



## Beyond the Physical Classroom: A Comparative Performance Analysis of Online and Traditional Accounting Pedagogy

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### **Abstract:**

This study aims to analyze the comparative effectiveness of online and traditional accounting pedagogy in a resource-constrained higher education context in South Africa. The rapid digital transformation of higher education has shifted learning from physical classrooms to virtual environments, raising concerns about student engagement and learning quality. In accounting education, this transition is critical because it helps develop technically competent professionals. This study employs an interpretivist paradigm with a qualitative case study approach. Data were collected through narrative and semi-structured interviews with 16 final-year accounting students and analyzed using thematic analysis. The findings reveal that online learning enhances autonomy through self-paced study and access to digital resources, creating a “personalized tutor” effect. However, a significant digital divide persists, with rural and township students facing infrastructural barriers such as poor internet connectivity and unreliable electricity. Additionally, the “hybridity paradox” shows students value flexibility but still depend on social interaction, often forming peer-led learning networks. Student adaptability varies based on demographic factors such as age, digital literacy, and responsibilities. The implications of this study highlight the need for higher education institutions to strengthen digital infrastructure, particularly through affordable connectivity solutions, while maintaining structured hybrid learning models that preserve essential social interaction in accounting education.

## INTRODUCTION

The digital transformation in higher education has become a fundamental societal necessity rather than a mere technical option. Research on the efficacy of learning modalities is crucial because accounting education is a primary pillar in producing professionals who safeguard public financial integrity. The rapid proliferation of online learning platforms has significantly reshaped the accounting education landscape, with traditional classroom methods increasingly replaced by digital alternatives, propelled by technological advancements and the pressing demand for remote access, a trend accentuated by the COVID-19 pandemic (Tetteh et al. 2023). Empirical evidence suggests that students in online and hybrid formats often perform better than face-to-face learners in rigorous technical subjects such as Intermediate Accounting III and Auditing

(Aldahray, 2024). Consequently, understanding this transition is vital for the broader society to ensure the sustained quality of graduates who can adapt to the increasingly digitized global economic ecosystem.

Despite technological solutions, the educational community faces a significant challenge in creating learning environments that do not foster isolation. A prevalent problem is the frequent failure to harmoniously integrate the distinct characteristics of both instructors and students into virtual spaces. As noted by Hwang & Seo (2025) and Luo & Sun (2025), learning effectiveness is highly contingent on the interaction among environmental factors in physical or virtual spaces. Furthermore, a holistic approach is often neglected, yet cognitive aspects must function in tandem with social-cognitive motivations and self-perception (Hong, 2025; Tramacere & Kaufmann, 2025). Without a profound understanding of how cognitive, emotional, and motivational mechanisms are influenced by the external setting, there is a tangible risk of diminishing student engagement and educational quality. This misalignment poses a threat to the stability of higher education institutions in the post-pandemic era, where the internal state of the student must be reconciled with the digital environment.

Historically, the academic community has relied heavily on face-to-face modalities, such as campus-based lectures, tutorials, and seminars (O'Shea & Djouma, 2025). However, these traditional approaches have increasingly come under criticism, particularly for failing to sustain student engagement and consistent attendance. Halabieh et al. (2022) highlights that low tutorial attendance is a pervasive problem in universities, often exacerbated by a lack of effective pedagogical alternatives. This creates an urgent need for institutions to evaluate student perspectives on online learning as a viable solution, particularly for final-year accounting students who require both high flexibility and the depth of technical analysis expected at a professional level. Therefore, assessing how students navigate the shift from traditional physical settings to digital platforms is essential to addressing the limitations of the classic lecture-based model and fostering a more resilient academic framework.

