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Article

Unpacking Student Perceptions about Online Assessments in Higher Education South Africa

Mpho Motebe[1], Kufakunesu Zano[2], Corneli Van Der Walt[3] & Innocent Mudhombo[4]

[1]Human Sciences, Vaal University of Technology, Private Bag X021 Vanderbijlpark, 1900, South Africa
[2]Faculty of Education, Walter Sisulu University, 280 Shepstone Road, Whittlesea, South Africa
[3]Centre for Academic Development, Vaal University of Technology, Private Bag X021 Vanderbijlpark, 1900, South Africa
[4]Department Accountancy/Vaal University of Technology, Private Bag X021 Vanderbijlpark, 1900, South Africa

*Corresponding Author: mgmotebe@gmail.com

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Abstract: The integration of online assessments in higher education presents both opportunities and challenges. While offering flexibility and accessibility, concerns remain about digital equity, academic integrity, and platform usability. This study explores students' perceptions of online assessments at a University of Technology in South Africa, focusing on digital access, effectiveness of assessments, time management, and institutional support. The Complex Adaptive Blended Learning System (CABLS) theory underpinned the study. The CABLS provides a lens for understanding the dynamic interplay between students, educators, technology, and institutional structures in blended learning environments. This qualitative study collected data through face-to-face interviews of 10 students composed of five undergraduates and five postgraduates from diverse disciplines. Purposive sampling was employed in this study to ensure a diverse range of experiences and perspectives related to the impact of online assessments on students. The data was analysed using content analysis to identify key themes. Findings revealed that online assessments enhance engagement, self-regulated learning, and accessibility. However, challenges persist, including unreliable internet, limited digital resources, fairness concerns, and platform navigation difficulties, reflecting socioeconomic disparities. This study highlights the need for hybrid assessment models, improved digital infrastructure, and targeted academic and technical support. To foster a more inclusive and effective learning environment, institutional policies should be designed to prioritise student-centred online assessments while addressing socio-economic inequalities. As online assessments continue to shape the future of higher education, technology should empower rather than hinder learning.

Keywords: Online Assessments; digital access; student perceptions; higher education; academic integrity; assessment effectiveness

Introduction

The increasing reliance on online assessments in higher education represents a transformative shift and a significant challenge, reshaping academic practices while exposing deep-seated inequalities (Devkota, 2021). Higher education institutions (HEIs) worldwide have integrated digital assessments into their pedagogical strategies to enhance flexibility, accessibility, and efficiency (Matsieli & Mutula, 2024). The rapid advancement of educational technology has transformed how students engage with learning and assessments,

driving innovation while also introducing new challenges related to academic integrity, digital equity, and student participation (Molokomme & Motebe, 2025). In the South African context, the adoption of online assessments has been driven by a need to expand access to education and address logistical challenges (Muzaffar et al., 2021). The COVID-19 pandemic accelerated this transition, compelling HEIs to shift from traditional in-person assessments to digital platforms such as Blackboard, Moodle, and Google Classroom. However, this transition was met with significant adaptation and connectivity challenges (Kaeane & Molokomme, 2025).

While online assessments were introduced to accommodate increasing student populations and enhance flexibility, concerns persist regarding digital access, academic dishonesty, and technological reliability (Molokomme, 2024). Research suggests that although online assessments promote student engagement and self-regulated learning, they pose challenges such as increased cheating, inconsistent feedback mechanisms, and technological malfunctions (Khan et al., 2022). Furthermore, despite their efficiency, online assessments raise questions about their effectiveness in fostering deep learning and ensuring fair academic outcomes (Mhlanga & Moloi, 2020; Arumugam et al., 2024; Rajaram, 2023). The global shift towards online assessments has been a crucial aspect of the broader digital transformation in education (Rof et al., 2022). However, in South Africa, students' experiences with these assessments vary widely due to disparities in digital literacy, internet connectivity, and institutional support (Iqbal et al., 2022). While some students benefit from the flexibility and self-paced nature of online assessments, others struggle with unreliable technology, academic misconduct, and the digital divide (Molokomme, 2024; Navarro & McGrath, 2022).

