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Accounting Education in Transition in South Africa: Perceived Challenges, Student Engagement, and Academic Performance in Online and In-Person Learning Environments

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Abstract

The swift transition to digital education has significantly altered pedagogical approaches within higher education, particularly in disciplines such as Accounting. This research aims to investigate the perceived challenges encountered by students in online learning environments as compared to traditional face-to-face learning within a South African university context. Utilizing the Community of Inquiry (CoI) framework, a qualitative research design was deployed, involving semi-structured interviews to obtain comprehensive insights from students. The collected data were subjected to thematic analysis, allowing for the categorization of similar responses to discern overarching patterns and themes. The findings indicate substantial distinctions between the two educational modalities. Although online learning is appreciated for its inherent flexibility and convenience, students reported experiencing challenges related to limited engagement, connectivity issues, and diminished interactions with peers and instructors. Conversely, face-to-face learning is regarded as beneficial for enhancing comprehension through direct engagement and immediate feedback, albeit it lacks the flexibility afforded by online platforms. The study concludes that neither modality can be deemed universally superior; both possess unique advantages and disadvantages. The implications of these findings suggest that higher education institutions should embrace a blended learning approach that synthesizes the strengths of both online and traditional learning formats. Furthermore, it is recommended that institutions invest in robust digital infrastructure, offer targeted support services for students, and develop flexible learning policies that cater to diverse student needs, thereby enhancing overall academic experiences.

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INTRODUCTION

The existing literature underscores the global dimensions of both online and traditional face-to-face accounting education (McCarthy, Kusaila & Grasso, 2019; Riggs, 2023). However, this revision shifts the focus to the specific experiences of final-year accounting students in South Africa, illuminating their perceived challenges, levels of engagement, and adaptability within both online and conventional learning contexts. Such alignment ensures that the reviewed literature directly reinforces the research objectives while providing a robust justification for the study. Moreover, the analysis of student performance and its influencing factors has been meticulously refined to highlight the multidimensional nature of learning outcomes. Empirical studies reveal that academic performance can vary significantly based on numerous factors, including mode of learning, previous knowledge, class size, characteristics of the lecturer, student dedication, and course complexity (Naser & Peel, 2018). These determinants have been contextualized within a social-cognitive and holistic framework (Kizilcec & Perez-Sanagustín, 2017; Winters & Greene, 2018), which elucidates the intricate interplay between cognitive, emotional, and motivational processes and both internal and external learning environments. By explicitly correlating these factors to the study's core focus, the revision substantially enhances the conceptual basis for investigating students' perceptions of online versus face-to-face accounting education.

Furthermore, the introduction has been structured for improved coherence, organized thematically into segments that encompass technological advancements and the surge of online learning, performance outcomes across different modalities, determinants of academic success, and the historical dependence on traditional teaching methods (Foo, Cheung & Chu, 2021; Amalba et al., 2020). Careful review of citation formatting and accuracy has also been conducted. The concluding section now articulates the study's purpose, scope, and significance more clearly, thereby reinforcing the rationale for exploring the perceived challenges associated with online and face-to-face learning among final-year accounting students in a South African university. The U.S. Department of Education (2010) identifies key challenges associated with learning effectiveness and the utilization of technology. It delineates findings related to student confidence, preparedness, and engagement with learning materials, which resonate with comparable studies conducted in various international contexts. For instance, research conducted in China evidenced that students enrolled in online accounting courses achieved performance outcomes comparable to those engaged in face-to-face courses. However, it also revealed that students with higher levels of motivation and self-discipline tended to perform better in online settings (Jin & Bridges, 2012). Additionally, a study by Jones and Moreland (2010) in the United States indicated that students participating in traditional face-to-face accounting courses significantly outperformed their online counterparts. While online learning presents an effective avenue for studying accounting, it necessitates a certain degree of motivation and self-discipline for students to thrive (Silva & Ward, 2014).

In the context of Africa, online learning for accounting remains in the nascent stages of development (Skhephe, 2022). Nevertheless, there is a burgeoning interest among students and educators in online education, driven by several potential advantages, including enhanced access to education, increased flexibility, and cost reduction (Kadir & Abdullah, 2022). Notably, a study conducted at a South African university revealed that students enrolled in an online accounting course exhibited significantly lower performance levels compared to their peers in face-to-face courses (Grasso, 2019). Additionally, this study elucidated that students in the online course reported lower satisfaction levels regarding their overall learning experience.

