

## Enhancing Hybrid Learning Style in a University of Technology: A Lesson from Accounting Post Graduate Certificate in Education Students

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### ABSTRACT

This empirical study aimed to identify strategies for improving the effectiveness of hybrid learning within the Post Graduate Certificate in Education (PGCE) programme in accounting. The PGCE is offered through two modes, full-time and part-time, to accommodate the varying needs and circumstances of students. Full-time students are required to complete the programme in one year and attending lectures during the day. In contrast, the part-time option extends over two years and is flexible, allowing individuals with professional to enroll and lectures held in the afternoons. Despite these options, student attendance remains a challenge across both modes. As a response, lecturers have adopted hybrid learning methods, however, its effectiveness is still relatively low. Therefore, this study was conducted to explore and recommend strategies to strengthen hybrid learning within the PGCE context. The research is grounded in the Complex Adaptive Blended Learning System (CABLES) theoretical framework. It follows a pragmatic paradigm and employs a mixed-methods approach with a pragmatic research design to investigate the issue. A probability sampling technique was used to select 20 PGCE Accounting students for the quantitative component, while five students were purposively selected for semi-structured qualitative interviews. Quantitative data were analyzed using SPSS version 27, and qualitative data were examined through thematic analysis. The results suggest that hybrid learning can be improved through new class configuration that support autonomous learning beyond the classroom. Furthermore, hybrid learning can be enhanced through modality of teaching in blackboard such as using breakaway rooms and discussion without the presence of instructors. Additionally, PGCE students should be allowed to use any accessible ICT resources to enhance hybrid learning. The study therefore concluded that hybrid learning could be effective if students are equipped with balancing two environments of learning (virtual and face to face).

**Keywords:** Hybrid learning, accounting; Post Graduate Certificate in Education (PGCE); students; Complex Adaptive Blended Learning System (CABLES).

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## INTRODUCTION

The acceleration of technology in the education sector is bringing numerous transformations including the way we teach, learn, assess, connect and network with education stakeholders. In the education sector, the transformation is more notable in institutions with better access to technology resources such as higher education. Evidently, the department of higher education has introduced and adopted a significant transformation of hybrid learning among institutions. This hybrid learning demonstrates a collaboration of face-to-face and online instructional practices which give instructors options of learning (Gleason & Greenhow, 2017). Additionally, it serves as an advanced and convenient teaching and learning method as learning can take place anywhere and anyhow. A vacuum of hybrid learning gained more momentum during the pandemic season where learning and to take place remotely. Although it has been an existing learning style, COVID made it to be more embraced as lecturers in higher education institutions were compelled to continue with teaching and learning remotely. Responding to the restrictions of pandemic of social distancing and closing institutions for safety reasons, higher education leaders made a choice of opting for mixed solutions, allowing synchronous and asynchronous teaching, and the use, of specific platforms for e-learning (Hamid, 2024; Manciaracina, 2020).

Notwithstanding research has shown that higher education institutions have adopted this hybrid learning however there are challenges that affects its effectiveness (Detienne, Raes, & Depaepe, 2018; Alducin-Ochoa, & Vázquez-Martínez, 2016; Hamid, 2024). Conole, de Laat, Dillon and Darby (2008) indicate that hybrid learning shifts the way students work, suggesting a complex interrelationship between individuals and instruments. The authors conclude by stating that technology is not simply seen as an 'add on' for these students, it is central to how they organise and orientate their learning. PGCE lecturers at a university of technology have adopted hybrid learning methods to address the issue of attendance foreseeing its benefits within the programme however there is a notable problem of ineffectiveness and incorporation from students. Nisar, Subhan and Latif (2022) argue that although hybrid learning is presenting a