Despite growing research on online assessments in South African HEIs, there remains a significant gap in the literature regarding their impact on students at a University of Technology (UoT). Existing studies have primarily focused on traditional universities, often overlooking the distinctive challenges UoT students face due to their diverse socioeconomic backgrounds and applied learning focus. Furthermore, while research has explored the technical and logistical aspects of online assessments, limited attention has been given to their psychological, academic, and equity-related implications (Lassnig et al., 2022; Heil & Ifenthaler, 2023; Selwyn et al., 2023). Key areas such as the role of institutional support in mitigating digital disparities, the effectiveness of feedback mechanisms in online assessments, and the impact of assessment format on student learning outcomes remain underexplored in the UoT context. Without a comprehensive understanding of students' lived experiences, universities risk implementing assessment strategies that fail to address critical barriers to learning and performance.

This paper seeks to bridge this gap by exploring students' perspectives on online assessments at a UoT in South Africa. Specifically, it aims to examine students' experiences with online assessments, focusing on digital access, platform usability, and engagement; assess the perceived effectiveness of online assessments in enhancing learning and academic performance; identify challenges students face in terms of digital equity, academic integrity, and institutional support; and provide evidence-based recommendations for improving online assessment strategies at a UoT. Understanding students' experiences with online assessments is essential for ensuring equitable and effective assessment practices in higher education.

By capturing the voices of both undergraduate and postgraduate students across various disciplines, this study provides a comprehensive analysis of the benefits and limitations of online assessments. The findings will contribute to the creation of hybrid assessment models that strike a balance between flexibility, academic integrity, and accessibility. Additionally, the study emphasises the need for tailored academic and technical support to ensure that online assessments enhance meaningful learning rather than deepening educational inequalities. As digital transformation continues to influence higher education, online assessments should act as a facilitator of academic success rather than a hindrance. This research offers evidence-based recommendations tailored to the UoT context, contributing to the broader goal of creating an inclusive, fair, and academically enriching digital learning environment. The next section presents the literature review, which further contextualises the findings within the existing body of research.

Literature Review

The literature on online assessments in higher education highlights the opportunities and challenges associated with their implementation. While some scholars emphasise the benefits of flexibility, accessibility, and enhanced learning engagement (Osabutey et al., 2024; Greaves, 2024; Ding et al., 2024), others point to concerns regarding fairness, academic integrity, and technological barriers (Verhoef et al., 2021; Yeung et al., 2022; Al-Maqbali et al., 2022). Despite the growing body of research on online assessments, there is limited focus on their impact within the University of Technology (UoT), where students often face unique challenges due to their socioeconomic backgrounds and applied learning focus. This section explores these key themes with a focus on students' perceptions, fairness and equity, ease of use, and challenges specific to a UoT in South Africa.

1. Students' Perceptions of Online Assessments

Students generally perceive online assessments as offering greater convenience and flexibility compared to traditional assessments, allowing them to manage their time effectively and accommodate personal commitments (Guillén Perales et al., 2024). This is particularly beneficial for students at a UoT, who often balance academic responsibilities with work and family obligations. The ability to complete assessments remotely also reduces geographical barriers, which is especially relevant in South Africa, where many students reside in rural areas with limited access to physical campuses. However, despite these advantages, concerns persist regarding technological barriers, academic integrity, and security (Li, 2022; Al-Maqbali et al., 2022). Some students struggle with unstable internet connectivity, lack of appropriate devices, and unfamiliarity with assessment platforms, which can hinder their ability to perform well.

Moreover, perceptions of fairness are affected when students believe that some individuals exploit technological loopholes to gain an unfair advantage, such as using unauthorised online resources or artificial intelligence tools. This raises questions about the credibility of online assessments and the effectiveness of monitoring strategies (Ding et al., 2024). In the UoT context, where assessments often emphasise applied learning and practical skills, there is growing concern about whether online assessments effectively evaluate students' competencies. Some students report feeling that online formats favour theoretical knowledge over hands-on skills, leading to frustration and disengagement (Iqbal et al., 2022).

