



Exploring the Perceptions of Online Learning among Students and Lecturers at Mangosuthu University of Technology: Successes and Challenges

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Abstract. This study explores the perceptions of online learning among students and lecturers at Mangosuthu University of Technology (MUT), focusing on the successes and challenges associated with its implementation. The theoretical framework employed in this research is the Technology Acceptance Model (TAM), which is particularly relevant for understanding users' acceptance and adoption of technology. TAM's constructs, such as perceived effectiveness and apparent simplicity of use, are applied to assess how students and lecturers perceive the advantages and user-friendliness of online learning platforms and tools. By examining attitudes toward online learning and intention to use it, TAM provides insights into the likelihood of successful implementation and potential challenges.

The study includes participants from the faculties of Engineering, Management Sciences, and Natural Sciences, covering a wide age range. The findings reveal both benefits and challenges of online learning. Participants appreciated the convenience of accessing recorded lessons and learning materials, but technological limitations, distractions, and connectivity issues were also noted. To enhance the online learning experience, students and lecturers suggest providing better access to technology and internet resources, improving communication and engagement, and addressing technical issues. Overall the use of technology, in this case, online learning, was embraced by both parties. Additionally, proper training and support in digital tools and platforms were highlighted as essential. The findings underscore the significance of technology in modern education and the need to create a well-balanced and supportive online learning environment for all stakeholders.

Keywords: *Online learning, Mangosuthu University of Technology, Lecturers, Students*

1. Introduction

Recently, the introduction of digital technologies has altered the education sector, resulting in the emergence of online learning as an alternative means of sharing and acquiring knowledge. The rise in popularity of online learning platforms and virtual classrooms has piqued the interest of lecturers, students, and researchers. The Covid 19 outbreak popularized online learning among South African higher learning institutions. Although before the Pandemic, many colleges and universities offered online courses as a viable alternative to traditional face-to-face instruction. At the global level, online learning has become popular due to its flexibility and accessibility. In the South African context, the COVID-19 pandemic has accelerated its integration, making it crucial to examine students' and teachers' perspectives in this new educational landscape.

Internet learning has transformed how students and educators interact with academic content digitally. Understanding how students and teachers perceive online education is essential to make it more effective. This study aims to explore online learning experiences at Mangosuthu University of Technology, focusing on its successes and challenges. At Mangosuthu University of Technology, online learning is being implemented, but its impact still needs to be fully understood. Both students and teachers play vital roles in its success, so understanding their views is essential to improve online learning strategies and creating a supportive virtual learning environment.

The study intends to explore the diverse perspectives and experiences associated with online learning, shedding light on its benefits, challenges, and future implications for higher education. By critically analyzing the myriad perspectives and encounters associated with online learning, this investigation aims to bring attention to its benefits, barriers, and potential consequences for the future of education. Comprehending these perceptions is vital in refining and optimizing online learning approaches to cater to the requirements of a dynamic and evolving education landscape.

2. Objective of the study

The primary objective of the present study was to scrutinize the perceptions of students and lecturers at the Mangosuthu University of Technology. The study employed a mixed-method approach. The quantitative method, which utilizes controlled questionnaires, was employed. The questionnaire was designed as a Google form survey to reach students and lecturers across all departments. Additionally, the qualitative method was deemed appropriate for this study as it facilitated the conceptualization of the research and allowed for in-depth questioning, which aided in gathering rich data that gathered nuanced experiences of both lecturers and students on how they experienced online learning.

Research problem and critical questions to be investigated

This research explores the perspectives of the primary stakeholders in education, namely the students and lecturers of MUT, regarding web-based instruction. The study delves into the aspects that have proven successful and those which may benefit from further enhancement. The research will fill this knowledge gap and create evidence-based strategies and initiatives to enhance online learning and support the institution's educational objectives. To address the aim of our study, the following questions are formulated:

- What are the perceptions of students and lecturers toward online learning at MUT?
- What are the perceived benefits and advantages of online learning as reported by students and lecturers?
- What are the key challenges students and lecturers face in the context of online learning at MUT?
- What strategies can be implemented to improve the online learning experience for students and lecturers at MUT?
- To what extent do students feel engaged and motivated in online learning environments?

