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**ORIGINAL**

# Diploma in Accounting and Business Studies Students' Perceptives on Online Teaching and Learning

## Percepciones de los estudiantes del Diploma en Contabilidad y Ciencias Empresariales sobre la enseñanza y el aprendizaje en línea

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## ABSTRACT

**Introduction**: the advent and consequent entrenched use of new media technologies in higher education has prompted systems change in many universities across the world. At the University of Botswana, the Centre for Continuing Education (CCE) unveiled a plan to "break down physical lecture-rooms and campus walls" by delivering courses in the Diploma in Accounting and Business Studies (DABS) programme, including to satellite centers, solely through the virtual mode. Driven by the idea of Digital Divide and the hypothesis of lack of access and system challenges, the study investigated the viability of this change considering the inherent social and digital divides in Botswana, and the observation that New Media Technologies often place more emphasis on proliferation of information and communication technologies to the detriment of variables such as economic status, income, and social environment.
**Objectives**: the central question for this study was: Do all students in the DABS programme have "access" to the Internet, mobile technologies and other associated resources to impeccably take part in the online teaching and learning dispensation? Thus, the overarching objective of this study was to unearth whether or not learners enrolled in the DABS programme had access to Internet, mobile technologies and other associated resources to successfully take part in online teaching and learning.
**Method**: this study used a focus group discussion method involving students' representatives from all the centers to get their perspectives on online teaching and learning.
**Results:** the study has unveiled that not all DABS students embraced online teaching and learning.
**Conclusions:** it was, therefore, concluded that DABS students have to change their mindset and behaviours towards online-based learning and teaching. They need to adapt to the new norm of online learning.

**Keywords:** Access; Online Learning; Internet; Mobile Technologies.

## RESUMEN

**Introducción:** la llegada y el consiguiente arraigo del uso de las nuevas tecnologías de la comunicación en la enseñanza superior ha impulsado el cambio de sistemas en muchas universidades de todo el mundo. En la Universidad de Botsuana, el Centro de Educación Continua (CCE) dio a conocer un plan para «acabar con las aulas físicas y los muros del campus» impartiendo cursos del programa de Diploma en Contabilidad y Estudios Empresariales (DABS), incluso en centros satélite, únicamente a través de la modalidad virtual. Impulsado por la idea de la brecha digital y la hipótesis de la falta de acceso y los retos del sistema, el estudio investigó la viabilidad de este cambio teniendo en cuenta las brechas sociales y digitales inherentes a Botsuana, y la observación de que las nuevas tecnologías de los medios de comunicación suelen hacer más hincapié en

la proliferación de las tecnologías de la información y la comunicación en detrimento de variables como la situación económica, los ingresos y el entorno social.
**Objetivos:** la pregunta central de este estudio era: ¿Tienen todos los estudiantes del programa DABS «acceso» a Internet, las tecnologías móviles y otros recursos asociados para participar de forma impecable en la enseñanza y el aprendizaje en línea? Así pues, el objetivo general de este estudio era averiguar si los alumnos matriculados en el programa DABS tenían o no acceso a Internet, a las tecnologías móviles y a otros recursos asociados para participar con éxito en la enseñanza y el aprendizaje en línea.
**Método**: en este estudio se utilizó un método de debate en grupo focal en el que participaron representantes de los alumnos de todos los centros para conocer sus puntos de vista sobre la enseñanza y el aprendizaje en línea.
**Resultados:** el estudio ha revelado que no todos los estudiantes de DABS adoptan la enseñanza y el aprendizaje en línea.
**Conclusiones:** por lo tanto, se concluyó que los estudiantes de DABS tienen que cambiar su mentalidad y comportamientos hacia el aprendizaje y la enseñanza en línea. Tienen que adaptarse a la nueva norma del aprendizaje en línea.

**Palabras clave:** Acceso; Aprendizaje en Línea; Internet; Tecnologías Móviles.

## INTRODUCTION

Online learning is any learning and teaching activity that involves the use of digital media as well as any assignments or activities that are provided by the teacher online.[1] This is the explanation that this study adopted. Thus, in evaluating DABS students' perspective on online teaching and learning of the Diploma in Accounting and Business Studies (DABS) learning programmes, the focus was not only on online instructions, but was also on all other concomitant and related activities.

