



## Blended Learning Challenges During COVID-19: A Case of Cost Accounting 2 Students at a Selected South African Higher Education Institution

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### ABSTRACT

Every sector in the twenty-first century makes use of technology for its activities, especially during the COVID-19 pandemic and higher education institutions are not exceptional. However, the cohorts enrolled in the selected higher education institution are from technologically challenged backgrounds. This suggests that in their previous schooling, technology was unemployed as a learning aid. As this may present some challenges for such students, this study aims to investigate challenges experienced by Cost Accounting 2 students who are from a technologically disadvantaged background. To accomplish that, a quantitative approach was used since it permits surveys to be delivered to the entire impacted population while also reducing sampling error. Because of the Coronavirus, online questionnaires were sent to 400 students, but only 119 (n=119) responded. Blended learning was found to be an effective technique for learning Cost Accounting 2 since the university provided sufficient information on how to use the system. However, there was a lot of discussion about internet access, learning materials access, and library resource access. Based on the findings, the blended learning is excellent for studying Cost Accounting 2 as long as the learning management system is customised such that students can navigate it effortlessly. Management must work with internet service providers to try stabilise internet connectivity in the students' neighbourhoods. The additional study can be done using a variety of research methods and target other groups of students.

### KEYWORDS

Blended learning; accounting education; student challenges; technological disadvantaged background; COVID-19.

## INTRODUCTION AND BACKGROUND

The fourth industrial revolution (4IR) necessitates that higher education institutions expand their technology systems, implement new teaching and learning modalities, and remove impediments to innovation (Gleason, 2018). Similarly, boosting education, training, and innovation in this knowledge society is discussed in Chapter 9 of the National Development Plan (National Planning Commission, 2010). As a result, higher education institutions have no choice but to modify their teaching and learning methods to produce graduates with the requisite 21<sup>st</sup> century skills, which include critical thinking skills, problem-solving abilities, and the ability to adapt to change as society grows (Mahanal et al., 2019).

The traditional chalk and talk method have become less effective because of this transition (Maycock, 2019). The coronavirus (COVID-19) pandemic also enforces Higher Education Institutions (HEIs) to drastically move from face-to-face to Emergency Remote Teaching and Learning (ERTL) (Hodges et al., 2020; Czerniewicz et al., 2020). This move was purely relying on the use of technology devices for teaching and learning activities. As we are embracing the change, we need not to forget about students who are the most important stakeholders. This paper will focus on students who are from a technologically disadvantaged educational background in an attempt to establish the challenges they are facing with the introduced Blended Learning (BL) mode of learning. The selected HEI is still making progress in incorporating technology with conventional instruction, which is referred to as blended learning (Hompashe, 2018). According to Liu et al., (2016), blended learning is frequently employed in education.

### Research Question

It is because of this background that the study explores the challenges faced by students from the technologically disadvantaged educational background by answering the following question:

- What challenges do students from a technologically disadvantaged background experience with blended learning in learning Cost Accounting 2?

## LITERATURE REVIEW

Students from Technologically disadvantaged backgrounds, blended learning, Generation Z as well as the impact of COVID-19 will be reviewed to understand what the world is saying about the student challenges in the BL mode of learning. The study will pay a specific focus on Cost Accounting 2 students.

### Students from a technologically disadvantaged background

Under apartheid, historically disadvantaged institutions (HDIs) met the educational needs of the former Bantu Homelands, which were marked by discrepancies as compared to their affluent equivalents, resulting in social hierarchies (Africa & Mutizwa-Mangiza, 2017). The democratic government adopts a scheme of subsidising basic education schools according to quantile

categorisation to bridge the gap created by the apartheid regime (Ogbonnaya & Awuah, 2019). Most schools in the selected HEI province have been in quintiles one and three since the system's establishment.

These are public schools that are fully sponsored by the government but lack sophisticated resources to carry out their educational operations. Because they rely on government financing, the priority is to have basic learning resources. As a result, they are not introduced to technology as a learning tool. These schools eventually became the feeder schools of the selected higher educational institution (Hompashe, 2018).

This labelling (HDI) impacts on those who can choose which university to attend. Labelling has also instilled in the person working in a labelled institution a stereotypical way of thinking (Africa & Mutizwa-Mangiza, 2017). When BL is offered to students with such background, it may have an impact on their learning of Cost Accounting 2. This technological infusion may excite students since they will respect the university's efforts in the face of adversity. On the other hand, learners may reject the learning process because they believe it will not work for them and is foreign to their learning because they have not been exposed to technology as a learning tool (Parker et al., 2021). Hence, this study attempts to understand Cost Accounting 2 students' challenges towards BL mode.

### **Blended Learning**

BL does not have a single definition. Some authors define blended learning as a mix of instructional modalities or delivery mediums (Crawford & Jenkins, 2017). Others define it as a mix of face-to-face and online learning (Ruokonen & Ruismäki, 2016). Blended learning is described as a form of education in which students learn using electronic and online media in addition to traditional face-to-face instruction in this study. Blended learning not only allows teachers and students to exchange synchronous and asynchronous feedback, but it also meets educational needs such as increasing learning satisfaction, increasing convenience and flexibility, achieving and improving language learning skills, and developing critical thinking skills. According to Ma et al. (2019) and Borglum (2016), allowing students to express questions anonymously is critical; after all, they may lack the confidence to do so in a classroom context or on a blended learning discussion board because they believe their queries are foolish. Yuerong et al. (2017) claim that students may experience culture and learning shock because of being exposed to a novel learning scenario.

Phakakat and Sovajassatakul (2020) argue that electronic engagement can no longer maintain the characteristics and multi-dimensionality of the tutor-student connection that actual learning appears to necessitate. In contrast, the selected HEI is transitioning to blended courses to meet the needs of undergraduate students enrolled in completely traditional face-to-face courses. This infusion of technology may pose some challenges to students from technologically disadvantaged backgrounds.

### **Generation Z (Gen.Z)**

Generation Z is defined as a technologically privileged generation born between 1995 and 2012 (Grace-Bridges, 2019). Because they are known as techno-savvy, it is assumed that they will be interested in using the learning management system (WiSeUp). According to research, Gen.Z has an impact on the workplace (Seemiller et al., 2019). Ninety-one percent believe that the technological sophistication of a company influences their decision to work for it. It is consequently imperative that higher education institutions take considerable care in preparing this generation for the workplace of the 20<sup>st</sup> century.