new mode of learning, the true potential of hybrid learning has not yet been manifested since the usage of hybrid mode isn't as strategic as it has potential to be. Furthermore, there have been no substantive methods available in terms of training hence students may not take part in hybrid learning they lack understanding. Another study worth noting is by Hofmann (2014) who claim that hybrid learning has been adopted quickly however one major problem is how people can effectively utilise the innovation and guarantee members' responsibility given the individual student qualities and experiences with technology. According to Park and Choi (2009), students are challenged by the inability to proceed with their online instruction now and again because of family, workload and less available time to study prompting student dropout. The above sentiments led to the objective of this study of exploring and recommending strategies to enhance hybrid learning in PGCE programme. This study is unique in the sense that it concentrates on mechanisms to enhance hybrid learning style as majority of studies on hybrid learning focus on effectiveness and challenges. It aims at ensuring that mechanisms proposed grows the effectiveness of hybrid learning. The uniqueness of this study is also the fact that it was conducted in a technology university and focuses on accounting PGCEs. The paper is structured to provide an overview of previous literature on hybrid learning, followed by the theoretical framework and methodology. Findings, discussion of findings and recommendations are then highlighted followed by concluding remarks.

### Research question

This study sought to address one crucial question:

How can hybrid learning style be enhanced in accounting PGCE at a university of technology?

## LITERATURE REVIEW

This section covers review of previous scholars on hybrid learning.

### Hybrid learning in higher education

Modern education in high education institutions is advancing ways of learning. One of the most notable modern styles of learning in higher education institutions is hybrid learning where there is a combination of digital resources and face to face learning. Due to ongoing debate of

hybrid learning scholars have shared various insights into it, for instance, Gnaur, Hindhede and Andersen (2020), Hamid (2024) and Nisar, Subhan and Latif (2022). Manciaracina (2020) maintain that to hybrid learning in higher education institutions co-occurs in a physical space (on-site) and a virtual space (online) to mix and amplify the positive benefits of both contexts. Hybrid learning process is administered in physical and virtual environments through the utilisation of digital tools. Manciaracina further indicates that hybrid learning is perceived as online realms that allow for synchronous and asynchronous interaction between teachers and learners while offering technological learning tools that learners can access at anytime and anywhere. Rahman, Wahid, Afandi, Bali and Hakim (2019) opine that hybrid learning is a learning approach for integrating innovation and technological progress through an online learning system with the interaction and participation of traditional learning strategies. According to Gleason and Greenhow (2017), this learning approach is observed beneficial to enhance students' learning, make provision of teaching and allow students the ability to establish social presence in synchronous hybrid learning styles.

### **Significance of hybrid learning in higher education**

Alducin-Ochoa and Vázquez-Martínez (2016) buttress that hybrid learning style constantly ensures up-to-date learning at universities are well-designed, planned and implemented in a manner they can respond to current university demands. Hybrid learning at universities is recognised as fundamental innovative methods that will advance quality of learning and provide students with basic skills they may require in the employment industry. Hybrid learning creates a unique learning experience which is necessitated in this 21<sup>st</sup> century. Gnaur, Hindhede and Andersen (2020) point out that hybrid learning at higher learning institution transforms the learning setting to an extent that universities have developed virtual classroom software to use for the creation of virtual classes and starting all the courses at a distance. In the PGCE programme there are modules that are designed to take place in distance learning, and this make hybrid learning style more needed.

Hybrid learning has been shown to address the frustrations and limitations resulting from the

separation of tutor and tutee commonly found with fully online education (Hodges, 2004). mode of instruction Wu and Hiltz (2004) found that hybrid courses that utilized asynchronous means of communications improved students' perception of learning. Bhatti, Tubaisahat, and El-Quawasmeh (2005) who examined the perceptions of female students regarding hybrid learning argued that student satisfaction increased with mixed-mode learning while the students' dependency on the instructor for assistance decreased. The authors explained that online materials provided students with resources to seek out answers independent of the instructor. Rivera, McAlister, and Rice (2002), who surveyed students' satisfaction among the three modes of learning (face to face, fully online, and hybrid), found that students' satisfaction was the highest with the hybrid learning model and that test scores were the same for all three methods of delivery. The hybrid teaching method may eventually become the norm in higher education. Young (2002) also opine that hybrid model posed the most substantive benefits for teaching and learning at several universities Although the hybrid learning style combined the technology resources effectively to benefit students, environments for administering the hybrid learning is also crucial to consider. In the study conducted by Bennett, Knight and Rowley (2020) it is apparent that hybrid learning spaces are significant for effective implementation. Combining multiple modalities to achieve effective synergies affords hybrid learning spaces that will enforce quality activities and considers the interactions between learner and teachers to extend how learning is optimised.

