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The Relationship between Academic Programme Type and Student Satisfaction with the Quality of Higher Education in Uganda

Godfrey Bagonza and Yuda Taddeo Kaahwa

Abstract

This study examined the relationship between the type of academic programmes offered in Ugandan higher education institutions and student satisfaction with the quality of higher education. High-quality academic programmes are those that focus on the outcomes of the higher educational processes, including student retention and graduate destinations and employability, as well as expectations of earnings proportional to the qualification. Employing quantitative and qualitative research methods, the study analysed data gathered from 400 undergraduate students, six quality assurance directors, and 12 academic heads of departments in six Ugandan universities. It found that students in different academic disciplines and different universities believed that the academic programmes they selected were strongly related to their satisfaction with the quality of higher education.

Key Words: academic programme, student satisfaction, student retention, employability, earnings

Résumé

Cette étude a examiné la relation entre le type de programmes académiques proposés dans les établissements d'enseignement supérieur ougandais et la satisfaction des étudiants quant à la qualité de l'enseignement supérieur. Les programmes universitaires de haute qualité sont ceux qui se concentrent sur les résultats des processus d'enseignement supérieur, y compris la rétention des étudiants, la destination et l'employabilité des diplômés, ainsi que les attentes en

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matière de revenus proportionnels à la qualification. Utilisant des méthodes de recherche quantitatives et qualitatives, l'étude a analysé les données recueillies auprès de 400 étudiants de premier cycle, de six directeurs de l'assurance qualité et de 12 chefs de département dans six universités ougandaises. Elle a révélé que les étudiants de différentes disciplines académiques et de différentes universités estimaient que les programmes académiques qu'ils choisissaient étaient fortement liés à leur satisfaction à l'égard de la qualité de l'enseignement supérieur.

Mots clés : programme académique, satisfaction des étudiants, rétention des étudiants, employabilité, revenus

Introduction

It is widely accepted that skills and human capital have become the backbone of economic prosperity and social well-being in the 21st century (OECD, 2012). Countries thus need to ensure that their higher education systems are capable of producing a skilled workforce that meets the demands of the labour market. High-quality academic programmes aim to promote positive outcomes such as student retention and persistence in their course of study, employability and graduate destinations, and earnings commensurate with qualifications (Pinotti, 2012; Monk, Sun and Bradley, 2012). Recent studies on university quality have focused on developing systematic and formal quality assurance models and processes (Doyle, 2006; Guthrie and Neumann, 2007; Hayford, 2003). It is suggested that the rationale for performance models and indicators in higher education is to ensure that the education provided to students equips them with skills for employment and provides the nation with a highly-skilled workforce that supports socio-economic growth and development (Chalmers, 2008).

The history of the Ugandan higher education sector dates back to the founding of Makerere University in 1922 (Hayward, 2006) that was motivated by the need to address the shortage of local human resources to serve the economic and social requirements of East African countries. Makerere University was established as a technical college to serve students from the British East African territories of Kenya, Uganda, and Tanzania (Cloete, Maassen, and Bailey, 2011; NCHE, 2016; Kasozi, 2003). In the initial stages of higher education, academic programme

quality was measured by the production of graduates with practical skills in carpentry, construction and mechanics. When the university expanded to offer other courses such as medicine, agriculture, veterinary sciences, and teacher training, more advanced quality assurance models were required (Ssekamwa, 1997; Kasozi, 2003, Muwagga, 2006).

University training also focused on producing high-quality civil servants and administrators to work for the colonial government. In the past decade, Uganda has experienced significant expansion of its higher education sector, evident in the growth in the number of public and private universities as well as the number of students applying for admission (Kasozi, 2003; Mamdani, 2007; NCHE, 2016). Higher education is regarded as having the potential to contribute to not only economic and social development but also poverty eradication in developing countries (World Bank, 2016). However, the expansion of Uganda's higher education sector has been accompanied by rising costs for both families and the government. It is against this background that this study investigated the relationship between the type of programmes that students chose and their satisfaction in terms of contributing to their welfare and socio-economic development.

The issue of Programme Quality

Demand and supply of higher education in Uganda are expanding, indicated by the rise in the number of students seeking university places. Statistics released by the Ministry of Education and Sports (MoES) show that total university enrolment increased from 57 114 in 2002 to 345 000 in 2016 (MoES, 2018). Similarly, the number of public universities increased from three in 2002 to 13 in 2022 and there are currently 43 private universities (NCHE, 2022). Economic theory would suggest that these changes in the higher education sector would benefit those who participate in education and the nation in terms of their contribution to national development. However, there is concern that, despite the growth in university provision in Uganda, the sector has not produced graduates with the skills required by the labour market. This has contributed to high levels of graduate unemployment, which stood at 36% in 2021 (World Development Report, 2021). Studies have also suggested that many Ugandan graduates lack *employability skills* such as communication and problem-solving skills, teamwork, self-motivation,

and a positive work attitude which results in unsuccessful job interviews or them losing their jobs after a few months (IUCEA, 2014). This study, therefore, investigated whether students were satisfied that the academic programmes they chose prepared them for the expectations of the labour market.

Literature Review

This section reviews the existing literature on the relationship between types of academic programmes and student satisfaction with the quality of higher education from theoretical and empirical perspectives.

From the theoretical point of view, the link between higher education qualifications and development is guided by the human capital theory advanced by Theodore Shultz in 1961. It suggests that individuals and nations invest in education in order to improve job opportunities and earnings (Becker, 1993; Johnes, 1993; Schultz, 1972). Many studies have shown that investment in education and training increases individual earning potential, enhances firms' productivity and promotes national economic development (Denison, 1962; Shultz, 1961). For example, Lepark and Snell (1999) showed that investment in human capital enhances a firm's competencies and competitive advantage.

Studies further suggest that individual decisions to pursue higher education involve an informal analysis of the costs of education measured against the expected return (Chevalier and Dalton, 2004; Groot and Oosterbeek, 1994). Kjelland (2008) notes that the human capital theory is based on the notion that education endows individuals with productivity-enhancing human capital and that this results in increased earnings.

Furthermore, the theory assumes that education determines labour's marginal productivity, which also determines earnings. It posits that intellectual formation constitutes a mode of economic capital, higher education is preparation for work, and education determines graduate outcomes. However, some studies have suggested that the human capital theory is limited by the fact that it imposes a single linear pathway on the complex passage between heterogeneous education and work and it does not explain how education enhances productivity or why salaries have become more unequal. This view is supported by the competitive market theory of wages which asserts that employees receive a wage

that is equal to their marginal product (Groot and Oosterbeek, 1994). Thus, the more productive a worker is, the more he/she will be paid holding the price of the goods he/she produces constant; the quality and quantity of education is important when determining such productivity. Therefore, students would be satisfied with the academic programmes they choose to pursue at university if they have high prospects of better returns in the labour market.

From the empirical perspective, several studies suggest that there is a correlation between the academic programmes students choose in universities and their potential for employment in the labour market as well as financial returns. For example, Walker and Zhu (2001) used a Labour Force Survey dataset in the UK and found that there is a strong relationship between education, employment, and earnings. Walker and Zhu's (2001) findings also suggest that degree qualifications play an important role in placing graduates in employment and that many employers use them as a point of reference in deciding on salaries.

Walker and Zhu (2001) also found substantial variations in employment and earnings across degrees. For example, they concluded that education and arts subjects have no significant effect relative to 2+ A levels. Languages and Economics/Business, Architecture and Law had returns of around 20%, Health 24%, Mathematics 19%, Engineering 11% and Science 7%. These findings suggest that the choice of a university degree has a bearing on an individual's employment and earnings prospects. Eide (1990), Kehm and Teichler (1995), and Neave and Jenkinson (1983) also suggested that social science and humanities graduates are less likely to secure employment than those in engineering and medicine. It is against this background that this study aimed to determine which degree programmes available in Ugandan universities have a strong effect on employment and earnings and whether students are guided by this economic motive when applying for such programmes.

In the Ugandan context, studies suggest that the majority of privately-owned universities have tended to avoid science and technology programmes that require expensive laboratory and workshop equipment and inputs. Instead, they offer qualifications in the arts and humanities for which there may not be strong demand in the labour market (NCHE, 2016).

Mayanja et al.'s (2001) survey of graduates from the Faculties of Arts and Science in Makerere University who were part of the labour market in 2001 suggested that Arts graduates' employment opportunities and wages are not substantially different from those of Science graduates. While Faculty of Arts graduates were as successful in obtaining jobs as their Faculty of Science counterparts, the latter had a slightly better chance of securing jobs immediately after graduation whereas the former were more likely to enjoy career growth and promotion to top management. Furthermore, the study found that Faculty of Arts graduates' salaries were in the same range as those of Faculty of Science graduates. They also suggested that Arts graduates seemed to make the same contribution to economic growth in terms of GDP as their science counterparts. While these findings suggest that arts and science students would have similar expectations of their employment and earnings prospects, it is important to establish which students are more confident about their labour market prospects based on the kind of academic programme they are enrolled in.

In terms of student satisfaction with their academic programmes, Hoang, Ngo, and Pham (2018) suggest that post-secondary institutions confront many questions regarding the value and effectiveness of their academic programmes. Such concerns have been heightened by the commodification of education and the rise of student consumerism. Hoang, Ngo, and Pham's (2018) findings suggested that dissatisfied students had notably different educational orientation profiles from their peers who were moderately and highly satisfied. Nara, Saxon, and Reubenson (2014) employed an ex-post facto, non-experimental approach to examine the relationship between student satisfaction and academic performance in Armenian higher education. Data were collected by means of a self-reported questionnaire administered to 372 students in nine public and three private four-year degree institutions in different rural and urban areas. The statistical analysis revealed significant differences in student satisfaction and academic performance, with those who reported lower satisfaction having poorer academic performance. This suggests that, apart from labour market expectations, student satisfaction with academic programmes is also influenced by their level of academic performance.

Objectives of the Study

1. To establish which programmes of study have the highest impact on student satisfaction with the quality of higher education.
2. To determine which programmes of study are the best predictors of student retention, employment prospects and earnings.

Methodology

Research Paradigm, Design, and Approach

This study leaned towards the positivist research paradigm which is rooted in the ontological principle and doctrine that truth and reality are free and independent of the viewer and observer (Nownaisin, 2020; Kothari, 2008; Creswell, 2009). It followed a correlational cross-sectional survey research design, with mainly quantitative approaches, enabling sampling of a large number of units of analysis in a relatively short time as well as the findings' generalisation to other universities in Uganda (Creswell and Clark, 2007; Gorard, 2013; Lindell and Whitney, 2001). Qualitative approaches were used to corroborate the findings from the quantitative analysis.

Study Population, Sample Size, and Selection

The study population included all participants and stakeholders in Uganda's higher education sector. The target population included all students enrolled in private and public universities; academic heads of departments in both types of universities; and quality assurance directors of the selected universities.

The accessible population was students selected from six universities (three private and three public) who were the principal subjects of the study. To complement the findings from the students, interviews were conducted with 12 academic heads of departments at six universities and six quality assurance directors. They were selected since they were able to provide information on the kind of academic programmes offered at their respective universities and which appeal most to students.

Using Yamane's (1967) formula for sample size selection (Israel, 2009), a sample of 400 students was selected. According to Yamane's formula, the sample size for a population size of 345 000 is 399; thus, the sample size of 400 respondents was appropriate considering the

margin of error of +/- 0.05. The targeted and actual sample for all the participants in the study are presented in Table 1.

Table 1: Summary of Targeted and Actual Sample

Sn	Category	Targeted Participants	Actual Participants	Response Rate
1	University Students	400	400	100%
2	Quality Assurance Directors	6	6	100%
3	Academic Heads of Department	12	12	100%

Source: Primary data

Methods of Data Collection and Research Instruments

A structured questionnaire was used to gather data from the university students as principal subjects. It included questions on their choice of academic programme and the programmes they rated highly for employment and earnings. A structured questionnaire was preferred because standardised data on facts and opinions was required, with the students responding to identical items. To ensure both face and content validity, the instrument for the principal subjects (students in the graduating class) was subjected to a pre-test with 10 students randomly selected from different academic programmes at Kyambogo University. Reliability was ensured by conducting initial statistical tests on data collected from pre-tested surveys to establish whether the outcomes related to the study's objectives and hypotheses. The initial statistical tests and the interviews with the selected stakeholders also revealed that the predictors of internal efficiency were correlated with the quality of university education.

Cronbach's Alpha was used to measure the internal consistency of the questionnaire administered to students. This reliability test was appropriate because the study worked with multiple Likert scale variables (Warner, 2013). For each of the research hypotheses, alpha ≤ 0.7 indicated that the instrument was reliable in measuring what it was meant to measure.

