; Hadi et al., 2022; Veluvali & Surisetti, 2022). In the rural context examined, where face to face interaction often anchors academic identity, the perceived absence of relational warmth on the platform weakened students' sense of community. Thus, social influence is lived not merely as expectation but as embodied relationality.

Taken together, these findings demonstrate that the UTAUT constructs are reconfigured when examined through a phenomenological lens in a rural setting. Facilitating conditions emerge as materially fragile and socially embedded; performance expectancy is mediated by pedagogical practice; effort expectancy is shaped by institutional coherence; and social influence is intertwined with belonging and presence. By explicitly linking theoretical constructs to students' reported experiences, the discussion advances technology acceptance theory beyond predictive modelling towards contextual interpretation. The study therefore contributes to the growing body of scholarship that calls for recalibration of dominant models when applied in the Global South, where structural inequality and infrastructural precarity fundamentally shape digital engagement (Mpungose, 2020; Hadi et al., 2022; Phan & Nguyen, 2025).

In sum, the discussion affirms that the LMS at this rural university functions not as a neutral conduit for content delivery but as a socio-technical space where historical inequality, pedagogical practice, institutional support, and lived experience intersect. By grounding theoretical interpretation in empirical accounts of connectivity constraints, data costs, pedagogical inconsistency, and relational distance, the study provides a coherent and contextually situated understanding of digital learning. This synthesis underscores the need to align infrastructural investment, pedagogical development, and culturally responsive support if LMSs are to meaningfully contribute to digital equity in rural higher education.

Implications and Recommendations

The research results provide important theoretical insights and practical guidance for executing digital education programs in rural areas of higher education. The study shows that UTAUT needs to adapt its existing constructs to meet the requirements of material resource-constrained

environments. The empirical findings demonstrate that rural environments treat facilitating conditions as essential requirements which determine whether users can engage with the system (Venkatesh et al., 2003). The students report that their total internet access breaks down into three parts: unstable connectivity, high data rates, and inconsistent device access. This research demonstrates that technology acceptance frameworks need recalibration because structural inequalities in the Global South affect both digital tools and evaluation processes (Hadi et al., 2022; Phan & Nguyen, 2025). The policy requires organisations to secure LMS funding while maintaining their connectivity infrastructure, device distribution systems, and power-interruption solutions in regions that have historically experienced resource inequality (Mpungose, 2020; Ajani, 2025). The educational system will experience widening educational disparities, creating deeper gaps between students with access to digital resources and those without (Selwyn, 2016; Molokomme et al., 2025).

The research demonstrates that effective digital learning requires both teaching methods and contextual support systems to create a complete student learning experience. The participants describe the platform primarily as a document storage system, suggesting that effective learning design must combine three elements: instructional design, social presence, and interactive engagement (Garrison & Kanuka, 2004; Maphalala & Adigun, 2020). Professional development programs need to focus on teaching staff to use digital tools in their teaching, as this approach better suits environments with limited internet access and varying levels of digital proficiency (Chen, 2024; Mpungose, 2020). The evaluation of digital institutional strategies should include student feedback to develop better digital practices, as students are experts in their daily realities within their educational environments. Learning Management Systems need to establish an integrated social-technical design which combines essential components for educational delivery in rural higher education environments.

Conclusion, Limitations and Future Research

To explore the complex and conflicting engagement with the university's LMS among university students in a rural South African context, a qualitative case study was conducted. The experiences of students have indeed been given preferential treatment in this situation: the engagement with the LMS was analysed in terms of how it was shaping injustice and pedagogical inequalities. This study views that the efficacy of digital learning platforms will rely not only on whether they are present but also on the interplay of infrastructure, pedagogic design, and material and interacting educational support systems in the context of students, and on the socio-economic and cultural dynamics that form the conditions under which the learning takes place. The finding suggests the recognition of the tacit view that technological mediation in rural areas really ought to focus primarily on being education within the local context and less on being solely a technical intervention.

Although the study offers some positives, its scope is limited by its focus on a single rural locale and students' experiences. To go further, researchers need to understand and discuss educators' reflections, expectations, and assumptions arising from their pedagogical framework regarding the use of an LMS in rural higher education. Discussions on how closely educators' preconceived pedagogical intentions align with students' actual access to and exploitation of the LMS would expand the academic discourse on how digital divides are fostered and maintained within pedagogical processes. Future investigations could emphasise data analytics on LMS usage,

observational data recording in classrooms, and multilocational qualitative research in rural and peri-urban areas to facilitate greater analytical depth and external validity transferability. Participation-based forms of research, involving action research that brings together students and teachers to candidly examine how contextualised digital support strategies ameliorate and potentially inform just and inclusive institutional technological learning, ought to consciously veer towards longitudinal and participatory research approaches.

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