PERCEPTIONS OF USING E-LEARNING APPLICATIONS IN ACCOUNTING AT RESIDENTIAL UNIVERSITIES IN SOUTH AFRICA: A SOCIAL JUSTICE LENS

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ABSTRACT

In a post-COVID world, higher education institutions are debating several divergent delivery modes, searching for the optimal approach, with many calling for change and embracing technology in the current space. However, institutions (and their students) may only be somewhat ready for e-learning, especially in developing economies such as South Africa, with its many social justice challenges. The COVID-19 period forced higher education into the e-learning space, and many students were left behind due to a lack of access, inequity, challenges related to diversity, and the inability to participate in learning. This study aimed to analyse students' perceptions and experiences with using e-learning applications through the lens of social justice. Qualitative data were collected from accounting students registered at four South African residential universities (n = 1864). Themes emerged from the data analysis performed using a qualitative research analysis tool. These themes were classified and discussed under four social justice principles. The findings indicate a clear link between student experiences of e-learning and social justice, with some students finding successful participation in e-learning significantly more challenging than others. The nature of these challenges should be informative for institutions that are considering

moving learning to online modes. Higher education curriculum developers, policymakers, institutions, and academics are encouraged to consider social justice principles when considering adapting to online or blended learning.

Keywords: accounting education, e-learning, higher education, online learning, perceptions, South Africa, students, teaching, technology acceptance

INTRODUCTION

Post-COVID, modes of delivery and pedagogical approaches in higher education are changing, with many calling for universities to embrace the technological advances precipitated by the pandemic (Conrad et al. 2022; Czerniewicz et al. 2020; Menon and Motala 2022; Mudau et al. 2022; Zhang et al. 2022). However, in developing economies such as South Africa, higher education institutions and their students are faced with numerous social justice challenges. The study aimed to provide a "magnified view" of students' perceptions of using e-learning applications in accounting studies at residential universities in South Africa. To achieve this, a social justice theory and a qualitative research design were followed, thereby allowing the student's "voice" to be heard in the debate regarding the adoption of e-learning.

Higher education had been shifting towards e-learning for some time before the pandemic (Bond et al. 2020; Henderson, Selwyn, and Aston 2017; Ng'ambi et al. 2016). Since e-learning is no longer an emergency measure, higher education institutions are looking to maximise the benefits of teaching with technology while minimising any negative aspects experienced during the pandemic (Conrad et al. 2022; Menon and Motala 2022; Zhang et al. 2022). It is, therefore, useful to analyse students' perceptions of using e-learning applications during the pandemic to reflect on lessons learned and to inform policies, modes of delivery, and pedagogies (Menon and Motala 2022).

Research in social justice addresses differential access to power, prestige, and resources (Charmaz 2011). Social justice supports the view that everyone deserves equal social, political, and economic rights and opportunities (Hytten and Bettez 2011). The Department of Higher Education and Training (DHET 2013) in South Africa set out its vision for a post-school education system as one that enriches lives, promotes social justice, and overcomes historical inequalities. However, issues of access that pre-existed the crisis were exacerbated by the pandemic (Maity, Sahu, and Sen 2021; Cranfield et al. 2021). The goal of distance learning during the pandemic was that no student should be left behind (DHET 2020). Achieving digital equity requires not only access to hardware, software, and connectivity to the internet but also meaningful, high-quality, culturally relevant content (Willems, Farley, and Campbell 2019).

The current study analysed a diverse body of South African (SA) accounting students'

perceptions and experiences of using e-learning applications for online learning through the lens of social justice. Students' responses to open-ended questions were coded into themes and then classified by four social justice theory principles. The following research question was addressed:

- What are the positive and negative perceptions and experiences of accounting students of using e-learning applications?

Students' e-learning experiences may provide valuable insights for higher education policymakers, institutions, curriculum developers, and academics in considering or adapting an online or blended learning mode. By applying social justice principles to e-learning, this study reflects on the lessons learned during the pandemic and contributes to an understanding of more equitable and inclusive online learning environments.

LITERATURE REVIEW

E-learning is a broad term for all forms of electronically supported instruction (Zhang et al. 2022). In this study, e-learning is defined as a form of online learning conducted via electronic media, typically the Internet. E-learning applications are interactive online services that provide learners with information, tools, and resources that support and enhance educational delivery and management (Kumar Basak, Wotto, and Bélanger 2018; Terblanche et al. 2023). During the pandemic, e-learning replaced campus-based teaching for students registered at residential universities and was referred to as "emergency remote teaching".

Recent quantitative research has applied technology-acceptance models to understand students' intentions in using technology. Findings indicate that students' acceptance of e-learning depends on how easy they find it to use the technology and how useful they believe it will be to their learning (Al-Emran and Granić 2021; Granić and Marangunić 2019). However, to truly understand students' lived experiences it is important to understand students' perceptions of online learning (Becker and Schad 2022). Student engagement in learning is shaped not only by the mode of delivery but also by a complex interplay of relationships, learning activities, and the learning environment (Bond et al. 2020).

Prior studies of student experiences of online distance learning identified self-regulation skills such as time management, balancing academic and personal life, and taking personal responsibility for learning; developing an online community including accessibility of lecturers and connection with peers; and support from family and friends were needed to deal with the lack of structure and proximity of an online learning environment (Becker and Schad 2022;

Blackmon and Major 2012). Students who experience e-learning as a replacement for or addition to face-to-face learning, report benefits around accessing course information, administration, and support. However, workload was a significant issue, possibly capturing concern about adding e-learning activities to existing face-to-face activities (Ellis, Ginns, and Piggott 2009). In addition, when new or unusual pedagogies were implemented, students experience this as an emotional experience and raised issues of time management and frustration (Sharpe and Benfield, 2005). Clear communication of the teaching and learning process and how e-learning fits into it could improve the quality of students' experiences of supplementary e-learning (Ellis et al. 2009; Ellis and Goodyear 2013). In addition, students and teachers may perceive e-learning differently. For example, teachers may be concerned that students do not have sufficient ICT skills but students may be more concerned with their ability to learn online (Sharpe and Benfield 2005). It is therefore essential to examine students' perceptions of their e-learning experiences.