Research Question

What are the perceived challenges associated with online and face-to-face learning of accounting?

Literature Review

Perceived challenges associated with online and face-to-face learning of accounting

Social Interaction and Social Presence

The significance of social interaction in effective learning is particularly pronounced in collaborative fields such as accounting (Johnson & Johnson, 2009). Traditional face to face classrooms inherently offers structured opportunities for interaction, prompt feedback, and team based problem solving, thereby enhancing both engagement and learner satisfaction (Nsor-Ambala, 2022; Rasheed et al., 2024). Conversely, online learning environments frequently impede meaningful social interaction due to the absence of physical proximity and spontaneous communication (Janssen & Kirschner, 2020; Tseng & Yeh, 2013). From a constructivist standpoint, it is posited that profound learning is facilitated through social engagement and collaboration, elements that are significantly more challenging to replicate in digital platforms (Dwivedi, 2023). Within the Community of Inquiry (CoI) framework, these dynamics are encapsulated under the construct of social presence, which pertains to learners' capacity to cultivate relationships, engage in meaningful communication, and foster collaborative learning. A limited social presence in online accounting courses may detrimentally affect teamwork, peer learning, and students' sense of belonging, thus underscoring the imperative for intentional strategies that promote interaction in virtual contexts.

Adaptability and Cognitive Presence

The abrupt transition to online learning necessitated by the COVID-19 pandemic compelled students to adapt swiftly from conventional face to face instruction to digital platforms (Bidwell, Grether & Pederson, 2020). The challenges relating to adaptability are particularly salient for students with limited prior exposure to self-directed learning or those with lower academic preparation (Callister & Love, 2016; Boadum, 2024). Cognitive presence, as delineated in the CoI framework, refers to students' ability to construct and validate their understanding through reflection and critical thinking (Garrison, Anderson & Archer, 2000; Kilis & Yıldırım, 2019). Empirical studies suggest that while students with higher prior GPAs demonstrate comparable performance in both online and face to face learning contexts, those with weaker academic backgrounds often experience significant learning deficits in online environments (Callister & Love, 2016). This observation implies that online educational settings may exacerbate existing disparities, thereby accentuating the necessity of enhancing cognitive presence through scaffolding, guided reflection, and adaptive instructional methodologies.

Time Management, Distractions, and Teaching Presence

The effective management of time and attention constitutes a fundamental challenge within online learning environments (Sarvestani et al., 2019; Nambiar, 2020). Online learners are typically required to balance academic obligations alongside household duties and personal commitments, which can result in multitasking and attentional diversion (Teodorescu & Aivaz, 2021; Edu & Negricea, 2020). In the context of the CoI framework, teaching presence which encompasses course design, facilitation, and instructional guidance emerges as a critical factor in alleviating these challenges (Garrison, 2019; Kurt, 2024). Well structured online courses that incorporate interactive tools, organized resources, and explicit guidance can minimize distractions and enhance student engagement. Conversely, a lack of effective teaching presence may contribute to disengagement, reduced participation in collaborative activities, and poorer learning outcomes. Thus, the literature reinforces that teaching presence is vital for fostering accountability, motivation, and effective learning experiences in both online and hybrid accounting courses.

Contextual Challenges in Developing Regions

In developing nations, such as South Africa, digital inequalities present additional complications for online learning. Barriers including limited internet access, insufficient digital devices, high data costs, and low digital literacy significantly hinder social, cognitive, and teaching presence (Rahiem, 2020; Liu, 2021). Research has indicated that students in rural or under-resourced areas often struggle to access online accounting resources and engage effectively with course content (Zaly & Ngwenya, 2023). Furthermore, infrastructural and institutional challenges comprising inadequate ICT infrastructure and insufficient training for educators exacerbate these issues (Mac-Ikemenjima, 2005; Agormedah, Henaku & Ansah, 2020). By situating these contextual factors within the CoI framework, the literature elucidates how environmental

limitations interact with learner characteristics and pedagogical practices, ultimately influencing engagement, motivation, and performance in online and hybrid educational settings.

