UNIVERSITY OF THE FREE STATE

<u>**TOPIC:**</u>

DIFFICULTIES IMPACTING ON ACADEMIC ACTIVITIES AT THE UIVNERSITY OF THE FREE STATE MULTI-CAMPUSES DURING THE COVID-19 PANDEMIC

REPORT PREPARED BY: Felix I. Okoye

SUPERVISOR: Dr. EL Van Staden

 (VanStadenEL@ufs.ac.za)

Glossary of Terms

Academic staff: Employees who spend at least 50% of their official time on duty either on teaching and/or research activities.

Classroom: All forms and modes of learning platform where the students meet for the purpose of sharing knowledge with the teacher as the moderator.

Computer lab: This is a space which provides computer services to a defined community. It is typically provided by academic institutions and libraries to specific people affiliated with the institutions.

Course: The unit of teaching within a programme that is offered for a specific period and specific subject matter.

Data: The representation of facts, concepts, or instructions in a formal manner, suitable for communication and interpretation or processing by humans or by automatic means.

Global protect: An application that allows users to secure their internet connection irrespective of their location. It provides free internet access to HEIs participants in South Africa.

Multi-campus: A system or an institution which has or involving two or more campuses in different locations.

Problem-based learning: As student-centered approach whereby the most important task lies with the student. The students are the active participants in the learning process as they construct their knowledge themselves to work out a solution to a problematic situation using the available resources.

Students: Persons who are formally registered with the University, who know and solve problems created as part of the learning process interchangeably and collaboratively with the tutors. This includes full-time (contact) and distance learning undergraduate students of various University of The Free State campuses.

Teaching and learning: The processes that bring together personal and environmental experiences and influences for acquiring, enriching or modifying one's knowledge, skills, values, attitudes, behaviour and worldviews.

Abbreviations

BL	Blended Learning
CTL	Centre for Teaching and Learning
DIRAP	Directorate for Institutional Research and Academic Planning
HE	Higher Education
HEIs	Higher Education Institutions
HR	Human Resources
ICT	Information and Communication Technology
NSFAS	National Student Financial Aid Scheme
PBL	Problem-based Learning
SRC	Student Representative Council
T&L	Teaching and Learning
UFS	University of The Free State
ZPD	Zone of Proximal Development
HDI	Human Development Index
GDP	Gross Domestic Product
ITP	Integrated Transformation Plan

Executive Summary

Background

This report presents the findings of a research project that aims to widen and accelerate the scope of transformation at the University of the Free State (UFS). The study explores the difficulties which impact academic activities (or teaching and learning processes and outcomes) at the undergraduate level at all the campuses of UFS. The aim of the study is to identify the needs of both staff and students during the COVID-19 pandemic and to proffer solutions that would help the UFS to meet its transformation agenda. The key research question which the study intends to answer is: *what difficulties impact on academic activities (of teaching and learning) at UFS multi-campuses?* In order to adequately answer this question, four sub-research questions were developed, the students' and staff's experiences were examined using a qualitative research approach. The researcher intended to gather perspectives from the students and staff regarding teaching and learning challenges they may have faced at the UFS multi-campuses. The aim was to deepen the understanding of the current institutional culture of the university, to strengthen its transformation plan, as well as to propose ways in which the university can enhance its academic environment. The study outcome is expected to significantly influence subsequent UFS management decisions that are integral to the transformation plan of the university, while seeking the best possible post-pandemic outcome. The researcher interviewed 79 students and 37 staff members from various UFS campuses to gather the necessary data. The individual interviews took between 30 to 45 minutes each whilst the focus group interviews took between 60 and 75 minutes. Unfortunately, it was not possible to conduct focus group interviews among the teaching staff (as planned) due to their unavailability. The entire data collection process took about eight weeks to be conducted.

However, given the situations associated with the unprecedented impact of the COVID-19 pandemic, the entire interview process was conducted online using platforms and/or applications such as Blackboard, Skype, Microsoft Teams and WhatsApp. Thematic analysis was used to analyse the collected data. The data was organised and presented as themes based on the study's

sub-research questions they tend to address. The social constructivist theory was adopted as the theoretical framework for the study. The theory posits that individuals are active participants in creating their own knowledge. Vygotsky (1987) who propounded the theory believes that learning takes place primarily in social and cultural settings rather than solely within the individual. The theory of social constructivism as used in this study serves as the lens through which the challenges are understood as the students and their lecturers engage, share and negotiate knowledge. The study's literature review explores the themes under the multi-campus system *vis-à-vis* the challenges facing academics in developing effective teaching and learning environments within a multi-campus context. The review focuses on the South African context but also explores literature emerging from other contexts. The literature review is attached to this report as an appendix (see Appendix 5).

Nevertheless, the study helped the researcher to measure the impact of the educational interventions and accomplishments of the UFS in real-time and within the COVID-19 pandemic context. The study also provided an opportunity to the participants to reflect on their teaching and learning practices, experiences and accomplishments during the pandemic. Hence, the engagement and discussion with the participants was indeed therapeutic given the feedback obtained from the participants. The information generated may help to inform how the UFS can subsequently improve its students' and staff's experiences at the university. The major development roles and purposes of research include the fact that it serves as a tool for (1) building knowledge and facilitating learning; (2) understanding issues and increasing public awareness; (3) helping the business to succeed; and (4) allowing us to disprove lies and support truth (Cresswell, 1998). Thus, as part of transforming institutional culture at the UFS this study's result provides an opportunity that enable the University to fulfil its transformation agenda as conceptualised and enshrined in the University's Integrated Transformation Plan (ITP). The tables below present a summary of the study's main findings and recommendations.

Table 1: **Summary of the findings**

SECTION 1	SECTION 2	SECTION 3
What are the students' perspectives regarding the academic challenges they face at UFS multi-campuses?	*What are the lecturers' perspectives regarding the difficulties facing academic activities at the UFS campuses?*	*What are the classroom teaching and learning challenges?*
Inadequate support from some lecturers	Increased lecturer workload due to the COVID-19	LECTURER PERSPECTIVE
Inconsistency of information and directives	Regular sickness	Too much back and forward correspondence with the first-year students
UFS customer service and students' satisfaction questioned by students	Lack of access to data	Large class sizes limit efficient planning and classroom engagements
Fear of underperformance given resource constraints and COVID-19 effects	Excessive and irresistible online distractions faced by the new (or first-year) students	Increased workload
Inaccessibility of the campus due to COVID-19 restrictions	Increased need for student guidance on time management mostly for the first-year students	Increased absenteeism
Challenges relating to internet connectivity	Students' mental health at stake	STUDENT PERSPECTIVE
Laptop application delay	Practical classes unable to go online completely	Students' reluctance to ask questions during online lessons or classes
	Assessment difficulties	Incessant re-scheduling of assignments, thus submission dates
	Difficulty in solving inequitable access to online	First-year students blame underperformance on online learning challenges

Global Protect and its limitations	learning, as well as digital resources	Students' disruption of online classes
	Blackboard not user friendly according to some lecturers	Courses without facilitators
	Increasing need to adapt to changes abruptly	Lack of learning devices or tools
	Need to increase classroom venues or reduce over-populated classes	

SECTION 4 *How can the identified challenges be remedied?*	RECOMMENDATIONS
LECTURER PERSPECTIVE	1. **Students' mental health:**
Strengthen blended learning	• The university may need to improve how the services available to the students are communicated or socialised.
Cut down on large classes	• Students who are 'at risk' or who have failed may need to be invited for counselling in as much as the students are expected to come forward (or take the first step).
Treat students as collaborators	2. **Student-lecturer Relationship:** • Part of the training for the lecturers need to include how to understand and utilise students' background information to improve teaching and learning processes.
Reduce the pressure on students	• This idea is necessitated by the current 'relational gap' being created by COVID-19 protocols.
Increase investment in blended learning, ICT human resources capacity building, and digitalisation	3. **Teaching and Learning:** • The lecturers need to consider different avenues for asking questions and expanding classroom engagement beyond the classroom in order to increase class participation.
T&L workshops needed on how best to utilize students' background information	• Courses without facilitators should have a facilitator assigned to them (South campus). • The lecturers' teaching and learning workshops/training should include how to optimise the use of the student's background information by the lecturer.
More collaboration is needed between relevant stakeholders to resolve the problem of resource constraint	**4. Blackboard:** • UFS may utilise a survey to determine from staff which aspects of Blackboard may need upgrade. This was

	engendered by the staff's perspective that the current Blackboard features were not the best UFS can have. • Blackboard training needs to continue for the first-year students and lecturers.
UFS should continue to maintain quality assurance at all level of its operations Continue ICT upskilling for academic staff, as well as the students	5. **Excessive and irresistible online distraction:** • There is need for students' workshop and training on time management. This point emanated from the perspectives of both staff and student participants that time management workshops have become a sinequanon for the first-year students given the 'big bang' and irresistible online distraction.
Increase students' guidance on time management	6. **Possible Research Foci:** • Subsequent research of this type should include teaching and learning challenges facing students at postgraduate level.
The use of other social media platforms to augment the Blackboard communications	• There is need for a continuous context-based research process on how to advance the ongoing digitalisation drive at UFS. This research should form part of the implementation of the UFS digitalisation strategy.
STUDENT PERSPECTIVE	• There is a need to obtain information to establish the status of the student/customer satisfaction at various UFS campuses and how this can be improved (if need be).
Students should take full responsibility of their studies (personal responsibility)	
Students should make use of the UFS provided support available to them	
Resolve load shedding issues	
Reduce data costs	

NB: The section four (4) and recommendation were combined into one table because they both gear towards finding solution.

Overview of the staff responses

The finding revealed high agreement percentages among staff with respect to their views on what they think would be the best temporal, permanent and/or would revert to pre-COVID-19. The participants unanimously indicated that blended learning should continue even after the pandemic. Hence, the participants, in relation to the transformation plan of the UFS, proposed that the university should not look back when establishing parameters that can foster blended learning. The finding also showed that the teaching staff are indeed satisfied with how the university has handled the COVID-19 situation despite all odds. The UFS staff believe that there have been good initiatives from the University in terms of the COVID-19 interventions and decisions. Thus, the university and its management has done remarkably well in dealing with the difficulties brought about by the COVID-19 pandemic although there is always room for improvement, which, of course gives credence to this study. The participants unanimously agreed that the COVID-19 crisis has not only brought abrupt changes but has also brought benefits to teaching and learning, as well as to higher education. The staff indicated that more effort goes into lesson preparations such that the students receive much better recordings from their lecturer, and these students should value the fact that they can go back to the recordings, work through content again, and revisit some of the older material.

However, there are areas in which the university may need to re-evaluate and improve some of the suggestions made by the participants. These include (1) establishing methods to reduce the large-size classes as some classes are overpopulated; (2) expanding the scope of students/customer satisfaction with focus on how the students' grievances, feedbacks and wellbeing are being addressed; (3) ensuring that students' voices are being taken seriously within their Faculties, and at department level; (4) ensuring that some students without the necessary teaching and learning devices/gadgets are assisted in any way possible; (5) creating more effective avenues through which the student support programmes such as counselling are being socialised and communicated to the relevant students. For instance, this would include ensuring that the students who failed are identified and invited for counselling rather than expecting the students to make the first move; and (6) maintaining continuous training to improve staff's technological skills.

Nevertheless, in order to maintain an effective teaching and learning environment at the UFS, the participants recommended that the University management considers moving towards promoting blended learning and digitalisation. The UFS could benefit from more collaboration towards solving the resource constraint, finance and technology-related issues. In terms of teaching and learning more time needs to be created for questions during online classes. The university also needs to work towards reducing the pressure placed on students taking cognizance of (1) the increasing need to maintain students' mental health; and (2) the fact that increase in the pressure associated with socio-economic challenges can push the students from previously disadvantaged backgrounds to the point of precarity.

The participants recommended that (1) students be treated as collaborators; (2) the University continue to strengthen blended learning; ICT upskilling for the students and staff; increase investment in ICT and its human resource capacitation; maintain quality assurance; (3) reduce number of students in classes; and (4) indulge in more collaboration towards solving the problems of resource constraints. The participants thus recognised that the pressure of having to endure so many challenges related to COVID-19 pandemic within a very short time period has caused an exponential increase in stress levels such that supporting the mental health of the students has apparently become a priority.

Overview of the student responses

In this study the responses obtained from the student participants incorporated their perspectives and experiences of the COVID-19 pandemic. These responses include the internet connectivity and communication challenges that arose due to an increased reliance on technology and how this impacted the classroom interaction. The participants raised the issue regarding distractions by some students during the online classes. The lecturer would try to stop the distractions but then, the damage would have been done. The participants hoped that the internal policies of UFS would be improved to regulate and reduce online distractions and communication issues that may come from the students. A group of participants from the Faculty of Science claimed that the faculty often treated them as if they were doing them a favour. These participants were mostly black African students. This can be seen as a statement to advocate for a 'better' treatment of the

students. The claim was probed further for clarity, but no relevant information came forth to substantiate the claim.

Furthermore, the participants blamed their academic underperformance on challenges associated with online learning during the pandemic. For many participants, educational funding by NSFAS has remained the only hope given their socio-economic backgrounds. Amongst the concerns raised by participants include the delays towards providing laptop computers, inadequate support from lecturers, inconsistency in the provision of information, directives and submission dates, students' reluctance to ask questions during online classes, high cost of data, lack of learning devices, Global Protect limitation internet connectivity challenges and load-shedding. The participants also showed dissatisfaction as well as questioned the UFS approach towards customer care and student satisfaction. The participants further highlighted challenges such as wearing mask and having to speak through a mask, missing classes due to COVID-19 illness, observing social distancing, the campus being shut down or reduced students' access to the UFS campuses, inaccessibility of the library and other inconveniences resulting from COVID-19 restrictions. There was also the issue of students' voice not being taken seriously (see discussion of the findings for details).

Moreover, the participants recommended that the university should champion policies that would strengthen the students voice (in terms of the channels and/or how the student representatives communicate their feedback) at the faculty and department levels. Hence, the students should be free to criticize and/or assess their lessons, classes and how the courses are structured or being taught. The University may need to find ways to enrich patterns of its support service across its campuses. The government need to reduce data costs given that every aspect of human life (including education, commerce and communication) has become data intensive. The participants further suggested that the students should be encouraged to optimise the use of UFS support services provided for its students.

Table of Content

List of Appendices

1. Introduction

The challenges facing South African higher education institutions (HEIs) are often linked to the widening challenges the country is currently facing. These include increased poverty, slow economic growth, escalating unemployment and political instability. Apparently, these challenges tend to worsen given the menace of the COVID-19 pandemic. The HEIs in South Africa appear to grapple with re-learning, advancing and re-evaluating teaching and learning challenges given the effects of COVID-19 and the University of the Free Stat (UFS) is not an exception. This study was conceptualised to examine the experiences of the undergraduate students of UFS during this time of COVID-19 pandemic in relation to the difficulties they encounter as they share and negotiate knowledge at UFS multi-campuses.

1.1 Study background

South Africa education system presents a much more structured and coordinated approached to multi-campus system compare to other developing nations (Delport, Hay-Swemmer & Wilkinson, 2014). Apart from the University of Natal, which has practised multi-campus model for many years, a wave of multi-campus institutions across the South African higher education system emerged in the 1990s through the restructuring process known as "merger" (Hall, Symes & Luescher, 2004). These mergers led to the restructuring of institutions from 36 to 11 universities, six universities of technology, six comprehensive institutions, and two National Institute of Higher Education (Delport et al., 2014; Hall et al., 2004). The merger process which was steered by the government provided a foundation for the development of multi-campus institutions (Hall et al., 2004). There has been a significant growing popularity of multi-campus institutions in Africa which has increased the need for blended learning. Blended combines the use of traditional face-to-face learning and the use of ICT, which have become vital components of teaching and learning. According to Anderson and Date-Huxtable (2011), the assumption is that the ICT would enable flexible teaching and learning beyond the time and spatial confines of the physical campus. The use of ICT would provide synchronous and asynchronous instructional methods for multi-campus education (Sheth, Dowling & Congdon, 2013). Synchronous instructional method refers to situation where teaching or lectures at the main campus is recorded and the students at the satellite campus can view the lectures once they are posted on a secure website (Sheth et al., 2013). In

contrast, asynchronous instructional method creates situations that prevent academic staff at the main campus from having to teach the same material twice for both campuses (Sheth, et al., 2013). Simply put, the asynchronous allows students to view instructional materials each at any time they choose which does not include a live video lecture component. Whist the synchronous requires the students to log in online and participate in class at a specific (or set) time. Most South African universities regardless of the model (single or multi-campus) make use of the blended learning approach (Delport et al., 2014). The aim was to allow ample time for a gradual transition to digital learning, until the COVID-19 necessitated unprecedented changes (or abrupt transition) to be made.

However, in order to understand the model of a multi-campus in a South African context, one may need to look at the post-apartheid history and the democratic dispensation. In 1995, South Africa established the National Commission on Higher Education (NCHE) followed by the release of the Green Paper on Higher Education in December 1996, and the Draft White Paper on Higher Education in April 1997 (Hall et al., 2004). This culminated in the Higher Education Act of 1997. These papers and the Act (1997) laid the foundation for the transformation that affected higher education in the early 2000s. The idea was that the transformation of higher education would redress past inequalities. In December 2002, the Ministry of Education released its proposals for transformation and restructuring of the institutional landscape of the higher education system in South Africa. These proposals resulted in the consolidation of HEIs through mergers and incorporations. According to Morgan (2015), Merger which comprises the processes of merging two or more institutions or organisations with similar products together into one legal entity can take a variety of forms. Thus, there are voluntary and involuntary, consolidations and takeovers, single sectors and cross-sectoral, two-partners and multi-partners etcetera. Voluntary merger (incorporation) are mergers that result from the initiatives of the participating institutions themselves while involuntary mergers result from the initiatives that emanate from external pressures, particularly the government (Morgan, 2015). The mergers that happen between two or more institutions of similar size are conceptualized as consolidation mergers, whilst take-overs are the incorporation of small institutions into large institution/s (Morgan, 2015). The UFS campuses which include QwaQwa and South campuses were incorporated with Bloemfontein campus as the main campus. There were discussions about whether the merge of campuses should follow a unitary or a federal model. The South African government opted for a unitary model. The merging

of the UFS with the *incorporation* of QwaQwa campus and South Campus in 2003 and 2004 respectively was based on the unitary model. The unitary model encapsulates a system where the directives and management planning are centralized (Morgan, 2015). The point of this merger was to streamline the administrative and governance structures and the better utilisation of scarce administrative and managerial skills. The unintended consequences that emerged from the process included (but were not limited to) organisational and governance clashes, corporate identity issues, appropriate management structures and lines of responsibility. In contrast, benefits were financial stability, use of an appropriate resource allocation model, productivity in research output, amongst others (Delport, 2014). These challenges remain a major concern in the merged universities to the present day. In UFS, these challenges are embedded in the view that the Bloemfontein campus is the main campus and it enjoys centrality in the multi-campus model. Given this backdrop, there is a question regarding the success of the UFS multi-campus model. The UFS has three campuses that are geographically dispersed within the Free State Province. In 2001 the Bloemfontein campus was renamed to University of the Free State whilst the QwaQwa and South Campuses incorporated. The rationale behind incorporating these two campuses to UFS was to provide local students from South African rural and township communities with access to facilities, as well as to provide services for local communities and practitioners (Sheth et al., 2013). The benefits of synchronous versus live instructional delivery methods on student academic outcomes has made the actualization of the multi-campus model possible for most South African universities including UFS. The UFS has clear reasons for having multiple geographically dispersed campuses. These reasons are related to the management and governance of multi-campuses. Thus, issues of centralized and decentralized decision-making, as well as the autonomy of campuses continue to have impact on the academic organisation and coordination within multi-campus settings. An important question to ask is: *How centralised and autonomous are UFS' multi-campuses and what are the experiences of the students enrolled therein especially this time of COVID-19 pandemic?*

1.2 Scope of the study

This study examines the difficulties facing academic activities at the UFS multi-campuses through the perspectives of the undergraduate students and their lecturers. Thus, the study examines the COVID-19 experiences of the participants as they go about the processes of knowledge sharing at UFS campuses. In this study context, the term 'academic activities' is used

to describe the experiences of the students and their lecturers in relation to the work done at the tertiary institutions, especially work that involves studying and reasoning rather than practical or technical skills. The study uses qualitative technique to examine the subject matter under investigation. It is important to highlight that this study does not intend to explore the challenges of developing a coherent framework for understanding how online learning communities are built and maintained using the available limited resources. The study also does not intend to explore learning challenges that are related to accommodation, self-belonging and matters of identity. The purpose and key-research question which the study intends to address are as follows:

1.2.1 Study purpose

The aim of this study is to understand the current challenges facing academic activities at UFS multi-campuses *via-a-vis* the COVID-19 experiences of the lecturers and undergraduate students, and to propose ways of improving situations that feed into these challenges.

1.2.2 Key-research question

- *What difficulties impact on academic activities (of teaching and learning) at UFS multi-campuses during the Covid-19 pandemic?*

In order to adequately answer the key question, the following sub-research questions were developed:

- *What are the students' perspectives regarding the academic challenges they face at UFS campuses?*
- *What are the lecturers' perspectives regarding the difficulties facing academic activities at UFS campuses?*
- *What are the online classroom teaching and learning challenges?*
- *How can the identified challenges be remedied?*

1.3 Problem Statement

Recently, online learning has rapidly become part of the educational landscape due to the effects and demands of the COVID-19 (Wehab, 2020). The teaching and learning challenges are consequently changing thereby increasing the need for a continuous evaluation and development of the core pedagogy. As the traditional face-to-face learning methodology has been abruptly

replaced by online learning, the need for a continuous re-evaluation of the online learning, as well as teaching and learning processes has increasingly become necessary. Developing nations (South Africa included) tend to grapple with what the next line of action should be and the policy decisions necessary to relieve the ravaging effects of the COVID-19 pandemic at the universities, and at HEIs in general (Okoye & Mensah, 2021). The situation necessitates a closer and continuous look at the lived experiences of the educational participants (i.e., undergraduate students and lecturers) in order to ensure that the appropriate policies are enacted towards the best post-pandemic outcome. The UFS is not exception as its management continuously looks forward to finding ways of improving the current institutional culture, teaching and learning processes, as well as ensuring a more welcoming and socially just academic environment.