2. Fairness and Equity in Online Assessments

Fairness and equity are central to students' attitudes towards online assessments, particularly in the South African context, where socioeconomic disparities influence access to technological resources (Bazvand et al., 2022; Tate et al., 2022). Students from underprivileged backgrounds often lack stable internet connections, personal laptops, or quiet study environments, placing them at a disadvantage compared to their more privileged peers. Some scholars argue that online assessments reinforce existing educational inequalities rather than alleviating them (Tate et al., 2022). Others, however, suggest that institutions can implement policies to mitigate these disparities, such as providing data allowances, loaning digital devices, and extending deadlines for students facing technical difficulties (McConlogue, 2020; O'Neill et al., 2022).

Another critical aspect of fairness is transparency in assessment design and grading. When students perceive that online evaluations are structured clearly and graded consistently, they are more likely to accept them as legitimate and fair (Bazvand et al., 2022). However, inconsistencies in grading and feedback delivery remain a challenge, particularly in institutions where lecturers have varying levels of digital proficiency. In UoTs, where students rely on continuous practical engagement, inadequate feedback in online assessments can hinder learning progress and skill development. Institutions can enhance fairness by clearly communicating expectations, offering multiple assessment formats, and ensuring that students receive timely and constructive feedback.

3. Ease of Use in Online Assessments

The usability of online assessment platforms significantly affects students' experiences and perceptions. Research suggests that students value user-friendly interfaces that are intuitive and easy to navigate, as

complex or poorly designed platforms increase frustration and anxiety (Tan et al., 2023; Singh et al., 2022). This is particularly relevant in the South African UoT setting, where students have varying levels of digital literacy. While some students quickly adapt to online assessments, others struggle with unfamiliar digital tools, leading to lower engagement and poorer performance (Surahman et al., 2022).

Moreover, ease of use is closely linked to perceived fairness. If students find online platforms overly complex, they may feel disadvantaged compared to peers who are more digitally proficient (Alessio et al., 2021). Institutions must prioritise accessibility by selecting platforms that are simple, reliable, and well-supported with adequate training and troubleshooting resources (Farsawang et al., 2023). At a UoT, where many students come from disadvantaged backgrounds, digital literacy training and technical support services are essential to ensuring equitable assessment experiences.

4. Accessibility and Technological Barriers

While online assessments are intended to improve accessibility, they often create new barriers for students who lack stable internet or access to appropriate devices (Rahiem, 2020; Conrad et al., 2022). Many South African students report experiencing difficulties such as system crashes, software compatibility issues, and slow-loading platforms, which can negatively impact their performance (Rahiem, 2020; Nawastheen, 2024). Security concerns also shape students' attitudes, as some fear that technical failures could result in lost submissions or incorrect grading (Dawson, 2020). Moreover, inadequate technical support worsens these challenges, leaving students feeling isolated and unsupported (Polianovskyi et al., 2021). Addressing these barriers requires HEIs to invest in robust technical support systems, provide training on digital tools, and ensure that online assessment platforms are secure and user-friendly (Pinto et al., 2020).

5. Challenges Faced by Students in Online Assessments at UoTs in South Africa

Students at a UoT face several challenges related to online assessments, the most pressing of which is inequitable access to technology (Ferri et al., 2020; Phiriepa et al., 2023). Limited availability of high-speed internet and reliable devices creates disparities in students' ability to participate in assessments. Additionally, academic integrity remains a major concern. The lack of physical supervision in online assessments has increased opportunities for dishonest practices, such as unauthorised collaboration and online answer-sharing platforms (Almossa et al., 2022). Some institutions have implemented proctoring software and plagiarism detection tools to address these concerns, but such measures can sometimes disadvantage students with unstable internet connections or older devices (Holden et al., 2021).

