

The Challenges and Opportunities for Online Teaching and Learning at Durban University of Technology's Business School

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Abstract

The shift to online teaching and learning (OTL) has significantly transformed the higher education landscape, particularly in response to global disruptions, such as the COVID-19 pandemic, that necessitated remote engagement. This study identifies the challenges and opportunities for OTL at Durban University of Technology's Business School (DBS). A qualitative research design was used, with an open-ended questionnaire administered to DUT (DBS) students and academic staff. Data were collected from DBS students and academic staff using purposive and convenience sampling. A total of 150 questionnaires were distributed, with 82 responses received. The data were analysed using inductive thematic analysis supported by NVivo software. Findings indicate that while OTL offers considerable advantages such as reduced commuting time, increased autonomy and broader access to learning materials, it also presents notable challenges. These include inconsistent internet connectivity, limited interaction with peers and lecturers and varying levels of motivation and self-regulation. The research contributes to the growing body of knowledge on digital pedagogy in South African higher education and offers practical recommendations for enhancing the quality and accessibility of online learning at DUT. These include improving infrastructure, offering targeted academic support and fostering a culture of digital readiness among both students and lecturers.

Keywords: Online Teaching and Learning (OTL), higher education, self-paced learning, digital learning environments, flexibility and self-discipline, digital access and connectivity

1. Introduction

The Durban University of Technology established its Business School in 2020 under the Faculty of Management Sciences. The curriculum focuses on applied business and aims to equip leaders to address real-world problems. The school offers academic programmes, executive education and short learning programmes. The Durban University of Technology Business School (DBS) is a member of the South African Business School Association (SABSA).

The COVID-19 pandemic had a major impact on the education sector, especially on traditional face-to-face teaching (Low et al., 2022). It led to industrial decline and major changes in education systems (Bakhmat, Babakina and Belmaz, 2020). Due to health regulations, higher education institutions restricted physical contact and gatherings (Makhado et al., 2022). As a result, the Durban University of Technology Business School (DBS) had to move quickly to online teaching, learning and assessment (TLA). This shift created many challenges for both students and lecturers.

Since 2020, COVID-19 has been one of the most widely studied topics (Odularu et al., 2022). However, existing studies mainly focus on either students' experiences or lecturers' experiences of teaching and learning. Database research shows limited published research on the challenges faced during emergency online teaching and learning. This gap suggests that key conditions required for effective emergency OTL were often missing. Therefore, there is a need for a deeper understanding of experiences with online TLA when used as an emergency solution. This study aims to identify the challenges and opportunities related to online teaching and learning (OTL) at DBS. The study is important because DBS plans to continue offering programmes through OTL in the future. Understanding both students' and lecturers' experiences will help to identify possible gaps.

2. Literature Review

2.1 Stakeholder Experiences with OTL

2.1.1 Lecturer Experiences and Perceptions

During and after the COVID-19 pandemic, the rapid move to online teaching and learning (OTL) greatly changed lecturers' work experiences. The demands of digital teaching environments left some academics feeling unprepared and overwhelmed. Others viewed the shift as a chance to adopt new teaching approaches and gain greater flexibility (Bozkurt & Sharma, 2020). The transition exposed gaps in skills related to learning management systems, instructional design and digital literacy (Rapanta et al., 2020). These challenges often affected lecturers' confidence, their sense of teaching effectiveness and their ability to maintain the same level of interaction and engagement found in traditional classrooms.

2.1.2 Student Experiences and Perceptions

The effectiveness of OTL is strongly influenced by students' experiences and views. Although online learning offers flexibility, access and personalised learning paths, student responses have been mixed. Many students appreciate the convenience and independence of online learning, especially when managing work or personal responsibilities alongside their studies (Dhawan, 2020). However, challenges such as poor internet access, feelings of isolation, low motivation and technical problems have reduced student engagement and satisfaction (Czerniewicz et al., 2020).

2.2 Challenges and Barriers to OTL Implementation

Although online teaching and learning (OTL) is becoming more common in higher education, several barriers still limit its effective use. One of the most common challenges is the digital divide, which includes unequal access to the internet, devices and technical infrastructure (Czerniewicz et al., 2020). This gap is particularly visible in South Africa among students from rural or disadvantaged backgrounds. Unstable electricity supply, limited bandwidth and high data costs make it difficult for these students to take part in extended online learning activities (Maringe & Sing, 2022).