The Covid-19 pandemic has added an impetus to the popularity and use of online learning and teaching in universities. It was at the peak of the Covid-19 scourge that most universities in Africa witnessed a surge on the integration of digital media such as Microsoft teams, Zoom and WhatsApp with teaching and learning. In 2022, the University of Botswana management took a decision to wholly dispense the Diploma in Accounts and Business Studies programme by means of computer networks with effect from the following year. The decision to migrate to a hundred percent eLearning for DABS students was an outcome of a recommendation by the Centre for Continuing Education (CCE) in the University.

What made CCE's recommendation find favour with UB Management is a subject of speculation because CCE could not share their recommendations with the researchers for this study. Thus, it is probable that UB Management was profoundly attracted to the possibility of cost saving among others. DABS programme is run through seven [7] centers across the country. Consequently, adopting the online teaching and learning mode would certainly lead to a significant reduction in the need for physical classroom spaces and other concomitant resources. Secondly, eLearning for DABS students would lead to a reduction in the number of lecturers. Instead of appointing seven lecturers (one for each centre) to teach the same course, there would be a need to appoint only one lecturer to teach all the students who have registered for the course in all the different centres. Also, the dispensation would significantly benefit learners as they would save money on commuting to the centres for lessons everyday week day.

Another possible consideration by UB Management might have been issues of accessibility and inclusivity. The UB Distance Education Mainstreaming Policy (2005) commits UB to expand access to tertiary education and to increase opportunities and levels of participation. Thus, the recommendation by CCE for migration to online learning and teaching might have been considered as an opportune time to "live the dream" of expanding access to education in that; one of the key advantages of online learning and teaching is the "demolition" of geographical limits that normally hamper accessibility and inclusivity in a face-to-face mode of learning and teaching. There is no doubt that online teaching and learning enables learners from all economic backgrounds, resident in diverse geographical locations, and with diverse physiological conditions, to access education from their homes. While this may be a noble gesture by the University of Botswana, it may be hampered by the inherent social and digital divide.

Because of the digital divide and socio-economic inequalities that are pervasive, especially in the poor third world countries, this study hypothesized that online teaching and learning for DABS students might be presenting digital inaccessibility and other logistical challenges to a great number of students. This hunch was influenced by the warning that even though the "Internet Spike" that the world has experienced ever since the global Covid-19 pandemic is a welcome development, there is a need to exercise care about addressing the digital divide and pay attention to the socio-economic differences that exist around technology access and use.[2] The issue of

migration to online teaching and learning for DABS students, and the likely challenges that this might be posing, resonate with the pronouncement.

Premised on this, this study sought to establish, from the perspective of the students, whether the online teaching and learning mode worked for them. Thus, the overarching question for this study was: Do all students who are enrolled in DABS programme have "access" to Internet, mobile technologies, and other resources to impeccably take part in online teaching and learning processes? It would be a serious setback if this good initiative did not work for all the students due to their socio-economic peculiarities and geographical locations as this would compound the problems of economic and social exclusion and inequality.

**Theoretical Framework**

As alluded to in the introductory section, this study was embedded within the Social/Digital Divide theoretical framework. Literature have shown that critical issues that affect health care, education, and economic development are Africa's social and digital divides. These are the disparities that exist between social groups regarding information and communication technology (ICT) understanding, access, and use in any field.[3,4,5]

The digital divide is the gap between those with access to emerging technologies and those without such access because of social factors.[6] Educational inequalities are manifestations of social and digital divides since several underlying factors that affect education are due to historical, economic, and political variables that produce differential outcomes among social groups.

The global digital divide, which is characterized by glaring differences in ICT access between nations and among their respective populations, is reflected in Africa's digital divide.,[4,7,8] Since the digital divide impacts learning in education, it notably extends to social inequalities just as social inequalities also influence the digital divide. Demographic, economic and personal elements (gender, age, privacy concerns), education, quality of support, and infrastructure are social factors that contribute to the digital divide negatively.[3,9]

The differences between students in urban and rural locations are more pronounced, with metropolitan areas typically having greater access to resources, including technology, which limits access to online education by rural dwellers.[9] Evidence abounds on the increasing use of devices and the Internet, but this hardly implies digital inclusion in learning as the level of access to mobile phones and the Internet differs from the level of use, skills and resources.[7,10] It is along this reasoning that European countries provided structures to address the use, skills and resources of the digital divide through the Digital Agenda for Europe programme.[5] The digital use, skills and resources in online learning among students in a higher institution deserve scholarly attention for enhanced understanding and decision making.