During the pandemic, e-learning replaced face-to-face teaching for many students. Students at a Canadian university reported issues with information overload, the quality of teaching and internet connectivity, and the format of classes (Conrad et al. 2022). Asynchronous classes were expected to increase flexibility for students, but students felt isolated by the lack of social presence and interaction (Conrad et al. 2022). Laksana (2020) reported on the perception of students living in areas with minimal internet access. Students were generally positive about the quality of learning material, adequacy of gadgets, lecturer responsiveness, and flexibility, but generally negative about access to the internet, the cost of online learning, and the telecommunications infrastructure to support online learning.

In studies conducted on SA students' perceptions of online learning during COVID, students identified access to the internet, sufficient bandwidth, and suitable devices as critical requirements for online learning (Joaquim et al. 2022; Naidoo 2022). Most preferred to use smartphones and data bundles specifically for smartphones to access e-learning, and WhatsApp and Facebook were preferred platforms for communication (Yu and Motlhabane 2022). The use of document cameras and the online community were perceived positively (Naidoo 2022), while video-conferencing platforms were perceived negatively by some due to a lack of prior knowledge in using such platforms, the cost of data, and the requirement for a computer. Students cited as benefits the flexibility and convenience in selecting the time and place of study and that the effectiveness of online learning depends on the nature of the content, instructor competence, infrastructure availability, follow-up, and student readiness (Joaquim et al. 2022). Family demands, distractions while studying remotely, and issues of managing access and passwords for learning management systems (LMS) were also negatively perceived (Naidoo

2022).

The COVID-19 period forced higher education into the e-learning space, and many students were left behind due to a lack of access, inequity, challenges related to diversity, and the inability to participate in learning. However, higher education institutions in South Africa worked tirelessly for pedagogic continuity and inclusion during the pandemic. Securing and sustaining these gains in the post-pandemic era, or when faced with new challenges, are crucial for social justice in higher education (Menon and Motala 2022). In a literature review on online learning in higher education during the pandemic, Zhang et al. (2022) found that research was distributed across the Global North and Global South, with 62 per cent emanating from the North. Most researchers used quantitative methods such as structural equation modelling (Valverde-Berrocoso et al. 2020), and the most researched disciplines were medical and chemistry education (Zhang et al. 2022). The current study contributes to this body of literature as it was based on students' experiences in a developing country in the Global South. In addition, it followed a qualitative method and focused on accounting students.

SOCIAL JUSTICE THEORY

Awareness of social justice grew during the Industrial Revolution and later gained focus when people identified with the moral obligation to work for the common good (Felber 2019). John Rawls outlined his vision of "justice as fairness" in his seminal work *A Theory of Justice* in 1971 (Sen 2009). Singh (2011) describes social justice as rooted in theological, political, philosophical, and ethical conceptions of the distribution and recognition of what is fair in a society. Such distribution and recognition include what is beneficial and valued in society but also enable access and choices (Singh 2011). The equal and fair distribution of material and social resources is often framed as "equity" – who gets what, when, and how. However, equity written into policies is often viewed as weak, as access requires examining the social and economic conditions that permit such access (Rizvi and Lingard 2011). Social justice research addresses differential access to power, prestige, and resources (Charmaz 2011).

In the context of higher education, Craven (2012) stated that social justice is fair access to rewards for all individuals within a group and society, and fairness pertains to a world where alternatives are available to everyone (Sen 2009). Issues such as insufficient funds, poor infrastructure, and lack of skills, which emphasise inequality and exclusion, have been exacerbated by the technological advances of the Fourth Industrial Revolution (Kayembe and Nel 2019). Higher education institutions have not sufficiently examined their achievement of social justice, including how barriers and incentives for socially disadvantaged groups to enter higher education and the economic challenges of funding are being addressed (Brennan and

Naidoo 2008). As a developing economy, South Africa is known for its unequal socio-economic environment, where access to technology remains a challenge for many students.

Within the agenda of social transformation, access to technology, globalisation, and innovation support student learning for the future. Communication technologies and the internet have transformed the education landscape, and, in some cases, the challenges they present to social justice seem to outweigh the opportunities (Osei-Kofi, Shahjahan, and Patton 2010). However, the work for social justice and e-learning in higher education should continue as progressive change that is genuinely inclusive (Osei-Kofi et al. 2010). According to Chikerema, Chikari, and Chikerema (2016), the digital learner requires pedagogies that support motivation, engagement, and an enhanced learning experience. Yet, in the development of accessible teaching and learning resources, aspects such as equity, equal opportunity, diversity, and social inclusion are often disregarded. Chikerema et al. (2016) call on policymakers to include social justice principles in higher education e-learning policies.

Social justice theory concerns the impact and implications of equity, equality and inequities, privilege and poverty, access and barriers, individual rights, and the collective good (Charmaz 2011; Nussbaum 2002). The broad lens of the social justice theory provides a framework to evaluate how students' access to technology (or not) results in social inclusion for some and exclusion for others. The values of social justice are established on a set of ethical principles for a just society (Hytten and Bettez 2011). These include access, equity, diversity, and participation.

1. *Access* refers to the extent to which different socio-economic groups receive equal access to resources and services. In e-learning, access refers to whether all students in the class have equal access to devices and the internet for engagement and learning.
2. *Equity* refers to how individuals are given tools specific to their needs and socio-economic status. Equity does not mean "equality", as the needs of one group may differ from those of another. In e-learning, equity refers to providing support to students to overcome systemic barriers and strive for equality in outcomes.
3. *Participation* refers to how everyone is given a voice and opportunity to participate in activities, such as learning. Participation includes being able to engage and ask questions. In e-learning, students experience participation when they can ask questions when they miss something or do not understand.
4. *Diversity* refers to understanding the value of social, economic, and cultural differences among different groups and appreciating that some groups may face more social barriers. Diversity refers to acknowledging that some students may have different learning styles

while others may not have a quiet space for online learning.