The study assumes that most registered students at the selected HEI belong to Gen.Z. As a result, the purpose of this study is to determine how students perceive blended learning in Cost Accounting 2.

### **Coronavirus (COVID-19)**

On March 8, 2020, South African officials announced the first Coronavirus infection. To prevent the virus from spreading, the South African government stopped all schools, including universities and other educational institutions, until March 26, 2020 (Government News Agency of South Africa, 2020). Most countries issued a complete or partial border lockdown to prevent the spread of Coronavirus among their nationals (Mhlanga & Moloji, 2020). Various education institutions around the world also made substantial efforts to reduce face-to-face interactions between students and lecturers. They proposed that all academic teaching be executed virtually at higher education institutions. As a result, during the first semester, all face-to-face academic activities were suspended (Czerniewicz et al., 2020; Dube et al., 2022). This virus necessitated the importance of infusing technology into learning and that poses various connectivity challenges (Williams et al., 2021) However, the question remains: Where does this infusion of technology place the learners who are from a technologically disadvantaged educational background?

## **METHODS**

### **Design**

The study design is descriptive to describe a population, situation or phenomenon accurately and systematically (McCombes & Van den Eertwegh, 2019). This design is relevant for this study as it allows the researcher to collect large amounts of data and can evaluate users' satisfaction with participants' views. However, its limitation is that the researcher cannot make inferences about causality (McCombes & Van den Eertwegh, 2019). Thus, a cross-sectional design will be employed because it is used to assess the burden of the needs of a population, and the data will be collected at one time.

### **Sampling procedure and participants**

The study took a census approach, that is, (n = 400). The census approach was adopted as it allowed the study to capture the students' challenges on BL. This approach was effective in

understanding how the entire population felt about a newly introduced mode of learning in studying Cost Accounting 2 (Charman et al., 2016). Therefore, the sample size included all students registered for the second year of Cost Accounting.

The participants were mostly from rural areas, and they were unfamiliar with technology-assisted learning. Because of the findings, the selected HEI, which is in the eastern part of South Africa's Eastern Cape, made greater use of traditional face-to-face teaching and learning modes in their first year and gradually introduced to BL. Prior to COVID-19, the department of Accounting and Finance in the Faculty of Business Sciences planned to make greater use of BL when students were in their second year onwards. When the pandemic struck, we shifted to emergency remote teaching and learning (ERTL) (Czerniewicz et al., 2020).

### Research instrument

The students were given the questionnaires at the end of the semester. The researcher designed an online survey in a Likert scale format using the Question Pro application to gather the data and because it allows standardised and numerical data to be collected; then later it was analysed (Sarosa, 2019). The questionnaire was categorised into the following two sections to collect data from the respondents: (1) Demographic information, and (2) Challenges experienced with BL. A letter of information and informed consent to participate was attached to the online questionnaire.

### Reliability and Validity

With Hayward et al. (2019), internal consistency reliability refers to the consistency with which a test's results are presented, ensuring that the numerous items measuring the various constructs produce consistent results. The focus groups in this study were given identical questionnaires and same timeframes to gather data. Cronbach's alpha coefficient was utilised to assess the research instrument's reliability. A reliability of 0.70 or greater was considered suitable. The table below indicates the reliability of the data collected:

**Table 1.** Analysis of reliability

Main Theoretical Variables	Valid N	Items Used	Cronbach's $\alpha$
Blended Learning Challenges	108	16	0.724**

\*\*Significantly acceptable reliability

Table 1 shows the results of the data collection instrument's internal consistency test. The study instrument's dependability was assessed using Cronbach's alpha coefficient. Dependability of 0.70 or more is deemed acceptable. The Cronbach's alpha for the scales, which are blended learning problems ( $\alpha = 0.724$ ), reveals acceptable reliability coefficients for the research instruments.

The questionnaire was piloted with ten students from the target population through a preliminary survey to clear and minimise ambiguity and confusion (Palmieri, 2020). The study

revealed that participants were unclear on the term 'perception' and a revision was made where necessary to eliminate the confusion. Feedback from the pilot participants contributed towards the revision. This was essential to ensure the reliability of the measures and meaningfulness of the data and knowledge unearthed through the study (Ariffin et al., 2016).

### **Data collection**

Marchalot et al. (2018) stated that online questionnaires have become a popular method of data collection, and considering the COVID-19 induced restrictions on movements and lockdowns, this is the most appropriate method. The decision to utilise a questionnaire was also arrived at based on the understanding that the researcher could ask questions that were consistent with the data analysis techniques adopted. Overall statistic report indicated a total of 208 responses out of 400 and of this number, only 119 completed the questionnaire. The link was sent out a week before the semester break, which was 05 July 2021 to 08 August 2021. A WhatsApp message to the group was sent weekly to remind the participants to respond until the last week.

In a descriptive study, the frequency and percentages of how respondents viewed various items were analysed to identify the general perception of participants regarding blended learning issues. On a 4-point Likert scale, 1 indicated strong disagreement and 4 indicated strong agreement. Before the study, all items were coded and written so that higher ratings (3-Agree and 4-Strongly Agree) indicated that the respondents agreed that the issue was a barrier to blended learning. The following themes for blended learning challenges were discovered: (1) Internet access, (2) Learning Resources access, (3) Library Resources access, and (4) Prior Online Learning and Training.

### **Data analysis**

Data were captured on an excel spreadsheet and the Statistical Package for Social Science version 25 (SPSS v:25) package was utilised to analyse the data and assess student challenges on BL. The researcher used descriptive and inferential statistics to analyse the data. The process of data analysis has been defined as the systematic organisation and synthesis of the research data and the testing of research hypotheses (Brown et al., 2019).

## **FINDINGS**

### **Descriptive statistics for biographical variables**

Before delving deeper into the data, basic distributions based on the study's biographical profile were run. The biographical factors in the study were documented using a descriptive method (see Table 2 below). The respondents indicated that the sample comprised rural South Africans in their responses.