Lecturers also encounter difficulties designing effective online assessments, particularly when ensuring they accurately measure learning outcomes (Simamora et al., 2020). Poorly structured online assessments may fail to capture students' knowledge and critical thinking abilities, leading to questions about their validity (Ndibalema, 2021). At a UoT, where students engage with applied and hands-on learning, the design of assessments must consider practical skill evaluation. Institutions must invest in continuous professional development opportunities to equip lecturers with the skills needed to design robust and meaningful online assessments. The empirical literature findings reported above indicate that while online assessments offer several advantages, they also introduce significant challenges that must be addressed to ensure fairness and effectiveness. As a UoT in South Africa continues to expand its use of online assessments, it is crucial to consider these diverse perspectives to develop more inclusive and equitable assessment strategies. Next to be discussed is the theoretical framework that underpinned this study.

6. Theoretical Framework

The Complex Adaptive Blended Learning System (CABLS) theory provides a structured approach to understanding and improving blended learning environments by emphasising the dynamic and interconnected relationships between key components: technology, pedagogy, content, teacher, institution, and student characteristics (Ortner, 2021:50; Olivera, 2023; Yao, 2023:3). Grounded in complexity theory and systems thinking, CABLS promotes continuous feedback, adaptation, and improvement, ensuring that learning experiences remain flexible and responsive to student's diverse needs. Although originally developed outside

of the South African context, CABLS has been successfully applied in various educational settings, including South Africa, where blended learning serves as a strategic approach to addressing challenges such as digital literacy disparities, resource constraints, and diverse student demographics (Muibi, 2023:283). Research by Pitso-Mbili et al. (2024) and Hlatshwayo (2023) demonstrate that CABLS enhances student engagement and learning outcomes in South African universities, while Masvosve et al. (2021) highlight its effectiveness in fostering student-centred learning within Technical and Vocational Education and Training (TVET) colleges. CABLS is particularly relevant for examining students' experiences with online assessments at a UoT in South Africa, as it provides a lens through which to analyse how technology integration, pedagogical strategies, and institutional support interact to shape students' academic performance and perceptions of assessment fairness. By applying CABLS, this study identifies best practices for refining online assessments and addressing context-specific challenges such as digital access limitations, assessment design effectiveness, and student engagement. The framework underscores the necessity of institutional support and faculty readiness in ensuring that online assessments remain fair, inclusive, and effective. Ultimately, CABLS offers a holistic perspective on the factors influencing students' online assessment experiences, guiding universities in developing strategies that enhance learning outcomes while maintaining academic integrity and equity.

Methodology

1. Research Method and Design

This study employed a qualitative research approach to explore students' perceptions of online assessments at a UoT in South Africa. Qualitative research focuses on how individuals interpret and make sense of their experiences, providing deep insights into their lived realities (Lim, 2024). A case study research design was adopted within a constructivist paradigm, as it enables an in-depth exploration of a phenomenon in its natural setting without altering the behaviour under investigation (Thomas, 2021). Constructivism was used as the theoretical underpinning, emphasising that knowledge is actively co-constructed through interactions and reflections, shaping each student's unique understanding of online assessments (Cook-Sather & Matthews, 2021). This research received ethical approval from the case UoT with ethics clearance number REC/HS/26/07/2024/6.18.

2. Population, Sample and Context

The study was conducted at a UoT in South Africa, an institution that provides vocational and professional education, with a strong focus on applied learning. The university enrols approximately 18,000 students annually, with a diverse student body from various socioeconomic backgrounds.

The target population comprised undergraduate and postgraduate students, ensuring a diverse range of experiences with online assessments. A purposive sampling strategy was used to select 10 participants, consisting of five undergraduate and five postgraduate students across different academic disciplines. Gender diversity was maintained, with a balanced representation of male and female participants within an age range of 18 to 35 years.

The sample size of 10 participants was deemed sufficient for this qualitative study as it allowed for an in-depth exploration of students' experiences with online assessments. According to Aguboshim (2021), data saturation in qualitative research can often be achieved with a small but diverse group of participants, as long as rich, detailed information is collected. The study aimed to capture a broad range of perspectives rather than achieve statistical generalisability, making the selected sample appropriate for understanding key themes and patterns in students' experiences.