1.4   Significance of the study

This study contributes to the closing of the knowledge gap that exist or exacerbated due to the COVID-19 pandemic as it examines students' and teaching staff's experiences through a qualitative analysis. The data obtained or generated may help to inform subsequent decisions of the UFS management regarding how the university can improve student and staff experience at the university. It is expected that the UFS students would benefit from this study as transforming institutional culture at this University could provide the opportunity to enhance the fulfilment of the staff's and students' hopes and ambitions. This study identifies the undergraduate students' and lecturers' needs, as they engage in their normal business of teaching and learning at UFS campuses. The study also proffers solutions to these challenges.

According to the feedback from the study's participants, the study interview conversations were therapeutic as they allowed the participants to reflect and introspect on their teaching and learning experiences during the COVID-19. This study outcome gives credence to the significance, urgency and validation for why the UFS should pursue, as well as invest in the ongoing digitalisation drive at UFS. The study also contributes to the existing literature on multi-campus system as it highlights approaches to deepen understanding of how to improve the effectiveness of the teaching and learning environment at UFS. In order to examine the experiences of the participants and view the study as a whole, the study adopted the social constructivism as its theoretical framework.

2. Theoretical Framework

2.1 Social Constructivism:

The social constructivist theory is a social learning theory propounded and developed by Lev Vygotsky (1987). The social constructivist theory posits that individuals are active participants in creating their own knowledge (Schreiber & Valle, 2013). Vygotsky believed that learning takes place primarily in a social and cultural setting, rather than solely within the individual (Schreiber & Valle, 2013). The theory hence focuses on people who are learning and sharing knowledge primarily through interaction with their peers, teachers, or more intelligible person(s) as the facilitators. The work of the teacher is to stimulate, harmonise and facilitate the flow of the conversation or knowledge sharing (Powell & Kalina, 2009). The theory suggests that successful teaching and learning is dependent on interpersonal interaction and discussion of the students vis-à-vis their understanding of the topic under discussion. The need to focus on student-centred learning remains an important contribution of constructivism (Kukla, 2013). It encourages learning methods such as mastery learning, problem-based learning, student-centred learning and collaboration (Kukla, 2013). In order to succeed in the efforts to reform education, increase access and inclusiveness, in the context of e-learning, the focus should be on students (Powell & Kalina, 2009). Hence, this implies that education has to become student-centred such that the theory is based on the idea that students construct their knowledge through the process of negotiating and sharing understanding with others. In this study, the theory enables us to investigate the difficulties impacting academic activities at undergraduate level of UFS. Whilst social constructivism is a widely applied framework for studying traditional face-to-face classes (Kukla, 2013; Powell & Kalina, 2009; Vygotsky, 1987), little is known about the process through which students (who has been used to face-to-face instruction) co-construct knowledge in the absence of a shared physical space.

The theory of social constructivism incorporates the Zone of proximal development (ZPD) which is also significant to this study (Vygotsky, 1987). The ZPD delineates the activities that a student can do with or without the help of an instructor or teacher (Vygotsky, 1987). The ZPD suggests that, with the help of an instructor, students are able to understand and master knowledge and skills that they would not be able to on their own (Schreiber & Valle, 2013). Thus, when the

students master the skills, they are able to complete or perform the skills without the help of the teacher. In this theory, the teacher plays an important role in ensuring that the student acquires the particular knowledge, or skills s/he aspires to acquire (Schreiber & Valle, 2013). The learning should take place in the student's ZPD, and the master or expert needs to be aware of the student's current knowledge level and then work to a certain extent beyond the level (Vygotsky, 1987).

However, the theory of constructivism encourages learning methods such as mastery learning, problem-based learning, authentic learning and collaboration (Kukla, 2013). This implies that if success is to be achieved to reform education, increase access and inclusiveness, the focus should be on students (Powell & Kalina, 2009). Thus, the need to focus on student-centred learning remains an important contribution of constructivism. The theory provides an enabling background that allowed for an inquiry and subsequently the understanding of how the UFS undergraduate students negotiate learning, as well as the challenges they faced when engaging with online platforms that are available to them. The section below provides the details of how the data was collected and analysed.

3. Data Sources and Methods

This study was conducted using qualitative data collected online. Both the individual and focus group interviews were conducted online using Blackboard, WhatsApp and Microsoft Teams due to the COVID-19 safety protocols. There were no face-to-face interviews as recommended by the ethics committee of the university. This was part of adhering to the COVID-19 protocols and requirements. A sample of the undergraduate students who were enrolled at the various UFS faculties and campuses were interviewed. The teaching staff of the University who were also interviewed were spread across faculties and campuses. The three campuses are namely: South campus, Bloemfontein campus and QwaQwa campus. This timing of the study is useful, because students had already been exposed to lecture-student interactions, online learning, as well as being able to identify their learning difficulties. The phenomenological approach was used to investigate the difficulties underpinning the experiences of the UFS students and academic staff as they interact and negotiate knowledge sharing during the COVID-19 pandemic. In accordance with the phenomenological approach, this study recognises the existence of both the subjective experiences of the participants, as well as their objectively shared experiences as part of a learning community

(Cresswell, 1998). The term phenomenology is a form of qualitative research that focuses on the study of an individual's lived experiences within their world (Cohen et al., 2007). Thus, in the context of this study, both the experiences of the teaching staff and students were examined in terms of the way they construct new meanings, appreciate, and understand their experiences (i e., as an individual, groups of individuals, or societies).

3.1   Data collection

The data collected for this study was from two sources. Individual interviews and focus group interviews were held with a sample of students. Individual interviews were also held with a sample of the academic staff from all the campuses. The data collection took between seven to eight weeks. The individual interviews of both students and staff took between 45 to 55 minutes each. The focus group interviews for the students lasted up to 90 minutes each. Both the students and staff were invited to participate through online platform of their choice. Those who responded positively were contacted, and the informed consent form was administered, as well as signed prior to the scheduling of the interview. The informed consent form spelt out that participation was free, with no material benefit involved except for the data bundle given to enable and motivate students to participate through online platforms.

3.2   Population and Sampling

the population in this study refers to the total number of registered students at UFS and the total number of staff at UFS (fulltime academic, contract academic, full-time and contract support staff and outsourced staff). In this qualitative study, 144 student participants were expected to participate from the three UFS campuses, but 79 participated, whilst over 72 staff were expected to participate in the study but 37 participated.

Moreover, purposive and snowball sampling were utilised to recruit the student participants. Only purposive sampling was used to recruit lecturers. Purposive sampling involves the intentional selection of participants who are believed to have appropriate information that would assist in answering a specific research question (Leedy & Ormrod, 2010). In this study, purposive sampling was used to recruit students from different undergraduate levels, faculties and campuses. Hence, purposive sampling was a tool significant in the process of selecting a range of students who shared

perceptions during the data collection process, both at the individual level and in the focus group interviews. This sample was chosen using the rationale that students vary in their level of (dis)comfort, as well as in their perceptions of their classroom shared experiences and sense of community. The staff were invited to participate by using their list of faculty members to ensure adequate representation was reached in terms of all faculties across the UFS campuses. The email addresses of participants were obtained from the Institutional Information Systems which was used to communicate with them in preparation for the interviews.

Nonetheless, the Snowball sampling became necessary when students who were scheduled for interviews did not attend, as the researchers faced time constraints. The researchers thus improvised by asking the successfully interviewed student participants to assist by identifying and inviting their colleagues and friends to the focus group and individual interviews. Snowball sampling involves gathering research participants in the process of data collection, often by asking them to nominate or recruit other potential participants (Charmaz, 2014). Hence, this sampling method becomes relevant when the targeted participants are not accessible. Seventy-nine (79) students and 37 staff members from various UFS faculties and campuses were interviewed to gather the information. The participants were the undergraduate students of UFS, as well as the teaching staff from the three campuses of UFS (i.e., Bloemfontein, QwaQwa and South campus). The student sample comprised on-campus and off-campus students, as well as distance learning students. For the purpose of this study, the staff were regarded as teaching employees who spend at least 50% of their official time on duty teaching, doing research work, or senior administrative work such as heads of department.

Table 2: Summary of the sampling

	Students	Staff	Campus
Number of participants	79	37	**Bloemfontein, QwaQwa and South campus**
Total	**79**	**37**	**116**

3.3   Data analysis and interpretation

The collected data was coded and analysed thematically. Thematic analysis is a qualitative data analysis method that involves reading through a data set (such as transcripts from in depth interviews or focus groups interviews) and identifying patterns in meaning across the data (Charmaz, 2014). Thematic analysis required the researcher(s) to read the data repeatedly and create a set of initial codes that represent the meanings and patterns that emanated from the data. Hence, during the initial coding process, the interview transcripts were named, and the highlighted datasets were coded in order to begin attributing meaning to the information (Charmaz, 2014). The codes allowed the researcher to formalise, compare and categorize the ideas that emerged from the datasets. After initially coding each interview transcript, similar codes were grouped, merged and compared to create themes that were significant and responded to the research question. In terms of the presentation, themes were established and categorised under the specific sub-research questions which the responses addressed. This data presentation structure allowed the researcher to organise and integrate the data into a coherent-interpretation framework such that the study's question was adequately answered.

3.4   Triangulation

This has to do with using more than one data source to investigate a phenomenon (Charmaz, 2014; Cohen et al. 2007). The importance of triangulation is that it increases the credibility and validity of the study. The use of two separate data sources (i.e., students and lecturers) was applied in this study using two different methods of data collection (i.e., the individual interview and focus group interview). This implies that in the study's result, each final theme emanates from the analyses of at least two data sources within qualitative research technique.

3.5   Validity and reliability

Validity in qualitative data is addressed through the honesty, depth and richness in scope of the data gathered (Cohen et al., 2007). Thus, when qualitative researchers refer to validity, they imply that the research study is plausible, credible, defensible and trustworthy (Cohen et al., 2007). There are two types of validity: internal validity which is also known as credibility, and external validity or transferability (Cohen et al., 2007). Internal validity answers the question of whether the report represents the 'true' contribution of participants to reduce infiltration of possible biases

(Leedy & Ormrod, 2010). In order to ensure internal validity, the researcher used probing questions during each interview to check the correctness of the interviewer's understanding with that of the participants. The data obtained through the individual interviews are matched against the focus group interview fieldnotes to check for similarities or otherwise. Transferability (or external validity) refers to the degree to which the study results can be generalised to the wider population, cases or situations (Cohen et al., 2007). This study however does not intend to generalise findings.

Reliability refers to the stability over time, the consistency through repetition, and the extent to which findings can be replicated or reproduced by another inquirer in the same context (Cohen et al., 2007). Thus, the study must yield similar outcomes when it is repeated by another qualitative researcher using the same instruments (Cohen, 2009). Throughout the study data collection methods were applied meticulously to avoid incidents and other distractions that could prevent the participants from speaking freely.

3.6   Ethical approval

The ethical clearance application was submitted requesting permission to conduct the study at the UFS. The ethical approval was granted which enabled the continuation of the study process (i.e., data collection and analysis of study result) which could not have been undertaken without such authorisation. Hence, the utmost protection of the wellbeing and integrity of the participants remained a priority throughout the study (Leedy & Ormrod, 2010). Consequently, the researcher strictly, and without reservation, adhered to the ethical conduct and research policies endorsed and recommended by the UFS ethical committee.

3.7   Study limitation

Due to the COVID-19 safety protocols, the data collection was done online. This has an impact on the study's representation as students from rural communities may have encountered challenges that could have reduced their chance to participate in the study. The use of various online platforms (such as WhatsApp, Skype, Blackboard and Microsoft Teams) for data collection were used to increase participation in the study. Data obtained from the postgraduate students would add value to this study. However, this study recommends that the subsequent

studies of this kind be conducted to incorporate the experiences of the postgraduate students studying in all the UFS campuses.

Unfortunately, the focus group interview for the staff could not hold due to the unavailability of the participants. It proved difficult to find a date and time that suited all due to their individual busy schedules. The academic staff's perspectives were adequately obtained through individual interviews since the same semi-structured interview questions were prepared for both the individual interview and focus group.

3.8 Research experiences

It was not easy to get the students to appear for the interviews due to COVID-19-related challenges. Despite the students being offered a data voucher, it was difficult to get them onto Blackboard (i.e., the UFS online teaching platform) for the interview. Many students signed up and signed the consent form but did not appear for the interview. Despite a series of emails to remind them, ultimately very few attended the virtual interviews. Some students said that they forgot, while others had pressing academic commitments resulted in limited time and meaning that they could not participate in the interview.

Furthermore, it was also difficult to get the lecturers for the interview due to a busy schedule associated with the cluttering of learning activities accrued due to a series of lockdowns during the academic year. The invitation and informed consent form were sent out to the teaching staff via the email after the ethical clearance had been granted. The staff who responded to the invitation were contacted and the interviews were scheduled. It happened that some of the contacted participants would phone to reschedule the interview appointments due to their busy schedule, and this was understandable. The researcher thus had to follow up on interview schedules via email in order to minimise disappointments and possibly waste of resources; it was a tedious and painstaking process.

Meanwhile, another researcher faced challenges that include not being able to physically visit the UFS campuses due to health reasons as you know, life can throw some dreadful curveballs at any time. So, working from home had its own challenges. Firstly, there was no access to unlimited

internet connectivity. It was expensive to procure data sufficient to meet the numerous interview schedules necessary for this study's data collection. Secondly, in order to increase the chances of recruiting research participants who might be busy during the weekdays, Saturdays and Sundays were incorporated as working days for the interviews. It worked though for me as it became possible to interview participants who could only be interviewed on weekends due to their busy schedules. The most exhausting part of the interviews were the days and hours where the interviewer showed up online only to meet the absence of the interviewee(s) who signed up (or scheduled) to be interviewed. Sometimes the researcher would wait for the whole hour and the prospective interviewee(s) or participant would not pitch.

At one point, it happened that the postdoctoral fellows could not access Blackboard as lecturers or facilitators. The ICT, through their highly competent staff, were able to improvise so that the postdoctoral fellows could access the Blackboard and conduct the interviews. During the interviews, sometimes internet connectivity was an issue such that it was difficult to keep a steady conversation without disruption. Many interviews were rescheduled due to the same reason.

4. **Data Presentation and Analysis**

The data is presented in four sections using the sub-research questions of this study. The findings were summarised at the end of this section. The letters 'L' and 'S' were used to represent comments by the lecturers and students respectively *vis-à-vis* the themes addressed by the comments.

SECTION 1:

- ***What are the students' perspectives regarding the academic challenges they face at UFS multi-campuses?***

a. Inconsistency of information and directives

The participants were concerned about the inconsistencies that arose in terms of directives due to the challenges associated with the COVID-19 pandemic.

> *S1—Today you are told it will be online, tomorrow it is face-to-face, the information that comes is inconsistent….*

S24—One of the things that changed during the pandemic is that you are not sure of anything…. not even the submission dates for the assignments; in fact, nothing has been stable….

b. Inadequate support from some lecturers

The participants raised the issue that most lecturers seemed overburdened and occupied such that situations that warrant necessary concession or tolerance are considered leniency on the side of the lecturer and would not be fair on other students. The participants highlighted:

S18—Even the lecturers show signs of fatigue and overburdened when dealing with us (students)…. they are focusing on their own thing and can be fussy sometimes….

S10—There is only one lecturer who supports…. I have met two lecturers that are not here just to lecture but they also act as supportive structures…my lecturer for microbiology, Dr. Lisa….some lecturers would not even care about your concerns as a student, they are just suspicious of everything that comes from the student….

c. UFS customer service and student satisfaction questioned

The participants questioned the customer care service and/or student satisfaction at UFS. The participants further questioned whether the university takes the plight of its students seriously on their campuses. The issue raised here was not the issue of students' sense of belonging; it was essentially about student satisfaction and/or UFS customer care/services being questioned by the students in their various campuses. The following participants agreeing with others stated:

S24—And this is what a lot of undergraduates often say 'I am sorry, but it is already too late. It is said that students resist speaking up due to fear of being persecuted or 'chastised'. The students sometimes fail a course, for instance, and then they(students) would say I am sorry, I need a second chance… and the lecturer would say to them 'I cannot help you given the policy and what the institution allows. It does not allow me to give you a second chance…. Why did you not come to me sooner?' and they (lecturers) would say something like that…. A student once said to me, she was scared because the year before she had fallen pregnant, and she went to her lecturers to say she needs additional support…. And almost all the entire lecturers asked the same question to her; how can we give you

additional support? It is not possible! The student was confused and was not sure what she needs to ensure that they (lecturers) give her that additional support…. She also felt intimidated, you know given how lecturers overexerting themselves on students…..She said that a lot of the lecturers slut-shamed her and said to her, why were you having babies at this age, it was not our responsibility to clean up after her mess…many of them requested that she leaves their office (and come back when she had cleaned her mess). Meanwhile, this was a very bright young student. I could tell from my discussions with her, and also looking at her previous results, that she knew the work the only reason why she had failed in the end was because of the struggle to manage certain things (or to find someone more humane to assist her).

S27—It would be the instances in which the students' lives are not taken into consideration. So, I do not think anyone who understands the plight of a student on campus has taken into some serious consideration whether the university cares or understands that the students have to travel about three kilometers for them to get anything to eat…. For instance, for all the time that I have been on this South campus, the cafeteria has been closed…. So, if the institution cares about students, all students regardless of their campuses, these are small things that I believe a person should not even be asking for because they should already be there… there is one thing that I found peculiar to UFS; I feel that if the University understood the life of the students they would understand there is a need for student bus services to accommodate students traveling in between the campuses for their classes. More especially, where they have not put in place systems like the fundi office on South Campus. So, when we have problems with the fundi card, we have to go to Bloemfontein campus, the main campus and that is a cost, that is put on the student. The University is the one that is not accommodating us. Then, there is the thing like I was surprised to hear that there is a 24-hour library at the main campus, but there is none at the South Campus….That is not the only issue, I think my issue is there is something that you cannot or we cannot do anything about, and that is the culture in which this university was built ….We who are within the institution can be different in terms of ideology, population group, age, experience (which is normal) but we are not of different humanity [inaudible] that's frustrating to say. Things like the cafe I do expect to be functional…. and also, to have a space where we can buy (or lend) the textbooks we need…. when I need a

textbook, I have to go to the main campus…there has not been any instance to consider that I might not have the money to go to the main campus…. I have to spend from my bursary to buy textbooks that I need…. because the university has considered me within the university…. It frustrates me that the plight of the student is not considered…. These are things that still do not allow me to enjoy UFS fully; I am not biased but I expect the university to take into consideration… since I am the rep, the students have to get to me when they want to communicate with a lecturer about certain issues they may have (and they are so worried and scared). My question is why would it be so? For instance, before the end of last semester a student had surgery and could no longer attend so they came to me asking the way forward and of my opinion and what way to go, and I told them to go to the lecturers, send them (lecturers) an email...

S22—But I think if I have to draw from my own experiences as a student, it is difficult as well because there is; I do not know even what to call it because I am not used to it. I am not from UFS originally, I have been... I have had experiences with being at Rhodes and UKZN and I have never experienced that in those institutions. But I see it in UFS, where (most) staff members do not like it when students approach them directly on issues. They want students to go through these sometimes ridiculous chains of commands, where I have had struggles, for instance, engaging with the scientific committee, and when I approached them to say, hey, I am struggling with this and that, and the first thing they asked was, who are you? Are you a supervisor? "No" I responded, "I am questioning certain issues in my capacity as a student", and in this regard, they said, "oh, no, we do not talk to students". "Yeah, but my supervisor is extremely busy…. and this is something that I feel like I can handle or deal with by myself. So, can't you just assist me?" "No, I am not going to talk to you. Please forward your queries to your supervisor who will have to contact me", and so these are the thing and has been my experience over the years with UFS.

S6—the lecturers expect that issues are settled in their favour….and it happens that way in my department, as well as others…. if you are taken seriously it is during the registration….

S2—I felt like the university is not aware that we are paying customers here…. I chose this university because of the tranquility around this part of the country…here is not as busy

32

as other South African cities, crime is low, and it is quiet here, but when you complain nobody takes you seriously….

d. Fear of underperformance given resource constraints

The participants emphasized their fear of underperforming in their studies due to resource constraints thus lack necessary technological devices as these two participants precisely put:

S1—It does affect my studies because sometimes I cannot always borrow my friend's laptop to do my schoolwork….

S14—Due to my dedication I have not failed but…. I would have failed dismally…we need a laptop (or at least a tablet); without it, we are doomed….

e. Inaccessibility of the campus during COVID-19 restrictions

Participants described the inaccessibility of the campus during the COVID-19 pandemic as an impediment to their academic success. These include access to the library and the University during the pandemic. This point was well described in these participants' claims:

S15—No, I could not have access to the university because a limited number of people were allowed…the security has to check your permit and a certain number of persons was allowed….

S 18—I had a problem with my phone and could not go into the campus…they check the CAP code and permit etcetera.….

f. Laptop application delayed

The participants also mentioned the laptop delay as something they were not aware of the cause and reason behind the delay as these participants reported:

S14—We applied for these laptops on the 11th of May 2021…. as the university directed but up till now, it has been five (5) months yet nobody has received any….

S24—I never received any support from the government…they did call last year and asked if I needed a laptop and I responded in affirmation since then nothing had happened.

NB: That is say that the student had not received any laptop up to time of this study.

g. Global Protect and its limitations

The participants unanimously assert that the Global Protect has challenges or limitations when it comes to connectivity and the scope of websites one can visit for research. The participants highlighted challenges of Global Protect to include its dependency on the strength of the network coverage or connectivity. Also, the Global Protect allows one to assess only the recommended websites. Thus, it limits the scope of websites one can visit. This point was vividly expressed in the comments by these selected participants:

> *S13—...another one is Global Protect, since we are at home, I am forced to use it. It is not working; it is limiting our research; we are going to be told to do certain research but when we go to a certain website looking for answers we cannot access that website. It is very limited also now I heard that people cannot use it due to poor connectivity and that Vodacom has recognized Global Protect as an illegal VPN, so Vodacom is blocking our (students) sim cards because of that…. So, that is why I refrain from using my Vodacom sim card. I now have to use another network because of that….*

> *S32—The Global Protect does not work over here especially during the storm and when internet connectivity is down or when it is raining. Sometimes, I would go to the mountain to get a stronger signal or connectivity that can allow me to download study materials using the Global Protect….Eish! (exclamation), it has not been easy…. In my place because am studying from home, we always end up climbing the mountain to have reception (or connectivity) ….*

> *S3—Yeah, because I am talking about Global Protect because Global Protect sometimes does not work…it depends on the quality of the network [Inaudible]…. It is not working; it is failing...*

SECTION 2:

- ***What are the lecturers' perspectives regarding the difficulties facing academic activities at UFS campuses?***

a. Need to increase classrooms or lecture venues

The participants unanimously highlighted how small the lecture venues (or classrooms) had suddenly become during the COVID-19 pandemic as described in the following comments:

L1—So obviously what has changed is that you cannot have an entire class in one venue for face-to-face due to social distance requirements, the classrooms have become smaller which necessitated repeating (contact) classes or lessons many times and at different times to accommodate….