The regional context adds a layer of complexity, particularly in provinces such as the Eastern Cape in South Africa. As a hub for various universities offering accounting programs, this region has experienced a significant surge in online learning popularity (Knight, 2024; Tetteh et al. 2023). However, despite this trend, a strong preference for traditional face-to-face methods persists among certain student and lecturer cohorts (Witcher & Sasso, 2024). The unique challenges in the South African landscape include uneven technological infrastructure and varying levels of student preparedness, which resonate with global concerns regarding learner confidence and engagement with complex materials (David, 2025). These localized dynamics make the Eastern Cape a representative locus for examining the friction between digital ambitions and infrastructural realities, especially in institutions serving historically disadvantaged communities, where the transition to e-learning may encounter specific socioeconomic barriers.

Current academic literature presents contradictory findings regarding the effectiveness of online accounting education. On one hand, research conducted in China found that online accounting students performed on par with their face-to-face counterparts, identifying student motivation and self-discipline as the primary determinants of success (Geng & Wei, 2023; Imjai et al. 2024). Conversely, studies by Aldahray (2024) and Meade & Parthasarathy indicated that students in face-to-face

accounting courses performed significantly better than those in online settings. These divergent outcomes suggest that the success of online learning is not universal but is highly dependent on the student's capacity for autonomous learning and self-regulation (Makhno et al. 2022). Such inconsistencies in global findings indicate a significant gap in the literature regarding how regional cultural variables and institutional support structures influence the learning outcomes of accounting students in different geographical and economic contexts.

A primary weakness in existing scholarship is the heavy reliance on subjective self-reported data. Almusaed et al. (2025) emphasize the need for broader data collection to capture the intricate nature of the learning process, while Torrington et al. (2024) argue that relying solely on verbal protocols is insufficient to understand how self-reported learning functions over time. Furthermore, there is a notable research gap: studies often fail to integrate learning science and computer science to enhance both physical and digital environments (Barna et al. 2025). In the South African context, many students in Open and Distance Learning (ODL) environments face unique challenges due to infrastructure and geographical constraints (Amoah & Le Roux, 2025). The lack of specific data on students at historically resource-disadvantaged institutions makes it inaccurate to generalize global online learning models to these South African contexts.

This study offers significant novelty by conducting a deep comparative evaluation at a higher education institution in the Eastern Cape, which is characterized by historical resource disadvantages. Unlike previous research that focuses primarily on grade-based outcomes, this study examines the adaptability, attitudes, and practical experiences of final-year accounting students amid the rapid post-pandemic transition. The novelty lies in integrating the challenges of geographic infrastructure into ODL environments with students' practical pedagogical preferences. By exploring the intersection of technical barriers and pedagogical efficacy in a developing region, this research fills a critical data gap on how students in high-risk environments manage their learning autonomy. This approach provides a more nuanced understanding of digital transformation in "disadvantaged" contexts, moving beyond the idealized scenarios often presented in studies from developed nations.

The central problem addressed in this research is the uncertainty about whether online learning can replicate the depth of face-to-face interaction in accounting education without compromising students' comprehension. The primary argument posited is that student preferences and learning success are more heavily influenced by the level of institutional support and infrastructural readiness than by the mere convenience of digital access. Through this systematic comparison, the study contributes to the formulation of a more inclusive hybrid learning framework. These findings are expected not only to serve as a reference for policymakers in South Africa to overcome geographical and socioeconomic barriers but also to provide global guidance on optimizing engagement for accounting students in an increasingly digitalized and volatile educational ecosystem.

## RESEARCH METHODS

This study is situated within the interpretivist paradigm, which prioritizes understanding subjective meanings and individual interpretations of social phenomena over the pursuit of universal, objective truths (Mtisi, 2022). In alignment with this stance, a qualitative methodology was adopted to facilitate an in-depth comprehension of

human experiences, specifically those of accounting students. As Muzari et al. (2022) postulate, the primary function of qualitative inquiry is to decode the essence of human action by describing the inherent characteristics of social objects. To operationalize this, a case study design was employed, enabling a focused exploration of learning modalities within a real-life institutional context. This design is particularly suitable for investigating complex, contemporary phenomena in which the boundaries between the phenomenon and its context are not clearly evident.