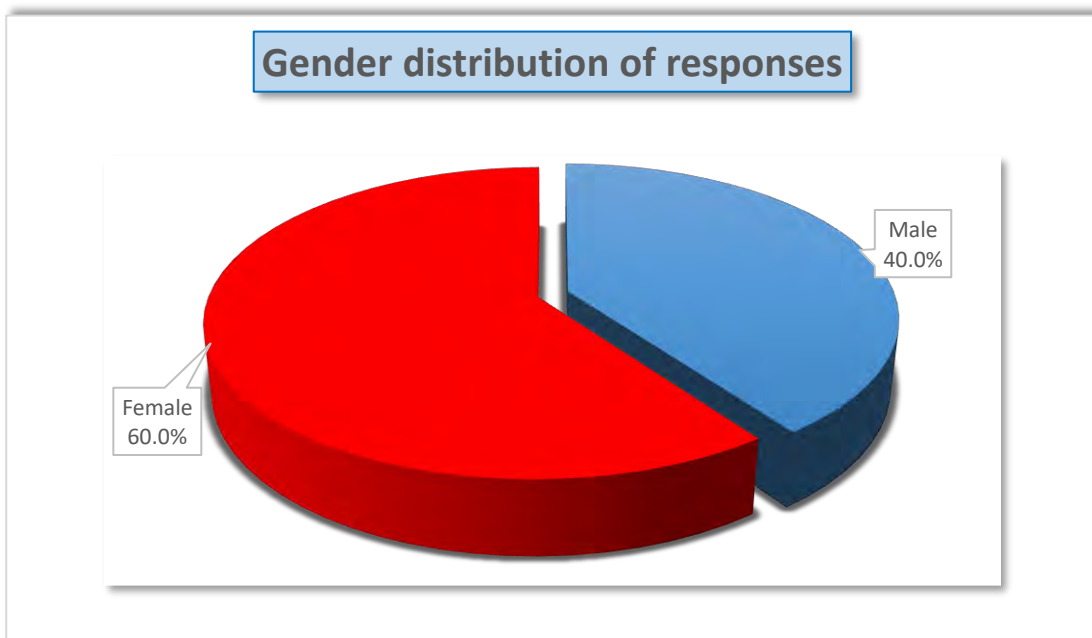
**Table 2.** Descriptive statistics for biographical variables

Variable	Levels	df	f	Valid %
Gender	Male	1	44	40.0
	Female		66	60.0
Race	Black	1	108	98.2
	White		2	1.8
Age	18 to 20 years	4	25	22.7
	21 to 25 years		66	60.0
	26 to 30 years		12	10.9
	31 to 35 years		6	5.5
	36 years and above		1	0.9
Home language	Xhosa	2	104	95.4
	English		1	0.9
	Zulu		4	3.7

*N=110*

### ***Gender distribution of percentages***

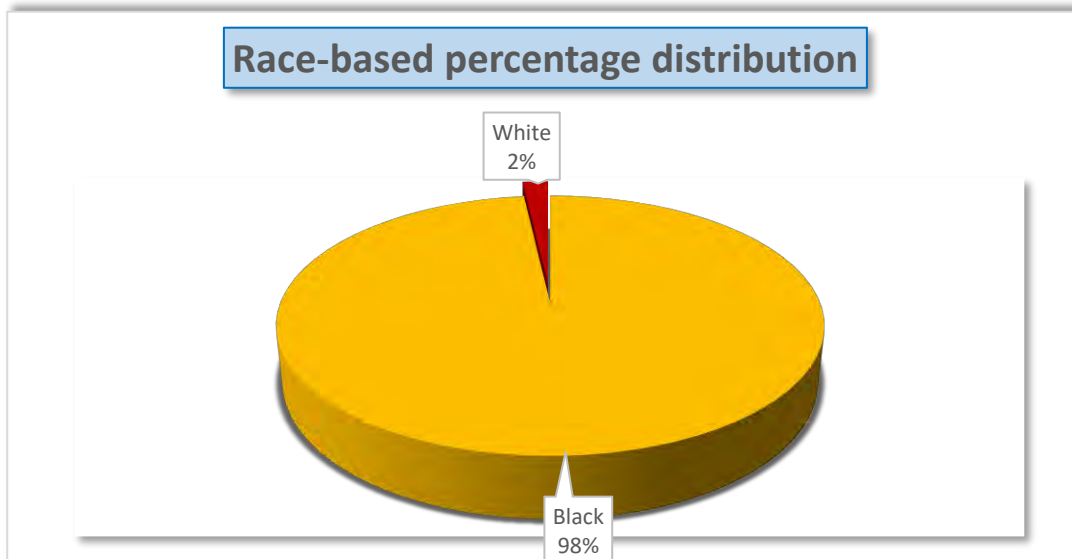
The descriptive statistics of the biographical data are represented graphically and described below. Figure 1 depicts the gender of respondents. Many of the respondents (60.0%,  $n = 66$ ) were female, while male respondents comprised 40.0% of the respondents ( $n = 44$ ).



**Figure 1:** Gender distribution of responses

### ***Race-based percentage distribution***

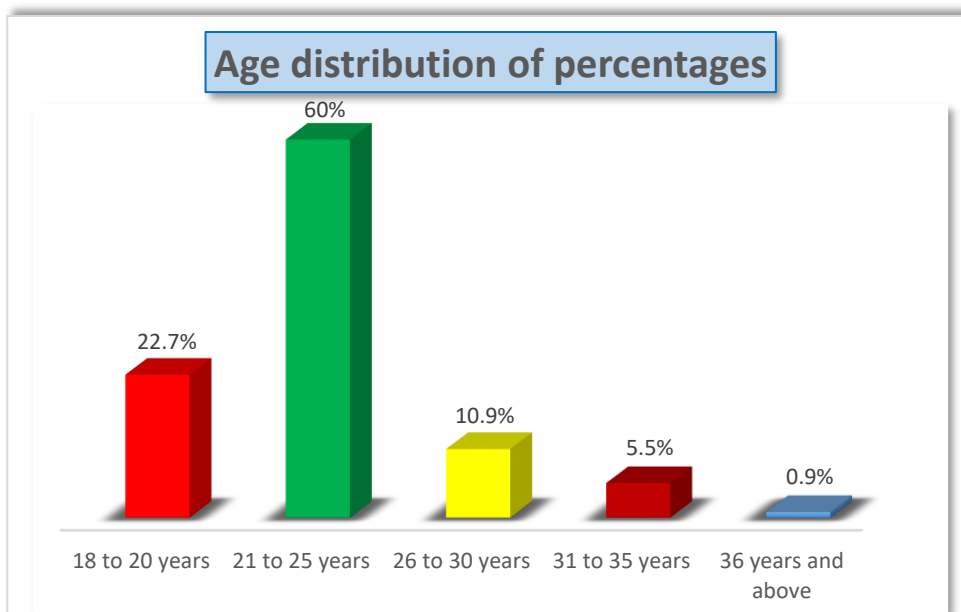
The race-based percentage distribution is depicted in Figure 2. According to the graph, the bulk of respondents (98.2 percent;  $n = 108$ ) are Black Africans, with only two White respondents (1.8 percent). There were no additional races in the sample.