L8—Due to the number of students… we have to adapt by doing either online teaching and learning thereby splitting classes and lessons into groups….It happens that whether the classes are online or face-to-face, you still have to split the classes so long as there is a large population….

b. Increased workload

The participants mentioned the overwhelming increase in their workload due to the COVID-19 pandemic. In agreeing with others, these participants emphasized:

L4—During the practicals; for instance, during the chemical training, we break the students into smaller groups which means that the same section has to be repeated many times…. This means more work for the lecturer

L14—Sometimes the work drives you crazy because you not talking about just the lecturer's work as a teacher, but also the technical or technological aspects…it is just too much….

L23— You see the support is there, just that the workload has risen…. Okay, being a new lecturer at UFS…and, then, COVID-19; I arrived January at UFS and March COVID-19 comes. So, you can imagine, you are new in this space and you are expected to do so much to interact with students, to perform your roles or duties. What do you do? It is hectic with COVID-19…. I must say that the colleagues from my discipline have been very helpful. I think also it takes one's character as a person because when you need help you cannot sit in a corner and hope that help will come. I think my character helps me a lot, at least, I can open my mouth and say that I need help, you see. So, the support has been there…. but this pandemic has escalated the work of a lecturer…. I can interact on platforms such as

Blackboard, and others, and the workshops have been there…. They have helped me because I am able to say that I can engage with my students through Blackboard and other platforms. I can transfer my marks from Blackboard to Grey book….

c. Regular sickness

The teaching and learning were seriously affected by the increasing number of students who were reported sick daily. There had been a sharp population increase of both students and lecturers who became absent from classes and duties respectively due to regular illness. This point was well put by these participants:

L1—Previously we did not have to be worried about students getting sick on regular basis. Now, we have to deal with that even with the staff too which leads to the cancelation of the classes, etcetera….

L8—the students' health is important, as well as the lecturers so…. This time we are worried because….

d. Lack of access to data

Participants highlighted challenges associated with limited access to data as nationwide concern, as it continues to affect academic activities, as well as education development in the continent. This situation COVID-19 circumstances allowed the international students to work from their various countries, but high costs of data remain critical as highlighted in the comments of the following participants:

L5—We have many international students…students from Lesotho, Namibia, and Botswana who are waiting to see if we can make a plan for them regarding data as had been done in the case of Zimbabwean students….but until then, the situation remains a thing of concern for teaching and learning at UFS….

L9—I think the biggest issue is not what we can do as lecturers but from the students' side if they have access to what we can offer online…with insufficient data they cannot have access or keep up….

e. Excessive online distractions

The participants mentioned that students easily and irresistibly get distracted when attending online classes, and when doing their schoolwork. thus, most students struggle with irresistible online distractions. In agreeing with others these participants emphasized:

> *L1—there are a lot of distractions online…because you cannot see or monitor the students, they can engage in other online activities even while the lessons are going on…you know the story….*

> *L11—here the students can do their schoolwork (or assignments) and submit without you having any capacity to see how…. The CTL gives training and support regarding online teaching to us… our students are struggling especially when it comes to managing their time due to online distractions….*

f. Students' mental health being at stake

The participants emphasized that the students' mental health was at stake due to the COVID-19 pandemic crisis. This suggested that UFS needed to consider the importance of the students' mental health when making its decisions during this time of COVID-19. Already the students have a lot going on with them (in form of pressure).

> *L7—the students' mental health needs have increased than it was previously…the stress from COVID-19, recent changes in the education system, fear of the unknown, increased physiological ailments, socio-economic pressure and loss of loved ones have exacerbated students' vulnerability towards mental illness….*

> *L23—certain students do not complain…they climb the mountain to get data but how they managed to submit assignments on time still thrill my mind as a lecturer…it calls for us to be more humane….These students are struggling and this increases our responsibility upon the students, of course, as an institution….*

g. Practical classes cannot go online completely

The participants asserted that blended learning would be a permanent change due to reasons associated with practical classes which cannot go online completely. In the UFS context, and as a university in a developing nation, some aspects of teaching and learning cannot go completely

online. This means that the challenges associated with blended learning would persist or continue to be a concern as these two participants affirmed:

> *L13—I think we have to move back to hands-on especially in the medical and engineering fields to make sure our students are adequately trained…this means that a student may still have to be a resident student just to attend one or two practical lessons….*

> *L9—Blended learning will persist…. This is because of the need for a lot of training that goes into establishing a workable online system…although there are tools; it is just going to take time. Both lecturers and the students have to deal with the blended learning challenges….*

h. Assessment difficulties

The participants unanimously disputed that the current online assessment module(s) are adequate. There are a lot of issues currently with assessment as the participants echoed:

> *L21—The university once wanted the assessment to be made doable via cellphones given that some students have limited access to proper learning devices or technological equipment such as laptops and tablets…. Recently, the UFS discouraged making all assessments doable by phone, students from disadvantaged backgrounds are complaining….*

> *L11—Here the student can give the work to somebody and submit it without you having any capacity to see what happened….There are, of course, Softwares that are more efficient but these are still outside our reach at the moment, even the ones available to us, we still are struggling to establish the know-how as the case may be….*

i. Difficulty in solving inequitable access

Most participants showed despondence regarding the difficulty of solving the obvious problem of inequitable access. The point here is not on inequitable access but the unavailability of a definite solution. These two participants thus stated:

> *L1—The students have varied backgrounds academically, socio-economically and even language-wise, the government too is very (s)low with the rural development plan….*

> *L20— …well, depending on how you defined access…but now access to e-learning equipment or devices is a concern because the situation with COVID-19 has created more gaps that can undermine the effort to increase access to education in South Africa… although some departments at UFS in collaboration with relevant stakeholders have bought tablets and dispense to most needy students meanwhile a lot needs to be done….*

j. Blackboard not being user friendly

Most participants emphasised that Blackboard features are not the best UFS can have for teaching and learning. Its user-friendliness was however questioned by participants who proposed that the learning platform (Blackboard) be further developed although none of them ever mentioned how. The following participants emphasized:

> *L11—I know that UFS values the Blackboard for not just texts and things like that…but the Blackboard is not the best the UFS can have in terms of its being user-friendliness….*

> *L6— I am suggesting White Site be used for essay writing…Blackboard is inadequate and is not a fan of it….*

k. Increased need to adapt abruptly

The need to adapt abruptly has become part of the pandemic's 'new normal'. The participants also fear that this trend would persist even after the COVID-19 pandemic. These participants put it well:

> *L16—I doubt we will ever return to the pre-COVID-19 era or situation…we have to realize we will always from now on be able to adjust in a very short space of time….*

> *L4—now I think the new (i.e., first-year) students may need additional modules or courses about technological adjustment and even more time to adjust….*

SECTION 3:

- ***What are the classroom teaching and learning challenges?***

STUDENT PERSPECTIVE:

a. First-year students blame underperformance on e-learning

The participants who were mostly first-year students blame their underperformance on e-learning difficulties and/or challenges. These participants described the point so well:

> *S28— I think…I was not used to the whole online learning. So, I think it is the reason why my marks are low. So sometimes I used to forget my assignments, and I think that is the main reason why my marks are low…*

> *S8—Yes, I had lower marks in that module because of online learning I think because I still do not understand things happening there…. As a new student…the online classes are a bit useless especially tutorials because I did not understand them.*

> *S33-- A lot I think that the online learning environment is not very ideal. So, I do take quizzes and I may like to obtain good marks. Sometimes I would obtain good marks, but sometimes not so good, but like if it were to…if we were to go to campus and study, you know, sit down and just focus it would be so much better.*

b. Students' disruption of online classes

Participants were worried about the disruptions by students during online classes. These disruptions could manifest in form of background noise when asking questions. Sometimes, the disruption seemed pre-meditated and would seem there were no serious consequences except the perpetrator(s) being removed or disconnected from the platform by the lecturer. In agreement with others, the following participants emphasized:

> *S12—The negative side yes, we do have those students who would just draw upon the lecture slide and that is disrespectful to others, as well as annoying because it is not only disruptive to others but also disrespectful to the lecturer. We do have those students and then another thing is the microphone thing…. Some students would be opening their microphones which results in disturbing background noise. Those background noises affect everyone….*

> *S7—It is very unfortunate to see that some students sometimes deliberately intended to disrupt the online lessons…. The lecturer would shut them out or disconnect them but, eventually, the class or lesson has been disrupted….*

S22—You can dictate from the question that the student had not been listening or following the discussion…and some students just want to be rude because they know they would probably get away with whatever….

S32—So far with Blackboard, it is good, but I think when we have to ask questions, something…. some students would just switch on their mic and would be just talking or chatting with some people in the background thereby making noise. This creates disruption and distraction to the whole class …. the lecturer would end up kicking them out, something like that…. So, I think there is a need to improve students' communication skills when it comes to Blackboard usage because I think it is quite difficult now the moment, communication….

c. Students' reluctance to ask questions during online classes

Participants, who were mainly black Africans and seemingly from previously disadvantaged backgrounds, expressed their experience of not having the eagerness to ask questions during the online lessons which according to the participants could have resulted from either personal preference to use other platforms that increases privacy, time constraint, lack of confidence to speak in public, shyness, 'rudeness' and/or timid etcetera. This point was vividly described in the following remarks below:

S21—Yes sir, I become shy maybe sometimes to ask questions. Too many students amongst us would not ask questions after or during the lessons…. I prefer to ask questions after the session, but through an e-mail which the lecturer or facilitator had provided. That is good for me… but when we are in a live session it becomes difficult for me to ask questions…. If there is something that I did not understand or that I needed clarification for, I prefer to consult the lecturer (using other platforms) and they (lecturers) are helpful and understanding too….

S23—I think I am just shy or rather timid…I do not find it unnecessary to ask questions…. even when I do not understand or need clarifications. I think I need to improve my communication skills. It is not easy….

S7—I do not ask questions at all and I do not know why. I prefer to write the facilitator or lecturer an email, and it takes time to get a response. I do not mind because…at least the facilitator answered my question.

S32—Okay sir, most of the time when we joined the sessions online, I found that it is difficult to ask a question or something like that…. and then it is not that simple to ask questions directly, so while my lecturer is busy teaching, if there is anything I did not understand I just write on my notebook and then, later on, I send him or her an email requesting for clarification or extra session to regarding my questions… during online it is very hard to ask questions something like that, even though it is simple to get an immediate response and as simple as it is… but making an arrangement or asking your lecturer privately is a preferred alternative for me….

d. Incessant re-scheduling of submissions

The assignment or project submission due dates that the students and lecturers agreed upon are always found on the Blackboard, but most students tend to submit on different dates after the due date given the COVID-19 circumstances. Sometimes, the lecturer is forced to keep differing the due dates and nothing seems stable anymore. In agreeing with others these participants stated:

S9—Yeah…although it is left at the discretion of the lecturer to decide concessions as the case may be… to hear that an assignment you submitted last month is still being submitted by others does not give one any feeling of fairness….

S21—This COVID-19 has caused a big gap…nothing is stable anymore, you hear this today, then, tomorrow it is another thing. Submissions are negotiated at every point in time….

e. Lack of learning devices or tools:

Participants indicated that they lack major teaching and learning devices such as laptops, tablets, and reliable cellphones. According to participants, there have been initiatives from the university, NSFAS, and other relevant stakeholders to resolve this problem, but more still need to be done as these participants echoed:

S23—No, I have my cellphone, but it is not good…it does not have good quality; it breaks up whenever I take it off the charger. And my laptop, well, was once my father's and it is the one that I am using now. It was bought a long time ago, like years ago hence it is an old machine… and apparently, I do not even have earphones….

S31—Sometimes it is difficult to borrow laptops from other students, they also may be using their laptops. I applied for a laptop with NSFAS but have not received it although some of my colleagues have received theirs…. I write my assignment using my phone sometimes.

f. Courses without facilitators

The student participants were unanimous about courses that are apparently without facilitators on their campus (South campus). The point was that usually, the concerned students found themselves stranded and would not be eager (though tempted) to seek help from other facilitators who specialize in different fields of study. These other facilitators may not want or feel obliged to assist the students for the obvious reasons. The participants below vividly highlighted:

S21—Yes sir, what I can say is that the university needs to ensure that every module that we study has facilitators and tutors. This is because in other modules we do not have tutors and facilitators. We only use our efficacy as students to research and read the contents of these courses of which, in the end, if maybe you feel you do not understand you become worried about whom to approach for help. We do not have….we are unable to ask other tutors because at times you see that they are avoiding answers and blame if, for instance, you fail, and the tutors specialize on other modules… it is not all of the modules we are doing that have facilitators and tutors.

S4—there are courses without facilitators especially with distance learning…of course, we are supposed to study on our own. It would be better if the university assigned facilitators to these courses that do not have facilitators….

LECTURER PERSPECTIVE:

g. Too much back and forward correspondence with first-year students

The participants mentioned that their first-year students have too much catching up to do in terms of communication, academic writing, and the use of technology. This according to the lecturer participants had made their work tedious and time-consuming as these participants put it:

> *L24—some of the first-year students have problems with accessing information from the web, pulling off good academic writing, and figuring out the Blackboard stuff…. My first-year students as they come to the university, usually they do not get the proper orientation and then we (lecturers) have to help them on how to use Blackboard, even on how to write an email….*

> *L5— during my initial lessons with my first-year students…. I have always begun with teaching the students how to write an email, to a lecturer, how to use the university website, and how to write a good academic paper. So those are the things that we have to do which I think have helped but there is too much back and forth with first-year students….*

> *L11—First years also want to see that we sort of not being too distant from them, that we have similar experiences although we sometimes have very different experiences, but we can connect and understand their situation….*

> h. Large class sizes limit efficient planning and classroom engagement

The participants during the interviews highlighted the magnitude of frustration that goes with planning for a large-sized class when it was face-to-face learning let alone now that e-learning has surpassed everything due to the COVID-19. The participants affirm:

> *L1—With my smaller group we can make them go to the museum, we can have that sort of, like workshops. It depends on the size. And I think the best thing is to give good feedback on the assignment….*

> *L28—Small-sized classes are easy to plan for, as well as to teach…*

SECTION 4:

- ## *How can these challenges be remedied?*

LECTURER PERSPECTIVE:

a. Increased need for students' guidance on time management

The participants unanimously suggest that the university should continue to guide the first-year students on time management.

> *L12—The information 'big bang' online remains a huge distraction for the new (first-year) students, you can notice from their questions during online lessons or class sections that they were not paying attention…they might have been busy with other stuff online instead of focusing on their work….*

> *L4—Since no one is checking up on them, it then translates into an increased need for guidance on how to structure their lives in this different environment manage their time and be able to focus on what matters at a particular time….*

b. Continuous ICT upskilling for academic staff

The lecturer participants unanimously agreed on the need for a continuous upskilling of technological ability as could be seen in the comments below:

> *L1—you need to upskill in the use of teaching and learning technologies…because things go wrong very easily in an online environment…we (lecturers) should be on our guard always. So, a continuous opportunity to upgrade ICT or technological skills would always be significant….*

> *L3—…a colleague and I were talking, and she says she is now starting to see the importance of attending workshops regarding how to use technology…even the Blackboard workshop as always being provided by UFS, and I said yes, I did that last year. The university may need to keep that up until….*

c. Strengthen blended learning

The participants were unanimous about blended learning persisting even after the COVID-19 pandemic. The participants suggested that in the UFS context, the university should continue to align its policies around sustaining and reinforcing blended learning. This would serve as a steppingstone towards the pursuit of the ongoing digitalization drive at UFS.

> *L23—blended learning is going to continue… UFS needs to channel its policy and implementation strategy towards reinforcing blended learning….*

L14—the university (UFS) and its management know that e-learning would continue even after COVID-19…there would be no going back to the pre-COVID-19 situation. The university should strengthen blended learning and pursue its digitalisation goals…

d. Treat the students as collaborators

The participants agreed on the increasing importance that the UFS students be treated as collaborators. For instance, UFS students should continue to be represented in department meetings and beyond, and there should be a well-established platform(s) that would allow the student representatives to dissemination feedback to other students.

L3—The students' voice is very important in maintaining good customer care services, as well as the students' support services…faculties and departments should continue to encourage students' representation in their meetings….

L10—It is very important…there need to be policies that support UFS students need to be treated as collaborators. Students should know exactly what to expect and should participate in decisions that affect what they learn or know. They (students) should not be surprised….

e. Increase investment in blended learning and digitalisation

The participants agreed that the UFS management, the government, and other relevant stakeholders should collaborate to ensure that resources are channeled to improve blended learning, ICT human resources, and digitalisation as reported by the following participants:

L9—You know if you have got a big class to teach and now struggle with the technological devices and the ICT is online, they would immediately rescue the situation….so this department need a continuous reinforcement and sponsorship hence more resources should be committed to ….

L23—the students who lack access due to the unavailability of technological devices need an immediate rescue plan. The investment in ICT should increase exponentially from all…. this however gives credence to the ongoing digitalisation drive at UFS….

L16—I think probably we will do more of the hybrid learning in a more permanent way. I think it is going to be difficult for us to have 100% online (learning) and we have nothing to show for it…. Of course, to return to 100% face-to-face would not happen. We are always going to have to straddle that hybrid mix of the digital and the contact (learning), I think partly because we will be more used to or drawn to contact (learning) as a developing nation…. I think we will be straddling that system (of blended learning) for a long time… we could find ourselves with a similar pandemic in the future, as such, if we do away completely with the digital aspect, we will find that the difficulties that we went through now will be just as bad….

f. More collaboration is needed

The participants unanimously agreed that both the government and the university should open up for more collaboration as these participants precisely put it:

L1—this problem would not be solved by one person or rather the university alone…. more collaboration should take place….

L23--…my departments bought tablets for their students who were bereaved or in need of it…. Collaboration is necessary especially in solving the challenges relating to resource constraints….

g. University should continue to maintain quality assurance

In all circumstances, participants tend to unanimously agree that UFS should not compromise its policy on quality assurance irrespective of whatever happens as these participants echoed:

L6—I will say to the university to stay committed to ensure that quality assurance in everything that it does….

L18—Continuous evaluation of output at all levels should continue to be pursued and/or maintained by UFS….

h. Reduce the pressure on students

Participants agreed that HEI students have increased pressure in their academic endeavours due to the COVID-19 pandemic. Hence, effort should be made by UFS not to worsen this pressure on the

students to increased class attendance, academic performance and, of course, lower the possibility of student unrest, as well as the dropout rate.

> *L3—The university should pay attention to the pressure that goes on students now during the COVID-19 pandemic…. Due to the disparity in accessing, disadvantaged students could be pushed to the edge of precarity if the university policies and decisions continued to increase the pressure, the students might have…which is worse than being vulnerable….*

> *L14—…this is because some support needed is inexistent, unfortunately during this time of COVID-19 pandemic….*

> *L8—UFS should have a plan that takes more into consideration before implementing decisions such as shutting down the university or making changes that affect access to the university, students' accommodation, and so on…. The students perform poorly when they are stressed….*

i. T&L workshops should integrate how best to utilise students' background information

The participants agreed that the lecturers need to have access to the students' background information, as well as to know how to utilize this information to better teaching and learning outcomes. This is important for better planning and service delivery outcomes. The following participants thus highlighted:

> *L18—Due to the relational gap created by online learning…a dashboard that exhibits the student's background is needed. Although bits and pieces of this information could be obtained here and there from UFS's records, the lecturers should know how to use such information…the teaching and learning workshop should incorporate how the students' background information can help the lecturers to understand the background of their students vis-à-vis their life experiences….*

> *L14—sometimes, it is difficult to get the information about students' background together from one place, it becomes even more difficult with large classes of 150, 200 to 400…. I think this is something the university can assist with….*

j. Use other social media platforms to augment Blackboard

Participants accepted that other social media platforms such as WhatsApp, Telegram etcetera have been very helpful to ensure effective teaching and learning through the Blackboard. These participants put it well:

> *L24…. Also, to upgrade the WhatsApp session to say students should be aware of this on the Blackboard….*

> *L10—I use WhatsApp….it does help to communicate with the students…. It is also convenient and flexible….*

k. Cut down on large classes

Participants unanimously emphasised that dealing with smaller classes is more ideal and effective in terms of online teaching and learning. Although this point may not concur or agree with the university's business model needs to come up with a plan to effect:

> *L8—So when I speak of old habits, this idea that there should be 800 people in a class needs to go…the system has shown that the smaller the class the better to offer effective (teaching and learning). I know this might not resonate well with the previous institutional setup and business model….*

> *L2—We should be intentional about getting more smaller classes, enrollment approach and management, student support, and teaching with technology….*

> *L17—I have not dealt with a large class…. I heard another lecturer complain about taking 300-400 students….*

> *L22— The university structures kind of don't allow for that free flow of social interaction and engagement and I understand it on some level for us as staff members, if you have like 500 students, right. And you are in a team of two lectures. So, in a way you are responsible for 250 students…. It is impossible to have that kind of free flow of interaction and social relationships without it having a negative impact on your other work because you are still responsible for 249 other students outside of the one sitting in front of you….*

STUDENT PERSPECTIVE:

l. Students should take full responsibility for their studies

The participants suggested that students should be responsible, realistic and take control of their academic success at all times. Hence, the onus is on the student to contact the lecturer early whenever s/he encounter difficulties as indicated by the following participants:

> *S23—I think students must follow instructions. If they are told that they need to attend classes or submit this task and do this and that, they should keep that and, you know, carry it out. Because when we do not submit anything or do not even attend classes, that would make the facilitators irritated and also because they are also human….*

> *S6—You have to call the lecturer, email, or WhatsApp them early enough once you have a problem with your studies….*

> *S2—Because I want them (students) to realize that this is their journey and they should take the lead….*

m. Students should (optimize the) use of UFS provided support

The participants confirmed that UFS has provided adequate support to students across the campuses, even during the COVID-19 pandemic. The student has the responsibility to access the support system provided to them by UFS as the participants explained:

> *S24—The university has done well…it has CTL, counselors, and social workers to give support to the university community. There are other avenues provided by the university during the pandemic.*

> *S2—I am okay with the services and assistance. The students should use this provided support…. They (the students) should make good use of it.*

n. Reduce data costs

The participants agreed that data is expensive in South Africa and so affordable to HE students. The present government needs to figure out how best to reduce the costs of data in the country especially now virtually every aspect of human life has become data-intensive due to COVID-19. The following participants stressed:

> *S2— The government needs to resolve the high cost of data nationwide. I have this class I signed up for….so every day, I have been missing the last hour because the online classes end at 7 pm but the internet access to the data stops at 6 pm…*

.