Interviews were conducted to collect qualitative data from purposively selected heads of academic departments at the six universities to corroborate the data gathered from the students.

Data Analysis Methods

A chi-square test of independence was conducted on the coded data to measure whether there is a relationship between the types of academic programmes that students selected and their opinions on their employment and earnings prospects. The qualitative data from the interviews with the quality assurance directors, university heads of academic departments, and human resource managers were categorised and presented descriptively.

Findings of the Study

The academic programmes offered by a university should motivate students to complete their course of study and create positive expectations of securing employment and remuneration commensurate with their qualification. For the purpose of this study, academic programmes were categorised as Arts, Social Sciences and Humanities; Business, Accounting and Management; Education and Teaching; and Engineering, Science and Technology.

Findings for Objective 1

The study's first objective was *to establish which programmes of study have the highest impact on student satisfaction with the quality of higher education*. Data analysis commenced by investigating whether there is an association between the academic programmes that students chose to study at university and their satisfaction with the quality of higher education. Student satisfaction with the quality of higher education was measured by their persistence to complete their course of study, employment expectations, earnings expectations based on information from their colleagues who completed their programme, and demand for graduates with the qualification in the labour market.

The Chi-Square test of independence using SPSS Statistics was conducted to measure if an association exists between the type of study programme and student satisfaction with the quality of higher education. This test was preferred because the independent variable study programme is nominal, categorising students who were enrolled for courses in Arts, Social Sciences and Humanities; Business, Accounting and Management; Education and Teaching; and Engineering, Science and Technology. The dependent variable student satisfaction with the

quality of higher education was ranked at an ordinal level on a five-level Likert scale for indicators of satisfaction such as retention and completion of a programme of study; employment prospects and options; better earnings prospects; and demand for graduates in the labour market. This kind of data fulfills the two key assumptions to run a Chi-Square test of independence, namely, that the two variables are ordinal or nominal, and that they consist of two or more categories of independent groups. The findings of this analysis are presented in Table 2.

Table 2: Correlation between Academic Programme of Study and Student Satisfaction with the Quality of Higher Education

Indicators of Student Satisfaction with the Quality of Higher Education	Chi-Square -Value	P-Value
Retention and completion of a programme of study	23.361	0.104
Employment prospects and options	20.874	0.183
Better earnings prospects	30.700	0.015
Demand for graduates in the labour market	30.807	0.014

Source: Primary data

The findings in Table 2 suggest an association between the type of academic programme that students select at university and their satisfaction with the quality of higher education measured by how the programme motivates students to complete their course and how it influences their labour market expectations in terms of employment and earnings. The results show that the association between students' responses on the effect of the study programme on retention has a Chi-Square value of 23.361, with a p-value of 0.104. Employment prospects has a Chi-Square Value of 20. and a p-value of 0.183; earning prospects a Chi-Square value of 30.700 and a p-value of 0.015, and demand for graduates in the labour market has a Chi-Square value of 30.807 with a p-value of 0.014.

These results are statistically significant at the 0.01 and 0.05 levels of significance, providing evidence to reject the null hypothesis and accept the alternative hypothesis that ***the type of study programme undertaken by students at university is strongly correlated with their motivation to complete their course of study and their labour market expectations.*** These findings also mean that students from different academic disciplines and

different universities (both private and public) believe that the academic programme they chose to study is strongly related to their satisfaction with the quality of higher education.

The second part of this analysis was examining which programme of study has the highest impact on student satisfaction with the quality of higher education. This involved interpreting the column percentages in cross-tabulation in SPSS. The column percentages from the five-level Likert scale were combined to come up with three categories, Agree, Undecided, and Disagree. The findings are presented in Table 3.

Table 3: The Relationship between the Programme of Study and Student Satisfaction with the Quality of Higher Education

Type of Study Programme	Study Programme Influences Course Completion		
	Agree	Undecided	Disagree
Arts, Social Sciences and Humanities	80.9	9.5	9.5
Business, Accounting and Management Courses	66.3	21.8	10.9
Education and Teaching Courses	76.1	8.7	15.2
Engineering, Technology and Science	88.2	2.9	8.8
Type of Study Programme	**Study Programme has high Employment Prospects**		
	Agree	**Undecided**	**Disagree**
Arts, Social Sciences and Humanities	81.0	11.1	7.9
Business, Accounting and Management Courses	76.4	9.1	14.5
Education and Teaching Courses	76.1	10.9	13.0
Engineering, Technology and Science	79.4	13.2	7.4
Type of Study Programme	**Study Programme has High Earnings Prospects**		
	Agree	**Undecided**	**Disagree**
Arts, Social Sciences and Humanities	87.3	6.3	6.3
Business, Accounting and Management Courses	76.3	19.0	32.5
Education and Teaching Courses	78.3	4.3	17.4
Engineering, Technology and Science	79.4	13.2	7.4

Source: Primary data

The findings in Table 3 indicate little difference between the students' responses on the effect of their study programmes on their ability to

complete or stay on course and their labour market expectations. More than 65% of the respondents from the four categories of academic programmes confirmed that their programme of study encouraged them to stay and complete their course, and more than 75% believed that their programme of study had high prospects for employment and earnings. These results suggest that universities in Uganda offer academic programmes that attract the interest of students.

Given the fact that there seemed to be no significant difference in the effect of the study programme on student retention, employment expectations, and earnings expectations among students in different disciplines, interviews were conducted with other university stakeholders to confirm or reject this finding. A Head of Department observed:

> *Liberalization and privatization of the higher education sector in Uganda has increased the financial burden on families that send their children to university. Parents and students are making hard choices and decisions when they select which programme students should study at the university. This could be the reason why students from different disciplines all think that their programme of study will lead them to employment and better earnings* (Head of Department, October 2017).

Another remarked:

> *Students will take pride in being at the university. These students may not know what their Programme of study has for them in terms of employment and earnings. This could have been caused by the inadequate guidance and counseling that students receive both at lower levels of education and university. However, it is for a fact that some study disciplines like engineering, medicine, and law have a higher potential for employment and earnings compared to other programmes in the arts and humanities fields.* (Head of Department, November 2017)

The above views imply that, firstly, while students select a programme based on their expectations in relation to future employment and earnings, some might not have sufficient information to make an informed decision. Secondly, some study programmes have more impact in terms of employment and earnings than others. These observations concur with the views of the Quality Assurance Directors who noted that

Uganda's National Council for Higher Education (NCHE) has adopted measures to ensure that universities align their offerings with the requirements of the labour market. For example, a Quality Assurance Director observed that:

> *Since the NCHE in Uganda was established in 2001, it has emphasised ensuring a relevant curriculum in universities and has provided monitoring and assessment of standards. Quality Assurance Directorates have been established in universities to ensure internal monitoring and assessment at the institutional level. All these are aimed at ensuring that high-quality and relevant academic programmes are taught in universities to prepare students for the world of work*. (Quality Assurance Director, November 2017)

Taken together, these findings imply that university stakeholders believe that the study programmes offered relate to student retention, employment expectations, and earnings prospects. Universities thus need to put mechanisms in place to ensure that they offer courses and programmes that meet the labour market expectations of both graduates and employers.

Findings for Objective 2

The second objective was to *determine which programmes of study are the best predictors of student retention, employment prospects, and earnings*. The academic programmes were classified into the following four categories:

1. Arts and Social Sciences/Humanities.
2. Business/Accounting and Management.
3. Education and Teaching-related Programmes.
4. Engineering/Medicine/Science and Technology.

Three multiple regression models were run to establish which of the four programme categories had a strong and statistically significant effect on enabling university students to complete their programme/retention; had high potential for employment; and had a strong effect on earnings expectations. The hypothesis to be verified in this model was:

> ***Academic Programmes statistically and significantly predict the quality of higher education in Uganda.***

The findings of the analysis are presented in Table 4.

Table 4: Model Summary and ANOVA Results for the Three Models

IV: Academic Study Programmes	DV: Indicators of Quality of Higher Education		
	Retention	Employment Prospects	Earnings Prospects
R	0.703	0.729	0.734
R-Square	0.494	0.532	0.538
Adjusted R-Square	0.493	0.530	0.537
F-Statistics	72.996	60.157	11.004
P-Value	0.000	0.000	0.000

Source: Primary data

The results in Table 4 demonstrate a significant level of predictive ability for the dependent variables. More specifically, the correlation coefficient (R) values indicate strong associations: R=0.734 for course completion and persistence, R=0.729 for employment expectations, and R=734 for earnings expectations. These correlations suggest that these variables can be reasonably predicted.

The coefficient of determination (R-squares) reveals the extent to which the independent factors related to the variable 'type of study programme' account for the variability in the dependent factors. The findings indicate that these independent factors explain 49.4% of the variability in retention, 53.2% of the variability in employment expectations, and 53.8% of the variability in earnings prospects. This implies that the respondents strongly believed that the type of academic programme significantly impacts student satisfaction with the quality of higher education. The F-ratios in the ANOVA table also indicate that the overall regression models are a good fit for the data. Programme completion/retention has $F(4,245) = 72.996$, $p < .0005$; employment prospects $F(4,245) = 60.157$, $p < .0005$; and earnings prospects $F(4,245) = 11.004$, $p < .0005$. These values indicate that the independent variables statistically and significantly predict the dependent variable.

Table 5: Coefficient Results for the Models

IV: Type of Academic Study Programme	DV: Indicators of Quality of Higher Education								
	Retention			Employment Prospects			Earning Prospects		
	Beta	t	Sig.	Beta	T	Sig	Beta	t	Sig.
Arts and Social Sciences	0.304	7.756	0.000	0.216	5.390	0.000	0.316	8.778	0.000
Business/Management	0.469	11.971	0.000	0.274	7.865	0.000	0.506	14.064	0.000
Education/Teaching	0.253	6.060	0.000	0.204	5.826	0.000	0.216	5.390	0.000
Science/Technology	0.435	10.785	0.000	0.274	7.052	0.000	0.435	10.785	0.000

Source: Primary data

The findings in Table 5 indicate that all the independent variables included in the model are statistically significantly different from 0, meaning that all the academic programmes that students chose are important in determining student satisfaction with the quality of higher education in Uganda. Furthermore, the business and management programmes' t-values are 11.971 for retention, 7.865 for employment prospects, and 5.390 for earnings prospects; while science and technology have t-values of 10.785 for retention, 7.052 for employment prospects, and 10.785 for earnings prospects, indicating higher levels of student satisfaction with these programmes than with arts and education programmes.

These findings on academic programme quality's effect on student satisfaction with the quality of higher education were supported by the heads of academic departments who emphasised that the programmes offered by universities affect student satisfaction more than other factors. They noted that acquisition of a university degree alone may motivate students to complete their course because they are aware that a university qualification opens the door to future benefits whether or not it is highly rated. A head of department remarked that:

> *Most of our students are from deprived backgrounds and once they have enrolled for a university degree that alone is a big achievement in their community. They will pursue that programme to the end irrespective of whether it has immediate employment benefits or not because they know that they will be among the few in their community to have a degree qualification.* (Head of Department, 16 November 2017)

While most of the interviewees agreed that the type of academic programme that students enrolled for was more important, they were also of the view that other inputs such as the quality of university facilities and teaching staff determine the quality of the outcomes. It was also noted that it is generally accepted that parents and guardians enrol their children in higher education to increase their chances of employment and a higher income. They thus suggested that universities have the responsibility to offer programmes that meet parents and students' expectations. A participant from one of the public universities noted:

> *I think the government in this country has realised that higher education should benefit parents, students, and the country. This is why university administrators are under intense pressure from NCHE and from the government to restructure their programmes and weed out those courses that do not have direct career paths. ... Newly created universities are under instructions to specialise in specific fields such as agriculture, vocational, business, and science and technology, and some courses that used to be stand-alone are proposed to be course units to be taught to all students.* (Head of Academic Department, 16 November 2017)

This observation suggests that stakeholders in the higher education sector are realising that higher education should produce employable graduates not only to meet parents and students' expectations but also those of employers. The findings also show that the government requires universities to primarily offer programmes in the fields of science and technology, vocational training and agriculture, as well as business and management. These fields promote student and parent satisfaction, as they provide direct career opportunities and pathways to employment.

Discussion of Findings

For the purpose of this study, the academic programmes were classified into four categories, namely, Arts and Social Sciences/Humanities; Business/Accounting and Management; Education and Teaching Related Programmes; and Engineering/Medicine/Science and Technology. The results point to minimal differences in students' responses on the effect of their study programmes on their ability to complete the course or fulfil their labour market expectations. More than 65% of the respondents

in the four programme categories confirmed that their programme encouraged them to complete their course, with more than 75% stating that they believed that their programme had high employment and earnings prospects. These findings suggest that Ugandan universities offer academic programmes that attract the interest of students with high labour market expectations. However, engineering, medical, science, and technology-related academic programmes were ranked highest in terms of employment and earnings prospects.