**Figure 2.** Race-based percentage distribution

### ***Age distribution of percentages***

The distribution of respondents by age is depicted in Figure 3. The bulk of respondents (60.0 percent,  $n = 66$ ) are between the ages of 21 and 25, with 22.7 percent ( $n = 25$ ) between the ages of 18 and 20. Twelve respondents (10.9 percent) are between the ages of 26 and 30, while only one (0.9 percent) is between the ages of 36 and above. This demonstrates that Gen.Z is the university intake mentioned in the literature.

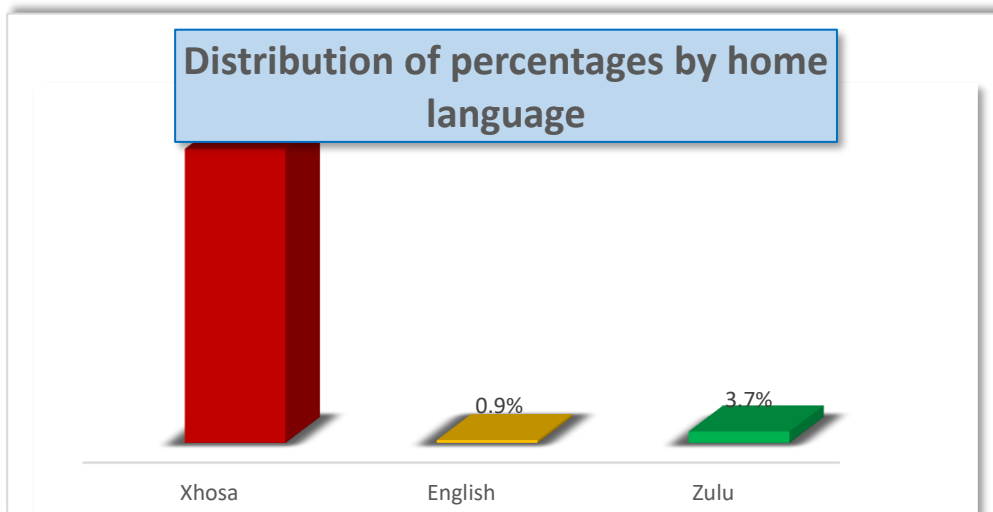


**Figure 3:** Age distribution of percentage

### ***Distribution of percentages by home language***



Figure 4 shows that most of the respondents (95.4%,  $n = 104$ ) were isiXhosa speaking. On the other hand, 3.7% ( $n = 4$ ) reported that their home language was isiZulu, whilst only one (0.9%) respondent reported English as a home language.



**Figure 4:** Distribution of percentages by home language

#### **The general perception of participants regarding blended learning challenges.**

The general view of participants about blended learning challenges was determined using a non-parametric Chi-square test for equality of proportions. This test analyses how respondents answered several items on the study instrument to see whether there were any significant changes. This was done to investigate the issues that students from underserved technological backgrounds face with blended learning. This section answered the following research question to achieve this goal:

- What challenges do students from a technologically disadvantaged background experience with blended learning on learning Cost Accounting 2?

The frequency and percentages of how the respondents regarded various things were assessed in a descriptive analysis to determine the general perception of participants regarding blended learning challenges. The items were graded on a 4-point Likert scale, with 1 indicating strong disagreement and 4 indicating strong agreement. Data were adjusted before analysis, and all items were coded and written so that higher ratings (3-Agree and 4-Strongly Agree) indicate that respondents agree that the item is difficult to blended learning. We then developed themes for the blended learning challenges, which are (1) Access to the Internet, (2) Access to Learning Resources, (3) Access to Library Resources, (4) Prior Online Learning and Training, and (5) COVID-19 Restrictions. The descriptive analysis of each challenge is presented below.

#### **Blended learning challenges: Access to the internet**

The data show that many of the participants disagreed on most of the items, reflecting participants' overall perceptions of internet availability as a blended learning problem. As a result, most students disagreed with the assertions that they did not have dependable internet

access or that they did not have access to course materials over the internet. On the other hand, many respondents felt that efficient internet facilities, such as public libraries and internet cafes, were few where they lived.

**Table 3.** Participants' general perceptions of internet availability as a blended learning problem are shown by frequencies and percentages.

Do you agree with the remarks below?	SD	D	A	SA
I do not have reliable access to the internet	n = 18 (16.4%)	n = 66 (60.0%)	n = 17 (15.5%)	n = 9 (8.2%)
I do not have access to course materials online over the internet	n = 27 (24.5%)	n = 74 (67.3%)	n = 6 (5.5%)	n = 3 (2.7%)
Where I live there is extremely limited access to efficient internet facilities such as public libraries and internet cafes	n = 10 (9.1%)	n = 28 (25.5%)	n = 42 (38.2%)	n = 30 (27.3%)

N=110, Statements were rated on a 4-point scale from 1 (strongly disagree) to 4 (strongly agree).