> *S29—Sir, I think that they can start giving us data since the Global Protect…we are struggling a lot with this Global Protect. We need data so that we can be able to attend classes…data needs to be affordable, at least, to the students, free data should not be the only option for the students in a country like South Africa….*

o. Resolve load shedding issues

The participants from the QwaQwa campus expressed their apprehensiveness regarding the looming continuation of the load shedding and its effect on teaching and learning, as well as education development in general. According to the participants, government intervention is highly needed to rescue the situation.

> *S19—It is not easy since here at QwaQwa we have electricity problems. There is always load shedding. So, it's not easy at all. All you have to do is make sure your phones are always charged. But as for the network issue, there is nothing one can do about that…. It usually happens during the cold weather, even now that it is raining the electricity might not work and does network connectivity…. The Load shedding requires urgent government attention….*

> *S5—I am afraid the Load shedding would continue, and we all know the consequences or the effect on education especially with the current trend in education….*

5. Summary of The Findings

SECTION 1:

Question1: ***What are the students' perspectives regarding the academic challenges they face at UFS multi-campuses?***

a.   Inconsistency of information and directives

b.   Inadequate support from some lecturers

c.   UFS customer service and students' satisfaction questioned

d.   Fear of underperformance given resource constraints

e.   Inaccessibility of the campus during COVID-19 restrictions

f.   Laptop application delayed

g.   Global Protect and limitations

SECTION 2:

Question 2:   *What are the lecturers' perspectives regarding the difficulties facing academic activities at UFS multi-campuses?*

a.   Need to increase classrooms or lecture venues

b.   Increased workload for the lecturers

c.   Regular sickness

d.   Lack of access to data

e.   Excessive online distractions

f.   Students' mental health at stake

g.   Practical classes cannot go online completely

h.   Assessment difficulties

i.   Difficulty in solving inequitable access

j.   Blackboard not user friendly

k.   Increased need to adapt abruptly

SECTION 3:

Question 3:   *What are the classroom teaching and learning challenges?*
STUDENT PERSPECTIVE:

a.   First year students blame underperformance on e-learning

b.   Students' disruption of online classes

c.   Students' reluctance to ask questions during online lessons

d.   Incessant re-scheduling of submission

e.   lack of learning devices or tools

f.   Courses without facilitators

LECTURER PERSPECTIVE:

g.   Too much back and forward correspondence with first years

h.   Large class sizes limit efficient planning and engagement

SECTION 4:

Question 4: *How can these challenges be remedied?*

LECTURER PERSPECTIVE:

a.   Increased need for students' guidance on time management

b.   Continuous ICT upskilling for academic staff

c.   Strengthen blended learning

d.   Treat the students as collaborators

e.   Increase investment in blended learning and digitalization

f.   More collaboration is needed

g.   University should maintain quality assurance

h.   Reduce the pressure on students

i.   T&L workshops should incorporate how best to utilize students' background information to improve teaching and learning

j.   Use other social media platforms to augment the Blackboard

k.   Cut down on large classes

STUDENT PERSPECTIVE:

l.   Students should take full responsibility for their studies

m.   Students should (optimise the) use of the UFS provided support

n.   Reduce data cost

o.   Resolve load shedding issues

6.   Discussion of The Findings

This study's findings feed into the attempt to solve the problem of poor-academic support, large classes and inefficiencies relating to the use of ICTs. The COVID-19 pandemic both intensified as well as escalated the already existing challenges facing teaching and learning by forcing an abrupt switch to e-learning (Wehab, 2020). The findings showed how suddenly the students were expected to learn how to succeed in terms of self-directed learning due to the COVID-19 crisis. The findings further showed that the role which the students undertake in learning has completely changed and many students are likely to have difficulty with changing their learning styles. Thus, the circumstances whereby the students' encouragement and motivation are on a decline, such that

some may fall short in keeping up with the learning challenges due to anxieties. There is also a question of improving student-lecturer relationship due to the relational 'gap' created by the COVID-19 pandemic (Camilleri, 2021). This study clearly suggests that more interventions should be adopted at UFS to ensure smooth pedagogical shift to the constructivist dominance and mainstream blended learning that are expected to dominate post-COVID-19 teaching and learning domain. This implies that for the UFS to succeed in effort to reform education, increase access and inclusiveness, the focus should be on students, teaching and learning, as well as on the ongoing digitalisation drive.

Furthermore, the findings indicated that some students lack the courage to ask questions during the online classes. Other student participants blame time constraints as the reason they prefer to evade asking questions during the online classes. There was also an issue of students asking questions seemingly to distort the lesson. Those disruptive students were sometimes warned and/or removed by the lecturer, by this time they would have already disrupted the lesson. Sometimes it would seem that the disruptive students get away with their disruptive behaviour as there do not seem to be significant consequences for those actions. The students who appeared to be 'timid' or lacking in confidence to ask questions during online classes would find themselves at a loss especially if there were no other means to register their concerns or ask for clarification.

Nevertheless, Vygotsky believed that learning takes place primarily in social and cultural settings, rather than solely within the individual (Schreiber & Valle, 2013). The social constructivist theory as adopted by this study focuses on small groups of persons who are learning and sharing knowledge primarily through interactions with either their peers, teachers, or more intelligent person(s). Thus, the theory indicates that the work of the teacher is to stimulate, harmonise and facilitate the flow of the conversation (Powell & Kalina, 2009). The participants mentioned that most UFS lecturers had created varied avenues through which one could seek clarification or ask questions about the topic treated in the class. The findings also revealed a lack of tutors in some courses that are offered at the UFS campus where there are facilitators.

However, the finding suggested that there was a general impression that students' grievances were often not taken seriously in some UFS departments and faculties. The Faculty of Science was mentioned several times. The university favours the top-down decision and instructional approach

such that oftentimes when there are issues between the students and lecturers, the lecturers expect resolutions and/or tensions to be settled in their favour. This is a situation that can have an impact on the students (or customer) satisfaction and impact on long-term retention.

Nonetheless, the findings indicated that Global Protect does not work efficiently if the internet connectivity or network coverage is down. The findings also showed that Global Protect restrict one to specific websites. Although the government has tried to provide free broadband internet connectivity for the higher education students, the issue of network coverage remains a concern (Wehab, 2020). Free internet access should be provided for all students up to high school level with necessary precaution in place. The students may need allowances to procure necessary devices such as laptops, possibly tablets specially designed for learning purposes, but increasing the computer lab facility goes a long way in helping those students on the campus. The relatively low level of public funding is making higher education translate into higher fees thereby shutting out the poor students from the previously disadvantaged backgrounds (Okoye & Mensah, 2021). Obviously, some families cannot afford the necessary technological devices necessary for teaching and learning especially with the current socio-economic realities associated with COVID-19 circumstances. The universities and HEIs from developing countries should align the ICT capacity support programmes with the modules that have a high failure rate to help students to achieve their outcomes and to progress (Crawford et al., 2020).

According to Okoye and Mensah (2021), it is important that the present government should provide its own communication network targeting the rural and township areas. This development project should target increasing access to information, internet connectivity and affordable communication costs with the sole aim to uplift the disadvantaged communities (Okoye & Mensah, 2021; Majola, 2021). An important question would be whether South Africa is prepared to embrace the future of education in the post-COVID-19 era (Wehab, 2020). In the South African context, the transformative measures towards reducing the university dropout rate need to be framed around new discoveries and recognition of new empowerment possibilities and/or new capability options (Okoye & Mensah, 2021). In order to ensure effective use of technology during online learning the university may need to determine how best to reduce large-sized classes. The compulsory use of online learning due to COVID-19 has precipitated the increasing importance of

reducing overpopulated classes. Wehab (2020) claims that large classes reduce efficient planning and engagement in an online learning platform. For instance, it is harder to plan for a largely populated class of 200 to 400 students than a normal sized class of 75. The staff participants in their perspectives unanimously support this assertion of reducing large-sized classes although numerous factors need to be considered to avoid an adverse effect on UFS business model.

Meanwhile, the findings also show that most UFS academic staff have some level of dissatisfaction with the features of Blackboard vis-a-vis what it can offer in terms of teaching and learning. The majority of the participants complained about Blackboard not being user friendly per se. This gives credence to the study's recommendation which proposed that the teaching staff be consulted using surveys on the areas in which the Blackboard could be improved. On the contrary, the student participants appear to be very satisfied with the Blackboard functionality. This study recommends that UFS may investigate and determine from the staff perspective how Blackboard may be further developed.

The technology-based learning, and blended learning have suddenly intensified leading to situations where learning becomes more student-centered (Wehab, 2020) This implies that the most important task lies within the student in terms of problem-based learning (PBL). The onus is on the failed or struggling student to come forward, but this does not conceal that the tutors in their professional roles have a responsibility to ensure that the students' experiences in the classroom are improved. The students need reliable guidance given the challenges of online learning which has been engendered by COVID-19 pandemic. At the institutional level, blended learning offers a way to enhance the organization's reputation in a digital world, provide access to segments of students that would not have taken particular qualification, increase student satisfaction and retention (Camilleri, 2021). In order to establish effective blended learning and create classroom efficiencies, a better classroom management, both effective and efficient use of social media, technology and communication are required (Cox, 2019). Thus, like any other educational technology project, blended learning requires a robust technical infrastructure and support mechanisms in order to be accomplished, as well as proper or active leadership to be accomplished (Poonam & Rajesh, 2019). There are understandably costs associated with supporting the

technology upgrade and those who make use of it. The question needs to be answered is whether UFS is equipped for this journey and the associated tasks that lies ahead.

There was an issue that arose frequently from the data whereby particular student participants questioned the way the Faculty of Science treats matters raised by their students. This hinges on student satisfaction (which in commercial terms is referred to as customer care). When this issue was probed further in other focus group interviews, it was realized that this claim was predominantly pressed by student participants from the population group regarded as back Africans. Another group of student participant from the same population group and from the Faculty of Science added that the faculty treated them as if the faculty was doing them (students) a favour. In yet another focus group, the same caliber of participants from the same faculty added that they needed a person from the white population group in order to successfully register a concern that can be taken seriously. As the researcher, I chose to dismiss this claim advanced by these black African participants on the basis of either being a sentiment or prejudice and without precision. Hence, even when I probed further to check if this is a statement to obviously point for unfair treatment, no substantive evidence was brought forth. I probed whether there was a situation where the finance office may not have wanted to release funds from NSFAS which were due to students. The issue was further probed to establish whether by any means, the department or bursary administrator(s) have faulted in any way, but nothing further was revealed. So, in the context of UFS, it appears that the participants were saying that the faculty was not doing the students a favour by teaching them as they (students) pay for the services rendered and the staff are obliged to co-operate. Hence, they (the staff) were fulfilling their duties. The statement would also imply that these particular students or participants were not satisfied with the treatment they received at the Faculty of Science.

Finally, the study's finding indicates that certain students shy away from asking questions during the online classes. The reasons given by the participants for this include (1) issues of self-confidence; (2) limited time for questioning; and (3) fear of the unknown. This does not qualify as a serious problem as most of the affected students confessed of using other communication channels (as allowed by the lecturers) to raise their questions, clarifications or concerns as the case may be. The study reveals that most lecturers allowed the students to used other channels like

Email, WhatsApp, Telegram, and other social media platforms to seek the lecturer's assistance or raise their concerns at their convenience. The lecturer and student participants unanimously affirmed that this methodology works perfectly within the teaching and learning spectrum. In other words, it is a good teaching practice to employ, thus, integrating the use of other social media platforms into online teaching and learning.

6.1 Multi-campus dimension

The multi-campus dimension of the study's finding hinges on these few points (1) at South campus participants mentioned courses without facilitators assigned to them; (2) lack of learning devices for some students; (3) data cost, network and connectivity issues; and (4) student's complaint of their voice not being given serious attention by the university managers. This situation is peculiar to QwaQwa and South campuses. On a more positive note, both the staff and students were content with the UFS approaches to COVID-19 safety interventions and strategies. According to the study's literature review, in order to improve the teaching and learning challenges that are peculiar to the multi-campus institutions. The teaching and learning infrastructure should be improved, as well as the resources and management input that go into planning across the campuses. The resource constraints and disparities include physical infrastructure such as libraries, ICT facilities and enablers, as well as other teaching and learning resources and materials (Camilleri, 2021). This is despite the fact that UFS has developed highly capacitated support opportunities for its academic activities in order to deal with the demands of its multi-campus needs, albeit the resources deployed on managing its multi-campuses are becoming more constrained given the challenges and demands of COVID-19 pandemic. Hence, improving communication and strengthening coordination capacity has become increasingly necessary. The finding indicates that the issue of inconsistency regarding information and directives which is experienced at multi-campus level during this pandemic are temporary. The situation may be interpreted as a call for the UFS course coordinators and academic staff to open up more channels of communication and feedback for an efficient teaching and learning at UFS campuses. It is important to mention that such communication channels require infrastructure upgrades or technological improvements (Wehab, 2020; Camilleri, 2021).

Moreover, the academic staff participants from various UFS multi-campuses acknowledged that the UFS has been successful in terms of providing professional development support to its staff.

Such support often takes place in form of seminar series, workshops, webinars, formal and informal training. The same participants also commended the UFS strategies in addressing the challenge of quality control and assurance which include assessment and improvement programmes, self-audit measures and review processes. The participants were confident that the UFS would maintain a good level of quality assurance.

Meanwhile, the complexities surrounding the creation and development of an ideal multi-campus model incorporate the internal conflicting management issues, governance, politics and development (Okoye & Mensah, 2021). Although the government has been responsive to the development challenges that affects township and rural areas in South Africa, more still need to be done as the country struggles and learns from the unfolding demands of the COVID-19 crisis. These development challenges hugely affect the smooth running of the multi-campuses in South Africa. It is true that the government has tried to provide free broadband internet connectivity for the HE students, yet the issue of network coverage is still a concern (Okoye & Mensah, 2021). The needy students from different UFS campuses especially those students from the previously marginalised groups may need allowances to procure necessary teaching and learning devices such as laptops and tablets. This study recognises that the university, government and other relevant stakeholders are working to provide solutions to these mentioned challenges. This study however makes a few recommendations.

6.2 Researcher's reflection on development

The issue of connectivity, high cost of data, lack of learning gadgets and the Global protect limitations all hinges on the strength and scope of development in South Africa. This however highlights the importance of socioeconomic status in education. The recent years have seen a greater integration of students from different socio-economic backgrounds in HEIs in South Africa. This has, of course, become more conducive to achievement as government's investment or interventions in education increases. Also, the motive to increase access to education since the dawn of the current democracy became viable but not without cost. The HEIs are filled with high concentration of different caliberes of students with varied cultural and educational background leading to the proliferation of multi-campus systems. According to Amundsen and Wilson (2012), the term development is vital in today's society, education and commerce as it affects every aspect

of everyday life. In South Africa certain factors have a huge influence on development or the lack thereof. These factors need to improve in order to facilitate development, educational development and the country's ranking on the human development index (HDI). Educational development and the name suggest is a growing and vibrant field of learning which is defined as the process of helping colleges and universities function effectively as teaching and learning communities with the aim of enhancing knowledge sharing (Amundsen & Wilson, 2012).

In South Africa context, we are not referring to economic growth which implies an increase in the country's GDP or an increase in the size or pace of the economy. The term development, as used here, refers to economic development (i.e., development of the individual per capita). Conventionally, there is a common assumption that economic growth would translate into an increase the living standards which does not happen automatically. So, in South Africa the conventional approach to development have been to increase economic growth with the hope that economic development would follow suit. Of course, without substantive change in the fundamental economic processes involved, then, the economic development would inevitably remain stagnant (Okoye & Mensah, 2021). Given the ravaging effects of the COVID-19 pandemic information, education and commerce have increased in data intensiveness. Social distancing has necessitated the importance of access to reliable internet connectivity, communication network coverage and affordable data costs. South Africa is currently among the countries with the highest cost of data in the world (Majola, 2021; Okoye & Mensah, 2021). Globally, Brazil remains the most data-expensive country followed by South Africa (Majola, 2021). Thus, data costs an average of $2.67 (or R38.93) for one gigabyte in South Africa whilst the lowest cost of data is $0.12 and the most expensive $34.95 (Majola, 2021). For an effective Covid-19 prevention strategies and campaign to happen the access to information remains vital. In terms of ensuring effective online teaching and learning, digitalization, distance learning and the running of multi-campus model, the communication network coverage of the country needs to expand or improve (Okoye & Mensah, 2021). The 'substantive change in fundamental economic process' would be for the present government to provide its own communication network targeting the rural and township areas (Okoye & Mensah, 2021). The aim of this development option would be to increase access to information, internet connectivity or network coverage and the reduction of communication (or data costs) to uplift the disadvantaged and rural communities. Only then would we be able to answer the corollary question on whether South Africa is prepared to embrace the future of education in the COVID-19 era (Wehab, 2020). The South African policymakers, skills providers and relevant

stakeholders should deliberate on the best approach to take or collaborate in order to ensure that the dividend of our democracy should be geared towards ensuring equity, inclusion and education for all.

7.   Recommendations

Themes	Findings (preamble/scenario)	Activities	Multi-Campus dimension	Responsible stakeholder
1. Mental Health/ Wellness	The findings show that students are struggling mentally because of the difficult study conditions and environment. This arose from the lecturers' perspectives and was corroborated by the students' responses. Most students struggle with a lot of things and could come forth looking for help. When it comes to failing their studies, some get stuck and do not know what to do until it becomes too late.	☐ The university may need to improve on how the services available to the students are communicated or socialised. ☐ Students who have failed or who are at risk may need to be invited for counseling, while they are also reserved the right to make the first move. ☐ I think the idea is that the initiative comes from the side of HEI, rather that expecting the students to make the first move.	All campuses	

2. Student-lecturer relationship	The findings show that the use of technology has precipitated the need to maintain a good social relationship between the lecturers and students. The students are suddenly expected to learn how to succeed in terms of self-directed learning due to COVID-19 constraints. Hence, the role which students undertake in learning has completely changed. Currently, many students are likely to have difficulty with changing their learning styles. Besides, if the student's motivation levels are inadequate, and anxiety levels are high s/he may not be able to succeed learning challenges.	☐ Part of the training for the lecturers needs to include a diagnostic survey to understand the needs of the students.	This is most urgent for the QwaQwa and South campuses.	
3. Teaching and Learning	The findings reveal that some students find it inappropriate to ask questions during online	☐ The lecturers need to allow varied avenues for questions to be	QwaQwa and South campus	

63

	classes. These students prefer to use other modes of communication to ask questions. This is as a result of either the lack of confidence, time constraint or individual preferences.	asked in order to increase class participation.		
	The courses without facilitators should be assigned facilitators. This comment came from the student participants from the South campus.	☐ The instances where there are courses without facilitators need to be rectified.	South campus	
	There was too much back and forth correspondence with the first-year students due to the limitations associated with the use of technology in teaching and learning. Deficiencies in academic writing skills and in the use of technology constitute a major part of the	☐ Since there are already initiatives/programmes to ensure that first-year students have more opportunities to improve in these two aspects (i.e., in academic writing skills and the use of technology). I suggest that UFS should review these programmes to	All the campuses	

	difficulties facing first year students.	ensure they are more effective or create new additions if possible.		
	The abrupt switch to online learning due to COVID-19 has created a greater relational gap than during face-to-face learning. Although there are several sources through which the lecturers can access background information on the students, how to optimise the use of the background information to improve teaching and enhance learning has increasingly become necessary given COVID-19 induced limitations.	☐ The teaching and learning workshops for the lecturers should include how to utilise students' background information to enhance the teaching and learning process. The understanding that students bring to the content being taught has a direct correlation with their background. Even the expectations the students bring to class has a direct correlation with their backgrounds, culture and upbringing.	QwaQwa and South campus	
4. Excessive and irresistible	The study reveals that the first-year students grapple with online distractions which are deemed	☐ There is a need for students' workshop and training on time management.	First-year students from	

			all the UFS campuses	
4.1 Online distraction	irresistible. This may have been overlooked in the past. However, since learning has moved exclusively online study management workshops are now necessary to equip the students with appropriate skills and strategies.		all the UFS campuses	
5. Blackboard Improvement	Although the student participants did not complain about Blackboard, most lecturers believe that the Blackboard application features need to be developed further.	☐ The UFS may use research to determine from the staff's perspective which aspect(s) of Blackboard can be improved and how. ☐ Training in the use of Blackboard needs to continue for both the new students (first-year students) and lecturers	All the UFS campuses	
6. Blended learning	There are practical classes that cannot be done completely online. This necessitates the need for blended learning which comprises	☐ Digitalisation: the importance of digitalisation, at this point, cannot be overemphasised.	All campuses	

	both face-to-face and online learning.	☐ The ongoing digitalisation drive at the UFS should be pursued with rigour.		
7. **Further research**	There is an increasing need to identify as well as understand the challenges facing teaching and learning at the postgraduate level.	☐ The research on teaching and learning challenges facing the postgraduate school.	All campuses	
	It appears possibly that the future may not be dissimilar from what is currently obtainable in today's mode of teaching and learning at higher education level.	☐ More research should be focused towards actualising the ongoing digitalisation drive at UFS.	All campuses	
	This study participants agreed that COVID-19 has increased the students' stress level.	☐ The UFS may consider using research to monitor the students' mental health-related issues at the University.	All campuses	

8. Conclusion

This study explored the difficulties impacting academic activities at UFS undergraduate teaching and learning environments. The study indicated that there were several challenges impacting academic activities, students, and lecturers at UFS the multi-campuses. The issues that arose in the study comprised lack of teaching and learning devices by some students, students' dissatisfaction of UFS customer care, courses without facilitators, internet connectivity issues, need to reduce high costs of data, difficulties associated with the use of technology for teaching and learning, amongst other COVID-19 induced challenges. The issue of the student voices not being taken seriously, students' mental health being at stake, reducing large-sized classes, irresistible online distractions, Global Protection and limitations, and load shedding were also raised. In order to address these challenges; participants suggested that students should take their studies seriously, more collaboration with other stakeholders to improve the most predominant challenges facing UFS teaching and learning processes, the government addresses the issue of high costs of data, as well as load shedding. The UFS needs strong and dedicated leadership and management structure that are enthusiastic to support multi-campus development initiatives as envisioned in the University's ITP. It is important going forward for UFS to draw on previous and current experiences, maintain its policy of quality assurance at all levels, and pursue the ongoing digitalisation drive at UFS. As the mode of the programme delivery are changing, becoming increasingly complex and highly demanding due to the COVID-19 induced limitations, the need to find a sustainable, cost-efficient, and contextual mode of programme delivery for multi-campus management remains indeed critical.