Another major challenge is the lack of teaching readiness and digital skills among academic staff. Many lecturers joined OTL with little experience, which resulted in a focus on content delivery rather than student-centred and interactive teaching approaches (Cutri et al., 2020). This lack of preparation affects teaching quality, student engagement, and learning outcomes. In addition, institutional barriers such as unclear policies, weak IT support and limited investment in digital systems often slow down the expansion of OTL initiatives (Bozkurt & Sharma, 2020). Recent studies further reinforce that challenges in online teaching and learning are closely linked to limited internet access, unequal availability of learning devices and varying levels of institutional readiness. For example, Asio et al. (2021) found that although many students had access to mobile devices, reliable internet connectivity remained a significant barrier to effective participation. Similarly, Paguio et al. (2021) highlight that higher education institutions faced both structural and pedagogical challenges during the COVID-19 transition, requiring adaptive strategies to sustain quality education. In addition, institutional readiness and digital competence among educational leaders have been identified as critical constraints in implementing effective distance learning systems (Asio & Bayucca, 2021).

Students also face academic and emotional challenges, including isolation, low motivation, mental health concerns and difficulties with managing self-directed learning (Adedoyin & Soykan, 2020). These challenges are worsened by limited academic support, especially in asynchronous learning environments where timely feedback and guidance are important. Institutions also struggle to ensure fairness, security and credibility in online assessments, raising concerns about assessment integrity (Rapanta et al., 2020).

Finally, resistance to change, poor curriculum alignment and language barriers remain key challenges to effective OTL implementation. When courses designed for face-to-face delivery are moved online without proper redesign, students may disengage and experience cognitive overload (Mishra et al., 2020). Addressing these challenges at the DUT Business School requires a holistic approach that considers curriculum design, infrastructure, staff training and inclusive teaching practices.

2.3 Opportunities and Benefits of OTL

OTL offers many opportunities and benefits for higher education institutions, lecturers and students. One of the main benefits is improved access. OTL allows students to access learning materials anytime and from anywhere. This supports flexible study options for working adults and part-time students (Dhawan, 2020). Such flexibility encourages lifelong learning and increases participation in higher education, especially in developing countries like South Africa. In these contexts, distance and financial barriers have long limited access to education (Czerniewicz et al., 2020).

Another important benefit of OTL is the ability to tailor learning experiences. Digital platforms allow flexible learning paths, enabling students to learn at their own pace and revisit content when needed. Lecturers can also use data tools to monitor student participation and performance in real time. This makes early support and intervention possible (Martin

& Bolliger, 2018). In addition, OTL supports the development of digital skills for both students and lecturers. These include online communication, collaboration and digital content creation, which are essential skills in the modern world (Bozkurt & Sharma, 2020).

From an institutional perspective, online teaching and learning (OTL) offers long-term cost savings. These include reduced reliance on physical facilities and the ability to scale programmes to reach larger and more diverse groups of learners (Means et al., 2014). OTL also allows lecturers to try different teaching approaches, such as using multimedia resources, simulations and international collaboration activities (Anderson, 2008). In addition, OTL supports inclusive teaching by catering for different learning styles. This is achieved through multimodal content delivery and accessibility features such as subtitles, transcripts and compatibility with screen readers (Almaiah et al, 2020).

The literature highlights several potential benefits of online teaching and learning, including increased flexibility, improved access, and support for independent learning. However, these benefits are often reduced by challenges such as the digital divide, limited peer interaction, low levels of lecturer digital skills and difficulties in maintaining student motivation and interest. Despite these challenges, OTL supports DBS in meeting its strategic goals. These include expanding postgraduate programmes, improving academic quality and increasing student retention. By using OTL opportunities, DBS can position itself as a progressive institution that responds to both local needs and global trends in higher education.

3. Method

3.1 Research Design

This study employed a qualitative research design to explore the challenges and opportunities associated with OTL at DBS. A qualitative approach was appropriate as it enabled an in-depth understanding of participants' experiences and perceptions within a real-world higher education context. The study adopts a qualitative case study approach, focusing specifically on the DBS context. The research was conducted during and shortly after the COVID-19 pandemic period, which was characterised by rapid and unplanned transitions to online learning environments (Adedoyin & Soykan, 2020).

3.2 Participants and Sampling

The target population comprised students and academic staff at DBS who had engaged in online teaching and learning. Participants were selected using purposive sampling to ensure inclusion of individuals with direct experience of OTL. In addition, convenience sampling was employed by distributing the questionnaire through institutional email systems and databases, which improved accessibility and participation. A total of 150 questionnaires were distributed to the targeted participants; 82 were returned, yielding a response rate of 55%. Participants were required to be registered students or academic staff at the DBS and to have participated in online teaching and learning during the COVID-19 period. Individuals without direct experience of OTL were excluded from the study.

3.3 Instrumentation and Data Collection

Data was collected using a structured questionnaire consisting of open-ended items designed to capture participants' experiences, perceptions and challenges related to OTL. The questionnaire was administered electronically via Google Forms to maximise accessibility and efficiency of data collection. Before the main data collection, a pilot study was conducted to assess the instrument's clarity and reliability. Minor adjustments were made to improve question wording and usability. Data collection took place during and shortly after the COVID-19 pandemic period.