The discussion in this section has shown that the concerns of this study, its hypothesis and overarching research questions resonate with those of the Social/Digital Divide. It can, therefore, be concluded that the Social /Digital Divide was the most relevant theory to "drive" this study.

**Literature Review**

There is an emerging body of literature on remote learning, online learning and teaching, and the perspectives on them. Online education comprises online learning and teaching, and evidence abounds that online learning is not a new way of learning.[11] These studies show past knowledge while placing the current study in a position to further expand the discourse in a different context. A few studies exist on students' perspectives from physical classroom learning to online learning. Most of these studies focus on either online learning during the COVID-19 pandemic or blended learning. This study focuses on DABS students, who are taught online fully at the University of Botswana. This makes this research a crucial one as it serves as feedback from the students on continuous learning due to constraints associated with the students and environment.[12]

Indeed, the COVID-19 pandemic forced most institutions to operate virtually, in consonance with the claim that conversion from traditional learning to online learning became popular and widely accepted with the occurrence of the COVID-19 pandemic.[13] He conducted a study among health science students to derive their perception of online learning tools in an effort to influence policy planners on appropriate tools through a survey and by deploying the structural equation modeling. A model was proposed (OLAS) for online tools based on better experience for commuting students, better engaging students, better interaction, effective use of technology and learning outcomes. The main concern of the research was to test the usefulness of the OLAS model in eliciting data on online learning from students during the COVID-19 pandemic and it was found appropriate. The study recommended the application of the OLAM model to study students' perceptions of online learning in other universities since it was limited to one university in Saudi Arabia and the COVID-19 period. This paper investigated the experiences post-COVID-19 of online learning in another context. In essence, Al-Kahtani's study is relevant because it established that students' perceptions are crucial in planning and implementing online learning policy.

During the COVID-19 pandemic, virtual platforms became emergency solutions to continue educational activities.[11,14] For this reason, the University students' readiness for the shift in Malaysia to demographic

factors using a quantitative research design.[15] The findings revealed that gender and level of education affect students' readiness and attending challenges as female students are more ready than their male counterparts for online learning.[16]

The argument above validated the gendered nature of universities' online students. Also, degree students were more ready than diploma students. The students responded through a Google Form to indicate the varying challenges experienced such as Internet connectivity, different teaching methods by lecturers, lack of motivation, slow computer gadgets and devices, lack of focus on learning, complex content, limited Internet broadband and weak technical skills. Indeed, most institutions were unprepared for the COVID-19 pandemic, but the crucial matter is the ability of students' flexibility to embrace online learning. In the study, most students agreed that they were slightly or moderately ready for online education. The researchers proposed that students' readiness and satisfaction could be studied in a range of contexts. Specifically, students' readiness for online learning is one of the factors that influence students' perspectives in this paper.

The role of students' engagement in effective teaching and learning is emphasized.[17] Major factors that hinder effective student engagement are lack of personal computers or devices, Internet issues, weak learning abilities, and lack of technology skills. Since a study on students' engagement should also elicit data from the affected students, the study was limited but quite relevant in showing that lecturers were aware of students' challenges in online learning. The current study provides additional information from student's point of view.

A study was conducted on students' and educators' perspectives on online learning.[18] This was done among 'Work in Learning' (WIL) students in Sydney by interviewing selected students on the experiences, and outcomes of underrepresented students in the programme for the purpose of equity. The study demonstrated that there are benefits of online learning and they include remote skills, increased job opportunities, networking, and mentoring, affordability, and flexibility. On the other hand, online learning is replete with challenges and such include lack of motivation, poor Internet access, lack of suitable and convenient environment, childcare, lack of privacy, and fatigue among others. The researchers further noted that the COVID-19 pandemic pushed most universities to accept online learning, and this is the situation at the University of Botswana. For the WIL programme, students could choose between physical learning or online learning, but DABS students do not have that choice. It was recommended that equity-based research of online programmes should be conducted in different contexts. This paper aligns the stated recommendation by focusing on DABS students' perspectives in Botswana.