The study was conducted at a selected higher education institution in the Eastern Cape Province, South Africa, specifically focusing on the Business Management Education department within the Faculty of Education. This location was purposively selected for its unique historical standing as a resource-disadvantaged institution, providing a critical lens for examining digital adaptation in challenging socioeconomic environments. Purposive sampling was utilized to ensure the inclusion of information-rich cases. As Ahmad & Wilkins, (2024) state, this is a strategic approach “to ensure the inclusion of studies that are most relevant, information-rich, and contextually diverse” (p. 5). The sample comprised 16 final-year accounting students. Participants were selected based on predefined criteria: current enrollment in a final-year accounting program, direct experience with both online and face-to-face modalities, and a demonstrated willingness to articulate the nuanced challenges encountered in both environments.

To elicit rich, evocative data, the researchers used a dual-method approach comprising narrative and semi-structured interviews. Narrative components allowed students to recount their educational journeys chronologically. At the same time, the semi-structured format ensured that specific research objectives, such as perceived adaptability and technological barriers, were addressed while maintaining the flexibility to explore emerging themes. These interviews provided participants with a platform to reflect deeply on their lived experiences. This approach aligns with the need for broader data collection to capture the intricate nature of the learning process, moving beyond superficial metrics to understand the emotional and cognitive mechanisms at play during the transition between physical and virtual classrooms.

The gathered data were processed using thematic analysis, a systematic method for identifying, analyzing, and reporting patterns or “themes” across defined analytical phases (Squires, 2023). This rigorous process involved familiarising oneself with the data, generating initial codes, and refining themes to ensure the findings accurately reflected the participants’ perspectives. Ethically, the study adhered to the highest standards of academic integrity. Formal institutional approval and ethical clearance were obtained before commencement. Informed consent was obtained from all participants, emphasizing their right to voluntary participation and to withdraw without prejudice. Following the principles outlined by Kaplan et al. (2023) the researchers prioritized safeguarding participants from psychological harm or discomfort. Confidentiality was strictly maintained by using alphanumeric codes instead of personal identifiers, and all digital data was stored on encrypted devices to ensure total anonymity and compliance with legal data protection standards.

## RESULTS AND DISCUSSION

### Results

#### Pedagogical Efficacy and Learning Autonomy in the Shift to Digital Flexibility

The transition toward online learning platforms has fundamentally redefined the pedagogical boundaries of accounting education. Participants consistently highlighted that the shift from traditional settings to digital environments fostered a heightened

sense of learning autonomy. For many, this modality was not merely a replacement for physical classrooms but an evolution that offered superior control over the learning pace. The ability to manage complex accounting cycles without the rigid constraints of a fixed timetable emerged as a primary benefit. This autonomy enabled students to transition from passive recipients of information to active managers of their academic progress. Consequently, the digital shift has empowered students to take ownership of their foundational knowledge, creating a more personalized educational experience that aligns with modern professional requirements. As illustrated in Table 1, the shift toward online learning platforms has redefined the locus of control, allowing students to navigate complex accounting concepts through self-paced digital interventions.

**Table 1. Comparative Analysis of Learning Modalities and Student Autonomy**

Feature	Traditional Face-to-Face	Online/Digital Learning	Pedagogical Impact (Autonomy)
<b>Pacing</b>	Synchronous; dictated by the lecturer's speed.	Asynchronous; student-led (self-paced).	<b>High:</b> Students manage their own cognitive load via "pause/rewind."
<b>Content Review</b>	Real-time notes; reliance on memory and peer notes.	On-demand access to pre-recorded lectures and PDFs.	<b>Moderate:</b> Reduces anxiety over missing critical information.
<b>Interaction</b>	Live discussions; risk of "dominance" by certain peers.	Asynchronous forums and private study groups.	<b>High:</b> Encourages "quiet" students to participate without social pressure.
<b>Flexibility</b>	Rigid schedule; requires physical presence (commuting).	Time-independent; accessible "anytime, anywhere."	<b>Critical:</b> Essential for working students or those with domestic roles.