Using the principles of social justice, this study analysed and interpreted students' e-learning experiences regarding access to and engagement with technology. As far as the authors are aware, this is the first study to do so with a specific focus on accounting students at residential universities in South Africa. A study by Fynn and Mashile (2022) of students at an open, distance and e-learning institution specifically addressed the impact of the shift to continuous online assessment. They identified increased workload as an issue, with inequality exacerbated by inadequate access to devices and the internet, and for students who worked or managed households. Other studies focused on specific student groups, such as those with mental health challenges (Chiwandire 2022) and visually impaired students (Amponsah and Bekele 2022). This study has a broader focus on student perceptions of e-learning in the online environment.

RESEARCH METHODOLOGY

The study followed an inductive, qualitative design aligned to an interpretivist paradigm in combining a qualitative and quantitative content analysis. Students' commentary about their experiences with using e-learning applications was coded and analysed through an open coding process. Before conducting the study, ethical clearance was obtained from all the universities under review.

Participants

The participants were undergraduate and postgraduate students studying towards an accounting qualification at one of four SA universities. These universities were selected to provide a representative sample of the public residential universities in South Africa. Distance universities were not included as distance students may use online learning as a norm.

Research instrument and questions

This study formed part of a larger study in which the extended Unified Theory of Acceptance and Use of Technology (UTAUT2) questionnaire (Venkatesh, Thong, and Xu 2012) was adapted for the higher education environment. The aim of the adaptation was to examine the relevance of the various determinants of accounting students' acceptance of e-learning applications in an online learning environment, the quantitative results of which have been reported by Terblanche et al. (2023). Students were asked in the questionnaire to voluntarily comment on any positive and negative aspects (respectively) regarding their experiences with using e-learning applications, allowing them to voice their opinions on this issue. The rich

content obtained through these open-ended, qualitative questions is reported in the current article.

Data collection and sample

Data were collected from four SA universities with a population of 10 235 accounting students. The qualitative data collected from the four universities were combined into a spreadsheet consisting of 3 654 fields of commentary (including both positive and negative views), resulting in usable responses from 1 864 students. This represented a response rate of 18 per cent, which was considered appropriate for the type of study (refer Terblanche et al. 2023).

Data analysis, coding, and validity

The qualitative data were analysed both qualitatively and quantitatively using ATLAS.ti version 23.0.8. The data were coded by one of the researchers through an open coding process resulting in 84 codes. A second researcher reviewed and verified the codes to exclude any bias in the coding. Keywords, patterns, and common themes were identified in the coding of the data. Codes were assigned to the participants' responses to the open-ended questions, resulting in the assignment of 6 531 quotations to 84 codes.

The social justice lens was applied by scrutinising the quotations within each code and allocating the codes to one of the four social justice principles.[1] The generic or neutral codes that did not relate to any social justice principles were removed. After removing neutral codes and repeating some codes under more than one social justice principle, 84 codes remained (see Appendix A). These results are discussed in the next section.

FINDINGS AND DISCUSSION

The 84 codes were categorised into positive, negative, and general (neutral) code groups, resulting in 57 per cent negative comments and 43 per cent positive comments.[2] This suggests that participants held somewhat more negative than positive sentiments towards using e-learning applications, at least to the extent that the questions, being open-ended, were able to elicit useful/relevant responses from the participants. The allocation of the codes to each of the four social justice principles – access, equity, diversity, and participation – is discussed below.

Access

Access refers to the extent to which participants have access to e-learning resources and services. Most codes relating to access were negative. The participants' main concerns were

internet connectivity (341 quotations) and the cost of data (111). The regular electricity outages experienced in South Africa also reduced access to e-learning applications for many participants (71). Fifty-five participants expressed frustration over technological malfunctions or the university's online LMS. Participants reported challenges with their electronic devices (18), poor sound or video quality (11), and delays in the availability of online learning material (10).

To illustrate, a verbatim quote [393.5] indicating a negative perception regarding "Access" as per code "Additional cost implications (e.g., data)" is given:

> "Data is expensive and videos are large; thus the data we receive from the university is not always enough and buying data is not possible for everyone. Also, if you do not have a printer/money for ink/paper it is even more difficult to study, some have it easier than others."

On the positive side, 136 participants mentioned that the e-learning environment resulted in better and more accessible learning resources. Participants appreciated the time saved travelling to campus (23), and eight obtained part-time employment to supplement their income.

A verbatim quote [650:3] indicating a positive perception regarding "Access" as per code "Can work part-time while studying":

> "I get to do the work on my own time schedule and therefore I was able to work during the day and study in the evening and still be able to get all of my things done."

Prior literature reported similar issues (Joaquim et al. 2022; Fynn and Mashile 2022; Naidoo 2022). The current study adds negative perceptions relating to the impact of regular electricity outages, the quality of online recorded material, and delays in the availability of resources, which may have been specific to the lockdown period but should be attended to if students are to perceive e-learning positively.

Figure 1 presents a word cloud of the most quoted words in codes allocated to "Access" (threshold = 15 occurrences or more). The regular occurrence of "connectivity", "network", "internet", and "data" support the allocation of these codes to "Access". The emphasis on "sometimes" may indicate that access is not "always" possible.

These responses indicate that efforts should be made to provide equitable access to digital devices and reliable internet connectivity for all students, taking into account challenges associated with cost and connectivity.