3.4 Data Analysis

Data was analysed using thematic analysis. Coding was conducted using NVivo 12 software, following a primarily inductive approach with light deductive alignment to the research objectives. Codes were grouped iteratively into higher-order themes and sub-themes. The analysis followed Braun & Clarke's (2021) six-phase process of thematic analysis, enabling systematic identification and interpretation of patterns within the data. While this approach enhances analytical rigour, the interpretive nature of qualitative analysis means that some level of researcher judgement remains inherent in the process.

3.5 Trustworthiness and Ethical Considerations

Trustworthiness was ensured using criteria such as dependability, confirmability and transferability (Lincoln & Guba, 1985). Dependability was achieved through consistent documentation of coding procedures in NVivo, while confirmability was enhanced by grounding interpretations in participant responses. Participants received information about the study and gave informed consent before participating. Participation was voluntary, and anonymity and confidentiality were maintained throughout the research process. The study complied with DUT ethical requirements and adhered to recognised academic standards for research involving human participants.

4. Results

This section presents and explains the results from the questionnaire completed by students and lecturers linked to the DBS. The sample included 82 participants. There were more female respondents than male respondents. Most participants were early- to mid-career adults aged 26 to 45 years. The majority lived in urban areas and were employed full-time, with full-time staff making up most of the sample. Most participants also indicated that they had not received prior training in online teaching and learning. This suggests that many were not well prepared for the sudden shift to online education. Table 1 summarises the participants included in the final analysis.

Table 1. Summary of Participants Included in the Study

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	34	41.5
	Female	48	58.5
Age Group	18–25	3	3.7
	26–35	31	37.8
	36–45	25	30.5
	46–55	17	20.7
	55+	6	7.3
Residence	Urban	55	67.1
	Township	19	23.2
	Rural	8	9.8
Participant Type	Staff	58	70.7
	Students	24	29.3

Thematic Analysis

Table 2 below presents a roadmap of the thematic structure employed in the following narrative.

Table 2. Summary of themes and subthemes

Theme	Sub-themes
T1. Perceived Benefits of OTL for Students	Flexible Learning Schedules • Reduced Commuting and Financial Costs • Self-paced Learning • Improved Access to Learning Materials • Enhanced Digital Literacy
T2. Perceived Benefits of OTL for Staff	Remote Work Flexibility • Expanded Student Reach • Professional Growth via Digital Platforms • Autonomous Schedule Planning
T3. Institutional & Pedagogical Barriers (Staffs & Learners)	Persistent Technical and Connectivity Issues • Limited Real-time Interaction • Low Attendance / Passive Engagement • Challenges in Monitoring Participation • Limited Access to Support Services • LMS Capacity & Administrative Readiness

4.1 Theme: Perceived Benefits of OTL for Students

This theme reflects how students described the value of OTL once the basic requirements were in place. Participants clearly highlighted benefits that match adult learners' needs. These included flexible study times, lower travel and financial costs, opportunities for self-paced learning, quick access to learning materials and improved digital skills.

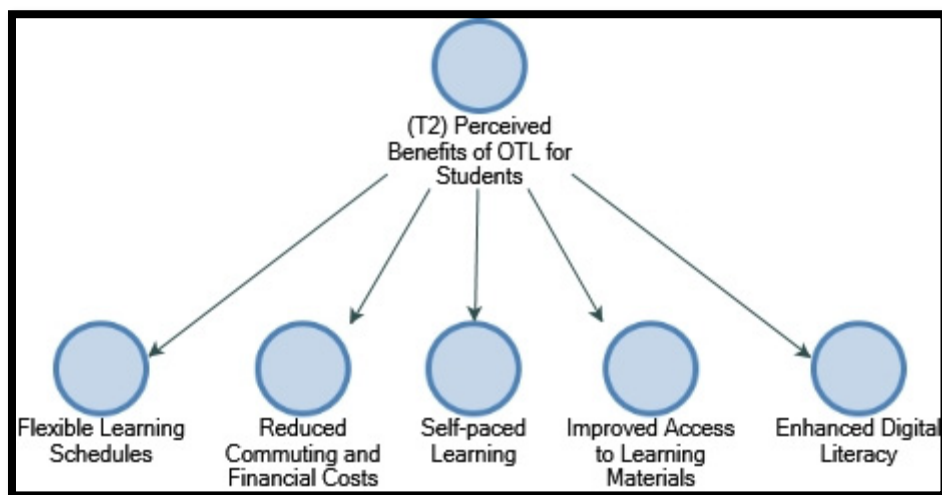


Figure 1. Theme 1 - Perceived benefits of OTL for students

4.1.1 ST1: Flexible Access and Time Management

Participants highlighted the time-saving and convenience benefits of accessing materials and working asynchronously. This flexibility was especially valued by part-time participants and those balancing work and family responsibilities.:

“Online platforms allow you to access lectures, readings and assignments on your own schedule. This is ideal for part-time students who may have work or family responsibilities.” (P3, Student)

“Recorded lectures and materials allow me to review and learn at my own pace, which is particularly helpful when juggling multiple responsibilities.” (P8, Student)

This shows that OTL enabled students to organise their studies around work and family commitments. It allowed them to take part from home and catch up when other responsibilities arose. The quotes suggest that this led to more consistent participation and reduced stress, as students knew they could join live sessions or rely on recorded content. This finding aligns with OTL research, which shows that flexible scheduling and on-demand access to recordings reduce time and travel pressures. It also supports self-managed study time and is linked to higher satisfaction and persistence. According to UNESCO (2023), improving access, equity and learner satisfaction in higher education requires flexible learning pathways. These include asynchronous access to materials and modular course structures.

4.1.2 ST2: Enhanced Self-Discipline and Independent Learning

The OTL format fostered an increased sense of personal accountability. Participants noted online formats meant they were more self-disciplined and worked independently to manage their studying

“Engaging in online learning helps me develop essential skills such as self-discipline and time management, which are beneficial beyond the academic environment.” (P60, Student)

This quote shows that online learning places greater responsibility on the student. Without fixed class times, students must plan their week, track deadlines, and maintain progress on their own. Students with clear weekly guidance, such as checklists, due dates, and reminders, are more likely to stay on schedule and use flexibility positively. Chigbu et al. (2025) also note that self-discipline and independent learning are key factors that influence student performance and engagement in online learning after COVID-19.

4.1.3 ST3: Improved Resource Access and Reviewability

Several participants praised the wide range of digital resources and their easy access. The ability to revisit materials such as recorded lectures, online discussion forums and digital libraries helped improve understanding and supported different ways of learning:

“Online platforms provide access to recorded lectures, digital libraries, discussion forums and other tools that can be revisited at any time.” (P53, Student)

“Online platforms offer a wide range of learning materials, like videos, interactive quizzes, recordings and eBooks, that you can access anytime.” (P56, Student)

Students described the learning management system (LMS) as the central place for slides, notes, assignments and recordings. They noted that materials were always available, which allowed them to review content and prepare for exams. For students who could not attend every live session, this access was especially important.

This reflects findings in higher education literature that describe the LMS as the main hub for course information. It supports convenient access to learning materials and helps ensure continuity of study.

4.1.4 ST4: Convenience for Working Students

Another common point raised was OTL's convenience for working students. Removing distance barriers and reducing travel demands made studying more manageable for students with limited time.

“Courses are easily accessible and convenient to those who are working.” (P69, Student)

“The online information is accessible at the same time as you study online.” (P67, Student)

Students reported that they did not need to commute, which removed transport costs and reduced on-campus expenses such as printing. Some quotes linked these savings to having more time and money for their studies. This included buying data or setting aside more time to study. This aligns with Dukhi et al. (2024), who found that online delivery reduces travel and campus-related costs. These savings can then be redirected towards study needs, such as data and study time.

This theme clearly shows what students gain when OTL works well. Flexibility allows students to organise their studies around work and family commitments. It also reduces travel time and related costs. Students can study at their own pace by using recorded lectures and well-organised materials on the LMS. Easy access to slides, notes and videos supports revision and exam preparation.

Regular use of digital tools also improves students' confidence and builds transferable skills that are useful in other modules and in the workplace. Together, these benefits reflect a learning environment that supports work and family responsibilities, ensures fair access to course content and develops valuable digital skills. However, students also noted that these benefits depend on access and readiness. When devices, data access or confidence in using the online platform are limited, the benefits of OTL are harder to achieve.

4.2 Theme 2: Perceived Benefits of OTL for Staff

This section presents the findings on how staff perceived the benefits of OTL. These benefits included greater work flexibility, wider reach, professional development through digital platforms and increased control over planning and teaching delivery, as shown in the figure below.