3. Literature review

Definitions of online learning vary however Jenkins in [1], states that online learning can be defined as learning that is facilitated through the use of information and communication technologies (ICTs). In its basic form online learning differs from traditional contact learning in the sense that there is a separation between lecturers and students. Other distinguishing characteristics of online learning include the use of a computer or electronic device to facilitate the distribution and consumption of educational content and teaching material; this is inclusive of the provision of virtual two-way communication between lecturers and students and among students themselves. In [2] online learning is described as the use of technology for teaching, learning, and assessment. They further acknowledge its contribution to education because online learning helps learners enhance their problem-solving skills and allows educators to share knowledge effectively. The authors in [3] posit that for “other sources, eLearning can be classified based on its main purpose into technology-driven, delivery-system-oriented, communication-oriented, or educational-paradigm-oriented”.

Positive outcomes of online learning

Surveyed research in [4, 5, 6] demonstrates that one of the advantages of online learning is the freedom it gives students in terms of accessibility in terms of time, and place. According to [7], this mode of learning was favorable because it offered improved communication and interaction in discussion forums between students and their lecturers. students can access course materials and complete assignments at their own pace, accommodating work and personal commitments. Additionally, online learning offers a wide range of resources, including multimedia materials. In consensus with these mentioned studies

The research in [8] states that online learning is useful for the improvement of learners' performance, engagement, interest, and motivation. They further highlight that online learning promotes active participation and self-regulated learning, which produces desired learning outcomes. The authors in [9] introduces another positive aspect of online learning where the author shares that Universities can gain a competitive advantage and remain relevant by using such technologies in teaching and learning to improve the quality of their offerings and potentially attract prospective students.

Critiques of online learning

The weaknesses of online education have attracted significant criticism in both academic literature and practical contexts, despite its widespread global growth [10]. While certain faculty members perceive online teaching as offering greater flexibility, others argue it is excessively demanding and time-consuming, leading to potential burnout. Several studies have revealed that concerns about flexibility, workload, and time requirements exist among online professors. Furthermore, online

education has faced criticism for its infrastructural barriers, affecting students, instructors, and institutions [12]. These barriers arise from inadequate or poorly managed hardware, software, and connectivity, resulting in infrastructural deficiencies that hinder effective online learning experiences.

Online learning is subject to criticism for its inadequate provision of training to both instructors and educational institutions. This lack of training contributes to lecturers' discomfort with teaching online, computer anxiety, and a fear of technology, particularly among older generations. Additionally, psychological and behavioral aspects are identified as factors that render online education less effective compared to face-to-face learning [10]. The research in [11] states that Students often experience a sense of isolation when engaging in online education, which can result in a diminished feeling of belonging and negatively impact student discipline, sense of responsibility, time management, and motivation. Collaborative learning experiences, where ideas are shared, and critical thinking is stimulated, are believed to be more effective in promoting engagement and deepened understanding. Furthermore, online education is criticized for integrity issues not encountered in face-to-face learning, as highlighted by researchers and practical experiences.

Factors Impacting Perception of eLearning:

Students' perceptions of online learning are influenced by a number of factors. A significant role is played by learner characteristics like age, prior experience with technology, and self-regulation abilities. A study in [13] revealed that while older students may encounter technology-related obstacles, younger learners who are digital natives tend to have more positive attitudes toward online learning. Perceptions are also influenced by aspects of the course design, such as interactivity, multimedia components, and clear instructions. Students' satisfaction and engagement are aided by the presence and assistance of instructors, including timely communication and feedback.

Student Success and Happiness in Online Learning:

Assessing student success and happiness is crucial for determining how effective online learning is. According to [14], student happiness is positively impacted by high levels of engagement, good communication, and clear learning outcomes and enables students to apply knowledge in novel situations through case studies. Students who feel more in control of their education and sense a sense of community in the online learning environment generally express greater happiness. Additionally, academic achievement in online courses has been found to be on par with or even superior to that of traditional face-to-face classes.

4. Theoretical framework

The Technology Acceptance Model (TAM) originally proposed by Fred Davis is a widely used theory that explains how users adopt and interact with technology. It suggests that the actual usage of technology is closely connected to a person's intentions to use it [15].