These findings are in line with those of previous graduate tracer studies by Kasozi (2003), Mamdani (2007), and the NCHE (2017) that established that 80%-89% of graduates in Human Medicine and Architecture obtained jobs within three months of graduation compared to 36%-60% of Social Sciences and Law graduates. This points to higher demand in the labour market for graduates of the former programmes.

An earlier study by the NCHE (2016) found that enrolment in science and technology courses in all Ugandan higher education institutions was below 40% while that in arts and humanities was estimated at 70%. Thus, more students in the country's private and public universities are enrolled in arts than in science programmes. Furthermore, the study found that 76.7% of all students enrolled in science courses were in public universities, with only 23.3% in private institutions.

Conclusions

The study found that the type of academic programme is strongly correlated with students' motivation to complete the programme and their labour market expectations. This suggests that regardless of the programme or university (public or private) they enrol in, students believe that the academic programmes they choose is strongly related to their satisfaction with the quality of higher education. Therefore, universities need to put mechanisms in place to ensure that they offer courses and programmes that meet the labour market expectations of both graduates and employers in different economic sectors. It was also found that some programmes of study have higher employment and earnings prospects. This implies that universities need to keep abreast of labour market dynamics so that they can offer programmes that are well-aligned with students' desired career opportunities and their parents' expectations.

References

Becker, G. S. (1993). *Human capital: a theoretical and empirical analysis with special reference to education* (3rd Edition). Chicago; London: University of Chicago Press.

Chalmers, D., Lee, K., and Walker, B. (2008). *International and national indicators and outcomes of quality teaching and learning are currently in use*. Carrick Institute for Learning and Teaching in Higher Education Ltd, Sydney, NSW.

Cloete, N., Maassen, P., and Bailey, T. (2011). Knowledge Production and Contradictory Functions in African Higher Education. *African Minds Higher Education Dynamics Series Vol 1*. Cape Town: African Minds.

Creswell, J.W., and Clark, P.V. (2007). *Designing and Conducting Mixed Methods Research*. London: Sage Publications Inc.

Creswell, J.W. (2009). *Research Design; Qualitative, Quantitative, and Mixed Methods Approaches*. London: Sage Publications Inc.

Doyle, W. (2006). State Accountability Policies and Boyer's Domains of Scholarship: Conflict or Collaboration? *New Directions for Institutional Research 129*, 979-113.

Eide, K. (1990). *Higher education and employment: the changing relationship, the case of the humanities and social sciences*. Paris: OECD.

Pinotti, P. (2012). Trust, Regulation, and Market Failures. *The Review of Economics and Statistics 94*(3), 650-658. DOI: https://doi.org/10.1162/REST_a_00209

Gonzalez, N., and Oyelere, R.H. (2011). Are Returns to Education on the Decline? *Economics of Education Review 30*(6), 1348-1369.

Gorard, S. (2013). *Research Design: Robust Approaches for Social Sciences*. London: Sage Publications Inc.

Guthrie, J., and Neumann, R. (2006). *Performance Indicators in Universities: The Case of the Australian University System*. (Submission for *Public Management Review* February 2006).

Hayford, L. (2003). *Reaching Underserved Populations with Basic Education in Deprived Areas of Ghana: Emerging Good Practices*. Ghana: CARE International.

Hoang. T.S., Ngo T. H., and Pham, T. M. K. (2018). Measuring Students' Satisfaction with higher education service – An experimental study at Thainguyen University. *International Journal of Business Marketing and Management (IJBMM)3*(4), 21-34.

Israel, G. D. (2009). *Determining Sample Size, Institute of Food and Agricultural Sciences*. Florida: University of Florida.

IUCEA. (2014). *Report from a Study Establishing the Status of Higher Education Qualification Systems and their Contributions to Human Resources Development in East Africa*. Kampala: IUCEA.

Kasozi, A. B. K. (2003). *Higher education in Uganda: challenges and opportunities for reform*. Kampala, Uganda: Fountain Publishers.

Kehm, B. M., and Teichler, U. (1995). Higher education and employment. *European Journal of Education 30*(4), 407-422.

Kothari C.R. (2008). *Research Methodology Methods and Techniques* (2nd Revised Edition). New Delhi: New Age.

Nownaisin, P., Koul, R., Chomsuwan, K., Poondej, C., and Lerdpornkulrat, T. (2020). Linking social relatedness with motivational goals and bachelor degree aspirations of vocational students. *European Journal of Educational Research 9*(4), 1581-1589. https://doi.org/10.12973/eu-jer.9.4.1581

Lindell, M.K., and Whitney, D.J. (2001). Accounting for Common Method Variance in Cross-Sectional Research Designs. *Journal of Applied Psychology 86*(1), 114-121.

Mamdani, M. (2007). *Scholars in the marketplace: the dilemmas of neo-liberal reform at Makerere University, 1989-2005*. Dakar, Senegal: Council for the Development of Economic and Social Research in Africa.

Mayanja, M. K. (2001). *A comparative study of Makerere University graduates of the faculties of Arts and Sciences*. Kampala: Association of African Universities.

Sun, L. Bradley, D., and Kathryn A. (2012). A Multilevel Modelling Approach to Investigating Factors Impacting Science Achievement for Secondary School Students: PISA Hong Kong Sample. *International Journal of Science Education 34*(14(, 2107-2125. DOI: 10.1080/09500693.2012.708063

Muwagga, M.A. (2006). *The Philosophical Implications of the Liberalization of Higher Education in Uganda*. Unpublished PhD Thesis, Makerere University, Kampala.

Nara, M. M., Patrick, S., and Reubenson, W. (2014). Student Satisfaction and Academic Performance in Armenian Higher Education. *American International Journal of Contemporary Research 4*(2).

NCHE. (2017). *The State of Higher Education in Uganda: A report on Higher Education Delivery and Institutions*. Kampala: NCHE.

NCHE. (2022). *The State of Higher Education and Training in Uganda 2015/16. A report on Higher Education Delivery and Institutions*. Kampala: NCHE.

Neave, G., and Jenkinson, S. (1983). *Research on higher education in Sweden: an analysis and an evaluation (Studies in Higher Education in Sweden)*. Sweden: Almqvist & Wiksell International.

OECD. (2012). *Assessment of Higher Education Learning Outcomes. A Feasibility Study Report Vol. 1 – Design and Implementation*. Paris: OECD Publications.

Shultz, T.W. (1972). Investment in Human Capital. *The American Economic Review 51*(1).

Ssekamwa, J.C. (1997). *History and Development of Education in Uganda*. Kampala: Fountain Publishers.

Walker, I., and Zhu, Y. (2001). *The returns to education: evidence from the Labour Force Surveys*. London: DfES.

World Bank. (2021). *The Growth Challenge: Can Ugandan Cities Get to Work?* Uganda Economic Updates (5th Edition).

Factors that Influence First-year Students' Academic Performance in Introductory Accounting: a Systematic Literature Review and Avenues for Future Research

Corlia Joynt

Abstract

This study involved a systematic review of academic research conducted between 1968 and 2022 on the factors that predict academic performance in introductory accounting. Several significant predictors including prior knowledge in accounting, academic aptitude and mathematical ability, as well as personal attributes like grit and self-efficacy have been shown to influence student success in this field. The study's findings will assist educators to adapt their programmes and integrate these predictive factors. Moreover, this research expands on the theoretical framework established by Rankin, Silvester, Wallely and Wyatt (2003), offering a holistic perspective and highlighting potential areas that warrant further investigation. Future research could explore the role of critical reasoning skills and reading comprehension's impact as predictors of academic performance in introductory accounting.

Key words: predictive factors, introductory accounting, high school accounting, academic performance, systematic review, theoretical framework

Résumé

Cette étude a consisté en un examen systématique des recherches universitaires menées entre 1968 et 2022 sur les facteurs qui permettent de prédire les résultats scolaires dans les cours d'introduction à la comptabilité. Plusieurs prédicteurs significatifs, notamment les connaissances préalables en comptabilité, les aptitudes scolaires et mathématiques, ainsi que des attributs personnels tels que le courage et

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l'auto-efficacité, se sont avérés influencer la réussite des étudiants dans ce domaine. Les résultats de l'étude aideront les éducateurs à adapter leurs programmes et à intégrer ces facteurs prédictifs. En outre, cette recherche développe le cadre théorique établi par Rankin et al. en offrant une perspective holistique et en mettant en évidence les domaines potentiels qui méritent d'être étudiés plus avant. Des recherches futures pourraient explorer le rôle des compétences de raisonnement critique et l'impact de la compréhension de la lecture en tant que facteurs prédictifs de la performance académique dans l'introduction à la comptabilité.

Mots clés : Facteurs prédictifs, introduction à la comptabilité, comptabilité au lycée, résultats scolaires, examen systématique, cadre théorique.

Introduction

South Africa's unemployment rate of 32.9% in 2023 (Statistics South Africa (Stats SA), 2023) is among the highest in the world. A shortage of qualified professionals, managers and other high demand occupations was reported at the same time (Department of Higher Education and Training (DHET), 2020), with 58 such occupations in the professional and managerial fields. Thirty-eight per cent of degrees preparing graduates for these occupations will require introductory accounting (or first-year accounting) (DHET, 2020). However, accounting is perceived as difficult to master, especially if a student did not take this subject at school (Friedlan, 1995; Mladenovic, 2000; Goldstein, Sauer, and O'Donnell, 2014). This leads to anxiety, low self-efficacy and even depression (Byrne, Flood and Griffin, 2014). Students are also aware of the courses with a high failure rate, negatively influencing self-efficacy (Sharma, 1997).

The South African education system fails to produce satisfactory throughput rates – measured from the start of school (Grade 1) to graduation with an undergraduate qualification. Only 4% of students (measured from Grade 1 intakes) obtain a three-year degree within six years (Council on Higher Education (CHE), 2017). The fact that most BCom programmes at South African universities require that students complete a course in introductory accounting exacerbates the problem. The Department of Basic Education (DBE) offers accounting as a Grade

12 subject, but the number of students enrolled for accounting in this grade declined by 47% from 2009 to 2020 (DBE, 2012, 2020).

In this context, it is important for educators to ascertain the factors associated with academic performance in introductory accounting.

Early research on predictors of academic performance in accounting focused on school subjects such as accounting, mathematics, economics, and English. Studies conducted since 1986 explored additional factors like academic ability, university entrance scores, and effort as indicators of motivation. However, these studies yielded contradictory results. Prior to Rankin et al.'s theoretical framework in 2003, research on these factors was fragmented and lacked integration. Rankin et al. consolidated these disparate traits into a comprehensive framework, providing a common theoretical basis to understand academic performance in accounting (Rankin, Silvester, Vallely, and Wyatt, 2003).

Numerous studies have been conducted on a range of diverse topics subsequent to the development of Rankin et al.'s framework, calling for an update of this theoretical construct. This study aimed to promote informed, methodical academic research on this issue by synthesising existing knowledge and identifying gaps within the research landscape. It thus not only adds to the body of knowledge but also facilitates decision-making grounded in empirical evidence.

The aim of the study was to systemically review existing research on the factors predicting academic performance in introductory accounting. This will enable educators to adjust current programmes to incorporate the development of these factors or traits. The study also expands the theoretical framework proposed by Rankin et al. (2003) (see Figure 1).

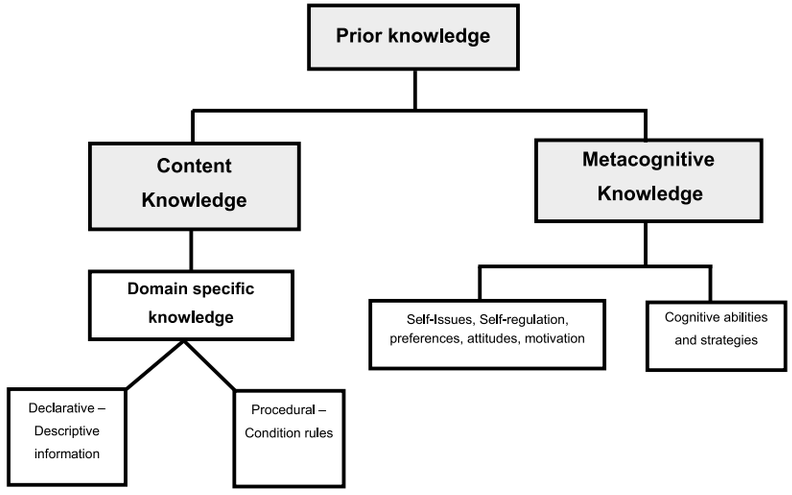

Figure 1: The theoretical framework for prior knowledge (Rankin et al., 2003)

Relevant articles, including published and unpublished literature dating back to 1968 are reviewed. However, the methodology does not make any claim to completeness. The author aimed to incorporate relevant South African and international literature to provide a comprehensive review of existing literature and to identify avenues for future research.