One of the most significant advantages identified was the role of pre-recorded lectures in reinforcing foundational knowledge. Participant ASF1 described traditional contact classes as a "gold mine" but noted that online flexibility allowed her to tailor learning to a busy schedule. She stated, "Pre-recorded lectures were fantastic for reviewing specific topics at my own pace." This sentiment suggests that the digital format serves as a vital supplementary tool that mitigates the risk of missing critical information during live sessions. For students grappling with complex accounting concepts, the ability to revisit materials repeatedly helps ensure the rapid pace of traditional lectures leaves no student behind. This flexibility effectively bridges the gap between varying levels of student comprehension.

Further supporting this theme, Participant ASM2 emphasised the "lifesaver" qualities of digital features, such as the ability to pause and rewind. In the traditional classroom, lectures could sometimes feel "dry," and the fear of missing a live explanation often led to anxiety. ASM2 remarked, "If I zoned out for a second, I could just ask a quick question without feeling awkward... Plus, I could pause and rewind confusing parts as many times as I needed." This functionality addresses the cognitive load issues often associated with accounting education. By allowing students to deconstruct complex formulas and ledger entries at their own speed, the online environment reduces the social pressure of the "awkward" question, thereby enhancing the overall efficacy of the learning process for those who might struggle in a fast-paced environment.

Ultimately, the findings indicate that online learning fosters a unique "personalized tutor" effect. As several participants highlighted, the convenience of having digital resources at their fingertips enabled a more independent learning journey. This sense of independent mastery is particularly crucial in the final year of an accounting

degree, when students must prepare for the industry’s professional rigors. The digital environment provides the tools necessary for independent problem-solving, which is a core competency in the accounting profession. By mastering these digital tools, students are not only learning accounting principles. However, they are also developing the digital literacy and self-discipline required for a career in a technology-driven financial landscape, marking a significant departure from traditional reliance on pedagogy.

### The Digital Divide and the Impact of Socioeconomic and Geographical Backgrounds

Despite the perceived benefits of digital flexibility, the research uncovered a stark “digital divide” influenced by the geographical and socioeconomic backgrounds of the students. The Eastern Cape’s unique landscape means that students in rural areas face vastly different challenges than those in urban centres. For rural students, the promise of online education is often hindered by poor infrastructure. This disparity suggests that while online learning is theoretically inclusive, its practical application remains deeply tied to students’ physical location and access to reliable utilities. Therefore, the geographical context of South Africa plays a decisive role in determining whether a student perceives online learning as a benefit or a burden, highlighting a significant area for institutional intervention. The stark contrast in digital accessibility across different residential landscapes is summarised in Table 2, which categorises the specific infrastructural barriers encountered by students in urban, rural, and township settings.

**Table 2. Geographical Matrix of Digital Barriers and Student Experiences**

Geographical Context	Primary Infrastructure Barriers	Impact on Accounting Learning	Representative Participant
Urban (City)	Minimal to none; high-speed fiber/LTE availability.	Seamless access; “Game changer” for tech-savvy students.	ASF3
Rural (Remote)	Unstable internet connectivity; limited ISP coverage.	Disruption in submitting assignments and virtual discussions.	ASF5
Township	Unreliable electricity; frequent load-shedding/outages.	Struggles in maintaining focus on complex accounting concepts.	ASM6

The data presented in Table 2 underscore significant geographical stratification in the digital learning experience, revealing that “flexibility” is a privilege contingent on regional infrastructure. While urban students like ASF3 navigate a frictionless digital environment, those in rural and township areas face a compounded burden of connectivity issues, poverty, and energy instability. As evidenced by the experiences of ASF5 and ASM6, the “digital divide” is not merely a lack of devices but a structural barrier that disrupts the cognitive flow required to master complex accounting cycles. This disparity suggests that without targeted institutional interventions such as data subsidies or offline-compatible modules, online pedagogy inadvertently reinforces existing socioeconomic inequalities, transforming a supposedly inclusive tool into a source of academic frustration for disadvantaged cohorts.