REFERENCES

Achieng, P. C. (2018). Management Practices and Performance in Multi-Campus Model Universities: A Case of Busitema University (Doctoral dissertation, Uganda Management Institute).

Amundsen, c., & Wilson, M. (2012). Are We Asking the Right Questions? A Concept Review of Educational Development Literature in Higher Education. *Review of Educational Research,* 82(1), 90—126.

Anderson, A., & Date-Huxtable, E. (2011). ICT-assisted multi-campus teaching: Principles and practice to impact equity of experience for students. *Changing Demands, Changing Directions. Proceedings ascilite Hobart 2011.*

Baloyi, M. C. (2015). Mergers in South African Higher Education: Realisation of Policy Interventions? (Doctorate dissertation, University of South Africa).

Camilleri, M. A. (2021). Evaluating service quality and performance of higher education institutions: a systematic review and a post-COVID-19 outlook. *International Journal of Quality and Service Science,* 9(2), 41—53.

Charmaz, K. (2014). *Constructing Grounded Theory (2nd ed*.). London: Sage.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education (6th ed.).* New York: Routledge.

Cox, S. R. (2019). Technology to enhance in-class discussions and student participation at a multi-campus program. *Currents in Pharmacy Teaching and Learning*, 11(7), 719—722.

Cresswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions.* London: Sage Publications.

Crawford, J., Butler-Henderson, K., Jurgen Rudolph, Bashar Malkawi, Matt Gloatez, Rot Barton, Paulo Magni, Sophia Lam. (2020). Covid-19: 20 countries higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, 3(1), 1—20.

Delport, M., Hay-Swemmer, D., & Wilkinson, A. (2014). An internal communication model for multi-campus higher education institutions in South Africa. *Journal for New Generation Sciences*, *12*(1), 21-46.

Hall, M., Symes, A., & Luescher, T. (2004). The Governance of Merger in South African Higher Education. Research Report prepared for the Council on Higher Education. Council on Higher Education, Pretoria.

Kukla, A. (2013). *Social constructivism and the philosophy of science*. New York: Routledge.

Leedy, P., & Ormrod, J. (2010). *Practical research: planning and design.* Boston: Pearson Education International.

Majola, G. (2021). South Africa ranks 136 worldwide for the costs of mobile data. *Business Report,* Apr 11, 2021. https://www.iol.co.za/business-report/companies/sa-ranks-136-worldwide-for-the-cost-of-mobile-data-e2536315.

Morgan, L. N. (2015). Staff and students' experiences of the incorporation of the Caprivi College of Education into the University of Namibia (Master's dissertation, University of Pretoria).

Okoye, F. I., & Mensah, P. A. (2021). High institution dropouts in South Africa during Covid-19: have we got our priorities right in resolving teaching and learning challenges. *Research and Analysis Journals,* 4 (10), 7—9.

Poonam, D., & Rajesh, B. (2019). Blending learning: effective use of technology in classroom. *International Journal of Science and Research*, 8(7), 37—46.

Powell, K. C., & Kalina, C. J. (2009). Cognitive and social constructivism: Developing tools for an effective classroom. *Education,* 130(2), 241–251.

Schreiber, L. M., & Valle, B. E. (2013). Social constructivist teaching strategies in the small group classroom. *Small Group Research, 44*(4), 395—401.

Sheth, N. U., Dowling, T. C., & Congdon, H. B. (2013). Evaluation of synchronous versus live instructional delivery methods on student academic outcomes and perceptions at a multi-campus school. *Currents in Pharmacy Teaching and Learning*, *5*(5), 381—386.

Van der Merwe, D. P, Anneliese, R., Tana, P. (2015). *Information and Communication management.* New York: Routledge.

Vygotsky, L. (1987). Zone of proximal development. *Mind in Society: The Development of Higher Psychological Processes*, 5291, 157—164.

Wehab, A. (2020). Online and remote learning in higher education institutions: A necessity in light of COVID-19 pandemic. *Higher education studies,* 10(3), 16—23.

APPENDIX 1:

Student Focus Group and Individual Interview Schedule (Semi-Structured)

Theme: Challenges facing academics in the UFS multi-campus setting:

1. How has your well-being and academics been affected by this pandemic?

2. Which of your learning experience(s) has pushed you to the edge of despair?

3. Did you overcome the challenge(s)? How? (if yes)

4. Are there changes in your mode of learning?

5. How do you cope with the change(s)?

6. What are your classroom challenges (classroom include all forms or modes of learning with others)

7. Did you support any of your struggling colloquies? How? (if yes)

8. Did the university give you any support to resolve this challenge? How? (if yes)

9. Did you receive any support from the government? How? (if yes)

10. How are the things going for you now in terms of teaching and learning?

11. How do you cope with challenges relating to the use of electronic gadgets?

12. Did you fail any course? Why? (if yes)

13. Is there any of your courses that you scored unsatisfactory (or low) marks? Why? (if yes)

END

APPENDIX 2:

Staff Focus Group and Individual Interview Schedule (Semi-Structured)

Brief Demographic Questions

1. What faculty are you affiliated with?

2. Please indicate some of the courses you teach?

3. How many years have you been teaching face-to-face undergraduate classes?

Theme: Challenges facing academics in the UFS multi-campus setting

1. What has changed in your teaching practices due to the COVID-19 crisis?

2. Did your institution's practices or guiding principle for students changed? How? (if yes)

3. Did your practices or guiding principle for students changed? How? (if yes)

4. How do you expect your technological abilities to be enhanced in order to increase student support?

5. In your opinion, did the relationship between content and practice (or process) change? How? (if yes)

6. With your classroom experience, how would you describe equitable access of the students?

7. Which change(s) in teaching and learning do you think is permanent?

8. Which change(s) seem more likely to revert to pre-covid-19 approaches?

9. What are personal learning networks, alliances or professional organizations that help you to manage challenges during the pandemic?

10. What is your emerging vision or advice to the institution (or government) for a better post-pandemic outcome?

END

APPENDIX 3:

Research Study Information Leaflet and Ethical Approval

DATE : 2021-06-25

TITLE OF THE RESEARCH PROJECT

Widening and accelerating the scope of transformation at the University of the Free State: a focus on institutional culture

PRINCIPLE INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Taabo Mugume	Staff number: 0876564 Contact num: +27514019849
Yaw Owusu-Ageyeman	Student number: 2018657987 Contact num: 0514012753
Felix Okoye I.	Student number: 2020910093 Contact num: 0514019906

FACULTY AND DEPARTMENT:

Directorate for Institutional Research and Academic Planning (DIRAP)

STUDYLEADER(S) NAME AND CONTACT NUMBER:

Taabo Mugume
Contact number: +27514019849

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The aim of the study is to understand the current institutional culture of the University of the Free State and propose ways of improving the current institutional culture towards a more welcoming and socially just environment.

WHO IS DOING THE RESEARCH?

This study comprises three primary investigators and three assistant researchers.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

Yes

Approval number: *UFS-HSD2019/0340/0905*

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

You have been invited to participate in the study on the ground of being a staff member or student. You have been selected because of your ability to provide insights into matters related to institutional culture. We obtained your contact details from the faculties, head of schools, and

Human Resources (HR). In this second phase of the qualitative study, 144 student participants from three campuses of the University of the Free State will participate in the study. There will be also 72 academic and support staff who will participate in the study. In this second phase of quantitative study, 400 participants will respond to a questionnaire.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

You may respond to the question asked by the researchers. We will employ both quantitative and qualitative sources of data collection. The traditional qualitative data collection methods will include focus group discussions and individual interviews. This qualitative study involves audio taping, focus groups and individual interviews guided by open-ended questions. The time allocated to each individual interview would be 45 and 60 minutes, whereas time for focus groups may vary from 60 to 90 minutes. The quantitative study will use a questionnaire. To complete a questionnaire will approximately take 45 minutes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation in this study is voluntary, and there is no penalty or loss of benefit for non-participation. You are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason. There will be no penalty or loss of benefit for non-participation. However, once the questionnaire and interview has been concluded, it will not be possible to withdraw or correct any written and recorded statement.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The potential benefits of taking part in this research pertain to the expected outcomes of the research itself. You may not get any direct benefit from this study. While there are no immediate direct benefits to those participating in the study, the information generated may help to inform how the university can improve student and staff experience at the university. In fact, we are sure you will benefit from this study as transforming institution culture at the University of the Free State will provide an opportunity to enhance the fulfilment of staff's and students' hopes and ambitions. This study will identify the needs of the students and staff and attempt to proffer solutions that will help the university to meet its transformation agenda.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

The researchers will ensure that information or data gathered from participants and respondents will not be divulged to a third person. Additionally, this study will protect the identity of all the participants and respondents. In order to minimize any potential level of inconvenience and discomfort, participants' anonymity will be maintained and protected in order to encourage their self-disclosure. Participants will be encouraged to choose a pseudonym to assure the anonymity of their provided information. In cases of emotional discomfort by any participant in relation to issues of race or gender or any other herein not listed, we shall refer such participants to the appropriate UFS support service for counselling.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

Your name or position will not be identified and recorded, and no one will be able to connect you to the answers you give. Your answers will be given a fictitious code number, or a pseudonym and you will be referred to in this way in the data, any internal report or publications, or other research reporting methods such as conference proceedings. Our research team and assistant researchers will have access to data. In fact, they will maintain anonymity and confidentiality. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records. Your anonymous responses may be used for other purposes, e.g. research report, journal articles, and conference presentation. Your confidentiality will be protected in any publication of the information by the use of code and pseudonym. In fact, a report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. Please keep in mind that it is sometimes impossible to make an absolute guarantee of confidentiality/anonymity, e.g. when focus groups are used as a data collection method. A focus group is a gathering of few people who usually share common characteristics such as age, background, geography, etc. the set comes together to discuss a predetermined topic. In a focus group, there is free expression of opinion, thoughts or views even if they differ from those of the others. While every effort will be made by the researchers to ensure that you will not be connected to the information that you share during the focus group, we cannot guarantee that other participants in the focus group will treat information confidentially. We will, however, encourage all participants to do so. For this reason, we advise you not to disclose personal sensitive information in the focus group.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of participants' responses will be stored by the researchers for a period of five years in a locked cupboard/filing cabinet at the University of the Free State for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval, if applicable. Once the five years will have elapsed, papers and electronic data will be incinerated and deleted.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICPATING IN THIS STUDY?

There is no payment for participating in this study in terms of money. However, a light lunch will be served on the day of interviews and participants will receive a mug embossed with the inscription transforming UFS through institutional culture: Spread love.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

To get information about the final research findings, please contact Taabo Mugume on +27514019849 or MugumeTJ@ufs.ac.za; Yaw Owusu-Agyeman on +27514012753 or OwusuAgyemanY@ufs.ac.za; Felix Okoye Ifeanyichukwu on +27785935240 or Okoye.FI@ufs.ac.za/felizokoye@gmail.com. Should you require any further information or want to contact the researchers about any aspect of this study, please contact: T. Mugume at the

Directorate of Institutional Research and Academic Planning, University of the Free State; P.O Box 339, Bloemfontein 9301; email: MugumeTJ@ufs.ac.za. Tel: +27514019849; Fax: +27 51 401 9600. Should you have concerns about the way in which the research has been conducted, you may contact the study's supervisors Dr. Engela Van Staden, Vice-Rector: Academic; University of the Free State; P.O Box 339, Bloemfontein 9301; email: VanStadenEL@ufs.ac.za; Tel: +2751 401 7151; Fax: +2751 401 3636. The possible risks to you in taking part in this study is emotional aspect related to race issue that you may encounter, and we have taken the following steps to protect you from these risks if you experience such a thing we will refer you to the appropriate UFS support service for counselling. In the participants' training session for photovoice study, it will be made clear that photographs that may endanger or compromise the dignity of people will be excluded.

Thank you for taking time to read this information sheet and for participating in this study.

END

APPENDIX 4:

Consent To Participate In this Study

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet. I have had sufficient opportunity to ask questions and am prepared to participate in the study. I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable). I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.

I agree to the recording of the *insert specific data collection method*.

I have received a signed copy of the informed consent agreement.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

END

APPENDIX 5:

Challenges Of Teaching And Learning In A Multi-Campus Institution Context: A Review Of Literature

 ABSTRACT

A multi-campus institution is a phenomenon that has a long history and its evolvement differs from one higher education system to another. In the recent past, multi-campus institutions have become a common trend in higher education systems around the globe. The recent surge in multi-campus is attributed to higher education institutions and systems seeking to respond to several common challenges and developments. The chief amongst these are the demand for more access, stiff competition, consolidation of the systems, reposition of institutions and economic pressures. Beyond these, technological revolution has enabled universities to expand and operate across geographically disperse campuses. Despite this emerging trend, relatively little is explored and understood with respect to creating effective teaching and learning environment for multi-campus set up. This review of literature attempts to highlight some of the challenges facing academics in developing effective teaching and learning environment within the multi-campus context. While the focus is on South African context, the review looks at the literature emerging from other contexts. From the analysis of the literature, the main challenges facing academics in creating effective teaching and learning for multi-campus institution include but not limited to challenges related to resources and support, lack of consistency, quality assurance and control, information and communication technologies (ICTs) and logistical matters. One of the observations made in and through the review is that while the issue of multi-campus or merger is common in South Africa, there is clear paucity of literature and empirical studies on the challenges facing academics in creating effective teaching and learning across multi-campus institutions. Thus, several lessons can be drawn from other contexts in terms of conditions under which multi-campus institutions operate and ways in which effective teaching and learning suitable for multi-campus set up can be developed and implemented.

1.0   Introduction

This review provides an analysis of literature on the concept and phenomenon of multi-campus institutions. Using South Africa as a main frame of reference, the review focuses on responding to two main areas that are relatively less explored within the context of multi-campus institutions. The first area is the understanding of multi-campus institutions model that is workable and context specific. The second area is the identification and analysis of the challenges facing academics in creating effective teaching and learning environments. To unpack this lacuna, this review is divided into five sections (i) methodology, (ii) multi-campus institutions: a general overview, (iii) models and characteristics of multi-campus institutions, (iii) challenges of multi-campus institutions, (iv) responses to challenges of teaching and learning in multi-campus institutions, and (v) conclusion. In this review, special attention is given to the models and

challenges facing academics in creating an effective teaching and learning environments within a multi-campus institution set up.

2.0 Methodology

This review was conducted as a critical review of evidence and cases of multi-campus institutions, meaning that the review methodology followed the principles of systematic reviewing with minimal stringent standards. The review was organized in four distinct phases:

1. Identification of search keywords/terms and databases
2. Searching: Identification of relevant literature
3. Screening and coding: Investigation of the scope and relevance of identified literature, resulting in a reduced list of studies
4. Analysis of the quality of all included studies, resulting in a further-reduced list of studies for synthesis

The potentially relevant literature was identified by conducting targeted searches in a wide range of bibliographic databases and websites that were likely to contain information relevant to the review. Given the very large volume of potentially relevant literature and the need to maintain a tight focus in the review, the decision was made to alter the scope of the review by focusing exclusively on multi-campus institutions in countries where this phenomenon is prevalent and narrowing down to Africa and South African context.

The key terms that were used to begin the search were "multi-campus institutions/universities, multi-campus systems, merger universities, and higher education differentiation". A secondary search was done using the mesh terms which were "multi-campus universities in South Africa", "multi-campus universities models" "teaching and learning in multi-campus context" and "challenges of multi-campus institutions".

3.0   Multi-campus institutions: A general overview

A point of departure in discussing multi-campus institutions is that of Scott, Grebennikov and Johnston (2007: 2) that "higher education institutions are geographically organized and can be classified into three categories: (a) the single-campus university; (b) the university with a main campus and one or more small satellite campuses; and (c) the multi-campus university comprising multiple geographically dispersed campuses, each with a substantial student load". Focusing on the multi-campus institutions, it is argued that the multi-campus is not a new concept and phenomenon in the global higher education system. The recent trends in global higher education have witnessed multi-campus universities increasingly becoming a major feature of contemporary higher education system all over the world (Pinheiro & Berg, 2017). In the United States of America, multi-campus universities have long history, although its clear form emerged

as early as the turn of the twentieth century with the California high education system spearheading this development. The approach grew rapidly in the 1980s due to the demand for more institutional diversity (Lewis, 2020; Gaither, 1999). It was estimated that 80 per cent of students in American high education study in multi-campus institutions. In the 1970s and 1980s, merger was used as a major restructuring device to deal with problems associated with fragmentation and small size with colleges of education, resulting in many institutions being combined, or being absorbed into nearby polytechnics or universities (Harman & Harman, 2003). Such move towards merger coincided with Martin Trow's (1974) argument that during this period Europe was experiencing high demand for 'mass higher education' and calls for broadening access (Georghiou and Harper, 2015). Overall, the mergers or concentration of universities across Europe has been on the rise since 2000 (Pruvot, Estermann & Mason, 2015). In Australia, multi-campus universities started to take place in 1988 when the Government released a Green Paper on Higher Education, which led into merging of various institutions (Scott, Grebennikov & Johnston, 2007; Broadbent, 2002). As far as China is concerned, the multi-campus system emerged since the mid 1980 through the rapid expansion and merger processes (Wu & Wu, 2013). The merger process gained traction in the 1990s with more than 400 cases of university mergers in China (Cai & Yang, 2016). There is the Lebanese International University (LIU), which has eight campuses spread across major cities and geographical regions throughout Lebanon as well as campuses in other countries such as Yemen, Senegal, Morocco and Mauritania (Haj-Ali et al., 2013).

In African context, the multi-campus system is relatively a recent development, which has emerged in the past few decades following the efforts to revitalize higher education sector in order to meet local demand as well as align with the global trends (Atibuni, 2019; Munene, 2015). According to Dinye (2016) countries such as Kenya, Nigeria, Zimbabwe, South Africa, Tanzania, Ghana and Uganda are using multi-campus universities to expand the frontiers of higher education. In Ghana, multi-campus university has existed since 2006 and are dominated by satellite campuses around the country and driven by extending technology-based education to locations further from the nation's capital (Bumbie-Chi, 2020; Loglo & Agleze, 2018). Similarly, multi-campus universities models are increasingly becoming common practice in Ugandan higher education system. A case in point is the Busitema University that was established as multi-campus university in order to improving and expanding access (Akategeka, Sekiwu & Ssempala, 2020; Achieng, 2018; Andama & Suubi, 2015).

South Africa, arguably, presents a much more structured and coordinated approached to multi-campus system. Apart from the University of Natal, which has practiced multi-campus model for many years, a wave of multi-campus institutions across the South African higher education system emerged in the 1990s through the restructuring process known as "merger". The merge led into the restructuring of institutions

from 36 to 11 universities, six universities of technology, six comprehensive institutions, and two National Institute of Higher Education (Delport, Hay-Swemmer & Wilkinson, 2014; Hall, Symes & Luescher, 2004). The merger process, which was steered by the government, provided a foundation for the development of multi-campus institutions (Hall, Symes & Luescher, 2004). Overall, there is significant growing popularity of the multi-campus institutions in Africa. However, this phenomenon is fragmented under-researched and there is significant paucity of literature and empirical studies (Langa, 2017; Munene, 2015) particularly with respect to challenges of teaching and learning in multi-campus universities context.

3.1   Conceptualization of multi-campus institutions

Following within the realms of sociology, philosophy, economics and politics, multi-campus institution is a concept that has received attention from various perspectives. Definitions of multi-campus vary and differ from one country and/or context to another. In defining multi-campus some emphasise the centrality of geographical location dimension (Nicolson 2004), others the management or governance structure (Lee and Bowen, 1971), others use the number of campuses, and mode of programme or curriculum delivery (Truyen et al, 2011; Ebden, 2010). For example, in the United States, the multi-campus university means two or four-year campuses of higher education system, which is only controlled by a single legal management of the management committee (Wu & Wu, 2013). In China, multi-campus university represents the university having an independent legal personality, at least more than two campuses (Wu & Wu, 2013). Clark Kerr (2001) defines multi-campus universities as higher education institutions with two or more campuses. Gaither (1999) describes that:

Multi-campus systems commonly consist of separate campuses all whose names begin with that of a parent college or university, followed by "at" and the name of a geographical location. […] the campuses that comprise such a system are, for the most part, separate and unique institutions, each with its own inventory of academic programs, special strengths and limitations, problems and challenges, and most importantly, faculty and student body (Gaither, 1999: 83).

Writing in South African higher education context, Nicolson (2004) describes multi-campus universities as – separate campuses significantly separated by geography but combined into a single system. In their study, Hall, Symes and Luescher (2004: 135) define multi-campus institutions as unitary institutions with geographically distant delivery sites. In addition, multi-campus universities are characterized by the coexistence of distinct communities operating under a common management framework or framework of governance (Lee and Bowen, 1971). Truyen et al., (2011) provide a definition that encompass virtually most of the elements of multi-campus institutions. They understand multi-campus institutions as:

Any higher education setting that involves delivering study curricula to campuses at different locations under one institutional umbrella, whether this is one individual institution or a network of institutions, and regardless whether the delivery method is physical, entirely virtual or blended. (Truyen et al., 2011).