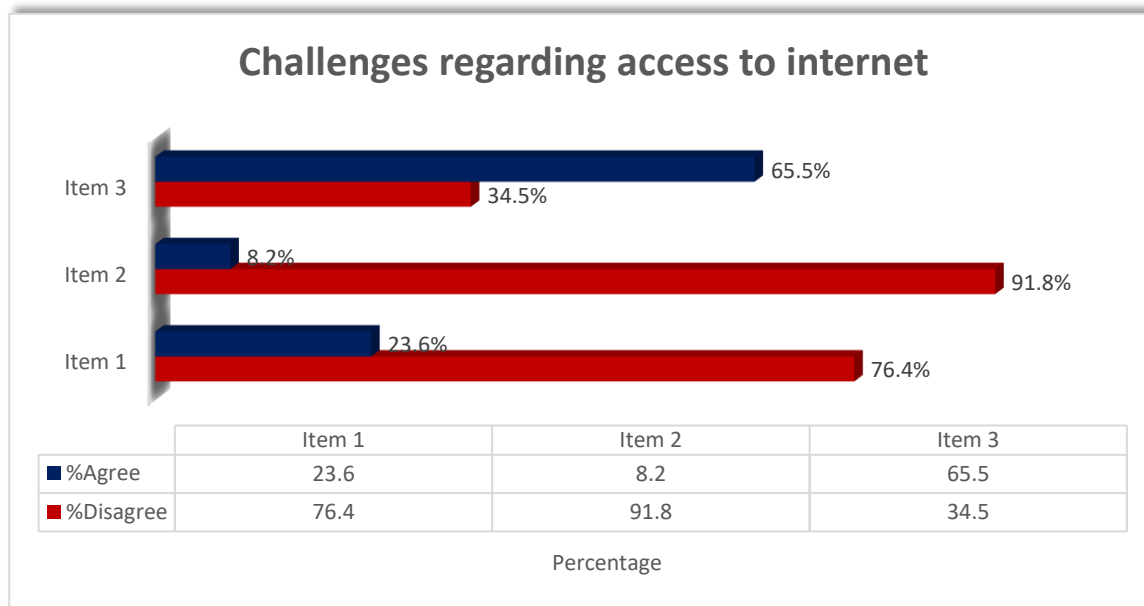
To check if there was any statistically significant evidence to suggest the general view of the participants with statistical certainty, a non-parametric Chi-square test of equal proportions was utilised. To do this, the 4-point Likert scale was decreased to a 2-point Likert scale. Thus, 1-strongly disagree (SD) and 2-disagree (D) were combined to become 1-Disagree, whereas 4-strongly agree (SA) and 3-agree (A) were combined to form 2-Agree. To examine if the proportions of the different established categories differed, the Chi-square test was utilised. Table 4.4 and Figure 4.5 illustrate the results of the Chi-square tests, respectively. Most of the participants (n = 84; 76.4 percent) reported having a reliable internet connection, which was statistically significant (Chi-square = 30.582;  $p < 0.0001$ ). The Chi-square test revealed statistically significant evidence (Chi-square = 76.945; = 0.0001) that many of the participants (n = 101; 91.8 percent) have internet access to course materials (Chi-square = 76.945; = 0.0001). The findings also suggested that where most students lived, there was limited access to efficient internet facilities such as public libraries and internet cafes (Chi-square = 10.509;  $p = 0.001$ ).

**Table 4.** Non-parametric Chi-square results on participants' general perceptions of internet access as a blended learning obstacle.

Item	Do you agree with the following statements?	Disagree	Agree	Chi-Square	p-value
1	I do not have reliable access to the internet	n = 84 (76.4%)	n = 26 (23.6%)	30.582	<0.0001*
2	I do not have access to course materials online over the internet	n = 101 (91.8%)	n = 9 (8.2%)	76.945	<0.0001*

3	Where I live there is limited access to efficient internet facilities such as public libraries and internet cafes	n = 38 (34.5%)	n = 72 (65.5%)	10.509	0.001*
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N=110, (\*) - Statistically significant differences (at Alpha = 0.05). Statements were rated on a 2-point scale from 1 (disagree) and 2 (agree).



**Figure 2.** General student's perception of access to the internet as a blended learning challenge.

### Blended learning challenges: Access to learning resources

The frequency and percentage distributions reveal that many of the participants disagreed on most items measuring the general perception of participants regarding access to learning resources as a blended learning challenge (see Table 5). Thus, most students disagreed with the statements that they did not have access to tutors/lecturers. Besides, they had in sufficient access to different forms of media such as audio and videos. The data also suggested that most students reported that blended learning gave access to enough resources at my university as well as that blended learning gave access to quality resources to learn at my university. However, there were conflicting results when students were responding to the statement that learning Cost Accounting 2 through the blended model was inefficient. This could be because the participants were from technologically disadvantaged backgrounds, thus not used to BL mode, hence the resistance. At the same time, others were willing to embrace the move as they paid more attention to its benefits.

To check if there was any statistically significant evidence to suggest the general view of the participants with statistical certainty, a non-parametric Chi-square test of equal proportions was utilised. As shown in Table 6, many students had access to tutors/lecturers (n = 93; 84.5 percent; Chi-square = 52.509; p = 0.0001). There was also enough data to demonstrate that most students had ample access to various forms of media such as audio and videos as part of blended learning (n = 99; 90.0 percent; Chi-square = 70.400; p = 0.0001). Majority of the

participants also reported that blended learning gives access to enough resources at the university ( $n = 73$ ; 66.4%; Chi-square = 11.782;  $p = 0.001$ ). In addition, the Chi-square test suggests that blended learning gives access to quality resources to learn at the university. ( $n = 75$ ; 68.8%; Chi-square = 15.422;  $p = <0.0001$ ). However, the respondents neither agreed nor disagreed that learning Cost Accounting 2 through the blended model was inefficient (Chi-square = 1.333;  $p = 0.248$ ). The findings were summarised in Figure 7. Cost Accounting 2 is practical; therefore, the participants found the additional resources found under this BL mode to be more beneficial to their learning. The study also assumed that the dilemma found was because of the participant's background.

**Table 5.** Participants' general perceptions of access to learning resources as a blended learning problem are represented by frequencies and percentages.

Do you agree with the following statements?	SD	D	A	SA
As part of blended learning, I do not have access to tutors/lecturers	$n = 27$ (24.5%)	$n = 66$ (60.0%)	$n = 15$ (13.6%)	$n = 2$ (1.8%)
As part of blended learning, I do not have sufficient access to different forms of media such as audio and videos	$n = 29$ (26.4%)	$n = 70$ (63.6%)	$n = 9$ (8.2%)	$n = 2$ (1.8%)
Blended learning does not give access to enough resources at my university.	$n = 15$ (13.6%)	$n = 58$ (52.7%)	$n = 32$ (29.1%)	$n = 5$ (4.5%)
Blended learning does not give access to quality resources to learn at my university.	$n = 14$ (12.8%)	$n = 61$ (56.0%)	$n = 29$ (26.6%)	$n = 5$ (4.6%)
Learning of Cost Accounting 2 through the blended model is not efficient	$n = 16$ (14.8%)	$n = 32$ (29.6%)	$n = 40$ (37.0%)	$n = 20$ (18.5%)