The article is organised as follows: The next section describes the methodology employed to select and analyse the articles under review. This is followed by a discussion on the predictive factors for academic performance, including a schematic illustration of the categorisation of the themes as an expansion of the theoretical framework proposed by Rankin et al. (2003). The gaps in the literature are explored in the second to last section and the final section concludes with implications for policy makers, academics and career advisors.

Methodology

The literature review followed the systematic approach outlined by Tranfield, Denyer, and Smart (2003) that is considered scientific, transparent, and reproducible by other researchers. Tranfield et al. (2003) identified the following six steps which were employed to conduct the review.

Identification of Research and Databases

Keywords were derived from the research question and formed into a search string. The search string was used to query titles and abstracts in academic publications, utilising research databases like EBSCOHost and Taylor and Francis. As the field is well-established, the search was restricted to the two theses (that formed the seminal works) and peer-reviewed academic journals listed by the Australian Business Deans Council (ABDC) for 2022.

The research question was 'Which factors are associated with academic performance in an introductory accounting course?' The search string used for the databases (with slight adjustments depending on the requirements of each search function) was "Introductory accounting" OR "First-year accounting" AND "Predictors" OR "Determinants" OR "Indicators" OR "Factors" AND "Academic achievement" OR "Academic performance" OR "Academic success". Figure 1 shows the database search results.

Inclusion and Exclusion criteria

Academic material was included based on the following criteria:

a. The main aim or purpose was to explore factors that could predict academic performance in introductory or first-year financial accounting.
b. Studies that included students in various years of study (i.e., introductory and intermediate accounting) on condition that students in introductory accounting formed part of the sample and results were demarcated for this specific group.
c. For academic articles, only peer-reviewed journal papers were considered, not books or conference proceedings.
d. Academic work that fell within the scope of Rankin's theoretical framework or expanded on factors included in it.
e. Written in English, or when written in another language, available in English.
f. Published in any year.

Articles were excluded from the review if:

a. The journal was not included in the ABDC list for 2022.
b. The study only explored later years of study, e.g., intermediate, second-year, final year of accounting or postgraduate studies.

c. The study was in fields other than financial accounting.
d. Thematically differed from Rankin's theoretical framework; therefore, studies that explored the effect of participation in supplemental instruction, strategies for student retention, delivery mode, teaching styles, curriculum design and transition from school to university were excluded.

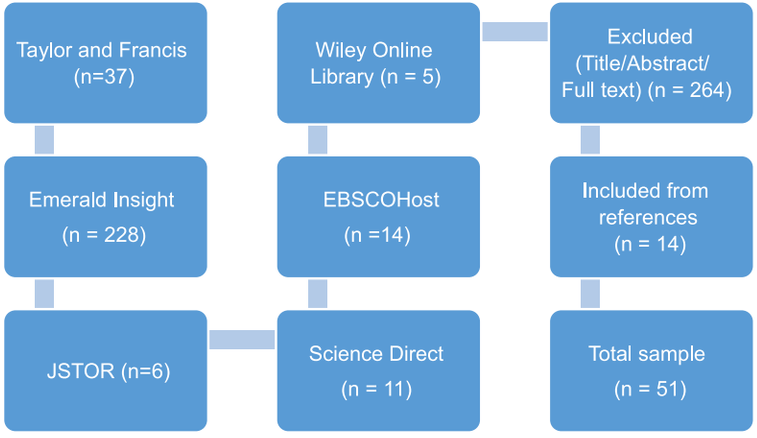

Figure 2: Flowchart of studies identified, excluded and included

Selection of Studies

The inclusion and exclusion criteria were applied to all the studies identified during the preliminary search using the key words. The reference list of these studies was used to identify those that were not included in the initial search. This resulted in the addition of 14 studies. In total, 51 studies were reviewed, two of which were theses.

Assessment of Quality

No additional quality measures were employed; instead, the quality of the articles was assumed based on their inclusion in the ABDC list and the journal rankings ranging from A* to C. The inclusion of the selected theses was based on their status as seminal works.

Data Extraction

Articles that met the requirements were read and specific information, i.e., predicting factor or method and results were documented.

Data Synthesis

The results from the studies were synthesised to expand the theoretical framework.

Results of the Literature Review

Table 1, located at the conclusion of this article, presents the findings from each study. The following section examines the significance of the results pertaining to each predictor.

Factors Affecting Academic Performance

Prior Knowledge of Accounting

Multiple studies have concluded that taking accounting at school contributes to academic performance in introductory accounting (Smith, 1968; Mitchell, 1985; Schroeder, 1986; Eskew and Faley, 1988; Farley and Ramsay, 1988; Keef and Hooper, 1991; Doran, Bouillon and Smith, 1991; Loveday, 1993; Tickell and Smyrnios, 2005; Tan and Laswad, 2008). The overlap between school and university accounting curricula is proposed as a possible explanation (Rankin et al., 2003), particularly in South Africa (Rowlands, 1988; Van Rensburg, Penn and Haiden, 1998). However, caution should be exercised in generalising the findings without considering the overlap between curricula (Mitchell, 1988).

Despite the positive impact of taking accounting at school, some studies suggest that students without prior accounting knowledge demonstrate greater academic progress, possibly indicating diminishing benefits over time (Smith, 1968; Jacoby, 1975; Bartlett, Peel and Pendlebury, 1993; Xiang and Gruber, 2012). For example, Van Rensburg et al. (1998) found that South African students who did not study accounting in high school outperformed their peers in second-year accounting. Other studies also reported no or limited benefits of taking accounting at school for university-level students, although the degree of curriculum overlap and learning approaches were not explicitly considered (Baldwin and Howe, 1982; Keef, 1988; Koh and Koh, 1999; McDowall and Jackling, 2006; Byrne and Flood, 2008).

The duration and performance in high school accounting may influence academic performance in introductory accounting. Students with more than one year of accounting in high school tend to outperform

those with no prior accounting, while the level of prior exposure to accounting may not significantly affect introductory accounting performance (Schroeder, 1986; Farley and Ramsey, 1988; Keef, 1988). However, differences in curricula could contribute to the mixed results across studies.

Improvements in research rigour have led to regression analyses being conducted, expanding the number of independent variables to examine the effect of taking accounting at school (Eskew and Faley, 1988). Recent studies continue to support the argument that high school accounting knowledge is beneficial to students, at least initially, even if the benefits may erode over time (Boshua and Van der Nest, 2015; Xiang and Gruber, 2012).

Academic Aptitude

Academic aptitude refers to a student's ability to absorb and retain information, encompassing cognitive skills that contribute to academic success (Thompson and Zamboanga, 2004). It serves as a proxy for intelligence, commitment, and diligence (Auyeung and Sands, 1994; Seow et al., 2014).

Various proxies have been used to measure academic aptitude and examine its impact on academic performance. Common measures include university entrance examinations (Schroeder, 1986; Eskew and Faley, 1988; Rankin et al., 2003) and Grade Point Average (GPA) or the South African academic performance score (APS) based on high school performance (Doran et al., 1991; Van Rensburg et al., 1998; Koh and Koh, 1999; Tickell and Smyrnios, 2005). Some studies also use a dummy variable for accounting as a major to proxy academic aptitude (Doran et al., 1991).

Many of the reviewed studies highlight the substantial role played by academic aptitude as a predictor of academic performance in accounting, with some researchers even regarding it as the most influential factor (Doran et al., 1991; Seow et al., 2014). The significance of academic aptitude has been reinforced by several studies (Koh and Koh, 1999; Rohde and Kavanagh, 1996; Rankin et al., 2003; Tickell and Smyrnios, 2005; Byrne and Flood, 2008). Nonetheless, it is crucial to interpret academic aptitude in conjunction with motivation and other non-cognitive variables such as expectations (Tepper and Yourstone, 2015).

This will enable a more comprehensive understanding of the predictors of academic performance in accounting.

Mathematics at School

Accounting has its roots in mathematics, particularly arithmetic (Sangster, Stoner, and McCarthy, 2008). Numerical understanding is thus essential for success in accounting studies (Collier and McGowan, 1989). In South Africa, mathematics is a prerequisite for undergraduate accounting studies.

The potential impact of mathematical ability (prior knowledge of mathematics) was recognised by Mitchell (1985), who recommended including a proxy for mathematics performance in studies on predictive factors of success in accounting. Mitchell (1988) later concluded that students who did not complete high school mathematics were at higher risk of underperforming in university-level accounting. Subsequent studies concluded that mathematical aptitude (sometimes referred to as numerical aptitude) served as a significant predictor (Eskew and Faley, 1988; Farley and Ramsey, 1988; Gul and, Fong 1993; Tho, 1994; Seow, Pan, and Tay, 2014). Van Rensburg et al. (1998) included mathematics as a predictive factor in a South African study but did not report its significance. Boshua and Van der Nest (2015) found mathematics to be a significant predictor of academic success in South African accounting.

While most studies confirmed the significant influence of prior mathematical knowledge, contradictory findings were also reported, making the findings inconclusive without considering the specific study contexts (Keef, 1988; Bartlett et al., 1993; Lane and Porch, 2002b).

Language

Language skills, including speaking, writing, and understanding, are part of cognitive abilities and play a crucial role in academic progress. Comprehension of spoken and written language is necessary to learn from lectures, textbooks, and assessments. Cognition encompasses a student's ability to regulate and evaluate comprehension, referred to as meta-comprehension (Schleifer and Dull, 2009). Second language learners, who constantly evaluate their understanding of both language and concepts, are often more cognitively and metacognitively engaged (Tan and Laswad, 2008).

Gender

Strategy knowledge – as part of metacognition – includes learning strategies, time management, allocation of resources, and monitoring and evaluation of the learning processes used (Dochy and Alexander, 1995). The learning approaches of male and female students tend to differ (Elias, 2005); it is thus pertinent to determine the effect of gender on academic performance in introductory accounting, as this may influence the accounting pedagogy. The inclusion of gender as a variable in regression models has also resulted in numerous contradictory findings, which has led to the formation of three schools of thought:

- men outperform women (Bartlett et al., 1993; Koh and Koh, 1999; Lipe, 1989; Seow et al., 2014);
- women outperform men (Mutchler, Turner and Williams, 1987; Tyson, 1989; Tan and Laswad, 2008); and
- gender is an insignificant variable with little explanatory value for variance in performance (Eskew and Faley, 1988; Buckless, Lipe and Ravenscroft, 1991; Carpenter, Friar and Lipe, 1993; Tho, 1994; Gist, Goedde and Ward, 1996; Lee, 1999; Tickell and Smyrnios, 2005; McDowall and Jackling, 2006; Byrne and Flood, 2008).

The results from prior research render the effect of gender inconclusive.

Motivation

Metacognitive knowledge encompasses learning strategies, self-regulation, preferences, attitudes, and motivation (Winne, 1995). Motivation is a broad construct that has been highlighted in the literature, and the inclusion of a proxy for motivation has been recommended (Bartlett et al., 1993; Doran et al., 1991; Mitchell, 1988; Xiang and Gruber, 2012). Various proxies have been used to measure it, including majoring in accounting, the number of assessments, self-expectation of the examination, degree programme and tutorial attendance, interest in accounting, self-efficacy, and student motivation (Schroeder, 1986; Tan and Laswad, 2008; Eskew and Faley, 1988; Gul and Fong, 1993; Rankin et al., 2003; Tickell and Smyrnios, 2005; Byrne and Flood, 2008; Tepper and Yourstone, 2015; Viviers, De Villiers and Van der Merwe, 2022).

The inclusion of variables related to motivation gained traction in the

1990s. Gul and Fong (1993) included self-expectation of examination results as a proxy for self-efficacy in their regression analysis, although its timing was a limitation.

Academic self-efficacy is associated with improved use of metacognitive strategies, assisting students in adapting and mastering unfamiliar concepts (Byrne and Flood, 2008; Schleifer and Dull, 2009). Positive correlations have been confirmed between self-efficacy and academic performance (Tepper and Yourstone, 2015; Joynt, 2022; Viviers et al., 2022).

Byrne et al. (2014) included student motivation and self-efficacy specific to accounting and found that the latter was a stronger predictor of academic success than university entry scores. This aligns with prior research that highlights self-efficacy as a significant predictor of performance (Pintrich and De Groot, 1990).