### **Challenges with hybrid learning style in higher education**

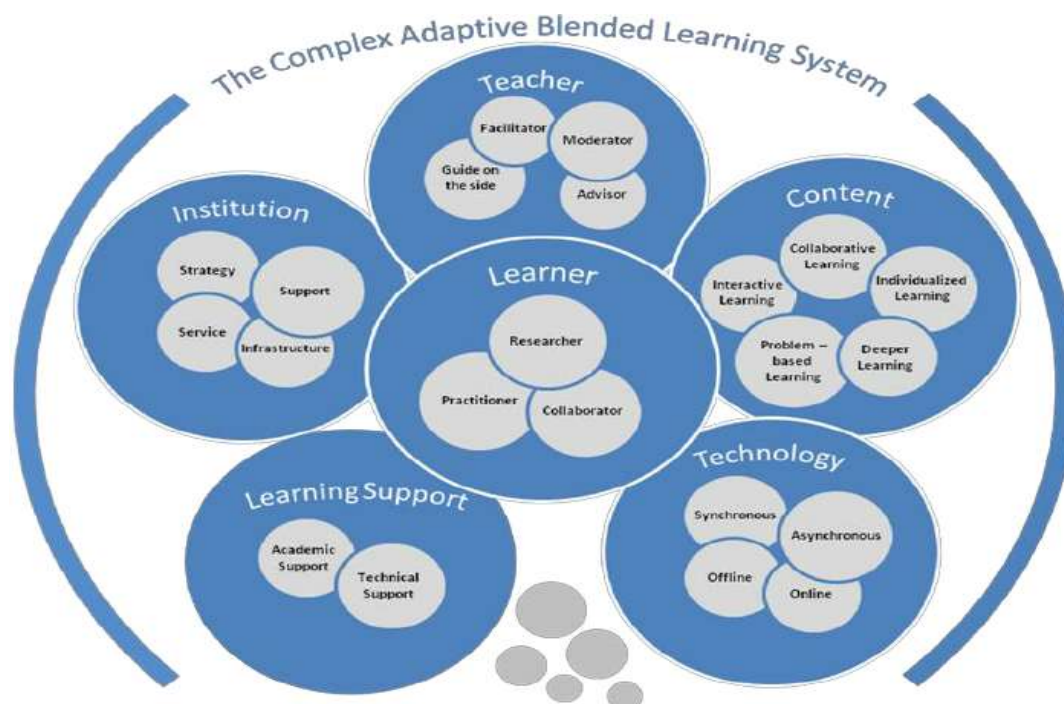
Although the debate shows full support of hybrid learning at higher learning institutions there are notable challenges or drawbacks. The most reported challenge in higher learning institutions is limited technical skills (Gnaur, Hindhede & Andersen, 2020). Manciaracina (2020) posited that the initial step is the technical skills required by instructors and learners during the period of forced hybrid learning, the new role of directors and designers of teaching activities assumed by teachers in active learning approaches. The availability of digital tools and environments that use the connective and innovative potential of

technology are radically reshaping what constitutes educational experience, where it happens, and what it means to deliver effective learning. Post Graduate Certificate in Education effectiveness is affected by lack of technology resources, students are resistant to adopt it, students being illiterate about it and students are not well trained.