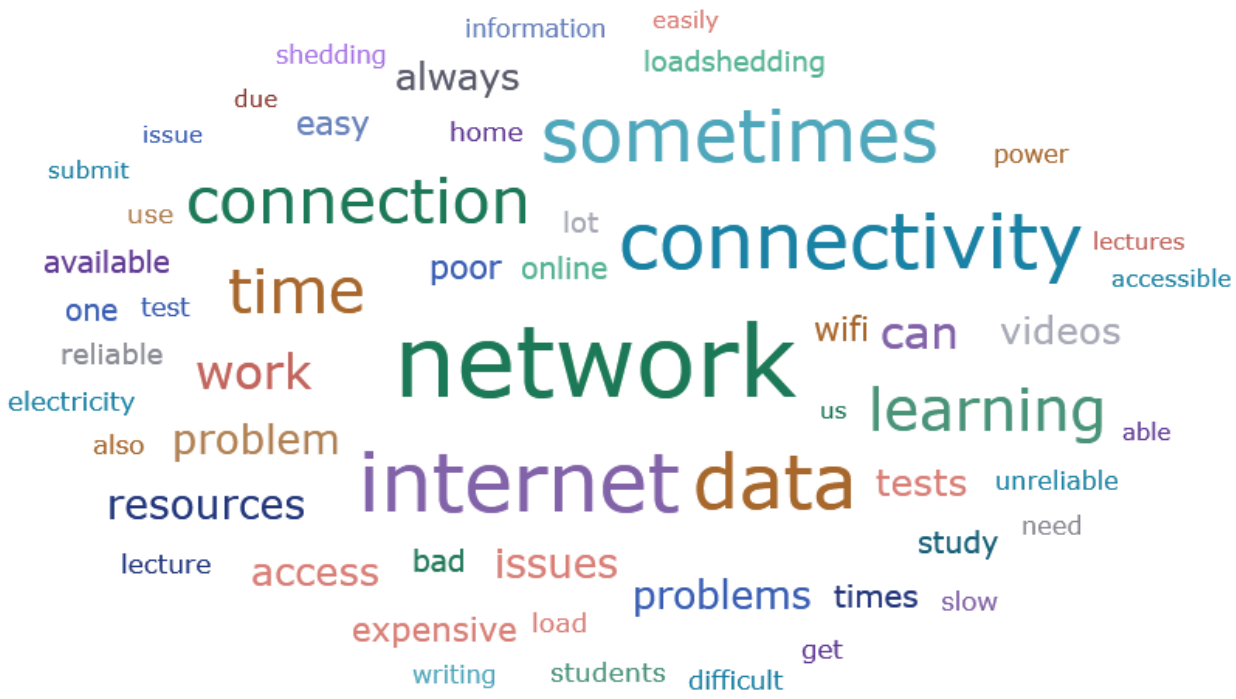

Figure 1: Word cloud for the "Access" social justice principle

Equity

Equity refers to whether individuals are given support and tools to overcome challenges they experience based on their background and socio-economic status. Responses coded to equity were slightly more negative than positive. The most positively perceived areas were that e-learning applications improved participants' digital acumen (64 quotations) and were easy to use (59). In contrast, 10 participants reported that the applications were difficult to use, while six participants advised that the university's online learning schedule was not optimal. Participants also felt that online learning improved a variety of life skills or soft skills (57). Thirteen participants reported that it is cost-effective to study from home and that it allows them to spend more time with their families (7).

A verbatim quote [1721:3] indicating a positive perception regarding "Equity" as per code "Ease of using e-learning applications":

> "[LMS name omitted] is a really great platform that is easy to navigate and has made my e-learning experience relatively simple."

Participants stated that assessments were less controlled in the online environment (21) and eight participants mentioned the benefit of receiving more time to complete assessments. Based on their commentary, they perceived this positively – possibly because participants saw this as

an opportunity to obtain better marks in the short term. In contrast, 27 participants felt that the online environment created leniency that would not have existed in the face-to-face environment. This negatively impacted learning and resulted in inflated marks, which may impact job readiness, although two participants felt that e-learning enhanced their thinking skills. Other participants raised concerns related to the number of assessments, their weighting, and how they were marked or graded (36), while 16 participants felt that the assessments in the online environment were difficult.

The most reported negative aspect relating to equity was unsatisfactory learning resources (58). Thirty-seven participants mentioned that it was difficult for them to adjust to e-learning, while 11 participants shared this sentiment but with reference to their disadvantaged backgrounds or social circumstances. Thirty-four participants felt that their university or lecturers did not demonstrate sufficient understanding of these difficulties. Some participants pointed out that e-learning is not value for money, given that they paid for face-to-face tuition (18).

Institutions and academics need to provide support to students by differentiating learning opportunities and resources, activities and assessments to the unique characteristics and needs of students (OECD 2012). Lecturers experienced in designing and delivering online courses with direct instructions to students in promoting self-regulated learning strategies (Cherif et al. 2019). This creates a sense of community and provides socio-emotional support to students and instructors during times of uncertainty (Shin and Hickey 2021), which are some of the ways that inequities may be overcome.

A verbatim quote [729:4] indicating a negative perception regarding "Equity" as per code "Lack of understanding/mercy/concessions by university/lecturers":

> "We get penalised for things out of our control. We get overwhelmed with work. Assessments are set without consideration of the fact that we were basically teaching ourselves. It's as though it's 'business as usual'."

Figure 2 presents a word cloud for "Equity" (threshold = 11 occurrences or more). Students' perceptions of online "learning" and "tests" as "easy" or "difficult" were possibly moderated by their circumstances, with "time" being important to students.

In summary, "equity" e-learning involves addressing systemic barriers that students may experience and designing online courses and using platforms with an inclusive approach. This includes creating accessible content and appropriate assessments that adequately prepare students for the workplace and the demands of the digital age.