Theoretical Integration and Implications for Accounting Education

The Community of Inquiry (CoI) framework offers a robust analytical lens for exploring the interaction of cognitive, social, and teaching presence within accounting education (Garrison, Anderson & Archer, 2000; Alsayer et al., 2025). Cognitive presence addresses the dimensions of student reflection and knowledge construction, social presence underscores the importance of collaboration and engagement, while teaching presence emphasizes the significance of instructional design and facilitation. By mapping the extant literature concerning online and face-to-face learning challenges onto these three dimensions, a comprehensive understanding of the complexities surrounding the teaching and learning of accounting can be developed.

METHOD

This study is anchored in an interpretivist paradigm, which emphasizes the understanding of how individuals derive meaning from their lived experiences within specific social contexts (Creswell & Poth, 2023; Tracy, 2022). This paradigm is particularly well-suited for exploring the subjective experiences and perceptions of Accounting students regarding online and face-to-face learning environments, as it prioritizes depth of understanding over the generalizability of findings. A qualitative research approach was employed to facilitate a nuanced, contextually rich examination of these experiences, recognizing that qualitative inquiry is particularly effective for investigating complex educational phenomena where meaning and interpretation are paramount (Creswell & Poth, 2023). Within this framework, a case study design was adopted to investigate a bounded system in its real-world context, thereby enabling a comprehensive and holistic understanding of the phenomenon under investigation (Yin, 2023; Stake, 2022).

The research was conducted within the Business Management Education Department of a Faculty of Education at a selected higher education institution located in the Eastern Cape Province, South Africa. The site was intentionally chosen due to its historically disadvantaged status and resource limitations, making it a pertinent context for analyzing the dynamics of online and traditional learning. Furthermore, the institution's implementation of both learning modalities provided a relevant setting for comparative analysis. A purposive sampling technique was employed to select participants deemed capable of offering rich and meaningful insights into the research problem. Purposive sampling is widely recognized as an effective method in qualitative research for identifying information-rich cases (Campbell et al., 2022; Ames, Glenton & Lewin, 2019). The sample comprised 16 final-year Accounting students, evenly split between 8 males and 8 females. Participants were specifically chosen based on their enrollment in a final-year Accounting program, their direct experience with both online and face-to-face learning modalities, and their willingness to articulate their experiences. Targeting final-year students was strategic, given their prolonged exposure to the various learning modalities, which facilitated informed and reflective responses. Data collection was conducted through semi-structured and narrative interviews, allowing participants to narrate their lived experiences while also enabling the researcher to probe for deeper insights. This methodological approach ensured the flexibility and depth essential for interpretive qualitative research (Tracy, 2022).

The sample size of 16 participants aligns with the norms of qualitative case study research, where the focus is on the depth and richness of data rather than on numerical representation. Recent methodological literature underscores that sample adequacy in qualitative research is contingent upon information richness and the attainment of data saturation (Hennink, Kaiser & Weber, 2022). In this study, data saturation was employed to determine the sufficiency of the sample size, defined as the point at which no new themes or insights emerge from the data (Guest, Namey & Chen, 2020). Saturation was observed after approximately the 14th interview, indicating the emergence of recurring patterns. To further validate this finding, two additional interviews were

conducted, thereby enhancing the credibility and trustworthiness of the study's results (Hennink, Kaiser & Weber, 2022).

Ethical considerations

For the paper, we took several concrete steps to protect our participants. First, we obtained ethical clearance from our institution (Walter Sisulu University) and secured formal approval before starting any data collection. We made sure every participant gave informed consent, explaining that their participation was completely voluntary and that they could withdraw at any time without any consequences. To prioritize their safety, we emphasized to participants that our main duty was to protect them from any physical or psychological harm. This included minimizing any discomfort they might experience during the study. To maintain confidentiality, we omitted personal identifiers from our data. Each participant was assigned a coded reference to ensure their identity remained private. We stored all data on encrypted devices, and locked physical copies in secure locations to protect against unauthorized access. When conducting interviews, we did so in private settings to create a comfortable environment for participants. The transcription of these interviews was also handled confidentially to ensure that sensitive information was not disclosed. By implementing these specific measures such as using coded references, secure data storage, and private interview settings—we ensure our research upholds the highest ethical standards, protects participant privacy, and maintains the integrity of the research process.