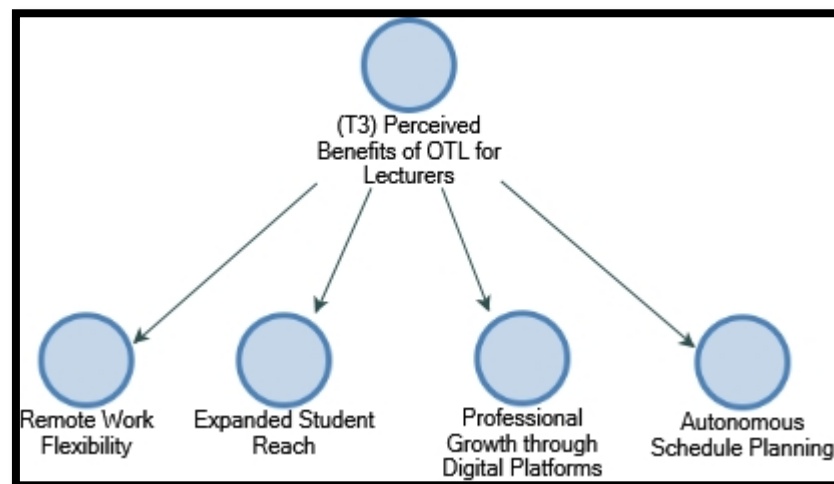


Figure 2. Theme 2 - Perceived benefits of OTL for staff

4.2.1 ST1: Remote Work Flexibility

One key benefit staff highlighted was the flexibility offered by OTL. It allowed staff to work remotely while still meeting their professional duties. Teaching could be delivered from different locations, with less reliance on being on campus. Several participants noted that working from home reduced travel demands and allowed them to teach in a more comfortable and personalised environment. Examples from participants include comments such as,

"Flexibility... work from home." (P48, Staff)

"You can continue with your studies while you work full time." (P58, Staff) and

"No transport costs." (P71, Staff).

Staff described OTL as removing the need for daily commuting and allowing them to teach from home or other locations while meeting their professional responsibilities. Working in a comfortable environment saves time and travel costs and gives staff more control over how they plan their day. This flexibility supports work-life balance, reduces fatigue and may lead to more consistent preparation and feedback. This aligns with research on online teaching in higher education, which shows that remote delivery reduces commuting demands and supports work-life balance. When schedules and expectations are clear, it may also improve staff satisfaction (Legg-Jack & Ndebele, 2022).

4.2.2 ST2: Expanded Student Reach

Staff valued that OTL had greatly expanded their teaching reach. Using online platforms, staff could engage students beyond the institution's immediate location.

As one participant noted,

"I would teach students across borders without geographic constraints, for example, a Staff member in Saudi Arabia upskilling learners in India." (P73, Staff),

and another commented,

"You can teach as many students as possible at once." (P75).

Staff highlighted specific benefits of OTL, including the ability to reach students across different regions, time zones and large groups at the same time. This broadens access to expertise and allows teaching across campuses or across borders without the need for travel. It also enables departments to share teaching resources and offer specialised content to wider student groups. The literature on distance and online education shows that digital delivery expands the geographic reach of programmes. It supports cross-border enrolment and scalable classes while maintaining key forms of interaction, as noted by UNESCO (2024).

4.2.3 ST3: Professional Growth through Digital Platforms

Another benefit that emerged was ongoing professional development enabled by digital engagement. Staff saw OTL as an opportunity to increase their academic reach by engaging with multiple institutions and global teaching platforms.

Quotes include:

"For academics, opportunities for online teaching and learning allow them to work for various institutions." (P81, Staff)

and

"More flexible and it accommodates a lot of audiences at one time." (P63, Staff)

Participants also viewed OTL as a pathway for professional development. It provides opportunities to teach using different modes, work across institutions and engage with diverse groups of learners. It also helps staff build confidence and experience in using new technologies. These experiences can support the development of digital teaching skills, strengthen academic networks and increase the visibility of scholarly work. The literature shows that sustained use of learning technologies supports the growth of digital pedagogy skills and helps form new communities of practice across institutions (Moyo et al., 2022).

4.2.4 ST4: Autonomous Schedule Planning

Participants also identified an important benefit of OTL as the opportunity to plan and organise their own teaching as a benefit. OTL supported flexible scheduling and asynchronous content delivery, rather than traditional time-tabled teaching.

Examples include:

"Yes, you can have 3 or more lecture classes at different times." (P66, Staff)

"Convenience and being able to work at your setting." (P74, Staff).

Staff reported having greater control over how and when they planned and delivered their teaching. This included managing multiple class groups at different times, combining live and recorded sessions and sharing materials before lectures. This level of control can improve efficiency, especially when teaching materials are reused and course delivery is aligned with other work commitments. These benefits are strongest when course timelines and expectations for student communication are clear. Research on online course design supports this view. It shows that OTL allows lecturers more control over their schedules and supports the efficient reuse of teaching materials. However, it also highlights the need for a stable course structure and clear communication to support students (Martin et al., 2020).

Staff identified several positive aspects of online teaching. Remote work flexibility allowed them to teach from home or other locations, reducing travel time and costs and improving work-life balance. Wider student reach enabled engagement with larger and more diverse groups, including students from different regions or countries. Professional development opportunities emerged through digital tools and cross-platform teaching, helping build digital teaching skills and academic networks. Finally, flexible scheduling allowed staff to mix asynchronous and synchronous teaching, reuse materials and better align teaching with other responsibilities. In general, staff viewed OTL as flexible, wide-reaching and professionally beneficial, especially when courses were well designed and properly supported.

4.3 Theme 3: Institutional and Pedagogical Barriers Experienced by Learners and Staff

Participants identified a range of systemic and pedagogical constraints that affect the quality of OTL. Although many constraints were shared, participants' experiences as either lecturing staff or students differed. Below, each sub-theme of barriers is outlined, and a comparison is made between the experiences of lecturing staff and learners.