**THEORETICAL FRAMEWORK**

To concretise the above arguments this study borrowed the theory of Complex Adaptive Blended Learning System (CABLES). This theory provides comprehensive ideas on the hybrid learning and is applicable to hybrid learning level of education including learners, teacher or instructor at schools and colleges and universities (Cleveland-Innes & Wilton, 2018).

CABLES is a widely accepted and adaptable model in the field of education, spanning from primary schools to higher education, placing a strong emphasis on students and their active interaction within a rapidly evolving educational landscape (Cummings, 2022). In this model, students' roles and responsibilities evolve in tandem with emerging technologies and systems, fostering their transition from passive to active learners (Boukhalfa et al., 2022). Instructors, too, undergo transformation as they become more proficient and innovative in their use of technology, influencing and being influenced by the students (Shohel et al., 2022). Below is the diagram and brief description of each (Cummings, 2022, p. 8).



**Figure 1.** Complex Adaptive Blended Learning System

Firstly, in CABLES the role of learners changes, as learners engage for the first time or in new ways with the elements in the system (Cummings, 2022). This is key to the support and training of lifelong learners, a characteristic identified as important in 21st-century society. Secondly, the teachers are also new in blended environments and will co-evolve with students as both engage with and adapt to each other and

the other four elements in the system (Cummings, 2022). The assumption is that teachers engaging in blended learning will adapt to pedagogies appropriate not only for blended learning but for learners preparing to engage productively in 21st-century societies, which are characterised by significant diversity. Thirdly, CABLES indicate that contents refer to subject matter and the material elements used to

engage learners in the process of mastering that subject. The interactive, dynamic, media-rich materials available online create opportunities for teachers and learners to add content before, during and even after the course experience (Cleveland-Innes & Wilton, 2018). Fourthly, technology in general terms refers to any equipment or mechanism that extends the human capacity to get things done, the creation and use of technical means, and their interrelation with life. Technology for learning requires new roles for the learner and teacher and new ways of accessing and working with content. Lastly, the learning support and the institution impacts the choice and use of content (Cleveland-Innes & Wilton, 2018). This theory was relevant to understand deeper the complex engagement of multiple learning modes to influence hybrid learning in higher education. The components of this theory assisted in exploring the hybrid learning style in higher education and how it can be enhanced. CABLES theory outlines clearly the responsibilities of each role player in successfully implementing hybrid learning. In the case of this study, all the elements of the theory assist to ensure everyone is on board during the implementation. The theory highlights comprehensively what technology resources needed for hybrid learning which helped to propose strategies that will consider the accessibility of resources. The theory is applicable in the sense that it provides ideas on what is required for effective hybrid and blended learning in all levels of education. This assisted to develop appropriate and feasible measures to enhance hybrid learning.

## RESEARCH METHODOLOGY

The following section articulates in depth description of the research process in this study.

### Study approach, paradigm and design

This study utilised a mixed-method approach, both quantitative and qualitative approaches, to conduct research. Patten and Newhart (2018) believe that the mixed-method approach works best since the researcher can utilise both quantitative and qualitative approaches at once to gather information. This approach provided comprehensive data on how to enhance hybrid learning style. Furthermore, pragmatism was adopted as the research paradigm. According to Creswell and Creswell (2017), pragmatic researchers concentrate on what and how

questions, which are essential to comprehend the intended results. This paradigm provided concrete information to understand hybrid learning style in the PGCE programme. I was able to understand participants' worldview and beliefs on hybrid learning in accounting PGCE programme. Explanatory sequential mixed-method research design was employed to comprehend ideas on enhancing hybrid learning. The explanatory sequential mixed-method research provides the researcher two-stage model of data collection (Guetterman et al., 2019). The two-stage model created the opportunity to collect data in two categories. The first category collected data using the quantitative method (questionnaires) and then analysed the data collected to build on the next category. The next category was to collect data using a qualitative method (interviews) and then analysed it to support quantitative data generated. Through these two categories more accurate since qualitative data provided clear understanding of the quantitative data.