3. Demographic Profile of Participants

The study included a diverse sample of 10 participants, evenly split between undergraduate and postgraduate students, with equal gender representation (50% male, 50% female). Most participants were aged 18-30, with only one aged 35 or older. Linguistic diversity was evident, with participants speaking isiXhosa, isiZulu, Sotho, Pedi, Swati, Tsonga, and Venda, reflecting South Africa's multilingual landscape. Educational

backgrounds varied, with undergraduate students holding qualifications from Grade 12 certificates to advanced diplomas/degrees, while postgraduate students possessed postgraduate diplomas and master's degrees. This diversity ensured a broad representation of student experiences with online assessments.

4. Data Collection

Data was collected through semi-structured interviews, which allowed for a combination of predefined themes and open-ended questions to facilitate in-depth discussions. Semi-structured interviews are a widely used qualitative method as they provide flexibility for deeper exploration while maintaining consistency across participants (Adeoye-Olatunde et al., 2021:1358).

The interviews were conducted face-to-face over one week, with informed consent obtained before participation. Each interview lasted 30 to 50 minutes, and participants were assured of confidentiality and anonymity by using pseudonyms. All interviews were audio-recorded and then transcribed verbatim to ensure accuracy in capturing participants' perspectives.

5. Ethical Considerations

This study adhered to rigorous ethical standards to protect participants' rights and confidentiality. Ethical approval was obtained from the relevant ethics committee at the UoT before data collection. Confidentiality was ensured by using pseudonyms for all participants, and all data were securely stored to prevent unauthorised access. Participants were fully informed about the study's purpose, procedures, and potential risks before giving their consent. Additionally, they were given the option to withdraw from the study at any time without consequences.

One ethical challenge encountered was ensuring participants felt comfortable sharing their experiences without fear of institutional repercussions. To address this, the researcher emphasised the anonymity of responses and reassured participants that their information would only be used for academic purposes. Furthermore, the study adhered to the principle of beneficence, ensuring that no harm emotional, psychological, or professional, came to the participants as a result of their participation.

6. Data Analysis

Thematic analysis was employed to systematically identify, analyse, and interpret key patterns emerging from the data. The study applied narrative and thematic analysis techniques to explore students' perspectives on online assessments, focusing on themes such as accessibility, usability, feedback quality, and fairness. An inductive open coding process was conducted using NVivo and Microsoft Word, allowing for an iterative process of identifying recurring themes and sub-themes (Isangula et al., 2024).

To ensure trustworthiness, the study followed Lincoln and Guba's (1988) criteria of credibility, dependability, confirmability, and transferability. Member checking was conducted to validate interpretations, and peer debriefing was used to enhance reliability. Triangulation was also applied by comparing findings across different student levels (undergraduate and postgraduate) to ensure consistency.

7. Study Limitations

One limitation of this study is the small sample size, which, while suitable for qualitative research, limits the generalisability of the findings to the broader student population. The study provides in-depth insights into students' perceptions of online assessments but does not claim to represent all students at South African UoTs. Future research with a larger sample across multiple institutions could provide a more comprehensive understanding of the challenges and opportunities associated with online assessments.

Additionally, the reliance on self-reported data means that findings may be influenced by participants' perceptions and experiences, which may not fully capture broader institutional trends. To mitigate this, future studies could complement interview data with survey research or institutional performance data for a more holistic analysis.

The Findings

This section presents the study's findings on students' experiences and perceptions of online assessments at a University of Technology (UoT) in South Africa. Five themes emerged from the data, namely (1) digital access, (2) platform usability, (3) effectiveness in learning outcomes, (4) time management, and (5) institutional support. These themes highlight key aspects affecting students' experiences, including accessibility, fairness, technological barriers, academic integrity, and institutional support. The themes are presented next, supported by verbatim student responses and relevant literature.

1. Students' Experiences of Online Assessments

Below are students' experiences with aspects of online assessments at a UoT in South Africa.