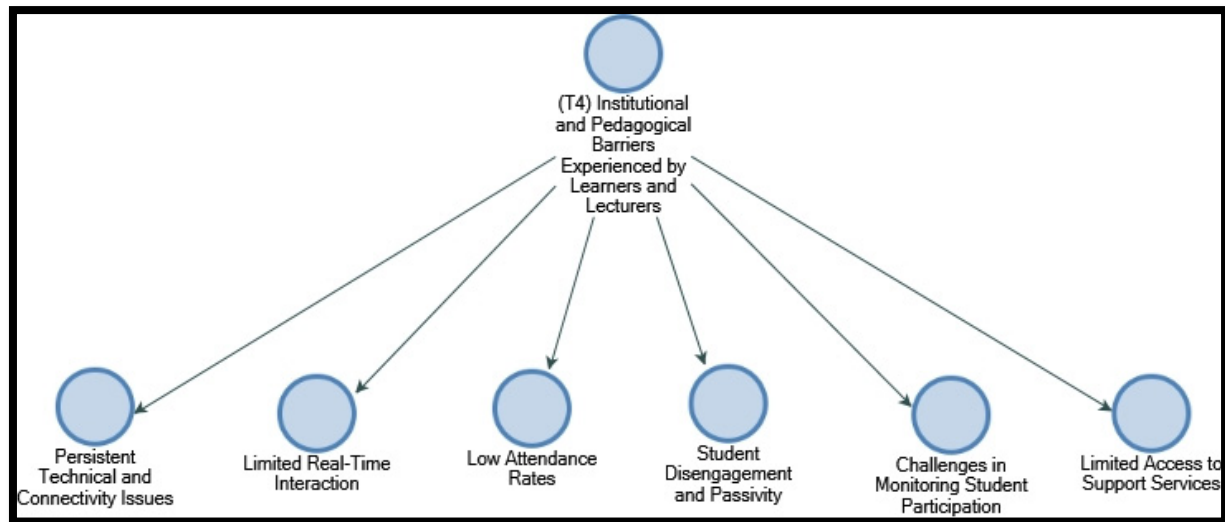


Figure 3. Theme 3 - Institutional and pedagogical barriers experienced by learners and staff

4.3.1 ST1: Persistent Technical and Connectivity Issues

The majority of the lecturing participants described challenges with unstable connectivity, platform glitches and low bandwidth, which interrupted the flow of lessons and disrupted continuity, eroding real-time engagement.

"Unstable connectivity during class negatively affects lecturing... in numbers and in attention due to connectivity interruptions." (P81, Staff)

In addition, most learners agreed and reported problems with access, low bandwidth and frequent disconnections, especially during load shedding. These issues affected class attendance and assessment submissions.

"The biggest challenge was accessing classes without electricity, which caused wi-fi disruption." (P56, Student)

Participants reported that unstable internet access, slow bandwidth and load shedding regularly disrupt classes and ongoing engagement. When these interruptions occur, real-time participation is affected, and assessment activities are delayed, especially when disruptions happen during scheduled sessions. Research in South Africa has consistently identified internet affordability, poor reliability and load shedding as major barriers to continuity in online learning. Power outages often disrupt attendance and assessment schedules. Mavimbela & Kang'ethe (2024) note that unpredictable load shedding in South Africa reduces internet access, lowers productivity and interrupts online teaching, affecting both students and lecturers.

4.3.2 ST2: Limited Real-Time Interaction

For some lecturing participants, the absence of physical cues limited the ability to build rapport and give in-the-moment formative feedback. They indicated challenges to gauge learner understanding in the moment.

"Building rapport with students becomes difficult without face-to-face contact." (P16, Staff)

Some learners described limited opportunities for spontaneous questions and less peer-to-peer interaction, and described it as though they were "talking to a void" in large classes.

"There was less chance to ask questions during the session." (P37, Student)

"I didn't feel motivated to attend, especially when the lectures were pre-recorded. There was no interaction." (P60, Student)

Staff reported difficulty reading student cues in online settings and giving immediate feedback. Students, in turn, said they had fewer chances to ask questions spontaneously and often felt as though they were talking into a void, especially in large or recorded classes. This points to lower social and teaching presence and greater transactional distance. According to Almahasees et al. (2021), online learning environments often lack the immediacy and interaction found in face-to-face settings, which can affect student motivation and engagement.

4.3.3 ST3: Low Attendance Rates

Another concern shared by the lecture participants was that irregular attendance and arriving late were common and had a ripple effect on pacing and assessment continuity.

"Poor attendance and non-participation of students." (P41, Staff)

By contrast, learners attributed absenteeism to load-shedding, limited data, work-related issues and timetable clashes with other modules.