### Sampling and population

This study targeted a population of accounting PGCE students at a university of technology. 20 PGCE students were simple randomly selected for quantitative data. These students were enrolled in accounting for the PGCE programme. For qualitative data in this study, 5 students were purposively sampled for semi-structured interviews. Under purposive sample, convenience sampling was used since the aim was to select participants who are more convenient. Through convenience sampling it was easy to obtain participants for the study as accessibility was also very high. Guetterman et al. (2019) argue that mixed-method sampling strategies involve using both probability and non-probability sampling in selecting cases for a research study. Thereafter, data was collected.

### Data collection

This study utilised two methods of data collection: questionnaires and individual interviews. The questionnaire consisted of closed-ended questions to collect responses on hybrid learning in accounting. The questionnaires included questions on resources, blackboard usage, learning settings and were designed according to the research question and objective. The questionnaires were distributed electronically to participants via WhatsApp and emails. After questionnaires were returned, they

were analysed and the second phase of generating data through qualitative method followed. Semi-structured interviews with accounting PGCE students were administered. Each interview lasted 25 minutes per participant and took place in the teacher's natural setting via Zoom, Teams and WhatsApp. The interviews were digitally recorded for transcribing and safekeeping. Data was stored on a laptop computer and later analysed.

**Data analysis**

The Statistical Package for Social Sciences (SPSS) version 27 was employed to analyse quantitative data collected. Quantitative data was reduced and analysed using inferential statistical analysis. Data analysis was recorded in the form of tables and graphs and supplemented by qualitative findings. Qualitative data obtained was analysed using thematic data analysis. The process started by listening to audio recordings multiple times. Thereafter, data was transcribed from the audio-recorded into text. Thereafter texts were grouped together according to their similarity for coding and developing themes. Thematic content analysis has been discussed in the literature as one of the methods that can be used in qualitative research to analyse data and measure trustworthiness in research (Creswell & Creswell, 2017). To report on the data analysed, a written presentation including the voices of participants, descriptions and literature was provided. Validity and credibility were ensured through pilot study and member check method. Pilot study was

conducted with 10 participants who were willingly available. For member check, after data has been analysed it was sent to participants to validate the accuracy of the data they provided after analysis.

**Ethics considerations**

Before proceeding to data collection, the research proposal was submitted to the Central University of Technology, Research and Ethics Committee to obtain permission to conduct the study. After permission was granted with ethics number: HREIC SF 29/02/24 consent forms were issued via WhatsApp or e-mail to participants to inform them about the study. Informed consent letters explicitly described the nature of the study and its objectives, confidentiality, anonymity, voluntarily participation and withdrawing anytime.

**FINDINGS**

To present findings that were obtained in answering the research question, quantitative findings are presented first, and the qualitative findings were used to clarify or support the quantitative data. From quantitative and qualitative findings three themes emerged demonstrating how hybrid learning style can be enhanced.

**New class configuration**

In this study it was essential to first understand how PGCE students are using hybrid learning in accounting. Participants were asked to choose from two options that were given: learning and discussion boards.