Presentation of the study findings

Impact and challenges

Participants reflected on the experience with the transition from online to traditional learning, and their perceptions were negative, as it was a new way of learning. **ASF2** stated that:

I experienced much struggle while trying to adapt to online classes in accounting because I was plodding when typing notes and writing online assessments, since I was used to handwriting, such as using a pen or a pencil for writing. Most of the time, I would finish late answering questions or exceed limits to finish, therefore I would be penalised for not finishing in time, and I would lose Marks. Uploading documents and presenting online was another challenge for me.

Also, in terms of technical glitches, she said:

When faced with technical issues, I contacted technical support promptly. Having backup devices and offline study materials helped during outages.

ASM5 had a similar view in terms of adopting online learning:

The transition to online learning significantly impacted my accounting studies. While it offered flexibility, I missed the face-to-face interactions with professors and peers. Adapting to virtual classrooms required adjusting my study habits and time management. Also, adapting to online accounting courses came with its challenges. Reliable internet access was crucial, and technical glitches occasionally disrupted lectures or assignments. Staying motivated without the physical classroom environment was also a hurdle. However, regarding technology and its frustrations, I contacted technical support promptly. Having backup devices and offline study materials helped during outages.

ASF6 had experienced fewer problems when changing from the traditional learning style:

The shift to online learning has been an adjustment for my accounting studies. As a tech-savvy city dweller, the flexibility is fantastic. I can access lectures anytime, rewind confusing debits and credits, and create digital flashcards on my tablet. It is like having a personalised accounting app! However, challenges exist. Online discussions cannot replicate the energy of in-person debates, and sometimes my Wi-Fi acts like a temperamental teenager. Also, the technical glitches are inevitable. Thankfully, most platforms have built-in chat functions to

alert the instructor, and recordings are usually available for missed content. The university's online support system has been a lifesaver, offering tutoring, counselling, and even IT troubleshooting.

However, **ASM4** also experienced this transition as a challenge:

Adapting was not easy. Juggling unreliable internet in the township with complex accounting concepts was a struggle. Plus, missing the in-person interaction took a toll on motivation. I formed online study groups with classmates to stay engaged – finding virtual accountability helped, and utilising the discussion forums provided a platform to ask questions and connect with peers, which kept things interesting.

Still on the question of the glitches, this was **ASF6's** response:

Oh yeah, internet issues are a reality! Having a backup plan, like a mobile hotspot, helped minimise disruptions. Thankfully, the university's online support team has been fantastic for resolving technical glitches.

ASF2 had mixed views regarding the challenges associated with the transition:

The transition to online learning has been a double-edged sword for me as an accounting student. On the positive side, it has offered much flexibility in scheduling and learning at my own pace. However, it also means to adapt to a new way of interacting with the material and my classmates. Also, challenges with the online accounting module were the case of maintaining focus and motivation, missing out on the real-time interaction and discussions of a traditional classroom. Difficulty collaborating effectively on group projects virtually, which for me they were not a deal breaker. Technical glitches and connectivity issues are a concern with online learning. When they happen, I try to reconnect immediately or find an alternative internet source that works fine for me. I sometimes catch up on any missed material as soon as possible.

ASM2 also narrated that online learning was better on her side compared to the traditional classroom by stating the following:

In the traditional class, the lectures could get dry at times, but having the professor there to explain things live was a lifesaver. Plus, if I zoned out for a second, I could ask a quick question without feeling awkward. Discussions were helpful, but sometimes the smarter kids dominated, leaving me lost. The flexibility of online courses was excellent! No more stressing about missing a lecture because of a late-night shift. Plus, I could pause, and rewind confusing parts as often as needed. Online forums were great for finding solutions to problems I was stuck on sometimes; someone else had already figured it out.

However, **ASF3** also highlighted that blended learning is a convenient way:

Overall, the blend of both formats was ideal. Traditional classes for core concepts and interaction, online courses for flexibility and independent learning. It was not perfect, but for a rural student like me, it opened doors I would not have had otherwise. Now, I feel confident tackling the job market with a strong foundation and the ability to adapt to different learning styles, a skill I am sure will be helpful.