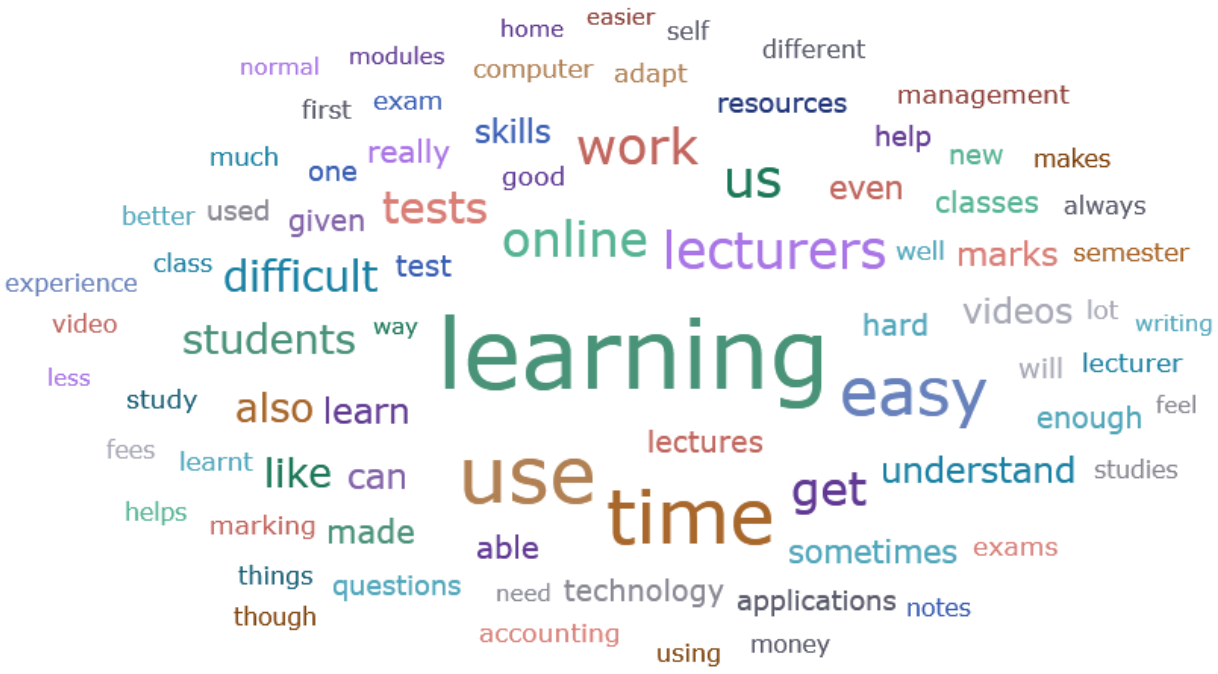

Figure 2: Word cloud for the "Equity" social justice principle

Participation

Students experience participation when they feel that they have a voice in how they learn and can ask questions when they miss something or do not understand. The most reported aspect of e-learning (423 quotations) is the opportunity to work at one's own pace and to pause and rewatch videos to master content. Related to this is the chance to learn at a faster pace allowing time for other things (71). The online environment improved communication generally and made lecturers more accessible (43), although some participants were irritated with overcrowded WhatsApp groups (5). In contrast, some participants felt that the university or lecturers did not communicate adequately during a time of uncertainty (21). Participants praised lecturers for content well-delivered and effective online teaching (31); others expressed gratitude for the university's efforts (31) in implementing online learning, which saved the academic year (29).

Participants found online learning convenient (23) and that it created opportunities for collaborative learning (5), with regular quizzes being helpful for learning (4). It also allowed participants to do research (2). One participant commented that one does not have to wake up early, and three participants liked the fact that they did not have to go to class.

A verbatim quote [469:3] indicating a positive perception regarding "Participation" as per code "Collaborative learning opportunities":

> "I am able to get quicker explanations from friends doing the same course using WhatsApp messages/voice notes as opposed to waiting on a response from the [LMS] Q&A function."

The most negative aspects of participation are related to interaction. Online learning felt impersonal and isolating, with limited interaction with lecturers and peers (148). Participants experienced challenges in reaching lecturers to ask questions or to consult about work (146). They were unable to ask questions during class (29), learn from peers (18) or do group work (2), which could be why 24 participants expressed a preference for face-to-face tuition.

A verbatim quote [1032:7] indicating a negative perception regarding "Participation" as per code "Difficult to do group work":

> "They were assignments and a research proposal which we had to complete being so far away from our peers posed as a challenge on its own."

Many participants (97) experienced stress during assessments due to challenges with technology and time constraints to submit. Four participants reported specific problems with the readability or completeness of their submissions. Some participants (48) felt that some lecturers put in insufficient effort to the point that specific lecturers or subjects were singled out. Participants also mentioned that course content or online resources were not well structured (13) and that they had difficulties learning from a screen (12). They cited problems with the lack of hardcopy assessments (7) and reported slow or inadequate feedback on assessments (4).

Participation has been defined in prior literature as doing, talking, thinking, and feeling (Kebritchi, Lipschuetz, and Santiague 2017). Student participation underpins a student-centred pedagogical approach, whether the delivery mode is online, face-to-face or blended. The change in the delivery mode investigated in this study required a more student-centred learning approach and possibly enhanced the doing, thinking and feeling aspects of participation through, for example, being able to watch videos at their own pace, as found in a flipped classroom setting (Zainuddin et al. 2019). However, the "talking" aspect of participation, which has been shown to influence the learning performance of accounting students positively (Terblanche et al. 2021), was negatively affected.

A visualisation of word frequencies (threshold = 15 occurrences) for the "Participation" theme are presented in the word cloud in Figure 3. In the "Equity" theme "understand" was used in relation to mercy, but here students used "understand" in relation to "time", "work", "learning", "lectures", "pace", "videos", "questions", "face" and "interaction".