Participant ASF5, a student over 35 from a rural community, provided a poignant account of these struggles. For her, the lack of reliable internet connectivity was a constant source of frustration, disrupting the flow of learning. She noted, “Submitting assignments and participating in virtual discussions were sometimes frustrating due to slow connections.” This highlights that for rural students, the “flexibility” of online

learning is often a double-edged sword. While it allows her to balance family and work, the technical barriers create a secondary layer of stress that urban students do not experience. Her experience underscores the need for institutions to consider the “connectivity poverty” affecting non-traditional students in remote areas, ensuring that digital mandates do not inadvertently exclude the most vulnerable.

Similarly, students living in townships faced unique infrastructure challenges, particularly regarding energy stability. Participant ASM6 described the shift to online learning as a “rollercoaster” due to the unreliable electricity in his township. He explained, “Juggling a little bit unreliable electricity... with complex accounting concepts was a struggle.” This narrative highlights “load shedding” and localized power outages as major inhibitors of digital education in South Africa. The struggle to stay engaged while managing these external stressors took a significant toll on his motivation. ASM6’s experience illustrates that even with high academic drive, the external environment can severely limit a student’s ability to remain consistently connected to the virtual classroom, thus creating an unequal playing field based on residential infrastructure.

The conclusion drawn from these diverse geographical experiences is that online learning in the Eastern Cape is currently a privilege of the well-connected. While urban and tech-savvy students thrive, those in rural and township areas must navigate a complex web of technical and environmental obstacles. This finding challenges the notion that digital education is a universal equalizer. Instead, it suggests that without significant investment in regional infrastructure and institutional support, such as offline access to materials or data subsidies, the digital divide will continue to widen. The success of online accounting education in this region is therefore inextricably linked to the socio-technical ecosystem, requiring a more nuanced approach to curriculum delivery that accounts for the realities of South Africa’s diverse living conditions.

### Hybrid Social Interaction Paradox

The research highlighted a “hybridity paradox,” where students expressed a deep appreciation for digital convenience while simultaneously mourning the loss of spontaneous social interaction. Traditional accounting education has long relied on the “gold mine” of face-to-face discussions to clarify complex concepts. Participants noted that while online forums exist, they often lack the depth and immediacy of in-person peer review. This absence of a physical social fabric can lead to feelings of isolation and a decrease in the motivation to stay engaged. The findings suggest that for many accounting students, the social dimension of learning is not just a secondary benefit but a core component of their cognitive development and professional socialization process. The interplay between the loss of spontaneous physical interaction and the emergence of student-led digital social networks is illustrated in Figure 1, which conceptualizes the ‘Hybridity Paradox’ experienced by accounting students.

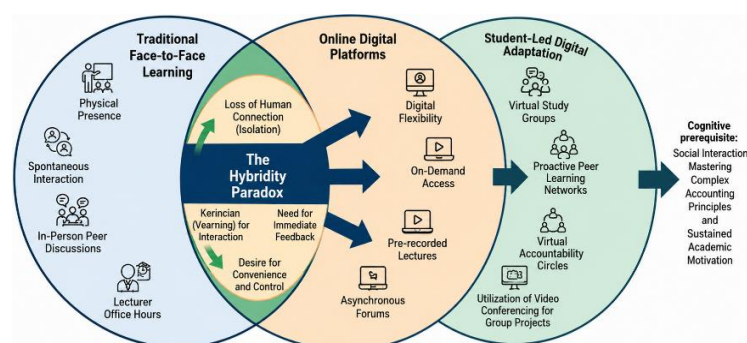


Figure 1. Conceptual Model of the Hybridity Paradox and Student-Driven Adaptation in Accounting Education