Studies measuring motivation to learn in accounting have yielded inconclusive results on its significance as a predictor of academic performance. Positive attitudes towards accounting, major field of study, tutorial attendance, and interest in accounting have been used as proxies for motivation to learn, showing varying levels of significance (Lane and Porch, 2002b; Rankin et al., 2003; Tickell and Smyrnios, 2005). However, some studies found no difference in accounting performance between students intending to major in accounting and those in other business disciplines (Tan and Laswad, 2008).

Age

Research indicates an indirect relationship between age and metacognitive ability (Palmer, David and Fleming, 2014). Age is not often a variable of interest in studies as most university students enrol immediately after high school, typically between the ages of 18 and 19. However, understanding the metacognitive abilities associated with different age groups can help to set realistic expectations. Some studies have included age as a covariate to examine its impact on prior accounting knowledge. Koh and Koh (1999) found that it was a significant determinant of academic performance in accounting, while Lane and Porch (2002a, 2002b) reported that older students outperformed younger ones. Conversely, Tickell and Smyrnios (2005) and Tan and Laswad (2008) found age to be an insignificant predictor.

Given that most studies focus on first-year students age is generally not considered a significant predictor.

Socio-economic Status

Metacognitive skills are influenced by the learning environment and socio-economic factors, which can impact how students learn and their readiness for university (Shaw, 2001). However, these variables have not been extensively used as determinants of academic performance. Some studies employed the type of school attended (private or public) and residential status as control variables to isolate the effect of prior accounting knowledge (Bartlett et al., 1993; Lee, 1999; Tickell and Smyrnios, 2005). The results are inconclusive, with Bartlett et al. (1993) and Tho (1994) finding them insignificant, while Lee (1999) and Tickell and Smyrnios (2005) reported a significant relationship between the type of school attended and the effect of prior accounting knowledge. In other disciplines such as mathematics, socio-economic factors were not significant predictors of academic success in the first year (Laging and Voßkamp, 2017).

Other

Among the reviewed studies, Jackling and Wigg (1997) were the pioneers in broadening the range of predictive factors by investigating the influence of memory. Their findings revealed that when students perceive accounting as challenging, they tend to rely on memorisation, which adversely affects their learning strategies and leads to surface-level learning. Additional predictors explored in later studies include personality types (Oswick and Barber, 1998; Bealing Jr, Staley and Baker, 2009; Papageorgiou and Callaghan, 2018), extracurricular activities (Wooten, 1998), the impact of class attendance (Steenkamp, Baard and Frick, 2009; Baard, Steenkamp, Frick and Kidd, 2010), and grit (Vinson, McMillan and Schleifer, 2022). By considering the potential effects of generic skills and employing more metacognitive strategies, educators can gain a better understanding of these crucial determinants of academic performance and implement appropriate strategies to promote awareness among students.

The Expansion of Rankin's Theoretical Framework

Authors such as Ausubel (1963) and Alexander, Kulikowich, and Schulze (1994) have emphasised the importance of prior knowledge as a key factor in academic performance. Prior knowledge encompasses the essential knowledge, skills, and competencies necessary to learn new tasks (Bloom, 1976). Dochy and Alexander (1995) define it as a person's entire knowledge, existing in multiple states with explicit and tacit components, including conceptual and metacognitive aspects.

The theoretical framework developed by Rankin et al. (2003) initially categorised prior knowledge into content knowledge and metacognitive knowledge. However, the expanded theory proposes three divisions: cognition (Anderson, 1996), self-regulated learning (Boekaerts, 1999), and motivation (Pintrich and De Groot, 1990). Cognition encompasses attributes and skills acquired from birth, including language, memory, problem-solving and critical thinking. Metacognitive knowledge involves being aware of one's cognitive processes and self-regulated learning strategies. Motivation, including expectancy and value, plays a crucial role in utilising cognitive and metacognitive strategies.

Factors such as accounting and mathematics performance at school, academic aptitude, language effect, and motivation have been identified as influencing academic performance in introductory accounting. Other studies explored the impact of gender, age, and socio-economic status. Rankin et al.'s (2003) framework made a significant contribution by explaining inconsistencies in previous findings. The current study expands on this framework, incorporating constructs from psychology and educational psychology to enhance our understanding of the factors related to academic performance.

Drawing on studies and seminal papers in psychology and educational psychology, the expanded theoretical framework presented in Figure 3 provides a synopsis of the relationships of each of the predictors of academic success and prior knowledge, cognition, and self-regulated learning. The constructs from these fields are indicated in italics in Figure 3.

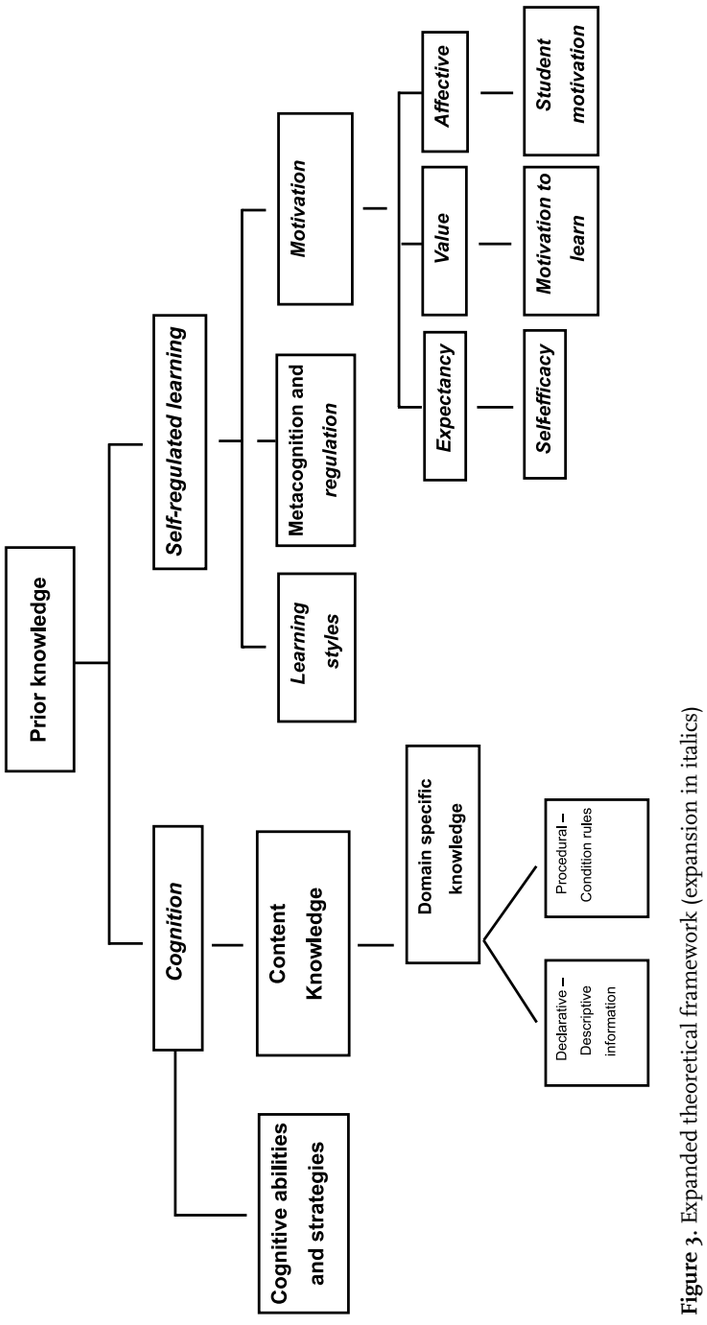

Figure 3. Expanded theoretical framework (expansion in italics)

Research Gaps

Prior Knowledge: Accounting at School

The assertion that prior knowledge is a significant predictor of academic performance in the first year of accounting can be supported by empirical evidence and research findings.

However, it is important to note that the literature review indicated a lack of recent studies on accounting at school level as a proxy for prior knowledge. As curricula and educational systems evolve over time, it is plausible that the relevance and content of accounting education at secondary school level may have changed. Furthermore, tertiary accounting education might also have undergone modifications.

Therefore, it is suggested that researchers frequently examine the impact of prior knowledge on academic performance in accounting and remain knowledgeable about the extent of overlap between school and tertiary accounting curricula. By conducting regular assessments, researchers can ensure that their findings are up-to-date and relevant to the current educational context. This approach will enhance understanding of the role of prior knowledge in accounting education.

Language of Tuition vs Home Language

The impact of mother-tongue versus non-mother-tongue education has been extensively studied. Although not included in this review, Nyika (2015) reports that using a second language as the medium of instruction may contribute to poorer performance in some universities in developing countries. It is generally recognised that students studying in their mother tongue have an advantage over those studying in a second or third language. Second-language accounting students may encounter language-related comprehension difficulties, leading to suggestions for language and reading comprehension instruction in accounting courses (Janse van Rensburg, Coetzee and Schmulian, 2014). When the language of instruction aligns with a student's home language, information reception and sharing are enhanced (Sugahara, Suzuki and Boland, 2012). Conversely, second-language accounting students may face academic challenges when the language of instruction differs from their home language (Coetzee and Schmulian, 2013). It is thus suggested that researchers explore the extent of first-year accounting students' reading comprehension as well as possible strategies to address the reading comprehension of a diverse cohort of students.

Socio-economic Status

Socio-economic status encompasses various factors that can directly impact academic performance. In countries like South Africa, inequality between the poor and the wealthy is apparent in the quality of education provided. South Africa's school education system is divided into five quintiles, indicating the level of dependence on government funding. Quintile 5, representing the highest level, receives less government support, indicating that households associated with these schools generally have higher disposable incomes than those in quintile 1 schools, which are typically located in townships. Consequently, there is a need for research on the effects of school quintiles in South Africa (or similar educational structures in other developing nations) as predictors of academic performance in accounting.

Other Generic Skills and Traits

The education landscape has undergone significant changes due to the impact of the COVID-19 pandemic. Disruptive events like pandemics, wars, political unrest and natural disasters serve as external shocks to the education system. Is there a way to better equip students and educators to cope with such events? While several studies have examined generic skills, to date, only one has investigated the importance of grit (Vinson, McMillan and Schleifer, 2022). Raising awareness of traits such as grit and intellectual perseverance may help to mitigate the negative effects of uncontrollable circumstances.

Despite growing recognition of the importance of critical thinking in education, none of the studies examined in this review considered critical reasoning as a predictor of academic performance. However, there is an increasing trend towards incorporating it in accounting education.

Conclusion

Since the 1960s, numerous studies have been conducted to examine the factors that predict academic success in introductory accounting, with the aim of supporting educators in both schools and universities. This study contributes to the body of knowledge by expanding the existing theoretical framework and presenting a comprehensive descriptive-analytical narrative of the factors associated with academic performance in introductory accounting.

Although there are some contradictory findings, the majority of the studies reviewed support a positive association between prior knowledge of accounting, mathematics, and academic aptitude. The variations in these findings can be attributed to factors such as the alignment of the accounting curriculum between schools and universities, the types of assessment used, and differences in learning approaches.

Motivation and academic aptitude are acknowledged as important factors affecting academic performance in introductory accounting. However, it is essential for researchers to provide clear definitions and delineate the specific motivational constructs they investigate, as the existing literature in this field often lacks precision and refinement. To improve future research, it is recommended that validated instruments from the field of psychology be used to measure motivational constructs. This approach could enhance our understanding of motivation as a predictor of academic performance

The study's findings have practical implications for educators, decision-makers, and career guidance advisors. The research highlights the importance of addressing student perceptions of accounting as a challenging subject and emphasises the need to create diverse learning opportunities to support students with varying levels of prior knowledge. Furthermore, policy-makers are encouraged to promote the inclusion of accounting in school curricula, ensure alignment between school and university accounting programmes, and emphasise mathematics as a prerequisite for accounting studies. This is crucial in South Africa given the significant shortage of finance skills in the country.

In summary, this study contributes to the understanding of the factors that influence academic performance in introductory accounting. It highlights the importance of prior knowledge, mathematics proficiency, motivation, and academic aptitude. By addressing curriculum alignment, assessment methods, and learning approaches, educators and policymakers can enhance the quality of accounting education and better support students in achieving academic success.

References

Alexander, P.A., Kulikowich, J.M., and Schulze, S.K. (1994). The influence of topic knowledge, domain knowledge, and interest on the comprehension of scientific exposition. *Learning and Individual Differences 6*(4), 379-397.

Anderson, J.R. (1996). *The architecture of cognition* (Vol. 5). Psychology Press.