Although most participants had similar views regarding the research question, they also had different views regarding their experiences; for example, **ASF5** tabled the benefits and challenges of both online and traditional learning approaches.

As a student from a rural community with limited access to technology and at the age of 35+, my experiences with online learning in accounting courses have been both challenging and rewarding. Ok, when it comes to challenges, the lack of reliable internet connectivity often disrupted my learning. Submitting assignments and participating in virtual discussions were sometimes frustrating due to slow connections. However, the Reward was the flexibility because I could study at my own pace, balancing family responsibilities and work. Online resources, such as recorded lectures, helped reinforce concepts.

ASM1 stated that:

However, the Traditional Classroom also had challenges, which I got used to, even though it was not easy. One I still remember is commuting to campus, which was time-consuming and expensive. Face-to-face interactions were valuable but sometimes intimidating as well. However, the rewards were better because engaging with professors and peers enhanced my understanding. The classroom environment encouraged active participation and immediate feedback, rather than procrastinating at my house.

Summary

Students transitioning from traditional to online learning faced various challenges. Adapting to typing notes and taking online assessments was difficult for some, while others missed the social interaction of a physical classroom. In a study on student experiences with online learning, most participants found it to be a positive experience, highlighting its flexibility, convenience, and ability to cater to individual learning paces. While some students missed traditional classrooms' in-person interaction and discussions, online resources like pre-recorded lectures and discussion forums were valuable tools. The study also found that students from different backgrounds had unique experiences, as those who came from rural areas appreciated the flexibility but struggled with internet connectivity, and working adults juggled multiple responsibilities. A tech-savvy student thrived in the online environment. Reliable internet access and technical glitches were common problems, though some students found workarounds like using mobile hotspots or contacting technical support. The transition required adjusting study habits, time management, and finding new ways to stay motivated.

Discussion

The findings of this study can be rigorously interpreted through the lens of the Community of Inquiry (CoI) framework, particularly with regard to the dimensions of cognitive, social, and teaching presence. The challenges associated with students' inadequate typing skills and limited digital literacy are reflective of constraints in cognitive presence, as students faced difficulties in engaging in knowledge construction due to technological impediments. The inability to effectively upload or download course materials, maintain pace with lectures, and complete assessments within prescribed time frames impeded their capacity for critical reflection and deeper understanding. These limitations suggest that cognitive presence in online accounting education is contingent not solely upon intellectual capability but also upon students' digital competencies. Consequently, the implementation of structured digital literacy training and preparatory support emerges as a fundamental prerequisite for facilitating meaningful engagement within online learning environments.

Furthermore, the findings underscore the significance of teaching presence, particularly in the intentional design and facilitation of online learning experiences. Students' frustrations with penalties stemming from slow typing and various technical challenges indicate a misalignment between instructional design and student preparedness. Effective teaching presence necessitates the incorporation of supportive mechanisms, including flexible deadlines, scaffolded learning activities, and robust technical support systems, such as help desks and training workshops. Moreover, while the integration of simulations and interactive tools (Sabri et al., 2024) possesses the potential to augment engagement and foster deeper understanding, the efficacy of such tools is contingent upon the quality of their introduction and ongoing support by instructors. This observation accentuates the pivotal role of teaching presence in constructing learning environments that are inclusive, responsive, and adaptable to the diverse needs of learners. In relation to social presence, the findings reveal a pronounced tension between the flexibility inherent in online learning and the concomitant loss of interpersonal interaction. Although students appreciated the autonomy afforded by self paced learning, many reported diminished motivation attributable to limited engagement with peers and instructors, as well as a lack of immediate feedback. This

observation aligns with CoI assumptions positing that meaningful learning is significantly enhanced through interaction and a sense of community.