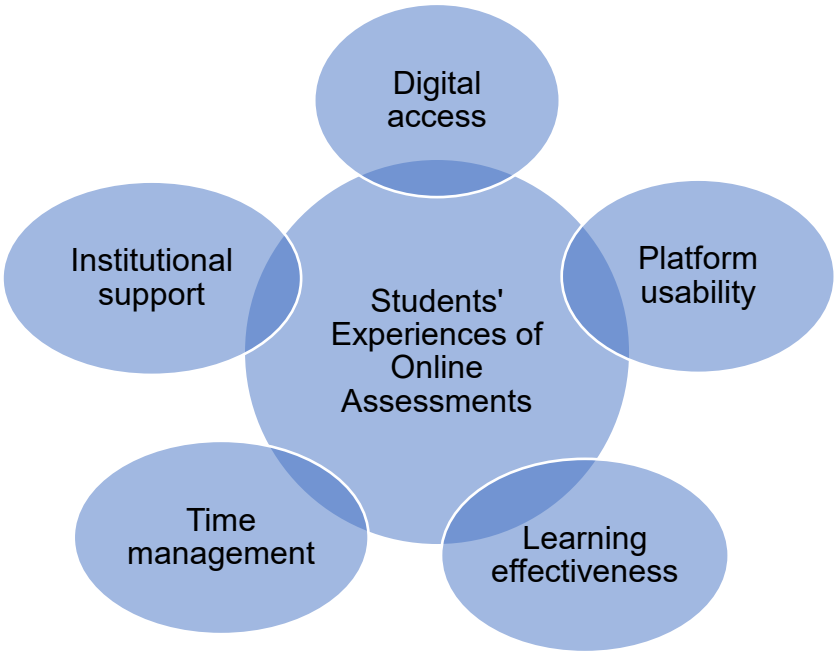

Figure 1. Students' experiences and perceptions

1. Participant Identification Key

To ensure clarity and consistency in reporting the findings, each participant has been assigned a unique identifier based on their academic level. The following abbreviations will be used throughout the analysis:

i. US1 – US5: Undergraduate Students (Participants 1 to 5)
ii. PS1 – PS5: Postgraduate Students (Participants 1 to 5)

Digital Access

Digital access emerged as a significant concern, with seven participants expressing frustration over inequalities in internet access and device availability. Many students highlighted South Africa's digital divide, which disproportionately affects students from lower-income backgrounds.

PS1 remarked:

> *"Unfortunately, online assessments are unfair to most students because not everyone has access to reliable internet or necessary devices like computers, laptops, and other gadgets. Disadvantaged students suffer the most in terms of fairness because they can't afford these things. So, those who are more advantaged can engage more with the course material."*

US1 and US2 echoed similar concerns:

> *"The internet is also unreliable at times; it takes time to connect, and sometimes the Wi-Fi freezes or kicks us out. Load shedding makes everything worse, and students in rural areas struggle more with connectivity issues. This makes it hard for us to submit on time"* (US1).

> *"In Africa, we struggle with network connectivity and can't rely on the school's Wi-Fi. Load shedding also affects us. When there's no electricity, there's no network, and without a network, you can't access Blackboard or attend classes" (US2).*

L*oad shedding* refers to planned power outages due to electricity shortages, which frequently disrupt online learning in South Africa. These challenges align with Azionya et al. (2021:165), who report that socioeconomic disparities, including rural-urban divides, create significant barriers to digital learning. Ferri et al. (2020:86) further emphasise that students from disadvantaged backgrounds are at a higher risk of being left behind in online assessments.

The Collaborative and Autonomous Blended Learning Systems (CABLS) framework, which underpins this study, stresses that technological infrastructure is crucial for equitable digital learning. Without institutional interventions to bridge digital gaps, students from lower-income backgrounds may continue to experience academic disadvantages.

Platform Usability

Students reported mixed experiences with the learning management system, the primary online assessment platform. While some found the system user-friendly, others highlighted technical disruptions and challenges related to internet connectivity and system glitches.

US3 stated:

> *"At my institution, we use Blackboard Ultra, and I can confidently say that it is user-friendly for all students, regardless of their backgrounds. The instructions are clear when students log in."*

However, PS4 noted:

> *"The platform can log you out if you run out of data or experience network problems."*

These findings support Majola et al. (2022:275), who argue that load shedding and unreliable internet exacerbate the digital divide in South Africa. Conrad et al. (2022:534) also highlight the importance of platform usability in ensuring students can engage effectively with online assessments.