Also, a monkey survey questionnaire was used to assess the adaptation of teaching, learning, and assessment of lecturers in online learning at two universities in South Africa.[19] This was meant to check the quality of change in learning while adapting from the traditional mode to the online mode. It was realized that content is either retained or changed in online mode and this often leads to some compromise in teaching. Hence, moving practices of traditional learning to online learning and creating space for the same practices are recommended to enable epistemological access for online learners. Of significance is the fact that learners' perspectives are required especially those who experienced both traditional learning and online learning in the same programme or department. This was not included in the study as it was limited to lecturers' perspectives.

Researchers have identified varying challenges of online learning. A review of these challenges was provided from 124 journal articles.[20] The prominent ones are "inadequate skills and training, inadequate Internet/ Infrastructure, lack of supporting resources and lack of online student engagement and feedback". He argued that these challenges were peculiar during the COVID-19 pandemic, and they are comparatively the same as the challenges that are associated with transition from traditional learning to online learning. Also, it was argued that both students and teachers face similar challenges. Consequently, institutional and long-term support for both students and teachers was recommended. This paper focuses on students as consumers of knowledge to effectively capture their experiences with a transition from face-to-face learning to online learning. This delimitation, by picking a particular programme, will allow an adequate concentration for decisions on the programme.

Still on the transition from traditional mode to online mode, STEM teachers' perspectives on online teaching and learning during the COVID-19 pandemic in South Africa were studied.[21] The competence and adaptation of skills in the online teaching of 45 STEM teachers were investigated through an exploratory research design. The researchers noted that teachers experienced challenges in online teaching and these included cost of data, consumption of time, inadequate support, navigation issues and technical glitches. To overcome the challenges, it was advised that teachers should be supported professionally to assist them to utilize digital resources. In as much as it was contended that the challenges of online learning and teaching are similar for both students and teachers, identifying some challenges that are peculiar to teachers which include time spent to prepare online content and presentations for students and lack of support in teaching online.[20,21] This literature, although from teachers' perspective, helps in relating to DABS students' experiences.

In the same vein, another study reviewed the general challenges and strategies for online remote learning and teaching by educators in tertiary institutions.[22] Most common challenges for students and educators are

motivation in online teaching and learning, inadequate skills and inadequate infrastructure while using suitable virtual platforms. Communicating asynchronously and synchronously, and giving feedback are the recommended strategies to overcome the identified challenges. Students' perspectives, as analysed in the article, cover the challenges experienced by students, but rather than writing a review of existing literature, this study is empirical by eliciting pieces of information from DABS students through a focus group discussion strategy.

Moreover, it was noted that there is a difference between remote teaching and online learning as the latter is more sustainable, and the challenges associated with remote learning could help sustain online learning.[11] Major challenges of online learning are technology, socio-economic factors, intrusion, assessment and supervision, heavy workload, and compatibility with some courses. The benefits include opportunities, research innovations, technological innovations, and socio-economic interventions. Moreover, the availability and use of instructional technology, sharing of research innovations, motivating learners, and education, inculcating digital skills into online learning and teaching, supporting learners, partnering with technology-based industries to provide internet, and implementing technical solutions are some of the ways of solving the common problems of online learning. These challenges are similar to those highlighted in other literature materials.[22]

In addition, the link between students' and teachers' perspectives provides a better understanding that is crucial for decision-making on online learning and teaching.[23] With the investigation that the perception of both students and teachers after a period of a full online learning in Jordan by identifying its effectiveness, challenges, and benefits through surveys are crucial, the findings indicated that online learning was useful during the COVID-19 pandemic, but less effective when compared with traditional learning.[14] The study refuted the fact that online learning could substitute face-to-face learning and identified disadvantages of online learning as difficult for students with hearing impairment, deficit motivation and interaction, technology-related issues, privacy, and security. The advantages include convenience, flexibility, personal learning, and less cost. In essence, blended learning, a combination of face-to-face and online learning was suggested as the best option for learning.[24]

Aside from constraints and benefits, any study on students' perspectives on remote or online learning should include motivation and satisfaction, the effectiveness of the learning environment, and teachers' practice and behaviours.[24,25] Therefore, this section has covered literature of key remote constraints in the transition of learning mode from traditional learning to online learning.[12]

## METHOD

A Focus Group technique was used to obtain data about DABS students' perceptions about online teaching and learning. Fundamentally, focus groups were used: to assess the consultative processes prior to the implementation of the online teaching and learning innovation, to establish students' views on the perceived benefits of the online teaching and learning mode compared to the face to face one, to assess students' perceptions on how online teaching and learning enable engagement with lecturers and fellow students, and to be appraised on the challenges that bedevil the online teaching and learning system. These were presented to DABS students in the form of open-ended questions.