The absence of real time communication exacerbated feelings of isolation, thereby diminishing social presence and consequently impacting overall learning experiences. These findings advocate for the necessity of hybrid or blended learning models that integrate both synchronous and asynchronous elements to promote interaction while preserving flexibility. Moreover, the influence of demographic variables such as age, geographical location, and technological literacy can be conceptualized as contextual conditions that shape all three dimensions of CoI presence. Students hailing from rural areas or possessing limited technological exposure experienced restricted access to digital tools, which constrained their participation in collaborative activities (social presence), impeded their engagement with learning content (cognitive presence), and limited the effectiveness of instructional strategies (teaching presence). In contrast, students with high technological proficiency exhibited elevated levels of engagement and adaptability. This disparity underscores the notion that the efficacy of online learning environments is not uniform but is significantly mediated by students' socio-economic and technological contexts. Overall, an integration of these findings within the CoI framework reveals that challenges in online accounting education are not disparate but rather arise from the intricate interplay among cognitive, social, and teaching presence. Addressing these challenges necessitates a comprehensive approach that bolsters digital competence, enhances instructional design, and fosters meaningful interactions. Such an approach is essential for the development of inclusive and effective hybrid learning models that are responsive to the diverse needs of students within the ever-evolving landscape of higher education.

It also stemmed from the study that students relied heavily on technical support, online tutoring, and virtual study groups to overcome challenges, highlighting the importance of institutional support systems. This reliance was evident in the responses of several participants, who articulated both the difficulties they faced and the coping mechanisms they employed. ASF2, for instance, described significant struggles with typing speed and digital assessments, noting, "I was plodding when typing notes and writing online assessments, I would lose marks" due to time constraints". She further emphasised the importance of technical support, stating that she "contacted technical support promptly" and benefited from having "backup devices and offline study materials." Similarly, ASM5 acknowledged the flexibility of online learning but lamented the loss of face-to-face interaction and the motivational challenges of virtual classrooms. He, too, depended on institutional resources, saying, "I contacted technical support promptly," and found offline materials helpful during outages. In contrast, ASF6, a tech-savvy student, experienced fewer barriers and praised the university's support systems, describing them as "a lifesaver" that provided tutoring, counselling, and IT troubleshooting. These varied responses highlight the uneven impact of the digital transition and reinforce the necessity of vigorous, accessible support structures to ensure equitable learning experiences across diverse student populations. This finding confirms what was established by Christanti et al. (2024), who posited that institutional support systems were crucial for bridging the digital divide, particularly during transitions to online learning. These systems furnish essential resources such as technical assistance, tutoring, and counselling, which are instrumental in helping students adapt and succeed. Without such support, students will likely experience heightened stress, diminished academic performance, and unequal educational opportunities.

Based on the findings, the researchers developed the battery below to depict the key suggestions from the participants.

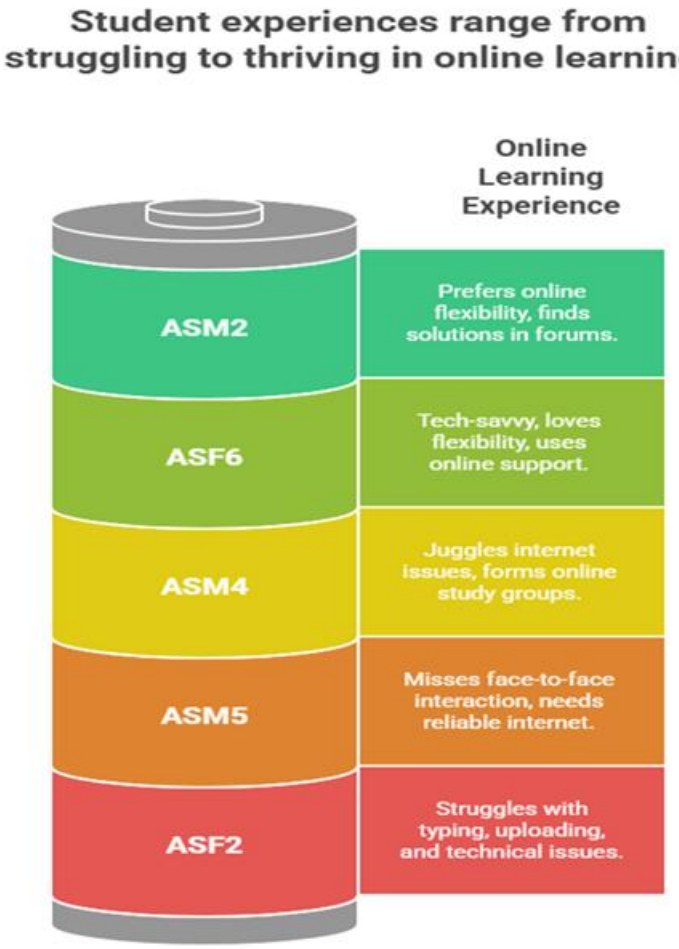


Figure 1: Spectrum of Student Experiences in Online Learning

The battery diagram shows different levels of student success and challenges in online learning environments, from highly adaptable and tech-savvy learners at the top to those struggling with technical, social, and connectivity issues at the bottom.