Effectiveness in Learning Outcomes

Students had divergent views on the impact of online assessments on learning outcomes.

PS1 stated:

> *"Online assessments promote continuous learning because they allow us to continually engage with the course material through quizzes and other assessment formats and listening to lessons which were recorded during classes."*

However, US2 critiqued certain assessment formats:

> *"Some formats hinder critical thinking. Online assessments depend on the type of assessment format used, such as multiple-choice and true or false questions. These formats don't allow for a deeper understanding of the content."*

These findings align with Villarroel et al. (2020:38), who emphasise the importance of authentic assessments that promote critical thinking and real-world application.

Time Management

Students expressed concerns about time constraints and technical issues affecting their performance.
US1 highlighted:

> *"Sometimes, if there is an issue with Blackboard, it will automatically submit the assessment even if we're not finished. Another challenge is time management, which can lead to rushed submissions."*

These concerns align with Huber et al. (2020:237), who argue that self-discipline and time management are critical in online learning. The CABLS framework emphasises that institutions must support students in developing these skills to enhance learning outcomes.

Institutional Support

Participants stressed the need for improved institutional support, particularly in technology infrastructure and faculty training.
PS1 suggested:

> *"To improve online assessments, reliable infrastructure, diverse assessment formats, and timely feedback are essential."*

US2 added:

> *"It's very important to train lecturers on how to effectively use online platforms and tools."*

These findings align with Simamora et al. (2020:185), who emphasize that faculty training is essential for successful online learning. Lewis (2021) also underscores the need for equitable access to technology to prevent widening educational disparities.

Discussion

This paper explored students' experiences and perceptions of online assessments at a UoT in South Africa, revealing critical factors that influence their engagement and learning outcomes. The findings highlighted key issues related to digital access, platform usability, assessment effectiveness, time management, and institutional support. These themes are discussed below concerning existing literature and the broader context of digital learning.

1. Digital Access and Equity

Digital access emerged as a critical factor influencing students' ability to participate in online assessments. A significant number of students expressed concerns regarding unreliable internet access, device limitations, and socioeconomic disparities. These issues reflect the broader digital divide in South Africa, particularly affecting students from rural areas and lower-income backgrounds. The Collaborative and Autonomous Blended Learning Systems (CABLS) framework (Wang et al., 2015) highlights that equitable technological infrastructure is essential for digital learning. If institutions do not actively bridge digital gaps, students from lower-income backgrounds may face continuous academic disadvantages.

Studies from developed countries indicate that digital access is less of a concern due to widespread internet penetration and institutional support (Anderson & Rivera, 2022). However, in developing regions, similar challenges are observed. In Nigeria, Wahab et al. (2025) found that students from lower-income backgrounds struggle with internet connectivity, leading to academic disparities. Similarly, in India, Das et al. (2021) reported that rural students experience limited engagement in online learning due to unstable electricity and network challenges. These global comparisons reinforce the urgent need for South African universities to improve digital access through infrastructural investments and financial support programs.

2. Platform Usability and Technical Competency

Students provided mixed feedback on the usability of Blackboard Ultra, the primary learning management system. While some found it user-friendly, others struggled with technical disruptions, system glitches, and navigation challenges. CABLS is a strong and adaptable theoretical framework that connects with the complex structure of modern educational conditions (Ortner 2021:50). It acknowledges the complexity of learning environments, including various educational methods, technology innovations, student diversity, and growing teaching methodologies. In the United States, online learning platforms such as Canvas and Moodle have been widely adopted with reported success due to institutional investment in user training and technical support (Johnson et al., 2023). Conversely, research from Kenya highlights that students frequently face system crashes and unreliable internet, leading to disrupted assessments (Njambi et al., 2021). This suggests that usability issues in South Africa are not unique and require targeted interventions, such as better user support and more stable platform infrastructure.