**Table 1.** Hybrid learning usage

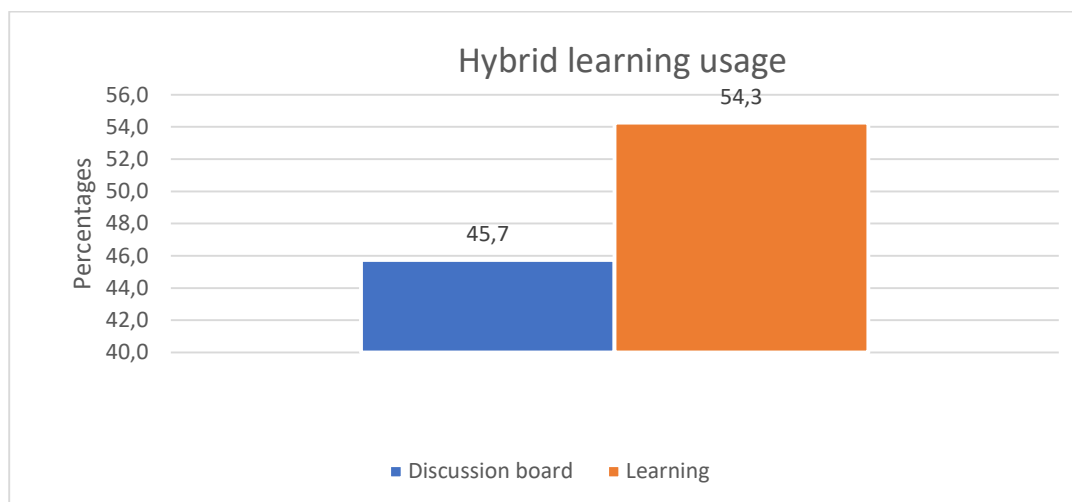


Table 1 shows that 54.3% of PGCE students use hybrid learning while 45.7% indicate that they use hybrid learning for discussion. Although statistical findings outline the above percentages, during interviews participants highlighted contrary findings. Participants acknowledge that lecturers do conduct hybrid lessons, however they are not actively involved in either. The rationale was that this is a new and advanced method of learning, and it consists of two different environments. Participants alluded that with hybrid learning instructors and students are in different environments which makes them not to be active. Participants felt that adjusting to these two environments is taking them time which results in ineffective learning. Participants disclose that discussion boards are not active as other students do not engage. This is what PGCE 1 had to say:

*“In our lecture we do have hybrid learning since some of us are part-timers. We meet for learning, however, not always as it is not effective as face-to-face learning. The institution is reinforcing this hybrid learning and I think because of us it is not active in my group. Being in two environments for learning is something we are still trying to adjust to. I think there must be a way of changing our mindset of the classroom”.*

PGCE 4 added that:

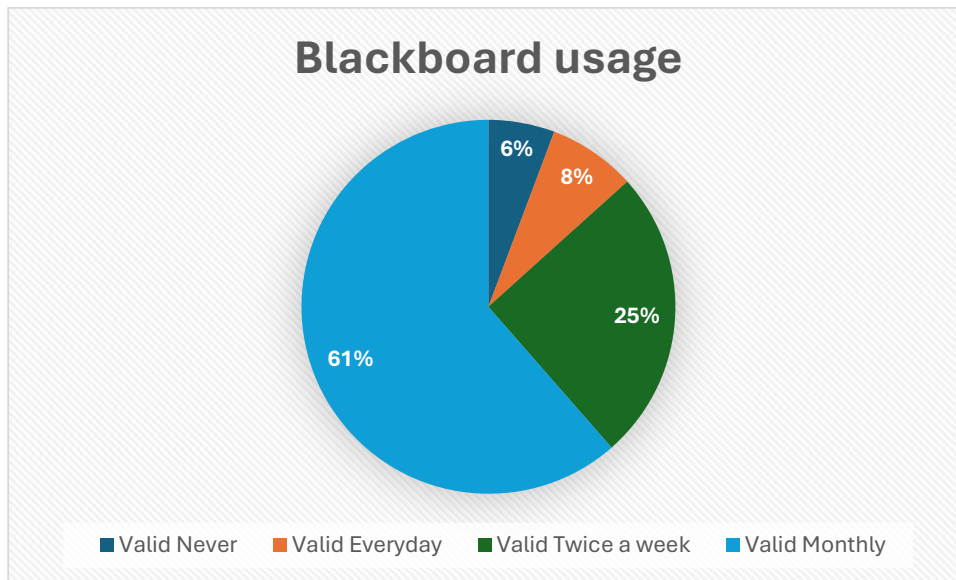
*“In my observation, as PGCE in accounting we are not finding it active to learn in different places. Others do not pay attention as in the classroom. Perhaps getting some developments on hybrid learning and environments will change us. We are old school students this hybrid learning is new to us.”*