The figure depicts students' online learning experiences through a battery icon showing successful and struggling learners. The upper section of the battery represents ASM2 students who welcome online learning flexibility and successfully locate answers through online forums. Students in ASF6 demonstrate technical expertise and value independent learning while actively using online support tools to boost their educational outcomes. These two groups show high adaptability and confidence in navigating digital platforms.

The middle section of the spectrum represents ASM4 students who experience average difficulties because of their unreliable internet connections. However, they adapt by creating online study groups to share resources and support one another. The students experience both positive and negative aspects of online learning because they benefit from the platform but face obstacles preventing them from fully participating. The battery metaphor positions this group between resilience and dependency because they need peer collaboration to overcome their challenges.

The lower section of the battery contains students who experience major obstacles while trying to learn online. The student ASM5 represents individuals who need face-to-face social interaction and experience difficulties when this interaction is absent, requiring constant internet stability for effective operation. The lowest position in the battery shows ASF2 students who face the most severe challenges because they struggle with typing, uploading, and technical issues, which create more stress and less productivity in their online learning. These stages demonstrate

how students in online learning environments vary in their needs, digital readiness levels, and individual capacities.

CONCLUSIONS AND SUGGESTION

This study advances the Community of Inquiry (CoI) framework by establishing that digital readiness and technological competence serve as critical enabling conditions that influence cognitive, social, and teaching presence in online and blended accounting education. The findings reveal that limited familiarity with virtual platforms, coupled with challenges in connectivity, significantly constrains students' capacity to engage meaningfully with course content, interact with peers and instructors, and fully benefit from deliberately designed instructional strategies. This research extends the CoI framework by situating it within the context of a developing country, wherein access and digital skills substantially impact the quality of learning experiences. Moreover, the study presents a novel contribution by identifying a context-specific tension between the inherent flexibility of online learning and the imperative for meaningful interaction within accounting education. While students may gain from self-paced learning opportunities and the ability to revisit complex material, these advantages are counterbalanced by diminished engagement, heightened demands for self-discipline, and unequal access to digital resources. This finding transcends simplistic binary comparisons of online versus face to face learning, illustrating that the efficacy of each learning modality is contingent upon the equilibrium achieved between flexibility and interaction. In conclusion, this study offers a substantive contribution to the field by demonstrating that blended learning is not merely a preferential approach but a critical pedagogical imperative for accounting education. It underscores the necessity for the intentional integration of digital skills development, structured teaching presence, and enhanced social interaction to effectively support a diverse learner population. These findings contribute to both theoretical understanding and practical application by providing a contextually grounded framework aimed at improving the design and delivery of accounting education within the changing landscape of higher education.

To create an effective and engaging online learning environment, it is important to prioritise student interaction and support. Incorporating interactive modules, gamified elements, and opportunities for peer collaboration can significantly improve student engagement with course materials. Gender differences did not play a significant role in the study. However, it was observed that as participants' age increased, there was a greater consensus that learning occurs equally in both online and face-to-face courses. Furthermore, students with more online course experience tended to have more positive perceptions of online learning. Conducting a thorough evaluation of support services, including tutoring, counselling, and technical assistance, is crucial for identifying areas for improvement and ensuring adequate support for students. Tailored feedback also plays a key role in enhancing student performance and satisfaction.

Future research

Future research could study the effectiveness of hybrid learning models in accounting education, focusing on how combining online and in-person elements affects student performance and engagement. This could help develop more resilient and flexible educational approaches for accounting students.

Declaration of Conflict of Interest

The authors report there are no competing interests to declare.

Declaration of the Use of AI

This paper was not written using any artificial intelligence applications.

Data Availability Statement

The data is restricted.

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