A total of twenty (20) DABS students took part in three Focus Groups. Focus group discussions were held virtually over a period of five (5) days and each group comprised a mixture of male and female students. The discussions ran between thirty (30) to sixty (60) minutes. Six (6) participants took part in the first focus group, while the second and third focus groups comprised seven (7) participants each.

Volunteer participants were identified during the lessons. Once participants had been identified and agreed to participate in Focus Group, a virtual meeting was arranged to get individual participants' permission and consent after the objective of the focus groups were explained to them. At such meetings all the information about the project was provided. Such information included: what the project involved and its potential benefits to the participants. Participants were selected through a purposive and representative sampling procedure using gender and age as inclusion and exclusion criteria for diversity of the sample. The gender dynamic was used to ensure equity in gender representation, and age ensured that participants of different gender categories were eligible for selection.

Focus Groups were conducted in English and the researchers later transcribed participants' responses. One of the activities that the researchers performed prior to focus group discussions was setting the ground rules and explaining them to the participants. Such rules included: the need to respect each other's opinions and point of views, and the need not to interrupt each other or silence each other. To facilitate the discussions, an outline of topics/questions that had been prepared well in advance was followed. The researcher facilitated the interactions among group members by encouraging them all to speak, interject and probe comments. The researcher also behaved professionally and avoided being judgemental to participants' responses and showed that every participant's contribution was valued. The development of a discussion outline and questions was guided and influenced by the research goal and questions. As such, each item in the outline had a specific purpose and was related to some specific research questions. Although a lot of questions outside the discussion

outline were asked, these were merely used to facilitate the social and psychological functioning of the groups and to solicit more information on the issues discussed.

Following previous examples, the focus group discussions were recorded.[26] The recordings enabled the researchers to listen to participants' contributions after the discussions. Because the discussions were virtual, recordings were not intrusive and they did not affect the flow of the discussions.

**Method of Data Analysis**

Given the qualitative nature of this study, data was produced in the form of narratives of focus groups participants' opinions. As a result, data analysis was largely interpretative, analytical and descriptive and was based on observer impressions. To put it differently, data was examined and interpreted by forming impressions and reporting those impressions using the Grounded Theory guidelines.[27] The Grounded Theory is an approach which is characterised by systematic processes of collecting, coding, analysing and sub-dividing data into categories using the information that emerges from the data itself.[28] It is one of the most rigorous, popular and widely recognised approaches to qualitative research.[29] Using the Grounded Theory approach, the coding enabled division and sub-division of data into common themes and sub-themes embedded in the data.

The idea of developing analytic notes was observed. The analytic notes were done after transcription of the data. The production of analytic notes was accomplished through the questioning of data and making comparisons.[27] The questioning of data involved exploring opinions expressed by Focus Group participants and observations made by the researchers in order to determine the extent to which they answered research questions and confirmed or disconfirmed the study hypotheses. Consequently, the what, and with what consequences type of questions were asked about the data. Comparison was mainly based on determining the similarities and differences of the responses of participants from the different focus groups.

Given the aim of exploring the extent to which DABS students had access to Internet and mobile technologies and other resources to successfully partake in online teaching and learning, the Grounded Theory approach was deemed appropriate for the analysis of data for this study. As shown above, this study produced qualitative data. It was therefore fitting to analyze the produced data using the Grounded Theory, a methodology that is widely recognized as an approach for qualitative data.[30] Second, the study of University of Botswana DABS students' perspectives on online teaching and learning had not yet been adequately explored. Consequently, this study was preliminary and to the best of the knowledge of the researchers unexplored. It therefore would significantly benefit from the Grounded Theory, an approach which is widely recognized as being suitable where there is little to no knowledge about a phenomenon being studied. [31] Given the fact that this study was essentially about human perspectives, it was deemed justified to use the Grounded Theory approach which is said to be suitable for studies that focus on human actions and interactions.[31] Because it is rigorous, in that it allows for a systematic break-down of qualitative data into themes and sub-themes, the Grounded Theory would potentially benefit this study.[29,32] Breaking the data into themes and sub-themes added depth to the data by enabling constant comparisons and questioning of the data.