"I missed live classes because of load-shedding and data." (P42, Student)

Attendance challenges were linked to load-shedding, limited data access, timetable clashes and work responsibilities. Students who missed live sessions usually relied on recorded lectures, but this reduced immediacy and limited opportunities to ask questions. Attendance became more stable when classes followed regular weekly patterns, had fixed engagement times and included asynchronous options to support students who lost connection. Studies in South Africa conducted during and after the COVID-19 transition show that connectivity issues, high data costs and load shedding affect participation in live online classes. These challenges are especially common among working students and those in low-access areas (Mutereko & Chikoko, 2021).

4.3.4 ST4: Student Disengagement and Passivity

Staff indicated that passive presence (logged in and inactive), limited chat/mic engagement and preference to watch recordings instead of live engagement were observed frequently.

"Some students log in but don't engage in the lecture." (P24, Staff)

Learners also reported distractions at home, digital fatigue, and a lack of motivation due to long classes that were heavy on lectures, with little or no interactive components.

"It was hard to focus on home; too many distractions." (P23, Student)

"Logged in but not actively engaged" indicates a superficial level of understanding. Factors such as lengthy lectures, home distractions and online fatigue can lead to reduced use of chat and microphone features, fewer questions asked and delays in completing assignments. Research on engagement, particularly in online higher education, highlights the importance of designing for engaging behaviour. Social engagement does not occur; limited interactivity and the length of lecturing content have been associated with passive behaviours (Almahasees et al., 2021)

4.3.5 ST5: Challenges in Monitoring Participation and Learning

Many lecture participants stated that without in-person cues, verifying attention, diagnosing misunderstanding, and timely intervention were challenging, particularly in large classes where students had microphones muted.

"You are not sure if people are paying attention or not." (P41, Staff)

However, some learners indicated they experienced anxiety about online classes, uncertainty about participation expectations, and uncertainty about how engagement was assessed.

"I wasn't sure what counted as participation online." (P19, Student)

When in-person cues are missing, staff struggle to monitor attention, notice misunderstandings and respond early, especially in large classes where cameras are off. Students also reported uncertainty about what counts as participation. Rapanta et al. (2020) similarly found that in large online classes, cameras turned off and muted microphones limit instructors' ability to detect confusion, track attention and assess understanding in real time.

4.3.6. ST6: Limited Access to Support Services

Staff raised concerns about delays in tech support and training on new systems, which meant lost instructional time and deferred sessions.

"Limited technical support... resulting in a delayed start to classes." (P24, Staff)

For learners, there was a lack of just-in-time digital support, unclear ways to access help, and poor guidance on using the platforms and troubleshooting.

"I needed help using the platform but didn't know where to ask." (P3, Student)

"When a problem is logged with support teams, it'll take weeks and multiple calls and emails to have that resolved, resulting in a delayed start to classes." (P19, Learner)

These challenges lead to delays and unresolved problems, increasing frustration for both students and staff. Students prefer quick, just-in-time support for basic tasks, while facilitators need fast escalation of LMS and IT issues. When support channels are clearly defined, response times are communicated upfront and students receive early orientation, downtime is reduced and learning is improved (Hassan et al., 2024).

In summary, this theme highlights several connected factors that threaten the quality of online teaching and learning for both students and instructors. Technical instability, including load shedding, poor internet access and system failures, interrupts lesson flow and delays assessment submissions. Limited real-time interaction makes it difficult for instructors to read student cues and reduces opportunities for students to ask questions, especially in large or recorded classes. Attendance is often inconsistent due to power cuts, data limitations, work commitments and timetable conflicts. This results in disengagement and passive participation, where students log in without interacting. These issues are further worsened by long lecture-focused sessions and distractions in the home environment.

4.4. Word Cloud

The word cloud in Figure 4 below demonstrates the dataset's primary focus: “online learning” for “students,” and “time” and “work” are prominent, reflecting the strong theme of flexibility and time management. Other frequent words are “materials,” “classes,” “platforms,” “access,” “internet,” “data,” and “network,” which refer to the preconditions students cited (devices/LMS access, affordable data, stable connectivity). “Interaction,” “attendance,” and “poor/limited” articulate barriers around real-time engagement and participation, while “skills,” “training,” and “support” match the recommendations for orientation and just-in-time help. Overall, the cloud graphically supported the outline: benefits (flexibility), barriers (interaction/attendance)