Arquero, J.L., Byrne, M., Flood, B., and González, J.M. (2009). Motives, expectations, preparedness and academic performance: a study of students of accounting at a Spanish university. *Accounting Review 12*(2), 279-300.

Ausubel, D.P. (1963). *The psychology of meaningful verbal learning*. Oxford: Grune and Stratton.

Auyeung, P.K., and Sands, D.F. (1994). Predicting success in first-year university Accounting using gender-based learning analysis. *Accounting Education 3*(3), 259-272.

Baard, R.S., Steenkamp, L.P., Frick, B.L., and Kidd, M. (2010). Factors influencing success in first-year Accounting at a South African university: The profile of a successful first-year Accounting student. *South African Journal of Accounting Research 24*(1), 129-147.

Baldwin, B.A., and Howe, K.R. (1982). Secondary-level study of Accounting and subsequent performance in the first college course. *The Accounting Review 57*(3), 619-627. Available at: http://eds.a.ebscohost.com.uplib.idm.oclc.org/ehost/pdfviewer/pdfviewer?sid=d61d8df9-3c45-40d0-a762-f10720a430b6%2540sessionmgr4007&vid= 1&hid=4110 (Accessed: 24 August 2016).

Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology 4*(3), 359-373.

Bartlett, S., Peel, M.J., and Pendlebury, M. (1993). From fresher to finalist. *Accounting Education* 2(2), 111-122.

Bealing Jr, W.E., Staley, A.B., and Baker, R.L. (2009). An exploratory examination of the relationship between a short form of the Keirsey Temperament Sorter and success in an introductory accounting course: A research note. *Accounting Education: An International Journal 18*(3), 331-339.

Bloom, B.S. (1976). *Human characteristics and school learning*. New York, NY: McGraw-Hill.

Boekaerts, M., (1999). Self-regulated learning: Where we are today. *International Journal of Educational Research 31*(6), 445-457.

Bouillon, M.L., Doran, B.M., and Smith, C.G. (1990). Factors that predict success in principles of accounting classes. *Journal of Education for Business 66*(1), 23-27.

Brophy, J. (1983). Conceptualizing student motivation. *Educational Psychologist 18*, 200-215.

Brophy, J. (1986). *On motivating students*. Occasional Paper No. 101. East Lansing, MI: Institute for Research on Teaching, Michigan State University.

Buckless, F.A., Lipe, M.G., and Ravenscroft, S.P. (1991). Do gender effects on Accounting course performance persist after controlling for general academic aptitude? *Issues in Accounting Education 6*(2), 248-261.

Byrne, M., and Flood, B. (2008). Examining the relationships among background variables and academic performance of first year Accounting students at an Irish University. *Journal of Accounting Education 26*, 202-212. doi: 10.1016/j.jaccedu.2009.02.001

Byrne, M., Flood, B., and Griffin, J. (2014). Measuring the academic self-efficacy of first-year Accounting students. *Accounting Education 23*(5), 407-423.

Canlar, M., and Bristol, J.T. (1988). Female and male undergraduate Accounting students. *The Woman CPA 50*(2, April), 20–23.

Carpenter, V.L., Friar, S., and Lipe, M.G. (1993). Evidence on the performance of Accounting students: race, gender, and expectations. *Issues in Accounting Education 8*(1), 1-17.

Coetzee, S.A., and Schmulian, A. (2013). The effect of IFRS adoption on financial reporting pedagogy in South Africa. *Issues in Accounting Education 28*(2), 243-251. doi: 10.2308/iace-50386

Collier, H., and McGowan, C. (1989). An empirical examination of the relationship between mathematic skills and course grade in Intermediate Accounting I. *The Accounting Educators' Journal 2*, 78-86.

Council on Higher Education (CHE). (2017). *Briefly speaking (2): Educational pathways*. Available at: http://www.che.ac.za/sites/default/files/publications/BrieflySpeaking%20%282%29%20Educational%20pathways.pdf (Accessed: 10 October 2018).

Deci, E., and Ryan, R. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York, NY: Plenum.

Deci, E., and Ryan, R. (n.d). *Theory overview*. Available at www.selfdetermination theory.org/theory/ (Accessed: 14 September 2016).

Department of Basic Education. (2012). *National Senior Certification Examination: Schools Subject Report*. Availableathttps://www.education.gov.za/Portals/0/Documents/Reports/NSC%20School%20subject%20report%202012%20(2).pdf?ver=2013-03-12-225552-000 (Accessed: 29 June 2021)

Department of Basic Education. (2020). *National Senior Certification Examination: Schools Subject Report*. Available at https://www.education.gov.za/Portals/0/Documents/Reports/2021%20NSC%20Reports/School%20Subject%20Report%202020%20Final.pdf?ver=2021-02-22-173254-820 (Accessed: 29 June 2021)

Department of Higher Education and Training. (2020). *The 2020 List of Occupations in High Demand: A Technical Report*. Available at https://www.dhet.gov.za/SiteAssets/Latest%20News/November%202020/The%202020%20List%20of%20Occupations%20in%20High%20Demand-%20A%20Technical%20Report.pdf (Accessed: 28 June 2021).

Statistics South Africa. (2023). *Quarterly Labour Force Survey (QLFS) – Q1:2023*. Available at https://www.statssa.gov.za/publications/P0211/P02111stQuarter2023.pdf (Accessed: 2 June 2023).

Dochy, F.J., and Alexander, P.A. (1995). Mapping prior knowledge: A framework for discussion among researchers. *European Journal of Psychology of Education 10*(3), 225-242.

Doran, B.M., Bouillon, M., and Smith, C.G. (1991). Determinants of student performance in Accounting Principles I and II. *Issues in Accounting Education 6*(1),74-84. Available at: http://eds.b.ebscohost.com.uplib.idm.oclc.org/ehost/pdfviewer/pdfviewer?vid=4&sid=2baf0062-efb1-4fa8-bdc6-d1baaacfabd5%2540sessionmgr106&hid=114

Duff, A. (2004). Understanding academic performance and progression of first-year accounting and business economics undergraduates: The role of approaches to learning and prior academic achievement. *Accounting Education 13*(4), 409-430.

Duff, A., and Mladenovic, R. (2015). Antecedents and consequences of accounting students' approaches to learning: A cluster analytic approach. *The British Accounting Review 47*(3), 321-338.

Dull, R.B., Schleifer, L.L.F., and McMillan, J.J. (2015). Achievement goal theory: the relationship of Accounting students' goal orientations with self-efficacy, anxiety, and achievement. *Accounting Education 24*(2), 152-174. doi: 10.1080/09639284.2015.1036892

Elias, R.Z. (2005). Students' approaches in introductory Accounting courses. *Journal of Education for Business 3-4*, 194-199.

Eskew, R.K., and Faley, R.H. (1988). Some determinants of student performance in the first college-level Financial Accounting course. *The Accounting Review 63*(1), 137-147.

Farley, A.A., and Ramsay, A.L. (1988). Student performance in first year tertiary Accounting courses and its relationship to secondary Accounting education. *Accounting and Finance 28*(1), 29-44.

Fraser, A.A., Lyttle, R., and Stolle, C. (1978). Profile of female Accounting majors: academic performance and behavioral characteristics. *The Woman CPA October*, 18-21.

Friedlan, J.M. (1995). The effects of different teaching approaches on students' perceptions of the skills needed for success in accounting courses and by practicing accountants. *Issues in Accounting Education 10*(1), 47-63.

Gist, W.E., Goedde, H., and Ward, B.H. (1996). The influence of mathematical skills and other factors on minority student performance in Principles of Accounting. *Issues in Accounting Education 11*(1), 49-60. Available at: http://search.proquest.com/docview/210932176?accountid=14717 (Accessed: 12 October 2015).

Goldstein, J., Sauer, P., and O'Donnell, J. (2014). Understanding factors leading to participation in supplemental instruction programs in introductory accounting courses. *Accounting Education 23*(6), 507-526.

Gul, F.A., and Fong, S.C.C. (1993). Predicting success for introductory Accounting students: some further Hong Kong evidence. *Accounting Education 2*(1), 33-42. doi: 10.1080/ 0963928930000003

Jackling, B., and Wigg, R. (1997). A multicampus study of first year accounting: An Australian study. *Asian Review of Accounting 5*(1), 126-146.

Jacoby, C.R. (1975). *The effects of teaching methods and experiences in achievement of Business students in the first college level Accounting course*. Unpublished doctoral dissertation. Pennsylvania State University, State College, PE.

Janse van Rensburg, C., Coetzee, S.A., and Schmulian, A. (2014). South African financial reporting students' reading comprehension of the IASB Conceptual Framework. *Journal of Accounting Education 32*(4), 1-15. doi: 10.1016/j.jaccedu.2014.10.003

Joynt, C. (2022). How to assess the effectiveness of accounting education interventions: Evidence from the assessment of a bridging course before introductory accounting. *Meditari Accountancy Research 30*(7), 237-255.

Keef, S.P. (1988). Preparation for a first level university Accounting course: The experience in New Zealand. *Journal of Accounting Education 6*, 293-307.

Keef, S.P. (1992). The effect of prior Accounting education: Some evidence from New Zealand. *Accounting Education 1*(1), 63-68.

Keef, S.P., and Hooper, K.C. (1991). Prior Accounting education and performance in a first-level university course in New Zealand. *Accounting and Finance 31*(1), 85-91.

Koh, M.Y., and Koh, H.C. (1999). The determinants of performance in an Accountancy degree programme. *Accounting Education 8* (Nanyang Business School, Nanyang Technological University), 13-29. doi: 10.1080/096392899331017

Laging, A., and Voßkamp, R. (2017). Determinants of maths performance of first-year business administration and economics students. *International Journal of Research in Undergraduate Mathematics Education 3*(1), 108-142.

Lane, A., and Porch, M. (2002a). Computer Aided Learning (CAL) and its impact on the performance of non-specialist Accounting undergraduates. *Accounting Education 11*(3), 217-233.

Lane, A., and Porch, M. (2002b). The impact of background factors on the performance of non-specialist undergraduate students on Accounting modules – a longitudinal study: a research note. *Accounting Education: An International Journal 11*(1), 109-118.

Lee, D.S.Y. (1999). Strength of high school Accounting qualification and student performance in university-level introductory Accounting courses in Hong Kong. *Journal of Education for Business 74*(5), 301-306.

Lipe, M.G. (1989). Further evidence on the performance of female versus male Accounting students. *Issues in Accounting Education 4*(1), 144-152.

Loveday, P.M. (1993). Exemptions from first semester Accounting and performance in the second semester course: an empirical study. *Accounting Education 2*(2), 143-150.

Lucas, U. (2000). Worlds apart: Students' experiences of learning introductory Accounting. *Critical Perspectives on Accounting 11*(11), 479-504.

Lucas, U. (2001). Deep and surface approaches to learning within introductory Accounting: a phenomenographic study. *Accounting Education: An International Journal 10*(2), 161-184.

Lucas, U., and Meyer, J.H.F. (2005). 'Towards a mapping of the student world': the identification of variation in students' conceptions of, and motivations to learn, Introductory Accounting. *British Accounting Review 37*(2), 177-204.

Lynn, B., Shehata, M., and White, L. (1994). The effects of secondary school Accounting education in university Accounting performance – a Canadian experience. *Contemporary Accounting Research 10*(2), 737-758.

McDowall, T., and Jackling, B. (2006). The impact of computer-assisted learning on academic grades: An assessment of students' perceptions. *Accounting Education 15*(4), 377-389. doi: 10.1080/09639280601011065

Mitchell, F. (1985). School Accounting qualifications and student performance in first level university Accounting examinations. *Accounting and Business Research 58*(15), 81-86.

Mitchell, F. (1988). High school Accounting and student performance in the first level university Accounting course: A UK study. *Journal of Accounting Education 6*(2), 279-291.

Mladenovic, R. (2000). An investigation into ways of challenging Introductory Accounting students' negative perceptions of Accounting. *Accounting Education 9*(2), 135-155.

Mutchler, J.F., Turner, J.H., and Williams, D.D. 1987. The performance of female versus male Accounting students. *Issues in Accounting Education Spring*, 103-111.

Nyika, A. (2015). Mother tongue as the medium of instruction at developing country universities in a global context. *South African Journal of Science 111*(1–2), 1-6. doi: 10.17159/sajs.2015/20140005

Oswick, C., and Barber, P. (1998). Personality type and performance in an introductory level accounting course: A research note. *Accounting Education 7*(3),249-254.

Pajares, F., and Schunk, D.H. (2002). Self and self-belief in psychology and education: a historical perspective. In Aronson, J. (ed.) *Improving academic achievement: impact of psychological factors on education*. New York, NY: Academic Press.