The Technology Acceptance Model (TAM) proves to be highly pertinent to this study due to its emphasis on comprehending users' acceptance and adoption of technology. The frameworks of TAM, like perceived effectiveness and apparent simplicity of use, are particularly appropriate to the setting of online education, enabling us to assess how students and lecturers perceive the advantages and user-friendliness of online learning platforms and tools. By examining attitudes toward online

learning and intention to use it, TAM can anticipate the likelihood of successful implementation and highlight potential challenges. The constructs of TAM thus provide a robust framework for evaluating how students and lecturers perceive the benefits and usability of online learning platforms and tools, ultimately contributing to informed strategies for enhancing its integration and addressing any obstacles that may arise at MUT.

The Technology Acceptance Method (TAM) serves as an invaluable instrument for comprehending the way in which individuals perceive online learning. This particular model functions as a means of elucidating the reasons why individuals either adopt or reject particular technologies. Such information proves to be incredibly practical when attempting to understand how individuals perceive and engage with online learning initiatives. Influences on user behavior can be identified by the TAM. Perceived usefulness, ease of use, personal attitudes, social influences, self-efficacy beliefs, and individual socio-demographic characteristics are among the factors that can affect an individual's decision to use a system, [16]. Essentially, the TAM explains that if an individual perceives that their chosen habit will simplify things for them (as in the case of online education), they are more likely to welcome this technology into their routine.

5. Methodology

Participants

The sample included all three faculties, namely the Faculty of Engineering, the Faculty of Management Sciences, and the Faculty of natural sciences, as shown in Table 1. This cohort comprised students and lecturers with an age range of below 20 years to over 50 years old. The Faculty of Engineering and Management Sciences show higher overall participation among the faculties, while the Faculty of Natural Sciences demonstrates relatively lower engagement. Notably, most participants fall within the age range of 20 to 30 years, indicating a significant presence of young individuals who grasp the use of technology in the survey. However, interestingly, the participants younger than 20 years exhibit a relatively higher representation of female respondents in the Faculty of Management Sciences.

On the other hand, the 20-30 age group displays more balanced participation between male and female respondents in the Faculty of Management Sciences. While there are variations in participation across faculties and age groups, it is essential to acknowledge that the survey attracts diverse participants, contributing valuable insights and perspectives to the research endeavor. Further investigation and exploration of the reasons behind these patterns could unveil critical factors influencing survey participation and offer opportunities for targeted outreach to ensure a more comprehensive representation across all demographics.

Table 1: Demographics data of participants

		Faculty of Engineering		Faculty of Mangement Sciences		Faculty of Natural Sciences		Total
		Staff	Student	Staff	Student	Staff	Student	
< 20 Years	Male				1.82%			1.82%
	Female		1.82%		10.91%		9.09%	21.82%
20-30 years	Male		12.73%		1.82%			14.55%
	Female		25.45%		3.64%		5.45%	34.55%
30-40 years	Male	1.82%						1.82%
	Female	1.82%	1.82%	1.82%		1.82%		7.27%
40-50 years	Male	5.45%				1.82%		7.27%
	Female	3.64%		1.82%				5.45%
> 50 years	Male	1.82%						1.82%
	Female			1.82%		1.82%		3.64%
		14.55%	41.82%	5.45%	18.18%	5.45%	14.55%	100.00%

Data collection instrument

A survey was formulated and distributed to students and lecturers from diverse faculties and disciplines at MUT. The survey facilitated a thorough exploration of their experiences, attitudes, and perceptions toward online learning. The survey comprised Likert-scale questions to quantitatively gauge perceptions, in addition to open-ended questions to obtain further qualitative insights. The responses procured from this survey provided invaluable data to obtain a comprehensive understanding of the success and challenges pertaining to online learning at the university.

Ethical considerations

An application was sent to and approved by the MUT research ethics committee to conduct this study. Participation in this study was voluntary and the identities of the participants are not disclosed.

6. Findings and Discussions

6.1. Perceptions of Students and Lecturers toward online learning at MUT

Most students (41.5%) had a neutral experience of teaching and learning online, with mixed responses. A significant proportion of students (26.8%) expressed dissatisfaction with their online learning experience, indicating that some areas may need improvement. 14.6% of her students said they were satisfied with teaching and learning online, and 4.9% said they were very satisfied. This means that only 20% of students had a positive experience with online learning.