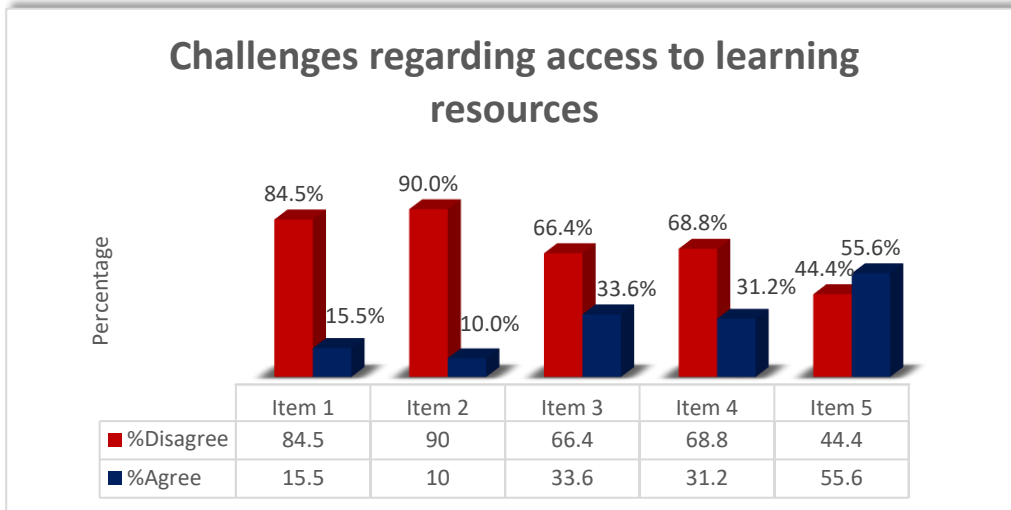
$N=110$ , Statements were graded on a scale of 1 (strongly disagree) to 4 (strongly agree) (strongly agree).

**Table 6.** Non-parametric Results of the Chi-square test on participants' general perceptions of the availability of learning resources as a blended learning issue.

Item	Do you agree with the following statements?	Disagree	Agree	Chi-Square	Exact p-value
1	As part of blended learning, I do not have access to tutors/lecturers	$n = 93$ (84.5%)	$n = 17$ (15.5%)	52.509	<0.000 1*
2	As part of blended learning, I do not have sufficient access to different forms of media such as audio and videos	$n = 99$ (90.0%)	$n = 11$ (10.0%)	70.400	<0.000 1*
3	Blended learning does not give access to enough resources at my university.	$n = 73$ (66.4%)	$n = 37$ (33.6%)	11.782	0.001*
4	Blended learning does not give access to quality resources to learn at my university.	$n = 75$ (68.8%)	$n = 34$ (31.2%)	15.422	<0.000 1*

5	Learning of Cost Accounting 2 through the blended model is not efficient	n = 48 (44.4%)	n = 60 (55.6%)	1.333	0.248
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N=110, (\*) - Differences that are statistically significant (at Alpha = 0.05). The statements were graded on a two-point scale of 1 (disagree) to 2 (agree) (agree).



**Figure 3.** General student’s perception of access to learning resources as a blended learning challenge.

**Blended learning challenges: Access to library resources and prior online learning and training**

The descriptive analysis revealed that the respondents had mixed perceptions on most items measuring the general perception of participants regarding access to library resources and prior online learning and training (see Table 7). Thus, an equal number of students disagreed and agreed that there were no sufficient library resources available online for Cost Accounting 2 students to use. This was also a similar case when asked whether, in their previous learning (school level), they did not make use of technology as a learning tool. Many of the participants disagreed that there are no accessible library resources available online for Cost Accounting students to use. However, the frequencies and percentages suggested that before the use of online platforms for learning, there was enough training provided by the institution.

**Table 7.** Participants’ perceptions of access to library resources, as well as prior online learning and training, are represented by frequencies and percentages.

Do you agree with the remarks below?	SD	D	A	SA
There are no sufficient library resources available online for Cost Accounting 2 students to use.	n = 16 (14.8%)	n = 39 (36.1%)	n = 39 (36.1%)	n = 14 (13.0%)
There are no accessible library resources available online for Cost Accounting 2 students to use	n = 16 (14.8%)	n = 48 (44.4%)	n = 32 (29.6%)	n = 12 (11.1%)
In my previous learning (school level), I did not make use of technology as a learning tool?	n = 19 (17.6%)	n = 35 (32.4%)	n = 32 (29.6%)	n = 22 (20.4%)

Before the use of online platforms for learning, there was not enough training provided by the institution.	n = 25 (23.1%)	n = 53 (49.1%)	n = 22 (20.4%)	n = 8 (7.4%)
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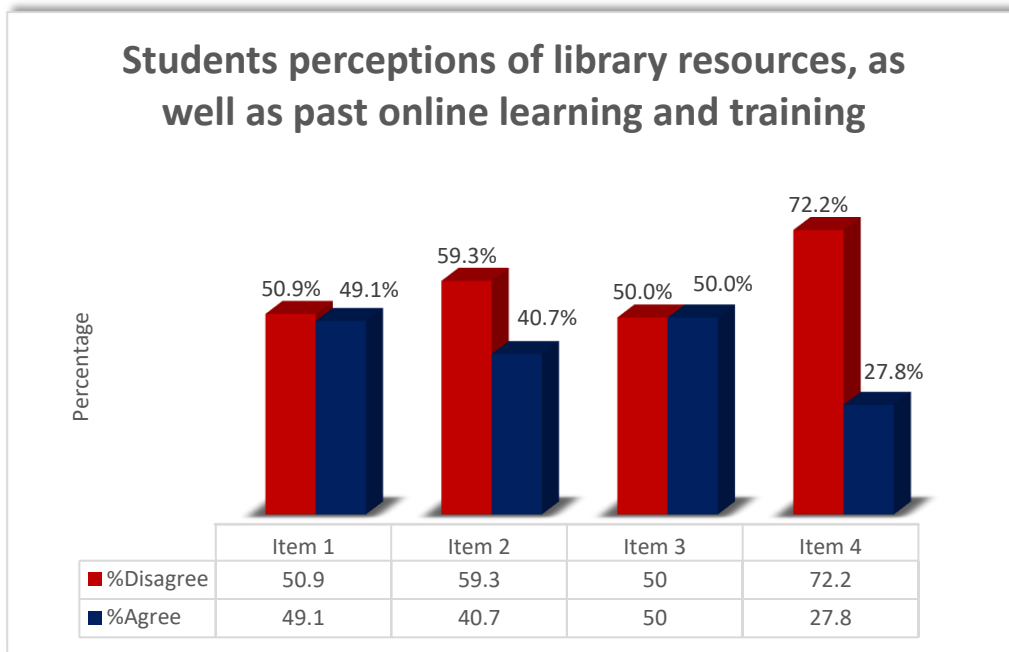
N=110, Statements were graded on a scale of 1 (strongly disagree) to 4 (strongly agree) (strongly agree).