Palmer, E.C., David, A.S., and Fleming, S.M., (2014). Effects of age on metacognitive efficiency. *Consciousness and Cognition 28*, 151-160.

Papageorgiou, E., and Callaghan, C.W. (2018). Personality and adjustment in South African higher education accounting studies. *South African Journal of Accounting Research 32*(2-3), 189-204.

Papageorgiou, E., and Callaghan, C.W. (2020). Accountancy learning skills and student performance in accounting education: evidence from the South African context. *Accounting Education 29*(2), 205-228.

Pintrich, P.R., and de Groot, E.V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology 82*(1), 33-40. doi: 10.1037/0022-0663.82.1.33

Rankin, M., Silvester, M., Vallely, M., and Wyatt, A. (2003). An analysis of the implications of diversity for students' first level Accounting performance. *Accounting and Finance 43*(3), 365-393. doi: 10.1111/j.1467-629x.2003.00096.x

Rohde, F.H., and Kavanagh, M. (1996). Performance in first year university Accounting: Quantifying the advantage of secondary school Accounting. *Accounting and Finance 36*(2), 275-285. doi: 10.1111/j.1467-629X.1996.tb00311.x

Rowlands, J.E. (1988). The effect of secondary school Accounting study on student performance in the first year university Financial Accounting course. *De Ratione 2*(2), 17-21.

Sangster, A., Stoner, G.N., and McCarthy, P. (2008). The market for Luca Pacioli's *Summa Arithmetica*. *Accounting Historians Journal 35*(1), 111-134.

Schleifer, L.L.F., and Dull, R.B. (2009). Metacognition and performance in the Accounting classroom. *Issues in Accounting Education 24*(3), 339-367.

Schroeder, N.W. (1986). Previous Accounting education and college-level Accounting exam performance. *Issues in Accounting Education 1*(1), 37-47.

Schunk, D.H. (1991). Self-efficacy and academic motivation. *Educational Psychologist 26*, 207-231.

Seow, P., Pan, G., and Tay, J. (2014). Revisiting the determinants of student performance in an undergraduate accountancy degree programme in Singapore. *Global Perspectives on Accounting Education 11*, 1-23.

Schleifer, L.L., and Dull, R.B., (2009). Metacognition and performance in the accounting classroom. *Issues in Accounting Education 24*(3), 339-367.

Sharma, D.S. (1997). Accounting students' learning conceptions, approaches to learning, and the influence of the learning-teaching context on approaches to learning. *Accounting Education 6*(2), 125-146.

Shaw, G. (2001) Promoting general metacognitive awareness. In Hartman, H.J. (ed.) *Metacognition in learning and instruction: Theory, research and practice* (Vol. 19). Springer Science and Business Media.

Smith, J.W. (1968). *Articulation of high school bookkeeping and college elementary Accounting*. Unpublished doctoral thesis. Norman, OK: University of Oklahoma Graduate College.

Solberg, V.S., O'Brien, K., Villareal, P., Kennel, R., and Davis, B. (1993). Self-efficacy and Hispanic college students: Validation of the college self-efficacy instrument. *Hispanic Journal of Behavioural Sciences 15*(1), 80-95.

Steenkamp, L.P., Baard, R.S., and Frick, B.L. (2009). Factors influencing success in first-year accounting at a South African university: A comparison between lecturers' assumptions and students' perceptions. *South African Journal of Accounting Research 23*(1), 113-140.

Sugahara, S., Suzuki, K., and Boland, G. (2012). Students' major choice in Accounting and its effect on their self-efficacy towards generic skills: An Australian study. *Asian Review of Accounting 18*(2), 131-147.

Annex 1: Predictors of success in Accounting identified in the prior literature

Author(s)	High school Accounting (prior knowledge)	Academic aptitude	Mathematics at school	Language	Gender	Motivation	Age	Socio economic status	Other
Smith (1968)	Significant	-	-		-	-	-	-	
Jacoby (1975)	Initially significant, eroded	-	-		-	-	-	-	
Baldwin and Howe (1982)	Insignificant	-	-		-	-	-	-	
Mitchell (1985)	Significant	-	Inclusion recommended		-	-	-	-	
Schroeder (1986)	Significant (if longer than 1 year)	Significant	-		-	Significant (Academic major)			
Eskewand Faley (1988)	Significant	Significant	Significant		Insignificant	Significant (Number of assessments)	-	-	
Farleyand Ramsey (1988)	Significant	Significant	Significant		-	-	-	-	
Keef (1988)	Insignificant	-	Insignificant		-	-	-	-	
Mitchell (1988)	Inconclusive	-	Significant		-	Inclusion recommended			
Rowlands (1988)	Significant (eroded)								
Bouillon, Doranand Smith (1990)	Significant (only 1st year)	Significant				Majoring in Accounting (significant)			
Doranet al (1991)	Significant	Significant			Males outperformed females	Inclusion recommended			
Keef and Hooper (1991)	Significant	-	-		-	-	-	-	
Keef (1992)	Insignificant (if > one year)	-	-		-	-	-	-	
Bartlettet al. (1993)	Significant (quickly eroded)	Insignificant	Insignificant (used as proxy for academic aptitude)		Inconclusive	Inclusion recommended	-	Insignificant (type of school)	
Gul andFong (1993)	Significant	-	Significant		-	Significant (self expectation of exam)	-	-	
Loveday (1993)	Significant	-	-		-	-	-	-	

Author(s)	High school Accounting (prior knowledge)	Academic aptitude	Mathematics at school	Language	Gender	Motivation	Age	Socio economic status	Other
Auyeungand Sands (1994)	Significant (surface learning)	Significant	Significant	-	Significant (Males)			Inclusion of socio-economic factors recommended	
Lynn, Shehata andWhite (1994)	Significant (level at school)	-	-		-	-	-	-	
Tho (1994)	Significant	-	Significant		Insignificant	-	-	Insignificant (residential status)	
Rohdeand Kavanagh (1996)	Significant	Significant	-		-	-	-	-	
Gist, Goedde, Ward (1996)	-	Significant	Significant		Insignificant	-	-	-	
Jacklingand Wigg (1997)	Significant	Significant			Insignificant	Significant			Memory
Oswickand Barber (1998)	-	-	-	-	-	-	-	-	Personality type (MBTI) (insignificant)
Van Rensburg, Pennand Haiden (1998)	Significant	Included							
Wooten (1998)	-	Significant	-	-	-	Effort (significant) Classroom environment	-	-	Family activities Work activities Extracurricular activities
Koh andKoh (1999)	Insignificant	Significant			Significant (males better than females)	-	Significant	-	
Lee (1999)	Significant	-	-		Insignificant	-	-	Significant (type of school)	
Laneand Porch (2002a)	-	Significant	-		-	-	Significant (older)	-	
Laneand Porch (2002b)	-	Insignificant	Insignificant			Significant (attitude)	Significant (older)		
Rankin, Silvester, Vallely and Wyatt (2003)	Significant	Significant	-		-	Significant (degree andnumber of tutorials)	-	-	

Author(s)	High school Accounting (prior knowledge)	Academic aptitude	Mathematics at school	Language	Gender	Motivation	Age	Socio economic status	Other
Duff (2004)		Significant							Study pathologies: effective vs ineffective learners
Tickell and Smyrnios (2005)	Significant	Significant	-		Insignificant	Significant (interest in Accounting)	Insignificant	Significant (Type of school)	
McDowall and Jackling (2006)	Insignificant	-	-		Insignificant	-	-	-	
Byrne and Flood (2008)	Insignificant	Significant	-		Insignificant	Significant (Self-efficacy and Motivation to learn (Value))	-	-	
Tan and Laswad (2008)	Significant	-	-		Significant (females better than males)	Insignificant (intention to major in Accounting)	Insignificant	Significant (Language)	
Arquero, Byrne, Flood and Gonzalez (2009)	Significant	Significant				Strong interest in Accounting as a career (significant) Self-efficacy			
Bealing Jr, Staley and Baker (2009)	-	-	-	-	-	-	-	-	Personality Type (Keirsey Temperament Sorter) (Significant)
Schleifer and Dull (2009)	-	-	-	-	Significant	Significant (Metacognitive attributes)			
Steenkamp, Baard and Frick (2009)	Significant			Significant (Home language)					Class attendance (significant)
Baard, Steenkamp, Frick and Kidd (2010)	Significant	Significant	Significant	Significant (Home language)					Class attendance (significant) Degree programme
Xiang and Gruber (2012)	Significant (eroded)	-	-		-	Inclusion recommended	-	-	
Janse van Rensburg,	-	-	-	Significant	-	-	-	-	

Author(s)	High school Accounting (prior knowledge)	Academic aptitude	Mathematics at school	Language	Gender	Motivation	Age	Socio economic status	Other
Coetzee and Schmulian, (2014)									
Seow, Pan and Tay (2014)		Significant	Significant		Significant (males better than females)	-	-	-	
Tepper and Yourstone (2015)		Significant				Self-efficacy (significant)			Non-cognitive variables (e.g. expecting a harder time studying Accounting)
Duff and Mladenovic (2015)					Inconclusive				Expectations or learning variables (insignificant)
Papageorgiou and Callaghan (2018)	-	-	-	-	-	-	-	-	Personality differences Conscientiousness (significant)
Papageorgiou and Callaghan (2020)	-	-	-	-	-	-	-	Significant (poor students)	Generic skills (significant) Race (insignificant)
Joynt (2022)	Significant	Significant	Significant	Insignificant	Insignificant	Self-efficacy (Significant)	Insignificant		
Vinson, McMillan and Schleifer (2022)	-	Significant	-	-	-	-	-	-	Grit (significant)
Viviers, De Villiers and Van der Merwe (2022)	-	-	-	-	-	Significant (Self-efficacy)	-	-	-

Faculty's Perspectives of/on Cultural Diversity Management in a Multicultural Classroom: The Case of a Ugandan University

Muhamadi Kaweesi, Justin Ayebare, Dennis Zami Atibuni and David Kani Olema

Abstract

Higher education institutions are changing fast in terms of the inclusion of international students. Consequently, faculty are expected to provide enabling learning environments and experiences for education in diversity. Based on the beliefs and practices of social constructivism philosophy and rooted in the interpretive paradigm, this article examines how faculty in a Ugandan university manage multicultural classes and their efforts to promote inclusive classes and curriculum. Qualitative research methods were employed with a sample of eight faculty. Data were collected by means of face-to-face individual semi-structured interviews that were triangulated with document checks. Data analysis followedGay's (2000) culturally responsive pedagogical framework, with faculty perspectives summarised in themes. The findings point to challenges in implementing a culturally relevant classroom management model, such as faculty's inability to fully multiculturalise due to inadequate knowledge of cultural minorities' backgrounds. However, they reveal that some faculty manage their classes adequately, show care and concern for non-Ugandan students, use several strategies to communicate with them, and endeavour to adjust to suit minority students' learning styles. The study suggests that much remains to be done to ensure inclusivity and to promote the social constructionist perspective that is inclusive in teaching and learning.

Keywords: cultural diversity, culturally relevant classroom management, managing diversity, culturally relevant teaching

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Résumé

Les établissements d'enseignement supérieur évoluent rapidement en termes d'inclusion d'étudiants internationaux. Par conséquent, les enseignants sont censés fournir des environnements d'apprentissage et des expériences favorables à l'éducation à la diversité. Basé sur les croyances et les pratiques de la philosophie du constructivisme social et ancré dans le paradigme interprétatif, cet article examine la manière dont les enseignants d'une université ougandaise gèrent les classes multiculturelles et leurs efforts pour promouvoir des classes et un programme d'études inclusifs. Des méthodes de recherche qualitatives ont été employées avec un échantillon de huit enseignants. Les données ont été collectées au moyen d'entretiens individuels semi-structurés en face à face, triangulés par des vérifications documentaires. L'analyse des données a suivi le cadre pédagogique culturellement réactif de Gay (2000), les perspectives des enseignants étant résumées sous forme de thèmes. Les résultats mettent en évidence les difficultés liées à la mise en œuvre d'un modèle de gestion de classe culturellement pertinent, notamment l'incapacité du corps enseignant à être pleinement multiculturel en raison d'une connaissance insuffisante des antécédents des minorités culturelles. Cependant, ils révèlent que certains professeurs gèrent leurs classes de manière adéquate, se soucient des étudiants non ougandais, utilisent plusieurs stratégies pour communiquer avec eux et s'efforcent de s'adapter aux styles d'apprentissage des étudiants des minorités. L'étude suggère qu'il reste beaucoup à faire pour garantir l'inclusivité et promouvoir la perspective constructionniste sociale qui est inclusive dans l'enseignement et l'apprentissage.