On the other hand, most Lecturers (64.3%) say they are satisfied with teaching and learning online, which is a positive indicator. 35.7% of Lecturers had a neutral experience, suggesting that there may be room for improvement in addressing specific needs and concerns. Not a single employee said they were dissatisfied which is a positive aspect of the survey results.

Fig. 1 suggests that students' experiences in teaching and learning online are more varied, with many students either neutral or dissatisfied. In contrast, staff members generally reported higher levels of satisfaction.



Figure 1: Experience of Online Learning

Given that online teaching and learning involves effectively utilizing different digital tools and technologies. As seen in Figure 2, the majority of students (39%) expressed high confidence in their ability to use digital tools and technology in their online teaching effectively, 24.4% of students said they were confident, indicating that many students have a positive attitude toward their digital skills. About 9.75% of students took a neutral stance, which may indicate they need additional support or training to boost their confidence. About 12.2% of students said they needed more confidence in their digital skills to teach online, highlighting areas where targeted intervention could be beneficial. 14.65% of students say they lack confidence and need more support and resources to improve their digital skills. On the other hand, 57.1% of staff members said they are confident in using digital tools and technology effectively for online education. 21.4% of employees reported a neutral confidence level. This may indicate potential improvements or additional training to improve your digital skills. 14.3% of staff said they needed more confidence, suggesting that some staff may need additional support to increase their confidence in using digital tools for online teaching. Notably, 7.1% of employees say they are very confident, showing positive trends in digital literacy.

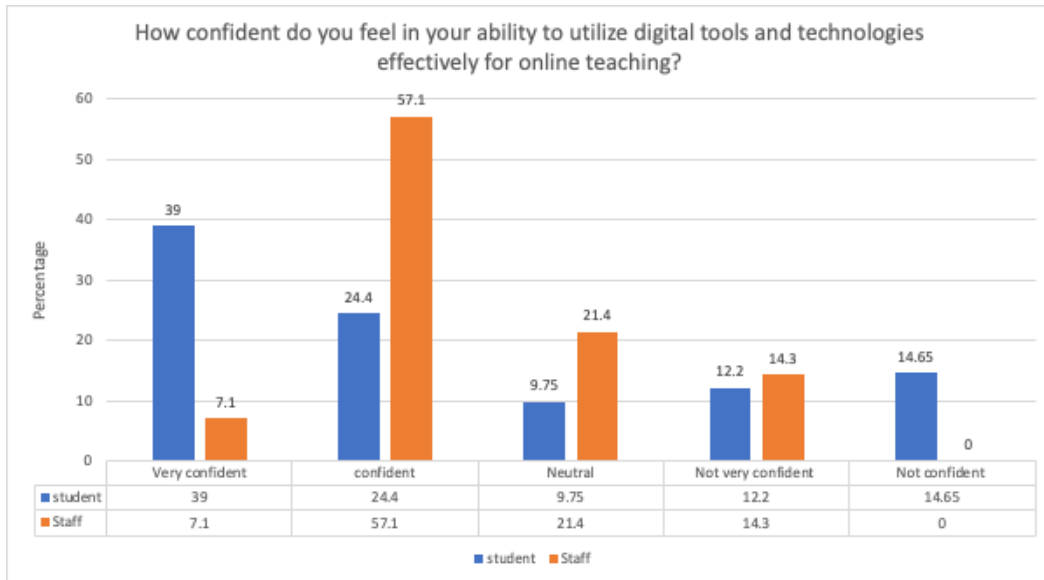


Figure 2: Ability to use technologies effectively

Previous research supports the findings of this survey. Studies have shown that students' experiences with online learning can vary, with some expressing satisfaction while others facing challenges and difficulties [17, 18]. Moreover, research has highlighted the importance of providing targeted training and support to enhance digital literacy and proficiency among students and educators [19, 20]. These studies emphasize the significance of recognizing individuals' diverse needs and experiences in online teaching and learning and tailoring interventions accordingly to optimize the online learning experience for all stakeholders.