## DEVELOPMENT

In this section, data generated through this study is presented, analysed, interpreted, and discussed. The interpretation and discussion of the data were driven by the hypothesis of connection by drawing a link between participants' responses and the scholarship of Social/Digital Divide and economic inequalities.

Open-ended questions were asked DABS students to establish their views on the viability and usefulness of Online Teaching and Learning of the Diploma in Accounting and Business Studies programme. From the discussions the following themes were derived:

**a. Consultation on the Implementation of Online Teaching and Learning of the Diploma in Accounting and Business Studies**

Participants were asked if they were consulted before the decision to migrate to online teaching and learning of the Diploma in Accounting and Business Studies was implemented. Responses to this question were grouped under the theme "Consultation on the Implementation of Online Teaching and Learning of the DABS programme". The rationale for asking this question was hinged on the researchers' understanding of the inherent benefits of consultation of key stakeholders whenever a decision that would affect them is taken. Consulting DABS students on the development and implementation of online teaching and learning of DABS courses would certainly make them appreciate the need for the new system and get psychologically prepared for it.

All the participants in the three Focus Group meetings stated that they were never consulted when the university decided to change to and implement the online teaching and learning system for the DABS programme. For example, one of the participants said: "*We were not consulted. There was a time when the coordinator passed by our classes and mentioned that there would be online classes in the following year*". Another one said; "*We were not consulted. We only found out when we reopened for Semester One that we were not going*

*to have physical classes*. The other one said: "*We received a letter after we registered for Semester One registration when we were to report for classes that's when we were informed that we are not coming to school physically we will only attend virtually*".

Many of the participants explained that they had to call the office before classes began for the first Semester to enquire on whether online classes were optional and were told that they would be no more face to face classes, and that all classes would now be conducted online. As indicated in the introductory phase of this report, the Centre for Continuing Education would not avail information to the researchers on the decision to change to online teaching and learning for DABS cohort of students. It was, therefore, not possible to further engage participants on this issue so as to establish the validity of their claim.

**b. Comparison between Online Teaching and Learning and Physical Classroom Teaching and Learning**

Participants were asked how in their view online teaching and learning compares with physical classroom teaching. This question required learners to tap into their experiences on the two modes of teaching and learning-online and physical classroom learning. The students highlighted a number of challenges with online classes which they never experienced with the face to face teaching mode. Such challenges include: lack of access to computer networks, lack of mobile data, large virtual classes, lack of computer (technical) skills, and lack of money to buy computer gadgets including smart phones. Some of these challenges are also outlined in other studies. For example, some of the varying challenges with Online Teaching and Learning as: Internet connectivity, different learning methods by lecturers, lack of motivation, slow computer gadgets and devices, lack of focus on learning, complex content, limited Internet broadband and weak technical skills.[15]

Responding to this question, the following are some of the participants' responses on the issue of computer networks: "*You can be cut off for about 30 minutes without network and after 30 minutes when you join, you have already missed a lot of stuff and it is difficult to understand what is being said.*" and "*The main challenge is internet connection which sometimes just simply goes off …*"

The issues of Internet access and connectivity feature in most discussions surrounding online teaching and learning. In such discussions, it is often mentioned as an impediment especially to students living in small scale and infrastructurally-disadvantaged communities. It was indeed asserted that internet access and internet packages are impediments to the efficacy of online teaching and learning.[33] Based on this pronouncement, participants' narrative that internet network was a challenge to them could not simply be ignored.

Allied to the issue of internet networks was the issue of lack of mobile data. According to the students, the University had entered into contract with Botswana Telecommunication Corporation (BTC), one of the mobile service providers, to deliver internet content to their mobile phones to enable them to connect to Microsoft Teams application for lessons. But when the contract with BTC ended, the students had to use their own money to buy mobile data. Unfortunately some of them could not afford the costs of mobile data. Students' challenges with the lack of mobile data are aptly captured in the following two extracts:

"*Some students are suffering because they depended on the mobile data provided by the university*" and "*The issue of data is very serious and some people do not consider it serious. Sometimes people judge others because of their situations. Some people wonder why students cannot afford P10 for data. It has been three weeks without data and classes are continuing while other students do not have data to access online classes*".