Related to Truyen et al's definition, the Australian Government Office for Learning and Teaching define a multi-campus unit as:

[…] one that is taught on at least two campuses, to different student cohorts, in the same calendar year, and involves, on each campus where it is taught, a minimum of one session every two weeks when teaching staff and students engage in curriculum activities in the same physical space. Most multi-campus units also involve students accessing information online, often through a learning management system, and perhaps also communicating online with their teachers and peers (Williams, 2013: 2).

Scott, Grebennikov and Johnston (2007) add issue of students' distribution to the definition of multi-campus. They define multi-campus as institutions with three or more campuses, which have at most 60% of their total student load on the largest campus. In Australian context, percentage of students' distribution is one of the main criteria for multi-campus universities, with six Australian universities meeting the test of having 50% or less of total student load on the main campus (Scott, Grebennikov & Johnston, 2007). In South African context, multi-campus institutions emerged as a result of merger processes. "A merger can be defined as the combination of two or more separate organizations, with overall management control coming under a single governing body and single chief executive" (Harman & Harman, 2003: 30).

The above definitions indicate the multidimensionality of the concept of multi-campus institutions as well as the complex and dynamic nature of the phenomenon.

3.2 Defining multi-campus in the context of the University of the Free State (UFS)

Against the backdrop of the definitions highlighted in the above section, some salient features relate to and are central to the UFS' multi-campus set up. The first is that of geographical location of campuses. This characterizes the UFS given its three campuses that are geographically dispersed within the Free State Province. However, while the rationales for this dimension are to provide access to local students in rural areas, provide services for local communities and practitioners (Ebden, 2010; Geenberg et al., 2008), it is important for the UFS to have clear reasons for having multiple geographically situated campuses. The second feature is that of management and governance of multi-campus. At the centre of this feature are the

issues of centralized, decentralized and autonomy of campuses, which impact the academic organization and coordination within multi-campus settings. An important question to ask is *'How centralized and/or decentralized and autonomous are UFS' campuses and"?* Addressing these complexities would enable a better coordination, management and running of academic programme as well as equitable allocation of resources. The third feature is that of number of campuses. While currently, the UFS has three campuses, it is importance for the UFS to draw on the previous and current experience before deciding to add more campuses. The final feature is that of modes of programme delivery, which is increasingly changing, becoming complex and highly demanding. At issue is the question of finding a sustainable, cost efficient and contextual mode of programme delivery for the UFS' multi-campus. The UFS seems to possess most of definition dimensions of the existing definitions of multi-campus. However, given that each feature has its implications, understanding the intricacies of each feature is central to developing a workable and sustainable model of multi-campus for the UFS.

3.3 Rationales for multi-campus institutions: A cross-national perspectives

Multi-campus systems remain a global phenomenon, which has significant widespread in countries like the USA, Australia, South Africa and across Europe (Pinheiro & Berg, 2017: Pruvot, Estermann & Mason, 2015). Langa (2017: 25) adds that "higher education institutions in the United States, Europe, Australia and Asia, and more recently in Africa, have seen their premises and activities disperse across two or more geographic locations". The modus operandi of establishing multi-campus institutions varies among and between higher education systems. According to Dingerink (2001), individual institutions sometimes take the initiative to establish additional campuses that expand their presence and others are created by state agencies or legislatures. A case in point for the latter steering mechanisms is the merger in South African higher education (Jansen, 2002).

The emergence of multi-campus institutions and its recent mushrooming across the world is due to multiple reasons. For Pinheiro and Berg (2017), multi-campus universities are the consequence of contraction patterns resulting from overcapacity, fragmentation and rising competition, domestically and internationally. Central to this trend is the demand for 'equity of access' to higher education opportunities. Pinheiro, Charles and Jones (2017: 1) reveal that "in many countries, a major rationale behind establishing multi-campus universities pertains to equity-related issues associated with the educational needs of underserved local populations, in addition to policy makers' anxieties as regards youth migration on the one hand and regional economic asymmetries on the other". However, given the contextual nature of multi-campus universities, more rationales have been outlined by several authors.

The debating of rationales behind growing trend of multi-campus institutions, Pinheiro and Langa (2017) identify two main issues, namely, to meet multiple objectives and to improve coordination under a single management structure. Langa (2017) describes that the global trend of increasing access has witnessed the expansion of higher education system with respect to establishment of multi-campus institutions. Other authors argue that multi-campus institutions are increasingly becoming a common approach due to the quest for diversity, differentiation, expansion, massification, marketization, and broadening access (Mandal, 2019; Groenwald, 2017; Atkins, 2015). Related to these are Harman and Harman's (2003) four rationales, which are:

i. increased efficiency and effectiveness, especially to cope with rapid and substantial increases in enrolments and additional responsibilities for higher education institutions;

ii. action to deal with problems of institutional fragmentation and nonviable institutions;

iii. improved student access and greater differentiation in course offerings to cater for more diverse student populations; and

iv. increased levels of government control over the overall direction of the higher education systems, especially to ensure that institutions more directly serve national and regional economic and social objectives.

Apart from the already mentioned, Stoica and Støckert (2018) reveal that multi-campus systems are developed due to: (i) economic gains, although the process of restricting or creating a multi-campus incur high cost; (ii) consolidation of the system to reduce redundancy; (iii) strengthening of the institutional position. Munene (2015) emphasizes that increased social demands and cutbacks in state budgetary for higher education has compelled African universities to turn towards a multi-campus survival strategy. For Dengerink (2001), additional access for students, providing appropriate context for programs and desire to leverage or enhance economic and cultural development in certain communities are some of the key drivers of establishing multi-campus institutions. In their study of merger of university in Europe, Pruvot, Estermann and Mason (2015) found the following rationales behind the merger: (i) increased quality; (ii) the realization of economic gains; (iii) consolidation of the system; (iv) strengthening the institution position; and (v) geographical drivers.

In spite multi-campus institutions being a context specific phenomenon, the rationales behind their creation are relatively similar across national higher education perspectives (see Pinheiro, Charles & Jones, 2017; Georghiou & Harper, 2015). To be more specific, for example, in America, multi-campus systems are created in order to address several issues and strengthen higher education system/s. Paraphrased from Nicolson, (2004: 348), multi-campus systems are created:

- so that the state legislature does not have to deal with a confusing and competitive range of demands and pleas for higher education institutions;

- so that institutions in such a system can negotiate with the state and donors more powerfully than would be possible as separate and competing institutions;

- so that scarce resources can be more strategically distributed;

- so that small and expensive disciplines do not need to be duplicated – which is also a protection for those disciplines which might otherwise disappear from all institutions as each institution cut costs;

- to ensure quality control across institutions which otherwise might reflect a wide range of quality in teaching and research. In this case, the quality demands of a "flagship" institutions can raise the quality of all the institutions in the system;

- to ensure efficient management across institutions where management may not be equally competent

In South Africa, the merger process as due to political motivation to change the landscape of South African higher education institutions (Schultz, 2009). Beyond the political motives, other ideas behind the merger policy as summarized by Adu and Mantashe (2014: 1517) were that of: (i) creating a unified national system; (ii) increasing access to education, particularly where previously disadvantaged would be given an equal chance to access education; (iii) responding to the changing society in terms of technology, global and national demands and economic needs. In the same vein, Jansen (2004) reveals that the merger of higher education institutions was instituted in order to:

- enhance access and equity goals for both staff and students

- enable economies of scale through the creation of larger multi-purpose institutions with more efficient uses of buildings, facilities and human resources

- overcome the threat to institutional viability in terms of student numbers, income and expenditure patterns, and management capacities

- create new institutions with new identities and cultures that transcend their past racial and ethnic institutional histories and affiliations

While there are some historical antecedents associated with reasons for merger in South Africa, in African countries such as Mozambique, Kenya, Uganda, Ghana, Nigeria, Tanzania, Zimbabwe, and among others, multi-campus models of universities are deemed to be panacea for addressing existential challenges facing higher education sector (Dinye, 2018; Langa, 2017; Munene, 2015; Dhliwayo, 2014). These challenges include but not limited to increased demand for access, financial constraints, competition between and

among institutions, and government demands. One of the major challenges facing Africa is that "in most cases the expansion of high education involves the replication of the same type of institutions and programmes" (Langa, 2017: 26).

4.0   Models and characteristics of multi-campus institutions

Before unpacking different models of multi-campus institutions, it is important to highlight two types of mergers, namely horizontal and vertical. The horizontal merger takes place between similarly sized institutions or institutions that of comparable scale (Pruvot, Estermann & Mason, 2015). The vertical merger denotes a merger of relatively large institutions with a significantly smaller counterpart (Pruvot, Estermann & Mason, 2015). A host of authors (Pinheiro and Berg, 2017; Wu and Wu, 2013; Winchester and Sterk, 2006) have identified and discussed different models of multi-campus institutions and their characteristics.

i.   *Lost in space model*

This model arises from the merger of campuses with distinct institutional histories. Within this model, campuses may demonstrate duplication and lack of strategic alignment, particularly in a newly merged institution. The *La Trobe University* (LTU) in Australia provide a good example of a lost in a space model of multi-campus. In South Africa, elements of this model were reported at *Nelson Mandela Metropolitan University* (NMMU) because of the George Campus (Pinheiro & Berg, 2017).

ii.   *Planet in alignment model*

This model takes place when campuses' identity has been well developed and embedded. The campuses share a common commendable strategic planning framework. Central to this model is that there may be one main campus (parent or the original) but all campuses work well together with appropriate structures that allow for local variation or flexibility. Considering the context under which the multi-campus operates, the university develop systems that drive central processes in a consistent way across the whole. A good example of this model is the University of Queensland in Australia (Winchester and Sterk, 2006; Kavanagh & Taysom, 1999).

iii.   *Satellite/galaxy model*

This is a multi-campus model where there is one smaller, perhaps remote, constituent parts that is marginalized, largely forgotten, perhaps exploited. This model is primarily meant to "cater for the growing demand of HE in areas removed from the mother university to deal with the issues of accessibility, demand overload, address decline in enrolment at the main campus, convenience and extension of reach for

universities to markets that were previously out of reach as well as at the request of the region in question" (Hlengwa, 2014: 662). The campus is often far removed from the main campus and the quality of student experiences may not be the same as the main campus (Burke, 2017; Fraser & Stott, 2015; Hlengwa, 2014). Examples of this model are Ourimbah campus at *Newcastle University* in Australia (Winchester and Sterk, 2006) and the Riverside Campus of the *Durban University of Technology* in South Africa (Hlengwa, 2014). These campuses enjoy less degree of prestige and positive self-image when compared to the main campus.

iv.   Birth of a new star' model

This emerges when one campus within the group of campuses is overtaking or outgrowing the rest. At the core of this model if the growth, whereby "one campus, perhaps identified with a particular academic division/faculty or school, expands exponentially" (Winchester and Sterk, 2006: 168) and becomes the main campus. The Gold Coast campus of *Griffith University* in Australia is a classic example of this model (Winchester & Sterk, 2006).

Multi-campus institutions models and their implications for teaching and learning

Model	Characteristics	Implication for T & L
Lost in space model	• Decentralization (campus autonomy) with specialization or complementary study programs or service offered to students • Specific programs are offered only at certain locations • Administrative delegated at the local level • Each campus has unique blend of academic programs • Sensitive to local events and requirements • Greater specialization • Each campus may develop its own life – decoupling from the system as a whole • Inequitability and inconsistency	• Developing and establishing effective communication strategy and institution-wide systems to assure quality in teaching
Planet in alignment model	• All major topics/programme across all academic field are offered across all campuses • Specialized and limited courses offered at specific locations • Decentralized mode of coordination	• Work fragmentation • Inadequate learning environments • Duplication of programs

	• Common framework that allows variations based on contextual circumstances • Low coordination costs • Flexible to local requirements and emerging events • Requires adequate and comprehensive strategic frameworks and visible leadership	• Higher costs associated with commuting between campuses
Satellite model	• Similar study programs taught across all campus under a common regulatory framework • Low coordination costs • Considerable degree of centralisation (one size fits all) • Less adaptable to local needs • Primarily established to serve the educational needs of a more distant community • These campuses are typically smaller and physically located a significant distance from the main campus.	• Students do not necessarily have access to the best teachers and learning environment • Absence of a shared academic culture • Lack of face to face contact daily
Birth of a new star' model	• All academic courses/programs in a specific subject area or that relate to a sub-unit – faculty or department – are offered at a small number of selected campuses • Each campus has a particular disciplinary or subject profile • Centralized coordination of a common legal framework adopted across all campuses • Identifiable student identity • Low cost of coordinating internal activities and travel logistics • Loyalty and identity among staff and students are associated with a specific campus instead of the university system as a whole	• Coherent learning environment and shared academic culture • Students interested in certain subjects may be forced to move their residence or incur substantial travel costs since their courses are only available at selected locations • Staff may be required to move home location or commute daily

Sources: Pinheiro and Berg, 2017; Krause et al., 2012; Winchester & Sterk, 2006

5.0 Salient elements of multi-campus institution model

The multi-campus model examined and summarized in the above table have several salient features. Chief among these features, are (i) the complexities involving management, governance and coordination of multiple campuses; (ii) the presence of a particular institutional history, culture and identity; (iii) irrespective of the model, there are substantial cost implications in running the multi-campus; (iv) they possess visible elements of loosely couple and decoupling (Clark, 1983) and; (v) each typology of the model has a certain level of and/or depend largely on geography, structural and social embeddedness[1]. These and other elements are central to the debate about the make-up and operational model of multi-campus universities.

6.0   Model of Multi- campus in South Africa

In the literature emerging from South African context, the focus in the discussion about models of multi-campus universities has largely been on the governance and management (CHE, 2004; Brown, 2000) as well as the communication model (Delport, Hay-Swemmer and Wilkinson, 2014). There are some facets that ought to be considered when debating and making decision about multi-campus models in South African context. This is partly because higher education in South African operates in a complex and fluid-structural, institutional conditions, and political and economic distribution. In juxtaposing the multi-campus models identified in section 4.0 against the paucity of models of multi-campus universities in South Africa, it is important to ask how multi-campus university such can as UFS develop a model that ensure student and staff have similar and equal experience across campus. This question cuts across issues of management, governance, coordination and it requires involvement of all university's key actor and/or stakeholders in enacting policies, structures and resources that support an agreed model. Central to this is that each of the model identified in section 4.0 has their implications for institutional culture and academic governance and management. In other words, the model needs to be a "fit for purpose model" (CHE, 2004). Perhaps this is what CHE (2004: 108-109) implies by arguing that:

> The model should include assessment of: the reach of the institution in terms of its location, gaps in the market and the level of specialisation of the merging institutions, opportunities to fast-track transformation, opportunities to improve viability and sustainability through the merger,

---

[1] The primary argument of embeddedness is that actors' purposeful actions are embedded in concrete and enduring relationships that affect their motives behaviours and decision-making. The decisions made by an organization were a response to a series of connected and often commensurate relationships that governed action (Uzzi, 1999; Zukin & DiMaggio, 1994).

educational, financial and other benefits of the self-defined model of the institution possible economies of scale and scope, synergies and risk, and the impact of the proposed merger on higher education in the region, on the community, on staff and students. The statement above provides what can arguably be regarded as a useful point of departure in deliberating and deciding on a multi-campus model for university such as the UFS.

7.0 Academic governance and coordination in multi-campus context

The growth of multi-campus university necessitates the extension of academic activities to other locations, which poses a set of challenges. These challenges are centered on several questions. Some of these questions are:

(i)   How should academic activities be governed and coordinated in multi-campus university context?

(ii)   What academic activities should be centralized and decentralized within multi-campus university set up.

(iii) What should be an effective teaching and learning model towards students' success?

(iv)   How are students' admissions processes governed?

(v)   How academic standards and quality are governed and coordinated?

(vi)   What alternative multi-campus teaching modes can the UFS adopt?

With a relatively paucity of literature on academic governance and coordination, Paul and Lodewijks (2002: 9) provide a scenario of teaching modes in a multi-campus university with four geographically dispersed campuses:

> *Consider a university offering N courses through m campuses in a city. Not all the campuses are equally popular from the point of view of location or choice by students. A campus located right in centre of a city or in some important suburb may be the most popular and may even be over-crowded. There may other campuses less popular than this and the degree of popularity with depend on its distance the central location such as train stations, shopping centres and other amenities. For the sake of simplicity, let us assume a university has four campuses: 'Popular' campus which is located in the centre of the city, 'Moderately popular' campus which is in a nice surrounding suburb connected by rail service but say 50 kilometres away from the city. The third campus could be located about 25 kilometres away from city but might be poorly connected with transport facilities and could be an 'unpopular campus' from the point of view of students. Let the fourth campus be 70 kilometres away from the city located in a remote place where neither staff nor the students prefer to go. Since the university is running some courses in this last campus,*

students aspiring to do those courses and the requisite staff visits this campus. There are activities during the teaching periods and no activities in non-teaching periods. Let us call this 'Least Popular Campus' largely from the point of view of the students. In another university setting all the campuses might be equally popular or one campus might be the most popular while all others might be small campuses running specific courses (many of which would be duplicative in nature).

To address the challenges posed by the four campus Paul and Lodewejiks (2002: 10) suggest the following approach:

There could be several ways of offering these courses. Each school teaches all courses in all the campuses to maximise the number of students to be taught. That is all the M courses offered by the university are taught in all the campuses. Or, all the major courses are taught in all the campuses and a very few specialised courses are taught campuses. The teaching staff members relating to each school are located at different campuses. This may suit the respective academic staff and the students in the sense of reducing travelling time. It does not use academic and institutional resources efficiently or necessarily (net of transport costs) provide students with the best quality instruction. Alternatively, each school teaches all courses in only selected campuses, say in any two campuses where it can attract reasonable number of students or specialise even further in terms of specific programs locations. Campuses could be school specific teaching centers.

The above mode and approach may involve one person being in charge for a subject that is to be taught across campuses by different people; and having an overall coordinator of the subject. Despite the above proposed mode and approach, Paul and Lodewijks identified challenges associated with the proposed mode and approach. These include constrains in terms of travelling time, timetable scheduling and consultation hours. Although Paul and Lodewijks offer useful information on the mode of teaching in multi-campus context, they do not engage with overall academic governance in terms of student admissions process, coordination of standard and quality control and academic planning.

In terms of accreditation of programmes/courses taught across multi-campus, there are limited literature that focus on discipline or field specific. For example, Groenwald (2017) argue that when there is one governing board, a central office, and a central leader responsible for all campuses, there are expectations that each campus will look and function like the other campuses and that curricula, services and outcomes are consistent across campuses. This may also involve professional accreditation bodies for example, The Accreditation Commission for Education in Nursing (ACEN), which accredit each campus of multi-campus institution separately, though in some provision in their regulations for accrediting a system (Groenwald,

2017). Groenwald (2017: 137) reveals that "maintaining accreditation when there are multiple campuses is significantly more time-consuming, challenging and costly especially because of the diversity of regulations".

8.0 Challenges of multi-campus institutions

Although several rationales and motivations have been provided with respect to the establishment of the multi-campus institutions, there are several challenges associated with multi-campus institutions. Ebden (2010: 267) states that "multi-campus universities provide a complexity of challenges that are pedagogical, economic and logistical in nature, demanding effective leadership and administration". As such, many questions are being asked regarding the multi-campus systems. Before engaging with specific challenges of multi-campus institutions with respect to creating effective teaching and learning environment, it is importance to highlight the broader challenges of multi-campus institutions. A good starting point are some of the common questions raised by Dengerink (2001). These questions include:

- How to organize the relationship among multiple campuses?
- Do the individual campuses have their own budget and, if so, how is it determined?
- Are the faculty (academics) at the other campuses represented within the faculty senate of the parent campus?
- Do the academic deans and department chairs at the originating campus control the curriculum at the new campuses?
- Do the individual campuses have the freedom to conduct independent fundraising campaigns?
- Do the individual campuses interact directly with the legislative and regulatory bodies of the state or with the board of regents?
- Do the chief administrative officers of the new campuses report to the president of the campus system or to one of the vice presidents? If the latter, then how does the chief administrative officer of the campus relate to the other vice presidents of the institution?
- Do the individual campuses develop their individual images and take responsibility for their own marketing, or are they subsumed under the efforts of the larger institution? Particularly with the advent of distance delivery technologies, the various campuses may be competitors with the parent campus for the same students. How are such conflicts to be resolved?

Adding to the above questions is the issues of how culture and identities of various campuses, which are shaped by local contexts aligned, negotiated and reconciled. In addition, Jansen (2004) asks, what happens to the resultant curriculum when two institutions, each with its own curricula, decide to merge? These

questions show that multi-campus institutions are challenging systems. Pinheiro and Berg (2017) describe these as equity and efficiency challenges and tensions and they outline the following:

- impersonal relationships between academics and students;
- low harmony (cohesion) among graduates;
- decline in the prevalence and effectiveness of research and planning activities;
- large gap between administration and academic coordination;
- increased bureaucratization of activities, research included;
- poorer support services; cafeteria, library, laboratories, etc.;
- difficult relations between university and society;
- managing diversity, as related to students' social, cultural, and residential backgrounds;
- tackling inequalities related to access to higher education in more peripheral areas;
- optimizing life chances among those who come from families with low levels of education.

The above questions and highlighted challenges revolve around the broader issues of governance; management and administration; and organization and structure (see Pinheiro, Geschwind & Aarrevaara, 2016; Paul & Lodewijks, 2003; Lee & Bowen, 1971). Given these complexities involving multi-campus institutions, what follows is the central thesis of the review, which is about the discussion of the challenges facing academics in creating effective teaching and learning environment within multi-campus context.

8.1 Multi-campus institutions teaching and learning approaches and their challenges

Creating an effective teaching and learning environments is one of the most complex and challenging tasks for leaders, managers, administrators and academics in a context of multi-campus institutions. Drawing on Kift (2004) and Baecker et al., (2007), Ebden (2010) states that educators are challenged to design effective learning activities that incorporate on- and off-campus resources across physical and virtual environments. Before looking at these challenges, it is important to look at the existing debates regarding approaches to teaching and learning within the multi-campus settings. An analysis of the literature from different contexts indicate multiple approaches and/or modes used in teaching and learning in multi-campus institutions set up. These approaches can be grouped into two categories, namely information and communication technologies (ICTs) coupled with elements of blended learning. These broad approaches combine variety of methods such as e-learning, video streaming and conferencing, face-face teaching and hard-copy resources (Anderson & Date-Huxtable, 2011; Ebden, 2010).