6.2. Benefits and advantages of online learning as reported by students and lecturers

Both students and lecturers identified several advantages of online teaching and learning compared to face-to-face classes. For students, the ability to review recorded lessons repeatedly was a key benefit, allowing for flexible and convenient revision. The flexibility of online learning was especially beneficial for working students and those with busy schedules, as they could access study materials at their convenience. Online learning was also resilient to adverse conditions like bad weather, ensuring uninterrupted access to education. Access to recorded lessons and learning materials improved time management and enabled catching up on missed content. The online environment was found to be friendly for shy and introverted students, fostering active participation in class discussions. The convenience of taking courses from anywhere with internet access further enhanced the appeal of online learning. Students appreciated the benefits of recorded lessons, increased convenience, improved access to information, and the utilization of technology to enhance their learning experience.

For lecturers, online teaching offered a more tailored and personalized learning experience, enabling students to interact with content at their own pace. It eliminated disruptions like latecomers and transportation issues commonly encountered in traditional classes. Recording and sharing lecture videos and notes provided convenience for students who might miss lessons. Additionally, the ability to review lectures later improved lecturers' understanding and assessment of their teaching

skills. Online teaching facilitated collaboration and discussion through document sharing and video interactions. Another advantage was the flexibility of conducting lectures remotely, especially during unforeseen circumstances. Lecturers found that recording lessons empowered students to revisit material for better comprehension, leading to increased comfort in asking and responding to questions online. Online learning provided access to learning materials beyond lecture times, accommodating students with irregular attendance. It also offered a valuable backup to traditional learning methods. Overall, online teaching provides convenience, flexibility, and enhanced learning opportunities for both lecturers and students.

Previous research in the field has also supported the advantages of online teaching and learning highlighted by both students and lecturers. For instance, a study conducted in [22] found that students in online courses reported higher satisfaction levels with the ability to review recorded lectures and course materials at their own pace. This aligns with the current findings where students appreciated the benefits of accessing recorded lessons for better comprehension and revision. Additionally, a meta-analysis by [23] demonstrated that online learning can be as effective, if not more, than traditional face-to-face instruction. The flexibility and convenience of online learning were cited as key factors contributing to its effectiveness. These findings corroborate the students' and lecturers' perceptions of the enhanced learning opportunities and tailored experiences that online teaching can provide. Overall, the combination of current and previous research supports the notion that online teaching and learning offer various advantages, such as increased accessibility, convenience, and personalized learning experiences, making it a viable and valuable alternative to traditional in-person classes.

6.3. Challenges faced by students and lecturers in the context of online learning at MUT

The discussion highlights the various challenges faced by both students and lecturers in the context of online teaching and learning. Students encountered difficulties related to technological limitations, distractions at home, load-shedding, insufficient data, connectivity issues, and the lack of traditional classroom dynamics. Lecturers, on the other hand, emphasized the importance of providing a human touch in the digital learning environment and the need for students to be adequately prepared to engage with online tools. Connectivity issues, data limitations, load shedding, and the digital divide emerged as common concerns affecting both students and lecturers. Proper training in using online tools was seen as essential for both parties. Monitoring student engagement and ensuring equal opportunities for all learners were emphasized to enhance the online learning experience. These challenges require targeted interventions and support to create a more effective and inclusive online learning environment. By addressing these issues, educational institutions can foster a more successful and engaging online teaching and learning experience for all stakeholders involved.

The findings from the current study regarding the disadvantages and challenges of online teaching and learning are consistent with previous research in the field. For instance, a study by [23] found that students' access to reliable internet and suitable devices for online learning was a major concern, which aligns with the current students' perspectives. Moreover, the challenges related to connectivity issues, distractions at home, and difficulties comprehending lectures due to online delivery were also highlighted in the previous study. Similarly, a research done in [24] identified the lack of face-to-face interaction and the absence of the traditional classroom setting as significant challenges of online teaching, supporting the lecturers' perspectives in the current study. The importance of providing proper training and support for both lecturers and students in using online

tools and platforms was emphasized in both the current and previous research. Overall, the combination of current findings and previous literature underscores the need to address technological limitations, data and connectivity issues, and the digital divide to enhance the effectiveness of online teaching and learning. Additionally, providing comprehensive training and support can help overcome the challenges associated with transitioning to online education and ensure a more successful and engaging learning experience for both students and lecturers.