To check if there was any statistically significant evidence to suggest the general view of the participants with statistical certainty, a non-parametric Chi-square test of equal proportions was utilised. Table 8 shows the results of the Chi-square testing. The institution presented statistically significant evidence that proper training was offered prior to the use of online learning platforms (n = 78; 72.2 percent; Chi-square = 21.333; p < 0.0001). There was, however, statistically significant evidence that respondents did not agree or disagree that there were insufficient library resources available online for Cost Accounting 2 students to use (Chi-square = 0.037; p = 0.847) or that there were no accessible library resources available online for Cost Accounting 2 students to use (Chi-square = 3.704; p = 0.054). Finally, the data revealed significant evidence that an equal number of students agreed and disagreed that they did not use technology as a learning tool in their previous learning (school level) (Chi-square = 0.000; p = 1.000). The graphical presentation is shown in Figure 8.

**Table 8.** Non-parametric Results of Chi-square tests on participants' general perceptions of library resources and past online learning and training.

Item	Do you agree with the remarks below?	Disagree	Agree	Chi-Square	p-value
1	There are no sufficient library resources available online for Cost Accounting 2	n = 55 (50.9%)	n = 53 (49.1%)	0.037	0.847
2	There are no accessible library resources available online for Cost Accounting 2	n = 64 (59.3%)	n = 44 (40.7%)	3.704	0.054
3	In my previous learning (school level), I did not make use of technology as a learning	n = 54 (50.0%)	n = 54 (50.0%)	0.000	1.000
4	Before the use of online platforms for learning, there was not enough training provided by the institution.	n = 78 (72.2%)	n = 30 (27.8%)	21.333	<0.000 1*

N=110, (\*) - Differences that are statistically significant (at Alpha = 0.05). The statements were graded on a two-point scale of 1 (disagree) to 2 (agree) (agree).



**Figure 4.** Student's perceptions of library resources, as well as past online learning and training.

#### Blended learning challenges: COVID-19 restrictions

The frequency and percentage distributions showed that most of the participants agreed on most of the items, reflecting participants' general perceptions of COVID-19 limits as a blended learning obstacle. As a result, most students felt that there were insufficient library resources available online for Cost Accounting 2 students to utilise and that there were no accessible library resources available online for Cost Accounting 2 students to use. According to the findings, most students reported that the COVID-19 epidemic had affected their teaching and learning processes. However, according to the descriptive analysis, the respondents claimed that the university was providing enough resources (such as data and laptops) for online learning during the COVID-19 epidemic.

**Table 9.** Participants' general perceptions of COVID-19 limits as a blended learning difficulty are represented by frequencies and percentages.

Do you agree with the remarks below?	SD	D	A	SA
Covid-19 pandemic limited the physical visit to internet café.	n = 3 (2.8%)	n = 11 (10.2%)	n = 50 (46.3%)	n = 44 (40.7%)
The covid-19 pandemic reduces face to face as a part of blended learning.	n = 2 (1.9%)	n = 2 (1.9%)	n = 48 (44.4%)	n = 56 (51.9%)
The teaching and learning process changes due to the covid-19 pandemic.	n = 4 (3.7%)	n = 1 (0.9%)	n = 39 (36.1%)	n = 64 (59.3%)
The school is not providing enough resources (such as data and laptops) for online learning during the COVID-19 pandemic.	n = 46 (42.6%)	n = 47 (43.5%)	n = 10 (9.3%)	n = 5 (4.6%)

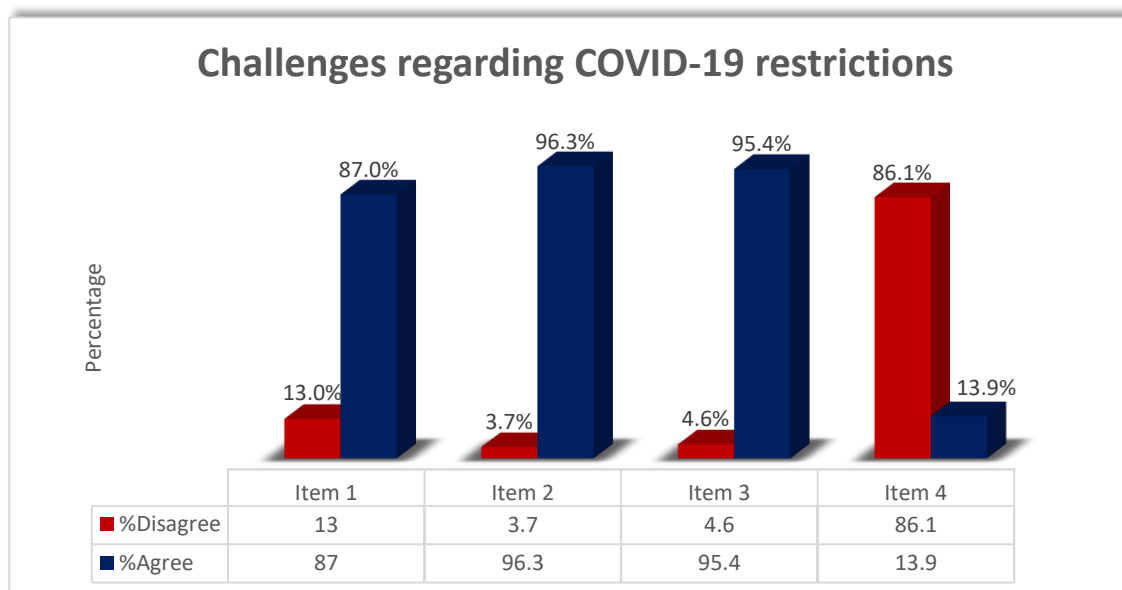
N=110, Statements were graded on a scale of 1 (strongly disagree) to 4 (strongly agree) (strongly agree).

To check if there was any statistically significant evidence to suggest the general view of the participants with statistical certainty, a non-parametric Chi-square test of equal proportions was utilised. In Table 10, the results of the Chi-square tests are reported. There was statistically substantial evidence that the COVID-19 epidemic reduced the number of people visiting an internet café ( $n = 94$ ; 87.0 percent; Chi-square = 59.259;  $p = 0.0001$ ). The COVID-19 epidemic also reduced face-to-face learning as part of blended learning ( $n = 104$ ; 87.0 percent; Chi-square = 92.93;  $p = 0.0001$ ). The teaching and learning process had also changed because of the COVID-19 epidemic ( $n = 103$ ; 95.4 %; Chi-square = 88.926;  $p = 0.0001$ ). Finally, the Chi-square test indicates that during the COVID-19 pandemic, the school was providing sufficient resources (such as data and laptops) for online learning (Chi-square = 856.333;  $p = 0.0001$ ). Figure 9 depicts the graphical presentation.