From the voices of participants, it is clear that PGCE students have not adjusted to learning in different environments consequently they become active in hybrid learning. The above findings are supported by Bennett, Knight and Rowley (2020) who emphasise the importance of connection between learning and places. Bennett, Knight and Rowley further claim that in the learning space, be it physical or online, students connect with the engagement strategies they consider to be typically successful for them. The salient qualities of specific learning places are aligned with successful learning activities and there is a consensus that enjoyable learning experiences equate to good learning outcomes. Supporting the above findings was Rahman et al. (2018) who postulated that implementation of hybrid learning depends on facilities and infrastructure covering the internet network and environments. Alducin-Ochoa and Vázquez-Martínez (2016) opined that when students are positive about the learning environment, they turn to produce good academic learning. The theory employed in this study advocate for accepting and understanding that students need to change and adapt to the new change of learning. Therefore, devising strategies of enhancing hybrid learning in accounting PGCE group was foregrounded by this theory. The new class configuration had to consider resources, activities and wide range of support.

### **Modality of teaching**

Participants were asked to range their level of using Blackboard which is a good mechanism to have effective hybrid learning. Participants had to range themselves from never, agree, strongly agree, neutral, disagree and strongly disagree.

**Table 2.** Blackboard usage



In table 2 above, it is evident that participants do not frequently use blackboard. According to statistical analysis showed that 61% use it once a month, 8% every day and 6% never use blackboard. During the interview participants indicated that they are struggling to use blackboard due to reasons such as connectivity, login issues and consuming too much data. The participants who have never used blackboard were asked to articulate how they use hybrid learning. They indicated that they get information from their fellows, sometimes join with fellows in one venue. On the other hand, from the 61% of participants it was apparent that participants logged in to download educational materials. 25% of participants acknowledged that they do attend lecture conducted on blackboard. Majority of participants who indicated that they use it monthly revealed that they are full time, so they only use blackboard it monthly. The participants disclose that blackboard is mostly used for learning. PGCE 2 disclosed:

*“Although I’m full time but blackboard is something that we use once a month and, in most cases, when we did not complete the lecture. The only thing I know about blackboard is learning, lecturer do conduct some lecturers, but we don’t attend.”*

Adding to PGCE 2 was PGCE 3 who alluded that:

*“In the blackboard the lecturer normally gives a full lecture, we downloaded materials and as students of accounting we cannot effectively do class activities. The lecturer supervises us.”*

Above findings display that accounting PGCE are not active on using blackboard. Gnaur, Hindhede and Andersen (2020) support the above findings by stating that support is required for students from all zones in online courses and this might be from family, companions, associates and associates in class. Additionally, I noticed that associate support helped new students with computer utilisation and applications. Variety of technology helps students who have no or little information about technology to enable them to defeat fears. Park and Choi (2009) demonstrated that organisations help altogether predicts students' stay and accomplishment in online courses since supervisors now and again will lessen students' workload amid studies and in addition they are occupied with work related learning to progress and enhance their aptitudes. Given this, universities must begin to expand the discourse around technology to include a debate on the development of digital learning spaces and hybrid learning processes. It was additionally noticed that students may not proceed in hybrid learning if they can't make companions subsequently creating sentiments of loneliness amid their hybrid learning encounters (Willging and Johnson, 2009).

CABLES theory encourages the use of modality aspect in blended learning, therefore in the context of this study hybrid learning enhancement measures had to be developed with blackboard use that will allow technical writing, engagements, collaboration, use of visuals and Visual, reading and writing that will use more technology.