6.4. Strategies to Enhance the Online Learning Experience for Students and Lecturers at MUT

The students and lecturers at the university offered valuable suggestions to enhance the online teaching and learning experience. Students emphasized the importance of providing better access to technology and internet resources, suggesting free or provided internet data to ensure seamless access to online classes, especially during load shedding or when students are off-campus. They also advocated for providing laptops or tablets to facilitate participation in online learning. Improving communication and engagement was another key aspect highlighted by students, with suggestions for more training in using online platforms and encouraging teachers to have online writing lessons to enhance their digital teaching skills. They recommended recording all online classes and making them available on platforms like Blackboard to support learning and revision. Addressing technical issues related to internet connectivity and ensuring audible and visually engaging lectures were also important for students. They proposed a balanced approach between online and in-person classes and provided more resources to support education. Time management was emphasized, with the suggestion of creating a well-coordinated timetable to avoid conflicting online class schedules.

For lecturers, enhancing the online teaching and learning experience involved improving technological infrastructure, ensuring stable internet connectivity, and providing access to computers for students in lecture halls and residences. They advocated for restructuring the timetable to accommodate online sessions and utilizing video conference learning to create interactive and engaging classes. To promote student participation and collaboration, they recommended subscribing to additional tools and resources that foster self-learning and engagement. The idea of mandating each student to have a specific laptop with minimum specifications was put forward to facilitate smooth online learning experiences. Comprehensive training and support for both students and lecturers on digital tools and online learning platforms were highlighted as essential for creating a dynamic and effective online learning environment. These suggestions underscore the significance of technology in modern education and the potential it holds in transforming the future of learning.

6.5. Assessing Student Engagement and Motivation in Online Learning Environments

The students' experiences with time management and motivation in online learning are diverse. While some students benefit from the flexibility of online classes, allowing them to manage their time efficiently and review recorded lectures, others need help to stay motivated and focused due to distractions at home and the lack of in-person interactions. To address these challenges, it is crucial to provide precise schedules and expectations, implement interactive teaching methods, and foster peer interactions through online discussions and group projects. Instructors can significantly support students by offering guidance and resources to enhance their online learning experience. Balancing

flexibility and structure is key to promoting effective time management and maintaining student motivation in the online learning environment.

Students' perspectives on the impact of online teaching and learning on their class engagement and participation vary. Some students find online classes beneficial, saving time and creating a comfortable environment for asking questions. Online platforms also boost confidence for shy individuals who find it easier to participate behind a screen. However, some students faced challenges in actively engaging during online classes and missed the in-person interactions of physical classrooms. Factors such as lack of motivation, fear of public speaking, and the convenience of not participating hinder some students' involvement in class discussions. Despite the mixed responses, it is clear that online learning has both positive and negative effects on student engagement. Interactive and engaging online experiences, anonymous questioning platforms, and support resources should be provided to address these challenges. Lecturers can also employ various teaching strategies to promote active participation and foster a conducive environment for meaningful class discussions, regardless of the mode of instruction.

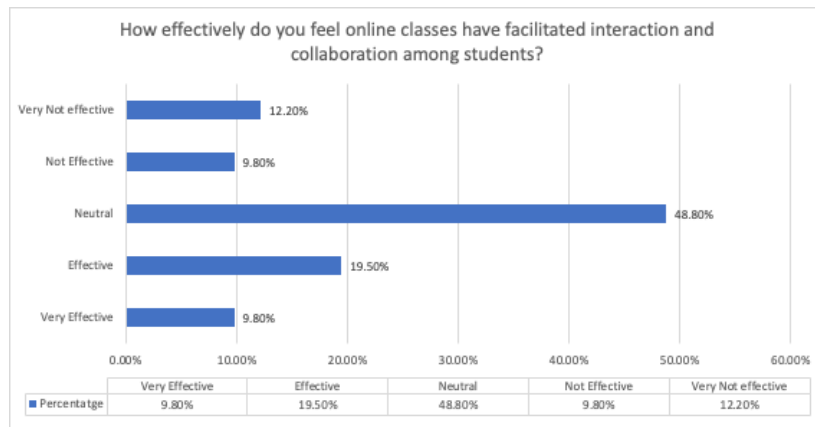


Figure 3: Collaboration and interactions among students

The current study's findings on students' perspectives regarding online teaching and learning align with previous research on the impact of virtual classrooms on student engagement and participation. Studies in [26] have shown that while some students view online classes positively, finding a more comfortable environment for participation, others need help in actively engaging, such as lack of motivation and fear of speaking in front of others. These findings highlight the dual nature of the online learning environment, where some students thrive while others struggle. To address these challenges and enhance student engagement, inclusive teaching strategies, and support are crucial. Creating interactive and engaging online learning experiences, providing platforms for anonymous questioning, and fostering a supportive learning environment can contribute to a more successful online teaching and learning experience for all students.