8.1.1 ICTs approach to teaching and learning in multi-campus institutions

The use of ICTs facilities, tools and digital learning technologies is increasingly becoming the common approach and vital component to teaching and learning in multi-campus institutions settings (Bahmani, Hjelsvold, & Krogstie, 2019; Cox, 2019; Tikoria & Agariya, 2017; Freeman, 1998). In fact, some believe that ICT revolution is one of the principal drivers of the growing multi-campus universities systems (Azziz et al., 2017; Pinheiro & Berg, 2017; Krause et al, 2012). According to Anderson & Date-Huxtable (2011), ICTs can enable flexible teaching and learning beyond the time and spatial confines of the physical campus. The ICTs are used for synchronous[2] and asynchronous[3] multi-campus education (Sheth et al., 2013; Moridani, 2007; Szeto, 2014; Freeman, 1998).

Within the ICTs approach, several methods or platforms are used for teaching and learning purposes in multi-campus settings. Video-streaming and videoconferencing are two primary technologies used for multi-campus teaching and learning in countries such as Australia and Norway. These technologies can be used to capture video and audio from one campus, and then distribute to other campuses in a live or near to live manner (Bahmani & Hjelsvold, 2019; Reilly et al., 2012; Andrews & Klease, 1998). Such an ICT enabled classrooms require a video-conferencing facility with high definition cameras for entire class view with zooming feature; audio – video facility, content and lecture sharing facility, microphone facility and camera zooming facility at each seat in the classroom, classroom networked with such other similarity equipped classroom irrespective of their location (Tikoria & Agariya, 2017). Apart from the video streaming and video conferencing, recorded lectures have also been central to creating effective teaching and learning environment in multi-campus space. The recorded lectures comprise recordings of face-to-face lectures that are made available through as a supplement to students directly after the lecture (Bos et al., 2016). The recorded lecture indicates the process of recording the content of the lecture (audio and video) to archive it for later use and they largely need some hardware and software devices to synchronize the recorded audio with the video (Bahmani & Hjesvold, 2019). The recorded lectures have been heralded for eliminating difference between students from different campuses who take a multi-campus course (Woo et al., 2008). Specifically, recorded lectures enable students in the distance to supplement their paper-based learning resources (Bahmani & Hjeslvold, 2019; Morris, Swinnerton & Coop, 2019). There are several

---

[2] Synchronous modalities include faculty from the main campus teaching at the main campus that is recorded and the students at the satellite campus can view the lecture once it is posted on a secure website (Sheth et al., 2013).

[3] Asynchronous modalities limit academics from main campus having to teach the same material twice for both campuses. It limits the interaction between academics and students at the satellite campus and prohibit interaction among students at both campuses (Sheth, 2013).

examples of multi-campus institutions that are using video-streaming, video-conferencing and recorded lectures. These include among others:

i. the Norwegian University of Science and Technology (NTNU) in Norway (Bahmani and Hjeslvold, 2019)

ii. La Trobe University, Monash University, Central Queensland University, Griffith University, University of Tasmania, Curtin University of Technology and University of Southern Queensland, University of Technology Sydney in Australia (Williams, 2013; Anderson & Date-Huxtable, 2011; Andrews and Klease, 1998; Freeman, 1998), and

iii. Chinese university in China (Walker-Gibbs et al., 2016; Szeto 2014).

Halabi, Tuovinen and Maxfield (2002) discuss the 'tele teaching', which is a form of instruction that transmit images and speech back and forth between two or more physically separate locations. The tele teaching uses video conferencing technology to conduct live, cross campus teaching between lecture theatres and is a relatively new style of teaching and learning (Halabi, Tuovinen & Maxfield, 2002). The tele teaching seems to be a useful approach to teaching across multi-campus and it can be applied in different ways as the following passage summarises:

> Tele teaching is the transmission of image (in the form of documents, computer text, three dimensional objects, or video) and speech (audio) back and forth between two or more physically separate locations. This transmission is accomplished with cameras (to capture and send video from a local endpoint), video displays (to display video received from remote points), microphones (to capture and send audio from a local point), and speakers (to play audio received from remote points). Tele teaching evolved from the use of video conferencing yet is more focused on group learning and the opportunity to create interaction. Tele teaching involves a greater reliance on instructor, student and content interaction as teaching material is presented to alternative sites simultaneously. In tele teaching the lecturer may interact with students at both the local tele teaching theatre, and at a linked campus through live video and audio capabilities (Halabi, Tuovinen & Maxfield, 2002: 257).

Beyond video streaming, video conferencing and recorded lecturers, there are other ICTs methods proposed and discussed in the literature. For example, Buitrago García (2020) discuss the 'mirror class', which is used by the multi-campus Universidad Cooperativa de Colombia (UCC) in Colombia. The mirror class is an academic resource that uses a digital platform shared between professors and students from two or more

universities, to participate in the synchronous and asynchronous development of a complete course or a session of a course. The mirror class is characterised of a blended learning model that combines virtual and face-to-face instruction. The mirror class relies on technological tools such as WhatsApp, Outlook and Zoom (Buitrago García, 2020).

8.1.2 A case for blended learning approach to teaching and learning in multi-campus institution

The ICTs approach to teaching and learning in multi-campus institutions set up is often discussed in conjunction with the 'blended learning' and/or hybrid model. Blended learning is understood as an educational method that combines the traditional face-to-face instruction with computer-based instruction (Hamdi, 2016; Bonk & Graham, 2012; Downey & Brown, 2009; Stacey & Gerbic, 2008). It can be accomplished through face-to-face and online activities in course design and may vary depending on the educational context and the information technology tools available for the course (do Amaral et al., 2018; Blieck et al., 2012). Blended learning can be facilitated using different learning platforms such as Moodle, Google, Blackboard, Rcampus, and Learnopia and can be accessed from computer, tablets or mobile devices (Smith et al., 2017). Blended learning approach allows the use of different learning tools, such as pre-recorded video lectures, collaboration software, electronic forums, mixed reality, video games and simulations (do Amaral et al., 2018; Singh, 2003). Most of South African universities regardless of the format (single or multi-campus) make use of the 'blended learning" approach (van der Merwe et al., 2015).

A good example of blended learning approach to multi-campus teaching and learning is the COAL FACE Project in Australia. The COAL FACE research sought to understand the student learning experience in the diverse learning space – physical and virtual (online) – that make up the learning environment in a multi-campus, multi-modal, regional university (Bricks et al., 2014).
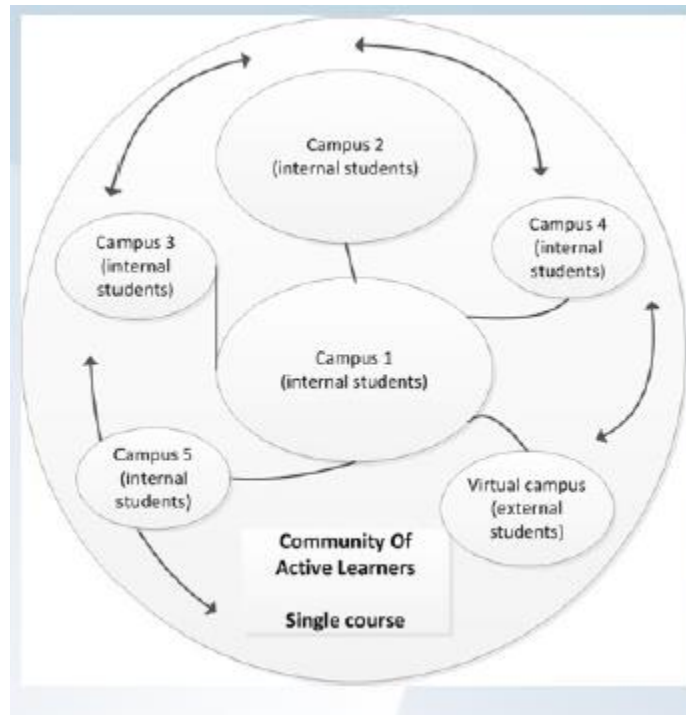
The COAL FACE approach to teaching and learning within a complex, multi-campus learning environment.

Consider the following case study of a multi-campus university that uses blended learning model:

> *James Cook University is a multi-campus, regional university and offers courses (programs) across multiple sites: campuses, remote study centres and external (home) to ensure students have access to relevant and high-quality courses at their point of need. Figure 1 illustrates how a multi-campus, distributed community of students might be represented, whereby the site-based students are connected as a community of students via technology and other strategies. Some of the challenges addressed in this Office of Leaning and Teaching (OLT) Extension Grant Project (within the discipline of Nursing) included maintaining curriculum consistency and providing active learning experiences across sites to meet professional accreditation requirements. Course delivery is done within the context of very different affordances of the learning spaces, technology (including videoconference) and physical resources available tostudents at each site and in their own personal learning spaces* (Extract from Buchan et al., 2015).

In debating approaches to teaching and learning in multi-campus settings, Mandal, Rasul and Azad (2019) proposes the concept and model of 'team teaching" (TT). TT involves more than one teacher working for the development and planning of a unit and its delivery (Jang, 2008; Murata, 2002). The focus of the TT

process relies on the fact that teachers learn through participating and engaging and collaborating in joint activities such as workshops, presentations of project outcomes, and seminars across multi-campuses (Mandal, Rasul & Azad, 2019). The flow of communication within the TT model involves the coordinator, lecturers, laboratory technician (Lab tech), students and mentor. The formation of a good TT is based on proper communication between the unit coordinator and the members of TT at different campuses (Mandal, Rasul and Azad, 2019). TT enables members to alternate perspectives, reciprocate ideas, provides valuable learning experience, and can enhance persona and professional skills development (Baeten & Simons, 2014). The TT also enhances student learning and satisfaction (Mandal, Rasul & Azad, 2019). The TT can apply for both a single campus and the other one is for a multi-campus setting. Through a synthesis of literature, Baeten and Simons (2014) found five models of TT namely, the observation model, the coaching model, the assistant teaching model, the equal status model and the teaming model. See two figures below drawn from Mandal, Rasul and Azad, 2019.
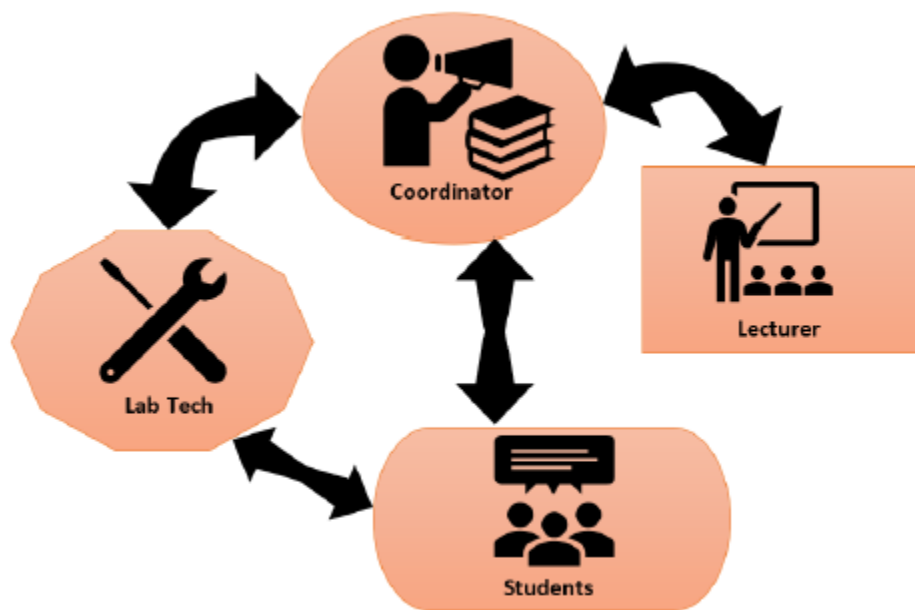

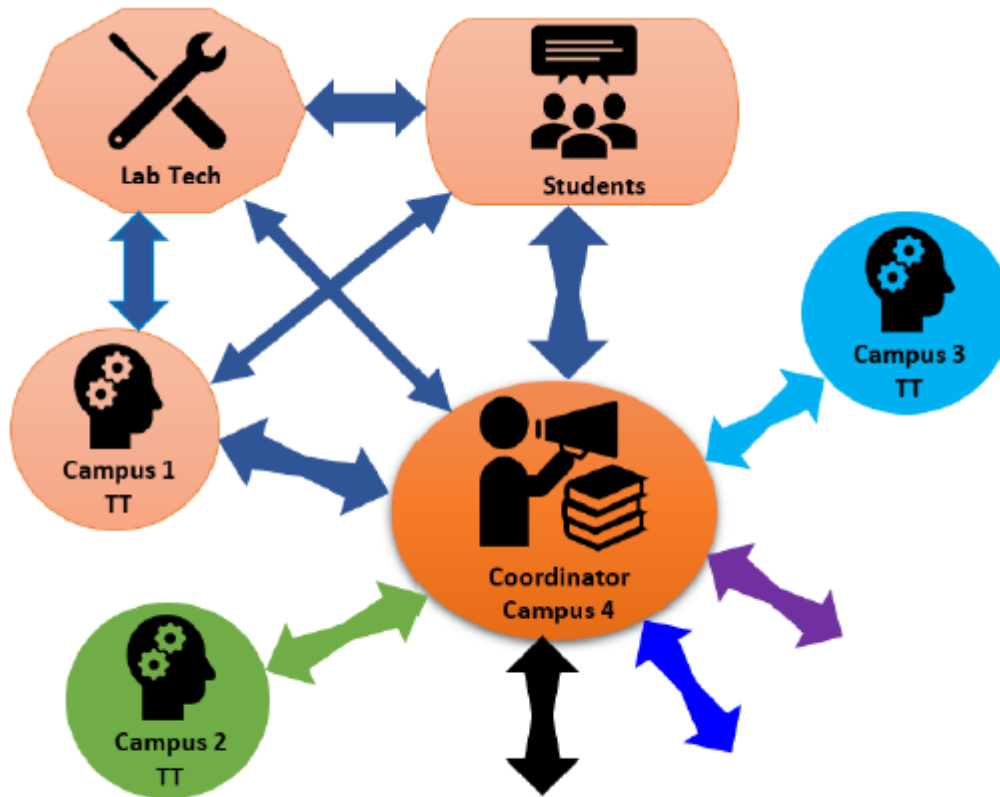Figure 1: On-campus teaching team model

Figure 2: Multi-campus teaching team model

Surprisingly, the review of the literature emerging from South African context indicates a lack of discussion on the approaches used in teaching and learning within the multi-campus. The focus of the existing literature is on the challenges facing multi-campus universities with respect to politics, governance, management and leadership.

8.2 Challenges of creating effective multi-campus institutions teaching and learning

Albeit with above highlighted different approaches to teaching and learning, the analysis of literature indicates several challenges facing academics in developing effective teaching and learning environments for multi-campus institutions. Buchan et al., (2015: 5) argue that:

> The experience of academic and students alike, are impacted by the user-friendliness of the environment in which they teach and learn. The challenges of offering courses in a multi-campus modes or university environment can be compounded by the limitations of the environments, learning spaces and technology in which they are delivered.

Related to the above statement, Ebden (2010: 267) states that "multi-campus courses challenges providers of higher education to develop the most efficient and effective mode of delivery to meet the needs ofstudents and educators". A host of authors have identified several challenges facing academics in creating effective multi-campus teaching and learning environment. A review of literature indicates that in developing effective teaching and learning environments academics encounter challenges. Although these challenges are context specific, broadly they include but not limited to interrelated challenges of maintaining consistency of curriculum delivery, standardization/teaching and administrative duplication, quality control, assessment and high program costs.

The first challenge facing academics in creating effective teaching and learning environments for multi-campus university is that of maintain consistency of curriculum delivery. Due to the geographically dispersed campuses, academics often grapple with balancing the subject or unit's intended learning outcomes with lecturers' experience and characteristics of each student cohort (Williams, 2013; Mandal, 2008; Clerehan, Wilson & Orsmond, 2002). Such challenge arise when there is weak communication and collaboration between and among academics and students as well as lack of shared common understanding of pedagogy, ongoing evaluation, moderation of learning activities, outcomes and assessments (Li & Li, 2013; Ebden, 2010; Mandal, 2008; Steedman et al., 2006). Lack of consistency is manifested through differential learning and teaching resources, wording of assignments, examples used to illustrate concepts and assessment standards (Williams, 2013). Such challenge is critical given that students function far better with a consistent and clear structure for their learning programme (Downey & Brown, 2009).

The second challenge and akin to lack of consistency of curriculum delivery, is the challenge of standardization/teaching and administrative duplication and replication. Freeman (1998) reveals that duplication has become evident as universities seek to establish new campuses. This challenge is at two levels. On the one hand, there is a requirement that subjects taught and assessed on both campuses be identical, which results in travel or equity of subject delivery concerns if different lecturers are used on different campuses (Harman, 2002; Freeman, 1998). On the other hand, the question of replication of course contents, delivery and outcomes across the campuses. This challenge is attributed to the issue of contextual specificities and it applies mostly in multi-campus university that has an international dimension, as summarized in the excerpt below:

> For example, if one of the learning outcomes of a particular unit related to understanding certain legal aspects of operating a business, it would be more appropriate for students at the Malaysian campus to focus on Malaysian laws and their implications rather than solely studying the Australian

cases explored by students at the Victorian campuses. At the other end of this continuum is a situation in which a unit differs across campuses in terms of learning experiences and assessment requirements that it would no longer be accurate to describe these variations as the same unit forming part of the same course (Williams, 2013: 81).

The third challenge is that of organizing logistical matters associated with teaching and providing learning opportunities across campuses. This challenge involves scheduling of teaching and learning activities across campuses, transportation and travel time for academics and students and finding academics who are dedicated to work in remote campuses (Ebden, 2010). These logistical matters constrain the coordination and management of teaching and learning activities across campuses. Williams (2013) and Ebden (2010) have highlighted several issues associated with the logistic challenge of multi-campus. These include, (i) distance and travel demands for lecturers and students, (ii) difficulties in scheduling simultaneous online platforms such as videoconference across campuses coupled with lack of videoconference and online classroom facilities, (iii) frequent technology and technical failures and faults, (iv) difficulty in meeting assessment marking deadline for courses taught across campuses, (v) coordinating and managing extra teaching workload, and (vi) lecturers may have no sufficient expertise to deliver a range of teaching modes including online learning. Other authors add that multi-campus university faces the challenge of establishing effective communication structure and model. Lack of clear and effective communication causes delay in interaction and engagement between students and lecturers across campuses (Campion, 2017; Delport, Hay-Swemmer & Wilkinson, 2014). Writing in Chinese context, Fei (2015: 62) states that:

> [...] logistical and other support costs are increased. The costs include the transportation and communication costs caused by distance between campuses, repeat purchase costs of experimental equipment, books, and other materials, duplication costs of hospitals, canteens, logistical and other institutions, and corresponding human costs.

The fourth challenge involves issue of ensuring quality teaching and learning, which is arguably one of the most discussed in the literature. Pinheiro and Berg (2017), Tikoria and Agariya (2017), Nair, Mertova and Murdoch (2012), Bianchi (1999) reveal that there are quality teaching and learning challenges specific to multi-campus contexts. Central to this challenge is the programme and courses with equivalent quality across multi-campus institutions (Scott, Grebennikov and Johnston, 2007; Freeman, 1998). This challenge involve the quality of teaching, quality of teaching and materials, quality and efficiency of marking, quality of lecturers and students interaction, quality of infrastructure and facilities, quality of feedback and outcomes, and overall quality of the educational experience for students (Williams, 2013; Wu & Wu, 2013).

The challenge of ensuring quality teaching and learning across multi-campus universities is attributed to lack of academic staff development and support (Cishe, 2017), weak quality assurance and control mechanisms within the multi-campus university (Willams, 2013; Knipe and Lee, 2002) and demand for quality instruction and delivery in the virtual classroom (Reilly et al, 2012). The challenge of quality control is fundamental in creating effective teaching and learning environment given that:

> Students expect a well-designed course with quality materials, clearly defined expectations, relevant assignments and assessments aligned to learning objectives, and appropriate use of media (Reilly et al., 2012).

The fifth challenge is that of variations in access to learning and teaching resources, opportunities and environments between campuses coupled with the ICTs and their related challenges. An analysis of the literature indicates that in most cases the large and/or main campus is endowed with resources in terms having many key and specialist staff and expertise, well developed infrastructures and facilities, better coordination mechanisms (Ebden, 2010). However, remote campuses often face great resource pressure and poor infrastructure and support resulting into inequality of learning opportunities (Ebden, 2010). Williams (2013) states clearly that there is a tendency for smaller campuses to have smaller support services. Such variation in teaching and learning between campuses is due to the challenges in accessing materials mainly due to slow internet speed, which increase the time to download resources (Walker-Gibbs, 2016). Also, not all academics embrace e-learning, and some of them have limited knowledge and skills in e-learning as well as concern about cost of online teaching and learning (Reilly et al., 2012). The variation in teaching and learning environment is likely to make some lecturers and students to consider satellite or remote campuses less attractive locations. In addition, technological driven teaching and learning can be time consuming, offers less interaction and limit the process of establishing effective student-lecturer relationships (Ebden, 2010; Baecker et al., 2007).

From the literature emerging from South African context, it can be argued that the majority of authors focus more on issues of politics, operations, management and leadership of merged institutions (Adu & Mantashe, 2014; Green & Ramroop, 2014; Hlengwa, 2014; Mgijima, 2014; Kamsteeg, 2011; Hall, Symes & Luescher, 2004; Jansen, 2004; Nicolson, 2004). Overall, there is relatively limited and/or no literature and empirical studies that focuses on teaching and learning elements of multi-campus institutions in South Africa.

8.3 Responses to challenges of teaching and learning in multi-campus institutions

In responding to the challenges of teaching and learning cross multi-campus institutions, a cluster of literature attempt to provide alternative solutions. The first solution is that of improving teaching and learning infrastructure and resources across campuses. Given that disparities in resources allocation between and among campuses has been identified as one of the challenges, some argue for the need to equally allocate resources across campuses (Ebden, 2010). These resources may include physical infrastructure, ICTs facilities and enablers, teaching and learning resources and materials (Williams, 2013). This also involve creating career development and support opportunities for academics to manage the demands of teaching in multi-campus setting (Furco & Moely, 2012). Of critical importance is deploying more resources on remote and/or rural campuses that are often resources constrained and under pressure.