**Utilising a wide range of available resources**

Participants were asked to indicate which resources they use for hybrid learning. The choice of responses ranged from computers, laptops, tablets, smartphones and others. Participants had to choose the one they mostly use. Below are analysed responses:

**Table 3.** ICT resources used by students for hybrid learning

No.	ICT resources	Number of students using it for hybrid learning (%)
1.	Computer	15%
2.	Laptop	34%
3.	Tablet	11%
4.	Smartphone	40%
5.	Other	None

Table 3 above outlines that students use more smartphones (40%) and tablets (34%) for hybrid learning. Tablets were the least used resource. During the interview participants disclose that hybrid learning is mostly in the afternoons when they are at home, and they do not have resources such laptops. Participants stated that they are not funded in the PGCE programme therefore they do not have the required technology resources for hybrid learning. Majority of participants acknowledged that they join virtual classes using their smartphone and for most of the resources they visit campus to download. PGCE 5 reported:

*“For any hybrid learning I use my phone since my laptop is not working, however it limits me from being active”*

PGCE 4 added on the debate by announcing that:

*“For virtual lectures I use both my phone and laptop, sometimes my phone makes it easy for me to connect, I am able to download learning documents and listen to the lecture, it does not give me a problem. Smartphones for me are convenient to hybrid learning.”*

From the above findings it is explicit that more resources that students can easily access must be used for hybrid learning. Students might be fully aware that a smartphone can administer all the activities of hybrid learning well thus training support is necessitated. Research shows that the accomplishment of hybrid learning can generally rely upon students and in addition educators' resources and capacity to partake in hybrid learning (Cummings, 2022). Since the utilisation of hybrid learning applies more use of PCs, computer skill is vital (Abubakar & Adetimirin, 2015) to maintain good performance in applying innovation in instruction for learning efficacy. Rovai (2003) noticed that students' computer proficiency and management of time are vital in hybrid learning and presumed that such factors are important in online classes. A need to look for supportive help from companions and instructors through talks, email and personal interactions for viability (Lynch and Dembo, 2004). The CABLES theory assisted to ensure that learning support and institution focuses more on resources. The theory argues that institutions must demonstrate importance of blended learning even by providing resources, thus this study used theory. In hybrid learning style support is needed on utilisation of resources.

**CONCLUSION**

This study intended to outline measures to enhance hybrid learning style in accounting at a technology university. The study employed a mixed method to address the research phenomenon. Findings showed that hybrid learning can be enhanced through new class configuration where students will understand how to learn outside the classroom. Further, findings revealed that hybrid learning can be enhanced through modality of teaching on the blackboard such as using break away room and discussion without the presence of instructors. Additionally, PGCE students should be allowed to use any available or accessible ICT resources to enhance hybrid learning.

## Recommendations

Taking into consideration the above findings, the study proposes some recommendations to enhance the hybrid learning style in accounting PGCE. To begin with, findings showed that students are not familiar with the two environments of learning thus they are not actively involved. The study recommends that the gap on environment setting must be bridged through initiating short training that will change students' mindset on environment of learning. Students must have a chance to come together and be informed about hybrid learning, what tools they need, how they can connect and what are the benefits of it. The theory employed in this study suggested that support is essential in technical support aiming to help students improve their knowledge of the technological tools and the fluency with which they use the tools to complete specific learning tasks (Wang et al., 2015). Before students commence with lectures they need to be trained in how hybrid will be implemented in the programme and what are their responsibilities. Recordings and video must be provided on ongoing basis for students to familiarise themselves with the mode of learning. Students must be supported in any challenges that might hinder effective hybrid learning. These challenges include troubleshooting technology, material access and learning to communicate effectively online. Allow students to initiate learning activities and discussions. Additionally, interactive learning is recommended such as breakaway rooms to attend students in small groups, use quizzes to keep students active and use modern digitals, discussion forum to be open always for students to post and discuss anytime. Furthermore, a wide range of use of digital resources is suggested. The resources that are more accessible and available to students must be highly used. Smartphones are used for hybrid learning style is encouraged as nearly all students have smartphones with them everywhere.

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