**Table 10.** Results of a non-parametric Chi-square test on participants' general perceptions of COVID-19 constraints as a blended learning challenge.

Item	Do you agree with the remarks below?	Disagree	Agree	Chi-Square	Exact p-value
1	Covid-19 pandemic limited the physical visit to internet café.	$n = 14$ (13.0%)	$n = 94$ (87.0%)	59.259	<0.0001*
2	The covid-19 pandemic reduces face to face as a part of blended learning.	$n = 4$ (3.7%)	$n = 104$ (96.3%)	92.593	<0.0001*
3	The teaching and learning process changes due to the covid-19 pandemic.	$n = 5$ (4.6%)	$n = 103$ (95.4%)	88.926	<0.0001*
4	The school is not providing enough resources (such as data and laptops) for online learning during the COVID-19 pandemic.	$n = 93$ (86.1%)	$n = 15$ (13.9%)	56.333	<0.0001*

$N=110$ , (\*) - Differences that are statistically significant (at Alpha = 0.05). The statements were graded on a two-point scale of 1 (disagree) to 2 (agree) (agree).



**Figure 5:** General student's perception of COVID-19 restrictions as a blended learning challenge.



## DISCUSSIONS

### Internet access

Data on internet access showed that the majority of the participants disagreed on most of the questions reflecting participants' overall perceptions of internet availability as a blended learning problem. As a result, many students disagreed with the assertions that they did not have dependable internet access or that they did not have access to course materials over the internet. On the other hand, most respondents felt that efficient internet facilities, such as public libraries and internet cafes, were few where they lived.

This is consistent with the fact that the cohort in the chosen HEI is commonly referred to as Gen.Z (Grace-Bridges, 2019). Their daily activities are dominated by the use of the internet, implying that they have made plans to have dependable internet. It was no longer a struggle for them to learn through the use of the internet. Secondly, during the COVID-19 pandemic, the institution provided learners with the necessary budgets and data. Those with residences could also return to their residences where WiFi was available.

### Learning resources access

On most measures indicating the general view of participants regarding access to learning resources as a blended learning problem, the participants disagreed (see Table 6). As a result, most students disagreed with comments like "I don't have access to tutors/lecturers" and "I don't have enough access to different forms of media like audio and videos." According to the research, many students believed that blended learning provided sufficient resources at the institution and that blended learning provided great resources to learn. When students were asked to reply to the statement that studying Cost Accounting 2 using the blended model is inefficient, the answers were mixed.

Given the participants' backgrounds, the chosen institution made tools for accessing learning resources available for those students who needed them (Parker et al., 2021). Knowing that the internet might not be stable in some areas, particularly in rural areas, academics were encouraged to create videos for students to view when they had free time or when they had stable connectivity. The findings also indicated that the participants managed to navigate the adopted learning management system (LMS) easily, as they are Gen.Z and familiar with several technology applications (Waters & Hensley, 2020). The practicality of Cost Accounting 2 is assumed to be the course of mixed answers, as some participants preferred a live explanation and solution development. Others were content with the videos that were provided.

### Library resources access

The descriptive analysis revealed that respondents had mixed feelings about most items assessing participants' overall perceptions, such as access to library resources and prior learning and training. As a result, a similar percentage of students agreed that there were not enough library resources online for Cost Accounting 2 students to use, as well as that there were not any accessible library resources online for Cost Accounting 2 students to use. Because this

learning mode is still in its early stages, some participants may not go the extra mile to make use of the provided links. As a result, they concluded that there were no accessible library resources available. The geographical location of the participants has an impact as well, as some could not have good connectivity to access information through the provided links. The COVID-19 pandemic posed significant challenges because students could not visit libraries physically.

### **Prior online learning and training**

When asked if they had used technology as a learning tool in their past learning (at the school level), the response was identical. However, the frequencies and percentages showed that the university provided enough instruction before the usage of online learning systems. During the COVID-19 pandemic, this included the distribution of laptops and data. This provision bridges the gap to an acceptable level, which the responders had reached as a result of the epidemic. They did not have access to a library or an internet café, but they could continue their studies using the resources available to them.

### **RECOMMENDATIONS**

The study recommends that BL is effective in learning Cost Accounting 2 as the university provided enough instructions to navigate the system. Customising the system minimised some students' anxieties about how to use it in their learning of Cost Accounting 2. The initiative of making information available online is highly recommended as many participants indicated that where they live, they do not have access to libraries. That will be of assistance as the students will be able to access additional resources. Negotiations need to be held with internet providers so that they can increase their bandwidth to the remote areas where the students reside. Alternatively, student accommodation needs to be availed to the learners even under the COVID-19 pandemic as the internet is accessible in those venues. Brothen and Wambach (2016) allude that people's views are influenced by their prior experience, the mixed answers could be caused by challenges participants encounter on BL. Gladly though, those challenges have nothing to do with BL but with elements that support the mode of learning like internet connection.

### **Limitations**

One department's second-year students was the focus of the investigation. If the survey had been conducted on all second-year students at the selected HEI, the results would have been different. Students with diverse qualifications are likely to have varied impressions, since their interactions with their qualifications also vary. However, because the study's goal was to determine the challenges of technologically disadvantaged educational background students on BL in learning Cost Accounting 2, that limited the study population.

### **CONCLUSION**

The fundamental purpose of this study was to establish the challenges experienced by the students in learning Cost Accounting 2 with BL mode. The study found that even though the students are from technologically disadvantaged educational backgrounds. They are willing to

embrace the change. They appreciate that the LMS used is customised in such a way that it is effortless to navigate around it. There are challenges like internet access and an online library where they can have access to further learning resources for Cost Accounting 2. These are mostly general challenges that are experienced under BL mode and sometimes are unavoidable. Further studies can make use of the quantitative method where interviews can be conducted not only through the distribution of the questionnaire. Also, further studies could look at how the participants perceive the use of BL not only for Cost Accounting 2 but for the entire modules within the qualification, as these modules are dynamic and have different approaches.

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