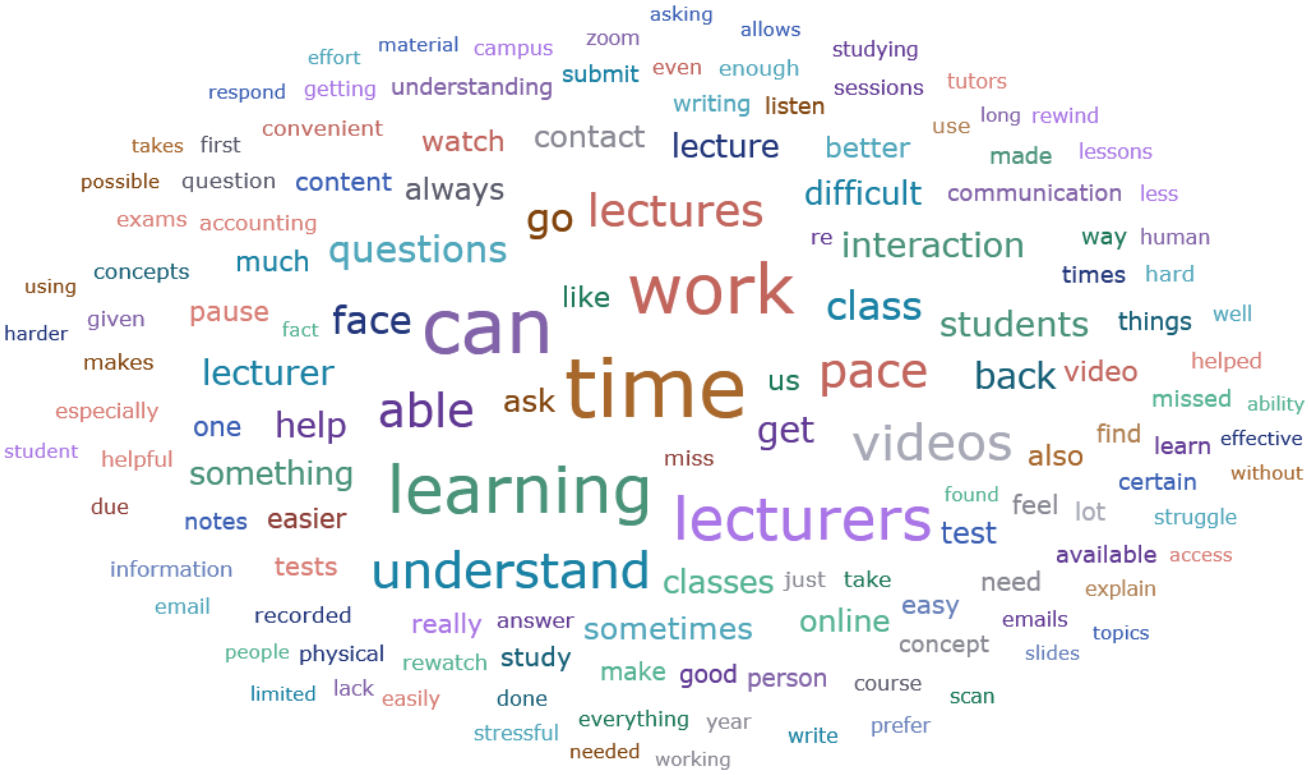

Figure 3: Word cloud for the “Participation” social justice principle

Thus, providing adequate support to students is essential for participation in e-learning. This includes encouraging engagement through personal interaction and feedback, space to ask questions and group work.

Diversity

Diversity in e-learning refers to accommodating students with different learning styles and not assuming that all students are able to learn independently. Diversity in socio-economic environments is evident in that some students may not have a quiet space for online learning while others celebrate being able to work from anywhere.[3] A high number of participants (328 quotations) perceived online learning to be more time efficient and flexible or that it allowed them to be more productive in their learning. A further 132 quotations related to e-learning being an effective approach, with participants mentioning that their marks had improved. Participants perceived as benefits the promotion of independent and self-directed learning (56), being in a comfortable place to study at home (33), being provided with a more structured/organised learning schedule (27), enjoyment of e-learning (22) and reduced stress or anxiety (7). Being able to study from anywhere is an advantage (24), with eight participants arguing that e-learning is the way of the future and six even requesting their university to continue with e-learning, possibly influenced by their quick adaptation to this learning mode

(3). Others reported that e-learning works well for introverts (6) and that it is kinder to the environment (5). Two participants liked the reminders that are given for online assessment submissions.

A verbatim quote [232:3] indicating a positive perception regarding "Diversity" as per code "Effective learning approach/marks improved":

> "E-learning helps me to understand and pass. If it was not for e-learning I was going to fail accounting."

Many participants (284) found e-learning less effective than face-to-face learning, with some reporting a drop in their marks. Participants struggled with managing themselves and their time due to distractions in the home environment or lacking motivation to study (180), which may partially be explained by some participants finding e-learning unenjoyable or boring (27). In contrast to their peers who felt that e-learning was faster, 156 participants felt that learning online was slower or that there was too much work to get through in the allocated time. For some participants (33), their home environments were not conducive to studying or taking online assessments.

Twenty-seven participants perceived a negative impact of screen time on their health and eyesight, or on their emotional well-being or resilience (21), possibly exacerbated by missing the student life and social interaction with peers and friends (26). Three participants mentioned the lack of boundaries between work and home life.

A verbatim quote [491:7] indicating a negative perception regarding "Diversity" as per code "Screen time impact on health/eyesight":

> "My eyes get sore and red because of all the screen time. Lack of physical movement because we are no longer on campus."

Dishonesty is of concern in an online assessment environment, so it is encouraging that some participants raised this, albeit only 16. It may be human nature to keep silent about matters that benefit an individual or their peers, even if students know that the morality thereof is in question.

Prior research used demographic characteristics (Rizvi, Rienties, and Khoja 2019) and cultural elements such as individualism, pragmatism, power distance, and indulgence (Gómez-Rey, Barbera, and Fernández-Navarro 2016) to explore diversity in online learning. Although not specifically addressed in this study, these characteristics may underpin the reported perceptions in this study regarding flexibility, self-management, independent learning,

structured learning schedules, lack of socialising and preference for face-to-face interaction. As identified by Chiwandire (2022) and Amponsah and Bekele (2022), participants in this study raised mental health issues and the impact of increased screen time on their health and eyesight.