The conceptual model in Figure 1 illustrates a “Social-Cognitive Bridge” that students construct to mitigate the inherent isolation of asynchronous digital pedagogy. While the traditional classroom provides a “gold mine” of immediate feedback and peer validation, the digital shift often creates a dialogic void in which in-depth discussions become rare. As illustrated, students do not remain passive in this void; instead, they exercise proactive agency by forming “Virtual Accountability Circles” and dedicated study groups via external platforms. This adaptation signifies that for accounting students, social interaction is a cognitive prerequisite for mastering complex financial concepts. Therefore, the “Hybridity Paradox” is resolved not by the institution, but by the students themselves, who blend the flexibility of the university portal with the human connection of peer-led networks to sustain their academic motivation.

Participant ASF1 characterized the online discussion forums as a “double-edged sword.” While these forums were helpful for minor clarifications, she found that “in-depth discussions were rare.” To compensate for this digital void, she and her peers were forced to take proactive measures by forming dedicated online study groups. This indicates a significant shift in student behaviour; they are no longer relying on institutional structures for social learning but are instead creating their own “virtual accountability” systems. This peer-led initiative suggests that while the university provides the platform, the actual “human” element of learning is being sustained through student-driven networks. This proactive adaptation is a testament to the students’ resilience but also points to a deficiency in the current online pedagogical design.

From a logistical perspective, Participant ASM1 reflected on the challenges of the traditional classroom, specifically the “time-consuming and expensive” nature of commuting. However, he maintained that the rewards of face-to-face interaction often outweighed these costs. He stated, “Face-to-face interactions were valuable... direct engagement with professors and peers enhanced my understanding.” For ASM1, the physical classroom environment acted as a safeguard against procrastination, offering immediate feedback that is often delayed in an asynchronous online setting. His perspective highlights a critical tension: the desire for the physical campus’s “academic atmosphere” versus the economic reality of the high costs associated with attending in-person classes. This tension is a central theme for students balancing limited financial resources with high academic aspirations.

Ultimately, the data suggests that a “blend” of both formats is the most sustainable path forward. Participant ASF3 summarized this ideal by noting that traditional classes are essential for “core concepts and interaction,” while online courses provide the necessary “flexibility and independent learning.” This hybrid preference suggests that the future of accounting education should not be an “either-or” proposition. Instead, institutions must find a way to preserve the high-value human interactions of the physical classroom while leveraging the logistical and pedagogical advantages of digital platforms. For rural and disadvantaged students, this blend “opens doors” that would otherwise remain closed, provided that the institution can successfully integrate the social and digital spheres into a cohesive educational journey.

### **Demographic Diversity in Learning Adaptability**

The final theme explored how demographic factors, such as age, family responsibility, and digital literacy, significantly influence a student’s adaptability to online learning. The research found that “non-traditional” students, those who are older or have

significant domestic responsibilities, experience online learning through a very different lens than their “digitally native” counterparts. For a mother and working professional, the digital classroom is a tool for survival and advancement; for a young urban student, it is a seamless extension of their technologically-oriented lifestyle. These diverse profiles suggest that a “one-size-fits-all” approach to online accounting education is likely to fail, as it ignores the varied life stages and responsibilities of the student body. The diverse spectrum of student adaptability, shaped by the intersection of age, domestic responsibilities, and digital literacy, is synthesized in the typology presented in Table 3.

**Table 3. Typology of Student Adaptability Based on Demographic and Digital Profiles**

Persona Category	Demographic Characteristics	Digital Literacy & Access	Primary Motivation	Adaptability Outcome
<b>The Resilient Parent (e.g. ASF5)</b>	Age 35+, Mother, Rural resident.	Low access; High determination.	Balancing work, family, and studies.	<b>High Resilience:</b> Views online as a survival tool despite technical hurdles.
<b>The Digital Native (e.g. ASF3)</b>	Young, Urban resident.	High access; Tech-savvy.	Efficiency, control, and personalized learning.	<b>Seamless Integration:</b> Views online as a “game changer” and a natural extension of life.
<b>The Struggling Hybrid (e.g. ASM6)</b>	Young, Township resident.	Moderate/Unstable (Energy constraints).	Overcoming environmental barriers.	<b>Fragile Adaptation:</b> Vulnerable to external factors (load-shedding) despite peer support.