These extracts corroborate the statement made in the introductory section of this research paper that Botswana, just like other third world countries, is replete with socio-economic inequalities. It, therefore, can be concluded that the participants who lamented that they could not afford to purchase mobile data were among those who were socially and economically at the margins. To this effect, it suffices to say that the issue of economic disparity had to be at the fore during the conception of the idea of a hundred percent migration to online teaching and learning. This pronouncement aligns with the contention that there is a need to address and pay attention to socio-economic differences when online teaching and learning mode is implemented. [2]

In response to the question above, participants also mentioned large classes as a challenge. The students from all the centres were combined to form one class per course. This eventuated in a single virtual class having over two hundred students. According to participants, as a result, there were always problems of class management as evidenced by noise and incoherent comments from the background during lessons. To buttress this point, one of the participants responded by saying: "*I think we are too many for one lecturer, it would be much better if we could be divided in to two*". Another one said: "*we should be reduced so that we can raise our problems with the lecturer and give the lecturer chance to respond*".

It should be borne in mind that DABS students had been used to the conventional physical classes where they were largely dependent on their lecturers for both social and learning support. They were, therefore, inexperienced with online learning. Naturally, being in class of over 200 students meant that they were getting less support than they were used to getting. It is obvious, as the response above indicates, that the advent of online teaching and learning for them heralded an "era" of getting zero to little personal communication and feedback than they used to receive to offset falling behind. They were also most probably finding it difficult to

engage in meaningful online discussions with over two hundred fellow students.

This notwithstanding, participants' concern regarding large online classes, this raises the question of typically how big a single online class should be. Participants should know that online classes range from small to very large. While in some instances online classes are kept at the size of face to face classes; in some, the size is unlimited to an extent that thousands of students across the country or even the world may be in a single class. This calls for mind-set change on the part of the students and to help them to adapt to the new order and to begin being independent learners.

Lastly, participants mentioned the issue of lack of technological skills herein also referred to as computer skills. Here are some of their responses: "*There are some lecturers who are unable to present the slides and it makes it difficult for students to learn"* and "*Some lecturers present handwritten slides that are even difficult to read"*.

The challenge that may be imposed on online teaching and learning by low levels of lecturers' computer skills is well documented. Participants' observations that learning was made difficult by lecturers' whose computer skills were not good enough resonate with the sentiment that online learning is made ineffective by teachers 'inability to implement it.[34] While one would have thought that participants would also speak of their own shortfalls on computer skills, paradoxically they spoke only of their lecturers. Whether or not there is some truth in participants' responses on this matter, the fact is: for online teaching and learning to be effective, both students and lecturers need to possess basic technological skills such as the use of social media applications such as Zoom, WhatsApp and others, Microsoft Office applications such as Teams, operation of smart phones, and use of email facilities.[35]

**c. Engagement with lecturers**

Engagement in teaching and learning is very paramount. It is for this season that participants were asked if they were able to engage with lecturers during online classes. In the context of this study, the term engagement is synonymous with "participation", "interaction", "communication" and "involvement". Thus, this question sought to establish the extent to which DABS students participated or got involved or communicatively interacted with their lecturers during online teaching and learning processes. Participants highlighted that the lecturers were very supportive. They also stated that when they needed help, they engaged with them. Here are some of their excerpts:

*Interaction is fine. They respond when we send messages even the private messages. When we seek clarity they respond well on time like the previous speaker they gave us their contact details*.

It must be noted that most of the participants never alluded to engagement with lecturers during virtual classes when they responded to this question. The small proportion that mentioned interactions during classes indicated that interaction during classes was limited due to the high number of students in a single class. Such participants indicated that some students dominated the discussions and intimidated other students during the classes; hence less engagement with lecturers during classes. They, however, indicated that profound engagement with lecturers was done outside virtual classes. They averred that they communicated with their lecturers frequently through SMS's, WhatsApp's and to a lesser extent through telephones and emails. It was gratifying to note that lecturers created "community of learners platforms" to enable communication and interaction with their learners. Community of learners refer to groups such as WhatsApp's that have been formed to enable students to work collaboratively and cooperatively to achieve learning tasks. Such platforms enable learners with diverse capabilities and aptitudes to optimally work and learn together.

**d. Engagement with other students**

Allied to the question on students' engagement with lecturers, participants were asked a question on their engagement with each other. They buttressed the point that online classes were mostly chaotic, and that students who had some experience with online teaching and learning were impatient with those who were encountering the online mode for the first time. They did not give the inexperienced students a chance to learn or ask questions. They further indicated that being registered in different centres, but being in the same online class caused conflicts among the students.