The second solution is that of contextualization of content and mode of delivery. The literature suggests that given the difference in physical location and different student cohorts, 'one size fits all' curriculum, course contents and mode of delivery is not ideal for multi-campus set up (Williams, 2013; Hardy, 2010). There is a need for developing teaching and learning environment that consider local factors and profile of students of the campuses (Ebden, 2010). This may involve a deliberate design of teaching activities that align with the context, circumstance, needs and environment of local students at remote campuses (Hjeslvold & Bahmani, 2019).

The third solution is that of improving communication and strengthen the coordination capacity. This solution is associated with the challenges of logistical matters. Thus, Mandal et al., (2019), Fei (2015), Williams (2013), Terry and Poole (2012), Ebden (2010), Mandal (2008) suggest that course coordinators and academics ought to develop and maintain effective and open channels of communication, timetabling, assessment mechanisms and feedback channels. Such communication requires infrastructure and effective processes to facilitate academics communication and collaboration with respect to the course, both within the course and across campuses and throughout the semester and beyond (Willaims, 2013).

The fourth solution is that of establishing and sustaining academics' professional development programmes. Academics professional development offers opportunities to discuss classroom experiences with others, are aligned with state and national standards, and encourage ongoing professional communication of instructors with similar concerns (Reilly et al., 20120 Hjelsvold and Bahmani (2019) identified three elements that demand academic professional development. These are people and culture, technology and structure. The element of people and culture involves unfamiliarity with multi-campus teaching, conditions for securing faculty endorsement, and potentially different cultures across (Furco & Moely, 2012). The element of technology involves equipping academics with skills on how to use

equipment and how to make sure that material is delivered clearly to students at all campuses (Gill et al., 2015). The third elements involve enabling academics to understand an effective link between purpose, people and pedagogy inside the institutions (Stensaker et al., 2007). Reilly et al., (2012) argue for faculty learning communities as an example of faculty development that can connect geographically and demographically diverse individuals from multiple schools to collaboratively achieve common purposes or solve real problems. This development may include academics predispositions and readiness to adopt technology innovations and instructor skills, academics change of attitudes towards technology, and understanding how to interact with support staff. The academics professional development programmes may include but not limited to experiential learning, provided feedback, included effective peer and colleague relationships, applied effective teaching learning principles, and used diverse methods (Reilly et al., 2012). This may take place through seminar series, workshops, webinars, formal and informal training.

Finally, importantly, to address the challenge of quality control and assurance, the literature suggest that multi-campus should establish this trend, ranging from implementing direct quality measurement instruments to self-audit and review processes. (Williams, 2013; Nair, Mertova & Murdoch, 2012). This process ought to involve all members of the teaching team, course coordinator and people outside the course team. According to Groenwald (2017), the issue of quality assurance cuts across the entire institutions with multiple campuses. It involves an ongoing assessment and improvements of programs, curricula and courses that must be tracked over multiple parties (Groenwald, 2017; Winchester & Sterk, 2006). For example, the Monash University, which is one of the largest multi-campus university in Australia, applied the institutionally adopted quality cycle – plan, act, evaluate and improve in the area of teaching, research, support services, and at the institutional level (Nair, Mertova & Murdoch, 2012).

9.0 Towards the UFS' comprehensive multi-campus model
One of the most complex and vexing questions regarding multi-campus institutions is that developing an ideal and suitable model that incorporate issues of management, governance and coordination of core academic function, the political and economic demands of multi-campus. The multi-campus models identify in section 4.0 and their salient features in section 5.0, an important question is "*What should be the comprehensive multi-campus model for the UFS, and how will I look like and what are the potential challenges and alternative solutions?* While there is no set of answers to this question, a number of recommendations can be made regarding the UFS' multi-campus model.

(i) Revisit the historical context and original rationales of establishing multi-campus university at the UFS

(ii) Re-consider the context in which each campus is located and assessed the enablers and barriers of managing and coordinating core academic functions

(iii) Asses cost implications of having multiple campuses geographically dispersed

(iv) Decide on the suitable and sustainable approach to managing and coordinating academic activities

(v) Understand and take into consideration the identity and culture that have been developed within the existing campuses

(vi) Decide on the level of power and autonomy of each campuses

(vii) Decide whether to offer similar courses across campuses, the structure and mode of delivery

10   Conclusion

This review of literature explores and understands challenges facing academics in creating effective teaching and learning environments within the multi-campus institution context. The review indicates that multi-campus institutions are complex and dynamic phenomenon, which poses several challenges to academics and programme and/or course coordinators. The challenges facing academics in creating effective teaching and learning environments are attributed to internal and external dynamics of operating across multiple campuses and geographically dispersed. Thus, for academics to develop effective teaching and learning environments, they must grapple and navigate issues of resource allocation across campuses, logistical complexities, technological infrastructure and capabilities, quality assurance and control, coordination and communication and standardization. From the review, it appears that ICTs couple with elements of blended learning are increasingly becoming the bedrocks of creating effecting teaching and learning for multi-campus. However, one of the major caveats from the literature is that in multi-campus set up, campuses that are remotely located suffer more that the main and/or parent and often urban situation. This result into inequality of learning opportunities, compromised quality and students' dissatisfaction. To address these challenges, some authors suggest several solutions. Broadly, they argue that there should be more resources allocated equally across campuses, academics be trained and equipped with tools and skills to teaching in a multi-campus set up, effective coordination and communication be developed, quality control and assurance of teaching and learning materials, modalities and outcomes be maintained, and equivalent academic standards be maintained across all campuses. These demands a strong and dedicated leadership and management structure that is dedicated to supporting remote and/or rural-based campuses and academics who teach across campuses.

REFERENCES

Achieng, P. C. (2018). *Management Practices and Performance In Multi-Campus Model Universities: A Case Of Busitema University* (Doctoral dissertation, Uganda Management Institute).

Adu, E. O., & Mantashe, L. X. (2014). Understanding the Transition and Implications of Merger in a Merged Multi-Campus University in South Africa: Human Resource Perspective. *Mediterranean Journal of Social Sciences*, *5*(23), 1516.

Akategeka, E., Sekiwu, D., & Ssempala, F. (2020). Facilities management and quality of teaching and learning at a multi-campus public university in Uganda.

Anderson, A., & Date-Huxtable, E. (2011). ICT-assisted multi-campus teaching: Principles and practice to impact equity of experience for students. *Changing Demands, Changing Directions. Proceedings ascilite Hobart 2011.*

Andrews, T., & Klease, G. (1998). Challenges of multisite video conferencing: The development of an alternative teaching/learning model. *Australasian Journal of Educational Technology*, *14*(2).

Atibuni, D. Z. (2019). Roles, Stress and Coping Mechanisms among Middle-level Academic Leaders in Multi-campus Universities in Africa. *Journal of Higher Education in Africa/Revue de l'enseignement supérieur en Afrique*, *17*(1/2), 95-124.

Atkins, C. L. (2015). The Branch Campus Contribution to the Mission of the Main Campus in Kentucky. *Dissertation* Paper.

Azziz, R., Hentschke, G. C., Parthenon-EY, E., Young, L. L. P., Jacobs, B. C., Jacobs, L. A., & Ladd, H. (2017). Mergers in higher education: A proactive strategy to a better future.

Baecker, R., Fono, D., Blume, L., Collins, C., & Couto, D. (2007). *Human interface and the management of information. Interacting in information environments. Book Series Lecture Notes in Computer Science*. Berlin/Heidelberg, Germany: Springer.

Baeten, M., & Simons, M. (2014). Student teachers' team teaching: Models, effects, and conditions for implementation. *Teaching and Teacher Education*, *41*, 92-110.

Bahmani, A., & Hjelsvold, R. (2019, September). From theory to practice: Teaching assistants' role in multi-campus education. In *Conference on e-Business, e-Services and e-Society* (pp. 654-664). Springer, Cham.

Bahmani, A., Hjelsvold, R., & Krogstie, B. R. (2019, September). ICT-based challenges of repurposing a single-campus course to multi-campus settings: A pragmatic case study. In *Conference on e-Business, e-Services and e-Society* (pp. 641-653). Cham: Springer.

Bianchi, M. (1999). Multicampus model and quality approach in the institution of big universities. Paper presented at Tertiary Quality Management for Higher Education Institutions II conference, University of Verona, 30–31 August

Blieck, Y., De Jong, M., & Vandeput, L. (2012). Blended learning for lifelong learners in a Multi-campus Context (MuLLLti). *L. Leuven University College, Belgium*.

Bos, N., Groeneveld, C., Van Bruggen, J., & Brand-Gruwel, S. (2016). The use of recorded lectures in education and the impact on lecture attendance and exam performance. *British Journal of Educational Technology*, *47*(5), 906-917.

Broadbent, C. (2002). Responding to Change in an Australian University: a Multi-Campus Study. *Journal of Institutional Research*, *11*(2), 58-66.

Brown, D.M. (2002). Swings and roundabouts: Centralisation and devolution in a multi-campus university in South Africa. *Higher Education, 40*: 163-181.

Buchan, J., Smithson, J., Birks, M., Wicking, K., & McDonald, H. (2013). At the COAL FACE: A Guide to active learning in multi-campus, multi-modal and distributed learning environments.

Buitrago García, H. C. (2020). The mirror class as a multi-campus teaching and learning experience.

Bumbie-Chi, D. M. (2020). Knowledge Sharing and Multi-Campus University Systems: Ghana's University For Development Studies Library In Perspective. *UDS International Journal of Development*, *7*(1), 315-329.

Cai, Y., & Yang, X. (2016). Mergers in Chinese higher education: lessons for studies in a global context. *European Journal of Higher Education*, *6*(1), 71-85.

Campion, C. (2017). Constraints militating against organisational communication in a multi-campus university. *Journal of Education and Social Sciences,* 8, 1.

Cishe, E. N. (2014). Fostering quality teaching and learning in higher education through academic staff development: challenges for a multi-campus university. *Mediterranean Journal of Social Sciences*, *5*(25), 272-272.

Clerehan, R., Wilson, A., & Orsmond, C. (2002). Hall of mirrors: Reflections on a multi-campus language and learning program. In *Changing identities. Proceedings of the Language and Academic Skills Conference in Higher Education*.

Cox, S. R. (2019). Technology to enhance in-class discussions and student participation at a multi-campus program. *Currents in Pharmacy Teaching and Learning*, *11*(7), 719-722.

Curaj, A., Georghiou, L., Casenga Harper, J., & Egron-Polak, E. (2015). *Mergers and alliances in higher education: International practice and emerging opportunities* (p. 307). Springer Nature.

Delport, M., Hay-Swemmer, D., & Wilkinson, A. (2014). An internal communication model for multi-campus higher education institutions in South Africa. *Journal for New Generation Sciences*, *12*(1), 21-46.

Dengerink, H. A. (2001). Institutional identity and organizational structure in multi-campus universities. *Metropolitan Universities*, *12*(2), 20-29.

Dhliwayo, K. (2014). The internal customers perceptions of a multi-campus university system in Zimbabwe. a case of great Zimbabwe University. *International journal of scientific & technology research*, *3*(2), 324-330.

Dinye, A. M. A. T. U. S. (2016). *Managing multi-campus Universities in Ghana: a comparative analysis of university for development studies (UDS) and Presbyterian University College, Ghana (PUCG)* (Doctoral dissertation, University of Ghana).

do Amaral, J. A. A., Araujo, C. R. M., & dos Santos, R. J. R. L. (2018). Lessons Learned Implementing Project-based Learning in a Multi-campus Blended Learning Environment. *Journal of Problem Based Learning in Higher Education*, *6*(2).

Downey, M., & Brown, M. (2009). The challenge of equivalence: Meshing food technology with blended learning across campuses and modes. Proceedings ascilite Auckland 2009.

Ebden, M. (2010). We're on a steep learning curve: The benefits and challenges of multi-campus university course delivery. *Research and Development in Higher Education: Reshaping Higher Education*, *33*, 267-277.

Fei, M. E. N. G. (2015). Problems Caused by the Management of Multi-Campus University in China. *Higher Education of Social Science*, *8*(4), 60-63.

Fraser, D., & Stott, K. (2015). University Satellite Campus Management Models. *Australian Universities' Review*, *57*(2), 79-83.

Freeman, M. (1998). Video conferencing: a solution to the multi-campus large classes problem? *British Journal of Educational Technology*, *29*(3), 197-210.

Furco, A., & Moely, B. E. (2012). Using learning communities to build faculty support for pedagogical innovation: A multi-campus study. *The Journal of Higher Education*, *83*(1), 128-153.

Gill, D., Parker, C., and Richardsson, J. (2005). Twelve tips for teaching using videoconferencing, Medical Teacher, Vol. 27, No. 7, pp. 573-577.

Green, P., & Ramroop, S. (2014). Service delivery at a satellite campus: A Durban University of Technology case study. *International Journal of Educational Sciences*, *7*(3), 615-622.

Groenwald, S. L. (2018). The challenges and opportunities in leading a multi-campus university. *Journal of Professional Nursing*, *34*(2), 134-141.

Gumede, D. C. (2014). *The challenges of working and studying at a satellite campus: a case study of the Riverside Campus of the Durban University of Technology* (Doctoral dissertation).

Haj-Ali, A., Harb, A., Abdul-Nabi, S., Elhage, H., & Hussein, B. (2013). AUTOMATED TOOLS FOR MULTI-CAMPUS UNIVERSITY COURSE ASSESSMENT. *Proceedings of the Canadian Engineering Education Association (CEEA)*.

Hall, M., Symes, A., & Luescher, T. (2004). The Governance of Merger in South African Higher Education. Research Report prepared for the Council on Higher Education. Council on Higher Education, Pretoria.

Hardy, I. (2010). Academic architectures: Academic perceptions of teaching conditions in an Australian university. *Studies in Higher Education*, 35(4), 391-404.

Harman, G., & Harman, K. (2003). Institutional mergers in higher education: Lessons from international experience. *Tertiary Education and management*, *9*(1), 29-44.

Harman, K. (2002). Merging divergent campus cultures into coherent educational communities: Challenges for higher education leaders. *Higher Education*, *44*(1), 91-114.

Hjelsvold, R., & Bahmani, A. (2019). Challenges in repurposing single-campus courses to multi-campus settings. *Læring om læring*, *3*(1).

Hlengwa, D. C. (2014). The Challenges of Working and Studying at a Satellite Campus of a University: A Case of the Durban University of Technology. *Mediterranean Journal of Social Sciences*, *5*(27 P2), 661.

Jang, S. J. (2008). Innovations in science teacher education: Effects of integrating technology and team-teaching strategies. *Computers & Education*, *51*(2), 646-659.

Jansen, J. D. (2004). How mergers shape the institutional curriculum: guest editorial. *South African Journal of Higher Education*, *18*(1), 5-18.

Kamsteeg, F. H. (2011). Transformation as social drama: stories about merging at North West University, South Africa. *Anthropology Southern Africa*, *34*(1-2), 51-61.

Kavanagh, M. H., & Taysom, S. V. (1999). Multi-campus university in operation: Perceptions of staff and students. *Journal of Institutional Research in Australasia*, *8*(2), 98-108.

Kift, S. (2004). *A new pedagogy for higher education? Exploring integrated learning environments in legal education.* Online Learning and Teaching (OLT) 2004 Conference Proceedings. Exploring Integrated Learning Environments. Brisbane: OLT.

Knipe, D., & Lee, M. (2002). The quality of teaching and learning via videoconferencing. *British Journal of Educational Technology*, *33*(3), 301-311.

Krause, K. L., Scott, G., Campbell, S., Lizzio, A., Spencer, D., Bath, D., & Clark, J. (2012). Developing program leader networks and resources to enhance learning and teaching in multi-campus universities.

Langa, P. (2017). A disjointed multi-campus system: the neo-liberal expansion and fragmentation of Mozambican higher education. *Tertiary Education and Management*, *23*(1), 23-40.

Lee, E., & Bowen, F. (1971). The multi-campus university: A study of academic governance. Highstown, NJ: McGraw-Hill.

Lewis, R. J. (2013). The multi-campus system's role in maintaining institutional diversity in Texas, public universities.

Li, Y., & Li, W. (2013). The Current Situation of Learning and Life of Students Changing Majors in Universities under the Multi-Campus University Mode and Existing Problems--Taking Students Changing Majors in Sichuan Agricultural University as a Case Study. *Higher Education Studies*, *3*(2), 96-101.

Loglo, F. S., & Agbleze, S. (2018). Understanding Media Usage Patterns of Students and Faculty via a Media Acceptance Approach: A Case of a Multi-campus University in Ghana. *Towards Personalized Guidance and Support for Learning*, 321.

Mandal, N. K., Rasul, M. G., & Azad, A. K. (2019). Team teaching approaches: how to manage student learning in multi-campus settings. In *30th Annual Conference for the Australasian Association for Engineering Education (AAEE 2019): Educators Becoming Agents of Change: Innovate, Integrate, Motivate* (p. 411). Engineers Australia.

Mgijima, M. N. (2014). Multi-campus colleges in South Africa: Challenging capabilities of principals in managing institutional transformation. *Mediterranean Journal of Social Sciences*, *5*(14), 394-394.

Moridani, M. (2007). Asynchronous video streaming vs. synchronous videoconferencing for teaching a pharmacogenetic pharmacotherapy course. *American journal of pharmaceutical education*, *71*(1).

Morris, N. P., Swinnerton, B., & Coop, T. (2019). Lecture recordings to support learning: A contested space between students and teachers. *Computers & Education*, *140*, 103604.

Munene, I. I. (2014). *Multicampus university systems: Africa and the Kenyan experience*. London: Routledge.

Murata, R. (2002). What does team teaching mean? A case study of interdisciplinary teaming. *The Journal of educational research*, *96*(2), 67-77.

Nair, C. S., Mertova, P., & Murdoch, N. (2012). An Integrated Approach to Quality Enhancement in a Multi-Campus University. *information technology*, *1*(2), 3.

Nicolson, R. (2004). The management of multicampus systems: the practice of higher education. *South African Journal of Higher Education*, *18*(2), 346-358.

Paul, S., & Lodewijks, J. (2003). Alternative structures and teaching modes for a multi-campus university. *Economic Analysis and Policy*, *33*(1), 136-143.

Pinheiro, R., Charles, D., & Jones, G. (2017). Translating strategy, values and identities in higher education: the case of multi-campus systems. *Tertiary Education and Management*, 23: 1, 1-4

Pinheiro, R., Geschwind, L., & Aarrevaara, T. (2016). Mergers in higher education. *European Journal of Higher Education*, *6*(1), 2-6.

Pruvot, E. B., Estermann, T., & Mason, P. (2015). DEFINE thematic report: University mergers in Europe. *Brussels: European University Association*.

Reilly, J. R., Vandenhouten, C., Gallagher-Lepak, S., & Ralston-Berg, P. (2012). Faculty development for e-learning: A multi-campus community of practice (COP) approach. *Journal of Asynchronous Learning Networks*, *16*(2), 99-110.

Scott, G., Grebennikov, L., & Johnston, K. (2007). Study of Australian multi-campus universities. *Journal of Institutional Research*, *13*(1), 1-23.

Sheth, N. U., Dowling, T. C., & Congdon, H. B. (2013). Evaluation of synchronous versus live instructional delivery methods on student academic outcomes and perceptions at a multi-campus school. *Currents in Pharmacy Teaching and Learning*, *5*(5), 381-386.

Smith, S. U., Hayes, S., & Shea, P. (2017). A Critical Review of the Use of Wenger's Community of Practice (CoP) Theoretical Framework in Online and Blended Learning Research, 2000-2014. *Online learning*, *21*(1), 209-237.

Stacey, E. & Gerbic, P. (2008). Success factors for blended learning. In www.ascilite.org.au/conferences/ melbourne08/procs/stacey.pdf. *Hello! Where are you in the landscape of educational technology? Proceedings ascilite Melbourne 2008*.

Stensaker, B., et al. (2007). Use, updating and integration of ICT in higher education: Linking purpose, people and pedagogy, Higher Education, Vol. 54, No. 3, pp. 417-433.

Stoica, G. A., & Støckert, R. (2018). Designing New Learning Scenarios for Multi-Campus Large Classes in Mathematics. In *the International Scientific Conference eLearning and Software for Education* (Vol. 1, pp. 495-500). " Carol I" National Defence University.

Szeto, E. (2014). Bridging the Students' and Instructor's Experiences: Exploring Instructional Potential of Videoconference in Multi-Campus Universities. *Turkish Online Journal of Educational Technology-TOJET*, *13*(1), 64-72.

Terry, J., & Poole, B. (2012). Providing university education in physical geography across the South Pacific Islands: Multi-modal course delivery and student grade performance. *Journal of Geography in Higher Education,* 36(1), 131-148.

Tikoria, J., & Agariya, A. K. (2017). ICT enabled classroom effectiveness scale development and validation: A case of multi-campus university. *Knowledge Management & E-Learning: An International Journal*, *9*(1), 111-127.

Trow, M. (1974). Problems in the transition from elite to mass higher education. In OECD. (Ed.). Policies for higher education (pp. 51–101). Paris: OECD.

Truyen, F., Van Dorp, K. J., Janssen, B., Rivera, J., Griset, R., & Kuppens, A. (2011). Open Educational Resources in a Muli-Campus and Virtual Campus Environment. *EDULEARN11 Proceedings CD*, 001248-001258.

Uzzi, B. (1999). Embeddedness in the making of financial capital: How social relations and networks benefit firms seeking financing. American Sociological Review 64: 481–505.

Walker-Gibbs, B., Paatsch, L., Moles, J., Yim, B., & Redpath, T. (2016). A view through the long lens: Pre-service teachers' perceptions of multi-campus course delivery. *Journal of university teaching and learning practice*, *13*(5), 1-10.

Williams, G., (2013). A Handbook for Reviewing and Improving Multi-campus Units. Office for Teaching and Learning, Australia.

Winchester, H. P., & Sterk, B. F. (2006, July). Multi-campus university management: Lessons from AUQA audit reports. In *Proceedings of the 2006 Australian Universities Quality Forum* (pp. 164-170).

Wu, Y., & Wu, Z. (2013, June). Management of Multi-campus Universities in American and its enlightenment on Chinese Multi-campus Universities. In *2013 Conference on Education Technology and Management Science (ICETMS 2013)* (pp. 1397-1400). Atlantis Press.