The word cloud in Figure 4 presents the "Diversity" of student experiences with many words, including "schedule", "productive", "behind", "physical", "flexible", "home", and "classes", being used at least 21 times. E-learning designers and teachers should respect the diverse perspectives of students and deliver culturally sensitive instruction, including flexibility and a wide range of learning activities (Gómez-Rey et al. 2016).

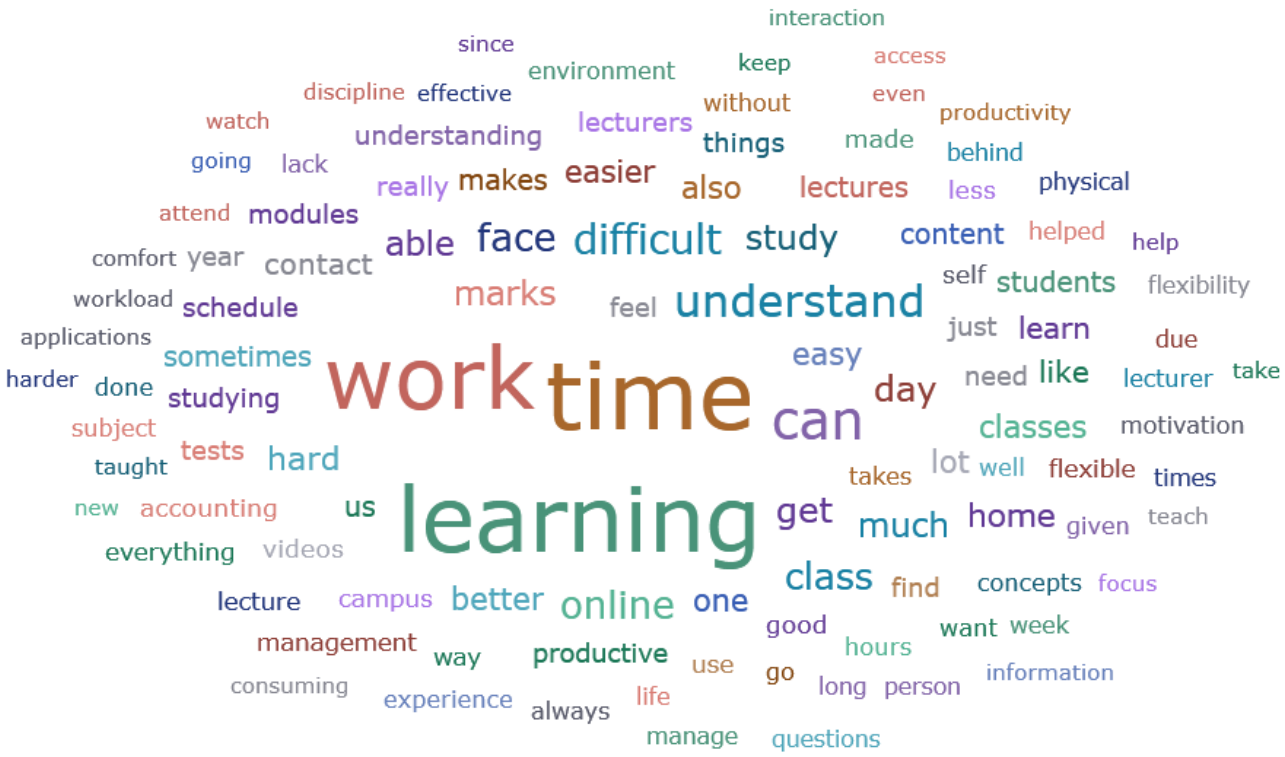

Figure 4: Word cloud for the "Diversity" social justice principle

While e-learning platforms often assume independent and self-directed learning, several students indicated this as a challenge. Diverse learning styles, home and study environments need consideration to give marginalised groups a voice and agency in e-learning policies and practices.

CONCLUSION

The purpose of this study was to analyse a diverse body of SA accounting students' perceptions and experiences of using e-learning applications for online learning through the lens of social justice. The main results and supplementary analysis suggest that participating students held

somewhat more negative than positive sentiments towards using e-learning applications.

The 84 codes identified in the data were categorised into four social justice principles. In the case of *access* (the extent to which students have access to e-learning resources and services), the negatives far outweigh the positives, with access to the internet, the cost of data, and electricity outages outweighing benefits such as more accessible and better learning resources. For *equity* (whether individuals are given tools and support to overcome their challenges), some students felt able to benefit from improved skills and ease of use of e-learning applications, while others felt the need for more support. Regarding *participation* (whether everyone is given a voice and opportunity to participate in activities), many students mentioned the benefits of working at their own pace and being able to rewatch videos, while the lack of interaction was raised as a significant negative factor of e-learning. Lastly, concerning *diversity* (relating to students having different learning styles or facing different social barriers), some students developed independent learning skills and found e-learning more efficient and productive, while others found it less effective and harder to manage themselves and their time and adapt to e-learning.

Lessons learned include that access to the resources required for effective e-learning remains a challenge in South Africa. At the same time, students have different learning styles and socio-economic backgrounds that are not always conducive to e-learning. More specific to the accounting discipline are challenges associated with participation, engagement with lecturers, and assessment. The findings were based on experiences and perceptions of accounting students at four SA universities. Approaches may differ in other disciplines. However, the reflections of student participants provide valuable insights, and by prioritising social justice in e-learning participation, educational institutions and platforms are encouraged to work towards creating a more inclusive and equitable learning environment that benefits all learners, regardless of their backgrounds or circumstances, and regardless of the subject discipline.

The study contributes to the literature in several ways. It is essential for universities and lecturers to hear students' voices to enhance their social capital in future educational settings (Mbati 2021). Student agency involves students' being active actors in their own learning (Marín, de Benito Crosetti, and Darder 2020). When students lack opportunities for engagement, agency has not been transferred to the students (Moses et al. 2020). The nature of the benefits and challenges that emerged from the findings should be informative for institutions considering the move to online learning or blended modes of delivery. The study has implications for institutional policies, such as (but not limited to) enhancing student access to technology and controlling the assessment environment to maintain the integrity of assessment

results, as highlighted by this study. It is further recommended that curriculum developers and academics consider the social justice issues highlighted in this study in adapting their pedagogical approaches.