7. Implications and contributions to knowledge

Examining online learning at Mangosuthu University of Technology reveals two key contributions: a focus on students' needs for tailored online education and the development of educators to excel in online teaching. These aspects significantly enhance the online learning experience.

This study places significant importance on putting students at the center of online learning. Through our research at Mangosuthu University of Technology, we have highlighted the value of aligning digital education strategies with the preferences and requirements of modern learners. Given the evolving landscape of technology and learning, educational institutions must adjust their online offerings to create personalized, engaging, and interactive learning experiences. As students' expectations evolve in response to changing educational norms, the insights we have gathered emphasize the need to tailor online education to suit diverse learning styles and preferences, ultimately enhancing their academic journey.

Our exploration into how lecturers perceive online learning contributes valuable insights to the ongoing conversation about improving faculty development and training in virtual instruction. The findings bring attention to the achievements and challenges lecturers encounter as they navigate the intricacies of online teaching. As education continues to adapt to the digital era, educators are tasked with refining their abilities to effectively engage and guide students in the virtual realm. The study's insights can help design specialized programs that provide lecturers with the teaching strategies, technological know-how, and innovative methods required for successful online instruction.

8. Conclusion and recommendations

Conclusion:

This study shed light on students' and lecturers' experiences and perspectives regarding online learning at the university. The findings indicate a combination of successes and challenges associated with the adoption of online education. On the one side, the study reveals that proper training and support for lecturers and students can lead to more effective use of technology, improved learning outcomes, and a stronger sense of community in the virtual learning environment. However, challenges such as technical issues, inadequate infrastructure, and the need for continuous pedagogical training were also identified, impacting the overall online learning experience. Regardless of the challenges faced both lecturers and students accepted the transition to online learning.

Study limitations:

Our study aims to understand the various viewpoints on online learning at Mangosuthu University of Technology, focusing on a specific period. However, it's important to recognize that online education is constantly changing. This means that our findings might offer a snapshot rather than a full, in-depth understanding over time. Rapid technological advancements, shifts in teaching methods, and changes in the student population can all impact how perceptions evolve. To gain a more detailed insight into how these viewpoints change and respond to the ever-evolving online education environment, a longer-term study that collects data over multiple academic terms or years would be beneficial.

Our study was conducted at Mangosuthu University of Technology and is specific to this environment which means that the insights we have gathered reflect the experiences of its students and lecturers. While these insights hold great value within the university's setting, their relevance to a wider educational context requires thoughtful consideration. The university's unique combination of infrastructure, technology resources, and teaching methods might result in perspectives that differ

significantly from those found in other institutions dealing with their own distinct challenges and advantages. While our study enriches the understanding of online learning within the Mangosuthu University of Technology community, extending these findings to different institutions needs caution due to variations in factors like socio-economic conditions, culture, and available technology.

Recommendations:

The main recommendation of this study is centered on continuous Training and Support. This can be done by implementing regular training programs for both lecturers and students to enhance their digital literacy, pedagogical skills, and proficiency in using online learning tools and platforms. Within this training lecturers should be encouraged to embrace innovative teaching strategies that suit the online learning context, promoting interactive and engaging learning experiences.

The success of Online learning is also based on frequent monitoring and evaluation of how teaching and learning are conducted. It is recommended that the University takes on a proactive role in regularly assessing the effectiveness of online learning initiatives through feedback from both lecturers and students. This feedback can be used to identify and address issues pertaining to teaching and learning online.

Through continuous improvement and adaptability, the university can leverage the benefits of online learning and overcome the challenges to provide a high-quality and inclusive educational experience for all.

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