The typology in Table 3 reveals that adaptability to online accounting education is not a uniform process but is deeply filtered through the student’s biographical and environmental context. For the “Resilient Parent” (e.g. ASF5), digital pedagogy serves as a critical bridge to social mobility, where the reward of flexibility outweighs the frustration of connectivity. In contrast, the “Digital Native” (e.g. ASF3) experiences a synergistic alignment between her lifestyle and the university portal, achieving an academic optimization that is physically impossible in a traditional classroom. However, the “Struggling Hybrid” profile (e.g. ASM6) highlights the fragility of digital inclusion, where academic success remains precarious due to external infrastructural failures. This diversity proves that a “one-size-fits-all” digital strategy is insufficient; instead, accounting departments must develop a differentiated support framework that acknowledges these distinct learner identities to ensure equitable academic outcomes.

Participant ASF5, representing the 35+ demographic, highlighted how online resources helped her reinforce concepts while “balancing family responsibilities and work.” Her narrative shift from the “frustration” of connectivity to the “reward” of flexibility illustrates a high degree of resilience. For students in her demographic, the ability to study at their own pace is the only way to pursue a degree while maintaining their roles as providers and caregivers. Her story underscores the importance of “anytime, anywhere” learning for adult learners. For these students, the success of the online modality is measured by its ability to integrate with a complex schedule, rather than by its technical bells and whistles.

In sharp contrast, Participant ASF3, a “tech-savvy student living in the city,” viewed online accounting courses as a “game changer.” Her life is already technologically oriented, making the transition to the university portal seamless and intuitive. She

described the system as “like having a personalized accounting tutor at my fingertips,” utilizing tablets and PDFs to create an optimized study environment. Unlike her peers in rural areas, ASF3 can realise the full potential of digital education without the constraints of infrastructure. Her “tech-dependent” profile thrives in an environment that prioritises digital control and support, suggesting that, for the modern, urban student, the digital shift is not a challenge to be overcome but an advantage to be leveraged for academic excellence.

The findings suggest that the student’s background is the ultimate filter through which online learning is perceived. While the “game-changer” effect is real for urban, tech-savvy students, the “rollercoaster” of rural and township life remains a significant hurdle for others. The study proves that online learning offers undeniable benefits in terms of flexibility and convenience. However, its success depends on the institution’s ability to address the diverse needs of its demographic. Whether it is a mother balancing work in a rural village or a young professional in a high-tech city, the accounting department’s goal must be to provide a resilient, flexible, and socially connected framework that accommodates all students, regardless of their starting point in the digital landscape.

## Discussion

The findings of this study regarding pedagogical autonomy and self-pacing align significantly with the social-cognitive perspective of learning, which posits that digital environments empower students to transition from passive recipients to active managers of their academic progress. This observation resonates with the work of Mhlongo et al. (2023), who argued that digital alternatives represent a necessary evolution in educational environments by offering greater control over the learning pace. Specifically, the “personalized tutor” effect and the use of pre-recorded lectures to manage cognitive load mirror the findings of Lajnef, (2025) and Shamsudin et al. (2023), who identified that students in digital formats often perform better in technically demanding subjects like Auditing due to the ability to revisit complex materials. However, while global literature often presents online learning as a universal facilitator of autonomy, this research suggests that such efficacy is deeply contingent upon the student’s internal state and self-discipline, supporting the assertion by Caprara & Caprara, (2022) that learning effectiveness is not a guaranteed outcome of technology but an interaction between the learner and the virtual space.