Recommendations for further research include broadening the scope to other SA universities and disciplines to obtain a more holistic view of students' perceptions and experiences of e-learning. The qualitative analysis could be extended to association with, for example, demographic characteristics and academic performance.

NOTES

1. For illustrative purposes, Appendix A contains a selection of participating students' quotations under each social justice principle.
2. As a supplement to the researcher-determined analysis, automated sentiment analysis was performed using ATLAS.ti to classify the emotion of participants' comments as positive, negative, or neutral. The software extracted sentiments from 4 421 quotations which included 346 positive, 863 negative, and 3 213 neutral sentiments.
3. Where participants' quotes were coded to both diversity and another social justice principle, these quotes are not discussed here again.

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Appendix A: Codes and quotation frequencies: Open-ended questions

	Code	Code group	Number of quotations (frequency)
	SOCIAL JUSTICE PRINCIPLE: ACCESS		
1	Internet connectivity/speed issues	Negative	341
2	More/better/accessible learning resources	Positive	136
3	Additional cost implications (e.g. data)	Negative	111
4	Loadshedding (electricity outages)	Negative	71
5	Technology or LMS issues / malfunctions	Negative	55
6	Saves travel time	Positive	23
7	Inadequate electronic device(s)	Negative	18
8	Poor sound or video quality	Negative	11
9	Delays in availability of resources/materials	Negative	10
10	Can work part-time while studying	Positive	8
	SOCIAL JUSTICE PRINCIPLE: EQUITY		
11	Improved tech/digital/IT skills	Positive	64
12	Ease of using e-learning applications	Positive	59
13	Unsatisfactory learning resources	Negative	58
14	Improved life/soft skills	Positive	57
15	Difficult adjusting to e-learning	Negative	37
16	General assessment concerns (quantity, grading, weights)	Negative	36
17	Lack of understanding/mercy/concessions by university/ lecturers	Negative	34
18	Too lenient/no deep learning/inflated marks/job readiness	Negative	27
19	Less controlled assessment (positively perceived)	Positive	21
20	Not value for money/paid for face-to-face classes	Negative	18
21	Difficult assessments	Negative	16
22	Less costly to study from home	Positive	13
23	Struggles of disadvantaged students	Negative	11
24	Difficult to use applications	Negative	10
25	More time to complete assessments	Positive	8
26	More time with family	Positive	7
27	University learning schedule/timetable not optimal	Negative	6
28	Enhanced thinking skills	Positive	2
	SOCIAL JUSTICE PRINCIPLE: PARTICIPATION		
29	Work at own pace/ability to pause/rewatch/revise	Positive	423
30	Impersonal/isolated, limited interaction with lecturers/peers	Negative	148
31	Difficulties/delays in communicating/consulting with lecturers/tutors	Negative	146
32	Insufficient time/stress/issues to submit online assessments	Negative	97
33	Faster/have more/enough time available	Positive	71
34	Lack of effort by some lecturers	Negative	48
35	Online improved communication/access to lecturers/more channels	Positive	43
36	Content well delivered/effective teaching	Positive	31
37	Grateful for university's efforts	Positive	31
38	Cannot ask questions during lectures	Negative	29
39	Saved the academic year/learning could continue	Positive	29
40	Prefer face-to-face interaction	Negative	24
41	Convenient	Positive	23
42	Inadequate/delayed communication from university/ lecturers	Negative	21

	Code	Code group	Number of quotations (frequency)
43	Lack of peer-learning opportunities	Negative	18
44	Course content/resources not well structured/inconsistent	Negative	13
45	Difficult to learn from a screen	Negative	12
46	No hardcopy tests	Negative	7
47	Collaborative learning opportunities	Positive	5
48	WhatsApp groups exploding/crowded	Negative	5
39	Problems with readability/completeness of submissions	Negative	4
50	Regular quizzes helpful	Positive	4
52	Slow/inadequate feedback on assessments	Negative	4
52	Don’t have to go to class	Positive	3
53	Can do research	Positive	2
54	Difficult to do group work	Negative	2
55	Don’t have to wake up early	Positive	1
	SOCIAL JUSTICE PRINCIPLE: DIVERSITY		
56	Time efficient/flexible/productive	Positive	328
57	Less effective than F2F contact/hard to learn/marks dropped (some or all modules)	Negative	284
58	Struggles with self/time management/motivation/distractions	Negative	180
59	Work/cognitive overload/slower to learn online	Negative	156
60	Effective learning approach/marks improved	Positive	132
61	Promotes independent learning skills	Positive	56
62	Difficult adjusting to e-learning	Negative	37
63	Nice/comfortable to learn from home	Positive	33
64	Unconducive study/assessment environment at home	Negative	33
65	More structured/organised learning schedule/platform	Positive	27
66	Not enjoyable/boring	Negative	27
67	Screen time impact on health/eyesight	Negative	27
68	No student life/lack of socialising	Negative	26
69	Can work from anywhere	Positive	24
70	Prefer face-to-face interaction	Negative	24
71	Saves travel time	Positive	23
72	More enjoyable	Positive	22
73	Emotional/wellbeing or resilience issues	Negative	21
74	Difficult assessments	Negative	16
75	Enables cheating/dishonesty	Negative	16
76	The way of the future	Positive	8
77	Reduced stress/anxiety	Positive	7
78	Request to continue with online learning	General	6
79	University learning schedule/timetable not optimal	Negative	6
80	Works well for introverts	Positive	6
81	Saves paper/kinder to environment	Positive	5
82	Adapted quickly	Positive	3
83	No boundaries between work and home/rest	Negative	3
84	Reminders given	Positive	2