*There is something between us … in our group there is that thing of saying this person is coming from which centre? I think there is a problem of dealing with each other because we are not registered in the same groups or in the same centres*.

This problem notwithstanding, participants indicated that lecturers created discussion forums to allow students to interact with each other. They averred that they mostly engaged with each other outside class times through discussion forums such as WhatsApp, telephone, SMS, and Email. The creation of discussion forums such as WhatsApp resonate with the pronouncement that engaging the learner in an online course through involvement, participation, community and communication is desirable because online lessons separate students from lecturers and peers.[36] It was, however, regrettable to note that some participants indicated that

they were intimidated by other students to engage during lessons. While it is a fact that online lessons lack social and emotional interactions that face to face lessons have, it is vital for online instructors to compensate this shortcoming with classroom management practices that will not leave any student outside the learning process.

**The Benefits of Online Teaching and Learning**

From participants' perspective, despite the challenges enumerated under the sub-heading "Comparison between online teaching and learning and physical teaching and learning", online teaching and learning is replete with benefits. Among the benefits of online teaching and learning is that lessons are recorded and this affords learners opportunities to listen to them as many times as they can. Furthermore, participants cited the fact that online teaching and learning can take place anytime and wherever. Students do not need to be confined to a certain location for them to attend the lessons any at specific times. The following extract buttresses the appreciation of online based learning and teaching by participants:

*The only thing you can say is that the lesson can be recorded.*

*The other benefit is that one can attend lessons wherever they are.*

Participants also mentioned that online learning and teaching offer them opportunities to know how to use technology to learn and to access learning materials independently. The point about technology resonates with the Botswana national strategic focus which endeavours to make the country a knowledge-based economy. The same point also supports the contention that with globalization and advancement of ICT, technology based and online learning should be encouraged. Premised on these, it was deemed right for participants to expressly appreciate technology in general, and technology based learning in particular. The other benefits of online based learning and teaching which participants did not mention but are worth mentioning borders on remote skills development, increased job opportunities, networking, and mentoring, and affordability.[1]

## RESULTS

The qualitative analysis of the data indicates that the migration of DABS programme to online reflect issues of digital divide and inequalities according to the responses. Some of the issues were a gap in information and consultation as shown in the students' responses. This, further highlights, that students' consultation is non-negotiable in any policy change in the university.

The findings revealed that specific challenges of online learning as identified by the students require technical attention and technological support. Computer knowledge, data availability, computer gadget, and internet are technology-related factors in online learning. The students complained about these factors, which accentuated inequality among them and aligned with previous studies on technology-associated difficulties in online learning.[3,7,8,15,17]

Issues and problems associated with large classes in online lessons were taken for granted in DABS programme, which made the learning less supportive and impersonal. Yet there was a supportive engagement outside lessons through social media. Hence, virtual classroom was less engaging and supportive while out of classroom engagement was highly supportive. Engagement with fellow students was less supportive for new students as students have different level of interaction through the virtual learning system. Conflicts and different integration issues were reported.

However, the students realised the benefits of online learning. Thereby, mentioning availability of recorded lessons, flexibility of location, access to technology as key benefits derived from online learning. Equipping the students with necessary skills to reduce the digital divide is a gap that was identified. The findings revolve around the intricacies and complexities of transitioning learning from physical classroom to virtual classroom and the need to bridge the gap of inequalities and digital divides.

## CONCLUSION

Online based teaching and learning was a relatively new norm with DABS students. As indicated elsewhere in this paper, online learning is a dispensation that resonates with the principles of globalization and Botswana's strategic direction. It is, therefore, desirable for learners across the different social and geographical environments and economic status to embrace it. Participants' responses to the open-ended questions suggested the need for them to adapt to online teaching and learning dispensation.

Most of the factors that DABS students enumerated as challenges appeared to be rooted on the lack of adaptation to the new norm. DABS students should change their mindset and behaviours in response to online based learning and teaching. Adapting to this new norm would most likely eventuate in increased knowledge of technology and ability to manage studies effectively.[1]

This study has confirmed the contention that not all learners embrace online learning. Thus, the responses that seem to not resonate with the good intentions of offering DABS programmes online should not surprise. But still, such responses should not be simply ignored. Authorities should identify factors that impede effective use

of online teaching and learning by DABS students in order to address them and make online users self-motivated to learn.

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The authors affirm that there is no conflict of interest

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