3. Effectiveness of Online Assessments in Enhancing Learning Outcomes

Students held divergent views regarding whether online assessments enhance learning. Some participants appreciated the flexibility and continuous engagement, while others criticised multiple-choice and true/false questions for not fostering deep learning. According to constructivist learning theories, assessments should encourage critical thinking, problem-solving, and application of knowledge (Dutta et al., 2022). When online assessments rely heavily on closed-ended formats, they fail to develop higher-order cognitive skills. In Europe, online assessments integrate authentic assessment approaches such as case studies and project-based evaluations, which promote deeper learning (Villarroel et al., 2020). In contrast, research from South Africa and India suggests that many institutions still rely on basic quiz formats, which limit students' ability to analyze and synthesise information (Naidoo et al., 2022). These findings highlight the need for South African UoTs to adopt more interactive and authentic assessments that challenge students intellectually.

4. Time Management and Self-Discipline

Students cited time constraints and technical issues as major challenges when completing online assessments. Automatic submissions, system logouts, and network failures caused stress and hindered students' ability to manage their time effectively. Self-regulated learning theories (Mubango et al., 2024) suggest that online assessments require students to develop strong time-management and self-discipline skills. However, technical disruptions create external barriers that undermine students' ability to self-regulate effectively. In North America, universities implement flexible assessment deadlines and extended-time policies to accommodate students facing technical difficulties (Johnstone et al., 2022). In contrast, South African institutions have rigid deadlines with limited recourse for students affected by technical failures. This discrepancy suggests that UoTs in South Africa should consider implementing more flexible time policies and technical failure contingency plans.

5. Institutional Support and Best Practices

Students emphasised the need for enhanced institutional support, particularly in technology infrastructure, faculty training, and student assistance programmes. The CABLS framework stresses that institutional support structures must be robust enough to accommodate diverse student needs. Without adequate faculty training and technical assistance programs, students struggle to engage effectively with online assessments. In Australia, universities invest heavily in faculty training programmes to ensure lecturers are proficient in using digital platforms (Lewis, 2021). Similarly, in Singapore, universities provide students with 24/7 technical support and subsidised devices to bridge digital gaps (Tan et al., 2024). These initiatives contrast with the South African context, where limited institutional support has been a recurring concern. This suggests that UoTs must increase faculty training efforts and expand student support services to improve overall engagement with online assessments.

Conclusion

To address the challenges highlighted in this study, universities and policymakers must implement specific interventions to bridge digital divides and enhance online assessment strategies. Universities should invest in improving digital access by providing affordable internet and devices to underserved students, potentially through partnerships with local service providers or government subsidies. Additionally, online assessment platforms should be made more user-friendly and mobile-compatible, with ongoing training for both students and staff. Flexible assessment formats that cater to diverse learning styles and abilities should be adopted, moving beyond rigid, standardised testing methods. Furthermore, universities must strengthen institutional support by providing comprehensive technical help desks, mental health services, and proactive academic counselling to assist students in managing their online assessments. Policymakers should standardise regulations to ensure consistency and fairness across higher education institutions, ensuring accessibility and quality in online learning.

The long-term impact of these interventions will significantly shape the future of digital learning in South Africa. By addressing issues of digital access, usability, and support, universities can create an equitable learning environment where all students, regardless of socioeconomic background, can succeed. Over time, these strategies will improve the overall effectiveness of online learning, leading to better academic performance, higher retention rates, and increased employability for graduates. With a more flexible and supportive digital learning ecosystem, South Africa's higher education institutions will be better equipped to prepare students for the demands of a global, technology-driven workforce. These improvements will also contribute to narrowing the digital divide, ensuring South African students are not left behind in the evolving landscape of higher education and professional development.

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Informed Consent Statement: All participants were provided with a detailed informed consent form outlining the study's objectives, procedures, potential risks, and benefits. They were informed of their right to withdraw at any time without consequences. Consent was obtained voluntarily, and participants acknowledged their understanding by signing the consent form. Confidentiality and anonymity were ensured through pseudonyms, and all data was securely stored to protect participants' privacy.

Conflicts of Interest: The authors declare that there are no conflicts of interest associated with this study. This research was conducted independently, with no financial, personal, or professional interests that could have influenced the findings or interpretations.

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