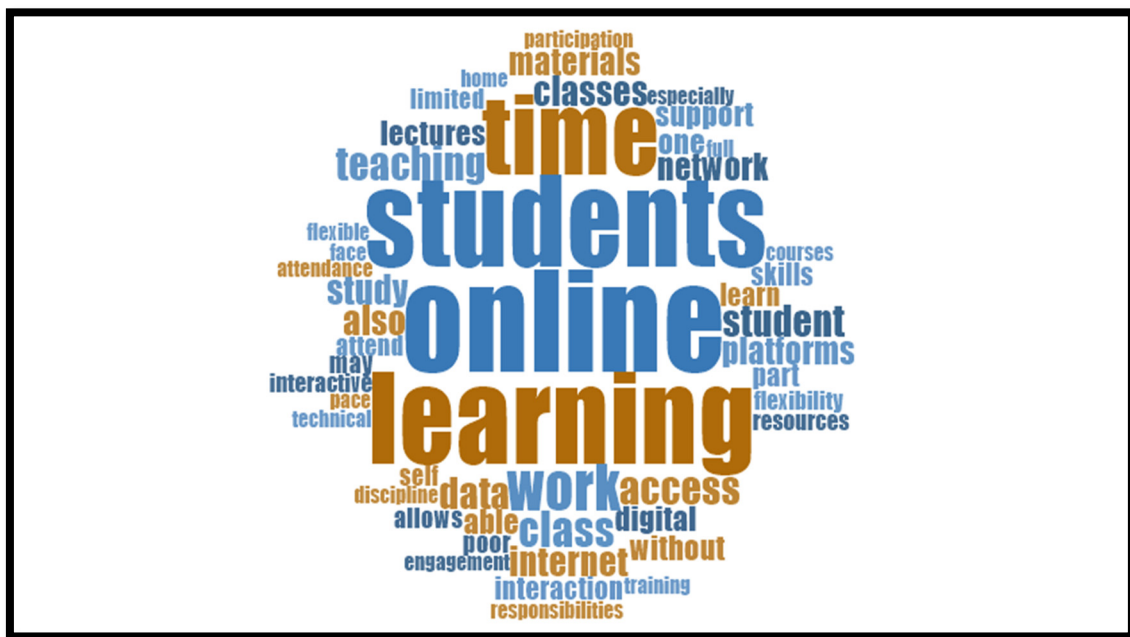


Figure 4. Word Cloud

5. Limitations of the Study

This study has several limitations that should be considered when interpreting the findings. The research was conducted within a single higher education institution, namely DBS, which may limit the generalisability of the findings to other institutional contexts. The study also relied on self-reported data collected through questionnaires. Such data may be subject to response bias, including social desirability bias, where participants may provide answers they perceive as acceptable rather than fully reflective of their experiences. Further, the study was conducted during and shortly after the COVID-19 pandemic, a period characterised by rapid and unplanned transitions to online learning. As a result, the findings may reflect temporary adaptations rather than long-term behaviours in stable online learning environments. Finally, although thematic analysis was conducted systematically using established procedures, qualitative analysis involves interpretive judgement, which may introduce some subjectivity.

6. Implications of the Study

The findings of this study have important implications for both theory and practice. From a theoretical perspective, the study contributes to the growing body of knowledge on online teaching and learning by providing context-specific insights from a South African higher education setting and highlighting the interconnected nature of technological, pedagogical, and institutional factors.

From a practical perspective, the findings suggest that higher education institutions should prioritise investment in digital

infrastructure, including reliable internet access and appropriate learning devices, to support effective online learning. In addition, lecturers need continuous professional development to strengthen their digital competencies and pedagogical strategies for online teaching.

The study also highlights the importance of institutional support systems, including clear policies, accessible technical support and student support services, to improve engagement and learning outcomes. Furthermore, institutions should adopt inclusive and flexible approaches to online learning design to accommodate diverse student needs and contexts. The study provides actionable insights to inform policy development, strategic planning, and the implementation of sustainable online teaching and learning practices in higher education.

7. Conclusion

The open-ended responses in Section D provided rich insights into both challenges and opportunities. Challenges were reported predominantly regarding infrastructure and engagement. For students, poor connectivity and frequent load-shedding (21 mentions), time-management difficulties (11 mentions), and limited institutional support emerged as major barriers. Lecturers similarly highlighted insufficient student engagement (10 mentions), technological barriers and challenges in ensuring academic integrity during assessments.

On the other hand, participants identified substantial opportunities. Students emphasised flexibility as the most significant benefit (19 mentions), particularly in balancing work, study and personal commitments. Access to global resources, recorded lectures and enhanced digital skills were also consistently mentioned. Lecturers highlighted opportunities for pedagogical innovation, including the use of multimedia, gamification, flipped classrooms and increased reach to geographically diverse students.

First, infrastructure investment in internet connectivity, device provision, and affordable data access is critical, as these have consistently been ranked among the top preconditions. Second, capacity-building initiatives should be prioritised to address digital literacy and pedagogical training for both students and staff. Third, institutional support structures must be enhanced, including clear communication channels, responsive technical support and visible help desks to support OTL training needs. These strategies directly address the challenges and opportunities identified in the study, providing DBS with a roadmap for effective OTL adoption and sustainability.

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Author contributions

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No additional data are available.

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