In contrast to studies conducted in technologically advanced nations, such as (2024), which observed parity between online and traditional performance, the current findings reveal a stark geographical stratification within the Eastern Cape. This study highlights that “connectivity poverty” and energy instability create a structural barrier that Olawuyi et al. (2024) might not have encountered in more stable infrastructures. The struggles of students in rural areas and townships, characterised by “load shedding” and unreliable internet, reinforce Ndibalema's (2022) arguments about the unique infrastructure challenges faced in Open and Distance Learning (ODL) environments in developing regions. Consequently, while Ramotshwane et al. (2024) Noted that traditional students often perform better in accounting due to live interactions, this study adds a layer of socioeconomic complexity. For many South African students, the preference for online learning is a logistical survival strategy to mitigate the high costs of commuting, despite the systemic technical frustrations highlighted by Mpungose (2020).

The “Hybridity Paradox” identified in this research, in which students mourn the loss of spontaneous social interaction while simultaneously prioritising digital convenience, offers a nuanced expansion of the existing literature on social presence in virtual learning. The findings indicate that students do not remain passive in the “dialogic void” created by asynchronous platforms; instead, they exercise proactive agency by forming peer-led “Virtual Accountability Circles.” This proactivity aligns with the self-regulation mechanisms discussed by Russo et al. (2025) yet it also points to a deficiency in institutional pedagogical design, which often fails to replicate the “gold mine” of face-to-face feedback. Hoi (2021) emphasises the importance of analysing self-reported learning experiences to capture the complexity of the learning process. This study demonstrates that students’ adaptive behaviours, such as utilizing external social media for academic discussions, are essential bridges that compensate for the lack of formal institutional social structures.

Demographic diversity emerged as a critical lens through which adaptability is filtered, challenging the “one-size-fits-all” digital strategy prevalent in many higher education institutions. The contrast between the “Resilient Parent” and the “Digital Native” suggests that age and domestic responsibilities fundamentally alter the perceived value of e-learning. For adult learners, the success of the online modality is measured by its ability to integrate with complex life schedules. This finding supports the barriers to e-learning adoption discussed by Barnes et al. (2024), such as skills shortages and negative attitudes often found in non-traditional cohorts. Conversely, for tech-savvy urban students, the university portal serves as a seamless extension of their lifestyle, enabling academic optimization that aligns with the “anytime, anywhere” learning ideal. This disparity underscores that digital literacy is not just a technical skill but a biographical advantage that dictates a student’s ability to thrive in a digitalized landscape.

The theoretical implications of this study suggest that the “Hybridity Paradox” should be viewed as a catalyst for a new pedagogical framework that integrates student-driven social networks into formal institutional designs. Practically, the findings demand that universities in the Eastern Cape move beyond mere digital delivery and invest in “offline-compatible” modules and data subsidies to address the “connectivity poverty” that threatens to widen the digital divide. As institutions transition to a post-pandemic reality, they must recognize that while technology offers flexibility, the human element of interaction remains a cognitive prerequisite for mastering complex accounting principles. By acknowledging the distinct learner identities and geographical constraints identified in this research, accounting departments can foster a more inclusive and resilient educational ecosystem that prepares students for the professional rigors of a technology-driven financial industry.

## CONCLUSION

This study concludes that the transition to online accounting education represents a significant pedagogical shift that promotes student autonomy and self-regulated learning, although its effectiveness remains highly dependent on geographical and socioeconomic conditions. The findings highlight the “Hybridity Paradox,” demonstrating that social interaction is essential for mastering complex financial concepts and encouraging students to build virtual support networks. By proposing a typology of student adaptability within a historically disadvantaged regional context, the study contributes to the discourse on educational equity and digital transformation.

However, its qualitative design and limited sample from a single institution restrict the generalizability of the findings. Therefore, future studies should adopt longitudinal or mixed-methods approaches to examine long-term graduate outcomes and assess the effectiveness of institutional interventions, such as data subsidies and offline-compatible learning modules, in reducing academic performance disparities.

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