Mots clés : diversité culturelle, gestion de classe adaptée à la culture, gestion de la diversité, enseignement adapté à la culture

Introduction

Cultural diversity management has become a reality in many universities due to the internationalisation of higher education (HE) and, in particular, the mobility of students pursuing their studiesacross borders. This concept has expanded dramatically, gaining volume and scope with globalisation that has accelerated the movement of people, encounters with other cultures, sharing of knowledge and technologies across

borders, and interconnectedness (Marginson, 2010). In 2006, Altbach reported that more than two million HE students were studying outside their home countries (Altbach, 2006) and in 2017, it was reported that more than 5.09 million students were pursuing HE in foreign countries (UNESCO Institute for Statistics [UIS], 2018).

Although the most common direction of cross-border student movement is from developing to developed countries (Varghese, 2020), South-South, and North-South flows are also increasing (Ssempebwa, Edwan and Mulumba, 2012). Even top international student-receiving countries in the North are now encouraging their young people to study abroad, especially at higher education institutions (HEIs) in middle- and low-income countries(Altbach, 2006; Brooks and Waters, 2009). According to Bourn (2011), this trend has been heightened by the desire to become more globally aware, acquire intercultural skills, and learn other languages. As such, the number of students from multicultural backgrounds continues to grow in Ugandan universities, with a sizable majority concentrated in private universities (European University Association [EUA], 2012).

In Uganda, this trend has also been occasioned by the expansion of the liberalised HE sector that has encouraged universities to look to foreign students as a source of income. For example, 48% of student enrolment at Kampala International University (KIU) in the 2013/2014 academic year was international students (National Council for Higher Education [NCHE], 2014), while during the 2019/2020 academic year, international students accounted for 2,599 of the total student population of 10,245 at the Islamic University in Uganda (IUIU) (IUIU, 2019b). These students mainly hailed from Rwanda, Kenya, Nigeria, Somalia, Nigeria, the Democratic Republic of Congo, Eritrea, Sudan, Japan, and Norway (Ayebare and Onen, 2021; IUIU, 2019a). Although the Uganda National Council for Higher Education [NCHE] (NCHE, 2014) revealed a declining trend in international student exchange, the Observatory on Borderless Higher Education (OBHE) 2012 report estimated that around 10% of Uganda's student population were international students (Murphy, 2019).

Enrolment of international students creates a diverse classroom setting that offers several benefits to students, faculty, and HE. For instance, students learn from multiple cultures (Spencer-Oatey and Dauber, 2017); the institution earns prestige through a diversified student population (Ssempebwa, Eduan, Nassir and Mulumba, 2012); tolerance of different cultures increases (Schapper and Mayson, 2004); and diversity of thought and the reshaping of academic disciplines and the university as a whole is promoted (Hegarty, 2014). While it is clear that universities take pride in their student population's diversity, what is not understood is how faculty respond to cultural diversity, especially concerning classroom management and how they plan and deliver lectures.

This article explores the various ways in which academic staff adapt their classroom management to the diversity of their classes through a mechanism that supports culturally responsive classroom management (CRCM). In consonance with Gay (2002), we propose that CRCM can be achieved through five key components, namely, developing a cultural diversity knowledge base; designing culturally relevant curricula; demonstrating cultural caring and building a learning community; engaging in cross-cultural communication; and practising cultural congruity in classroom instruction.

The Research Gap

While previous studies investigated classroom diversity management practices in HE (e.g., Samuels, 2018; Jabbar and Mirza, 2017; Hegarty, 2014), these practices have not been explicitly examined in culturally diverse classrooms in Uganda's private universities. More specifically, there is a paucity of scholarship on how faculty in these multi-cultural institutions perceive classroom cultural diversity management. Furthermore, earlier research (Ladson-Billings, 2000; McKenzie, 2001; Darling-Hammond, 2010) found that pre-service and experienced teachers' knowledge of diverse cultures was inadequate, suggesting that a culturaldisconnect could exist between faculty and minority students in these institutions' multi-cultural classrooms. This study aimed to fill the research gap by examiningfaculty's perceptions of student cultural diversity management with particular reference to Uganda's first private international university,the IUIU.

Research Purpose

The study assessed faculty perceptions of cultural diversity management

in culturally diverse classrooms by establishing whether they have developed a cultural diversity knowledge base and recognise their ethnocentrisms and biases; design culturally relevant curricula for culturally relevant teaching; demonstrate cultural caring for CRCM; use effective and varied strategies to facilitate cross-cultural communication, and are exhibiting cultural congruity in classroom instruction.

Analytical Framework

Gay's (2000) culturally relevant pedagogical framework was adopted to holistically explore faculty perspectives of classroom diversity management for students whose experiences and cultures are traditionally excluded from mainstream settings. The framework's components for CRCM and teaching were articulated as sub-themes to aid analysis and interpretation of the findings. The framework is presented in Table 1 below.

Table 1: Analytical framework

Essential components of culturally relevant classroom management and teaching	**Imperatives to manage students' behaviour and teaching and learning in multicultural classrooms to meet their educational needs**
Developing a cultural diversity knowledge base and recognising one's ethnocentrism and biases	Students develop new knowledge based on prior knowledge. Teachers demonstrate knowledge of cultural diversity. Teachers demonstrate knowledge of their own beliefs, biases, and values with regard to human behaviour.
Designing culturally relevant curricula	Teachers convert cultural diversity knowledge into culturally relevant curriculum designs and instructional strategies. Teachers infuse the curriculum with rich connections to students' cultural and linguistic backgrounds.
Demonstrating cultural caring and building a learning community	Teachers create a classroom climate that demonstrates cultural caring and is conducive to learning for culturally diverse students. Students feel a sense of belonging and connectedness to oneanother.
Cross-cultural communication	Teachers facilitate exchange of information between people of different cultural backgrounds to determine what culturally diverse students know, can do, and are capable of knowing and doing.
Cultural congruity in classroom instruction	Teachers modify their instructional strategies to match the learning styles of culturally diverse students.

Source: Derived from Gay (2000) and modified by the authors

The five essential components of CRCM anchored in social constructivism are briefly explained below. Developing a cultural diversity knowledge base and recognising one's ethnocentrism and biases means that effective management of culturally diverse students to meet their educational needs requires that faculty have clear knowledge of cultural diversity as well asthe ability to teach culturally diverse students based on students' prior knowledge to enable them to develop new knowledge; and demonstrate knowledge of their own beliefs, biases, and values with regard to human behaviour (Muniz, 2019; Paris and Alim, 2017). Designing culturally relevant curricula requires faculty to learn how to convert knowledge of cultural diversity into culturally relevant curriculum designs and instructional strategies that infuse the curriculum with rich connections to students' cultural and linguistic experiences (Gay, 2004). Demonstrating cultural caring and building a learning community alludes to the need for faculty to create a classroom climate that is conducive to learning for culturally diverse students (Watkins, 2005). Effective cross-cultural communication helps faculty to determine what culturally diverse students know, can do, and are capable of knowing and doing (Lin, 2020). Cultural congruity in classroom management and instruction means that cultural characteristics should be usedto determine how classroom management and instructional strategies should be modified for culturally diverse students (Gay, 2002). The framework enabled us to interpret the unique subjective accounts provided by each participant based on their lived experiences of the phenomenon of students' diversity management in multi-cultural classrooms using the components of CRCM and teaching.

Literature Review

Student diversity management in multi-cultural classrooms for improved teaching and learning has long been the subject of intense debate among scholars. The majority (Samovar, Porter, and Jain, 1981; Kolb, 1984; De Vita, 2001; Boland, Sugahara, Opdecam, and Everaert, 2011; Weinstein, Tomlinson-Clarke, and Curran, 2004) oppose the use of traditional methods of classroom management and instruction that seem to be ineffective with very diverse student groups from dissimilar backgrounds. They argue that CRCM through inclusive classroom management and teaching methods requires (1) developing a cultural diversity knowledge base; (2) designing culturally relevant curricula; (3) demonstrating cultural caring and building a learning community; (4) engaging in cross-cultural communication; and (5) practising cultural congruity in classroom instruction.

Accepting that students' cultural background is a resource for effective classroom management, teaching, and learning iscentral to developing a cultural diversity knowledge base (Muniz, 2019). This enables culturally responsive teachers to propose management and learning encounters that corroborate students' lived realities, cultural identities, and heritage (Paris and Alim, 2017). Teachers are expected to demonstrate understanding of their students' cultures because, as held by Ninetta (2009), knowledge of the "ethnic/ethic other" positively correlates with the development of inclusive classroom management styles and teaching methodologies. Teachers should also analyse their own cultural backgrounds and worldviews because limited knowledge of the 'ethnic/cultural self' has implications for developing multicultural classroom management styles and pedagogies (Ninetta, 2009).

Designing culturally relevant curricula calls for faculty to convert their acquired cultural diversity knowledge base into culturally relevant curriculum designs and instructional strategies that infuse the curriculum with rich connections to students' cultural and linguistic experiences (Gay, 2004). Drawing on students' cultures to shape curriculum and instruction entails designing differentiated instructional activities that connect to and mirror students' cultures and backgrounds (Muniz, 2019). If students' home cultures are infused into the curriculum, they will likely attain academic success (Ladson-Billing, 2000).

In line with the constructivist view, demonstrating cultural caring and building a learning community recognises that CRCM strategies and learning are about constructing knowledge with others. This occurs within social processes that are rooted in faculty's use of students' cultures and experiences to manage classroom diversity and expand their intellectual horizons and academic achievement (Gay, 2002). Premised on the above, culturally sensitive caring for culturally diverse communities where minority students feel validated and welcome is about actively engaging students (Dietz and Burns, 1992) and increasing their sense of classroom belonging (Watkins, 2005).

Cross-cultural communication helps to improve students' experiences in culturally diverse classrooms. Although labels such as dialogue, multiculturalism, and pluralism have been used to refer to the concept of "cross-cultural communication" (Lin, 2020), it is simply the exchange of information between people of different cultural backgrounds (Morais and Ogden, 2011). The concept is linked to universities' internationalisation agendas (Ayebare and Onen, 2021). Its importance in building a learning community was highlighted by Montagu and Watson (1979) who observed that communication is the "ground of meeting and the foundation of community" (p.vii), without which CRCM and learning for culturally diverse students become challenging to accomplish.

Practising cultural congruity in the classroom means that because culture is deeply embedded in any teaching, students' cultural characteristics should form the basisto determine how classroom management and instructional strategies should be modified (Gay, 2002). Muniz (2019) asserts that teaching culturally diverse students should be multiculturalised by identifying and honouring their varied identities and experiences and adopting appropriate teaching styles such as storytelling, group learning arrangements, and peer coaching. Multiculturalisation also involves planning course activities that promote social engagement through classroom interactions, using autobiographical case studies; holding open discussions; linking to student interests, dramatising teaching; and devoting a high percentage of instructional time to providing examples and scenarios to demonstrate how principles and concepts operate in practice (Yamauchi, Taira and Trevorrow, 2016; Hanley, 1998).

Methods

This study wasbasedon the beliefs and practices of the social constructivism philosophy that holds that reality is subjective and socially constructed (Guba and Lincoln, 2005). We thus focused on interpreting the participants' different subjective accounts of how they perceive cultural diversity management in multicultural classrooms. In line with the social constructivism philosophy, we adopted qualitative methods. We rooted the study in the interpretive paradigm, which holds that social life is shaped by people's experiences and social contexts (Creswell, 2007). We then pursued a case study design to broadly capture the themes represented by the study and access first-hand knowledge of the social realities involved (Creswell, 2014). The four academic disciplines studied as sub-units to gain a holistic understanding of faculty perspectives of students' cultural diversity management in multicultural classrooms were the hard-applied, the hard-pure, the soft-applied, and the soft-pure fields. This stratification was based on Biglan's (1973) disciplinary classifications.

We selected eight participants from the target population as set out in Table 2 below.

Table 2. Population by Staff Rank and Disciplinary Field

Rank	Disciplinary Field	Population	Actual Sample	Sampling Technique
Senior lecturer	Hard-applied	04	01	Purposive
Lecturer	Hard-applied	20	01	Purposive
Senior lecturer	Hard-pure	03	01	Purposive
Lecturer	Hard-pure	10	01	Purposive
Senior lecturer	Soft-applied	10	01	Purposive
Lecturer	Soft-applied	50	01	Purposive
Senior lecturer	Soft-pure	02	01	Purposive
Lecturer	Soft-pure	07	01	Purposive
Total			08	

Source: IUIU Graduation Booklet, 2019

Table 2 shows that two academic staff from each disciplinary field were selected to participate in the study, giving a total of eight participants. In terms of rank, four lecturers and four senior lecturers participated.

One lecturer and one senior lecturer were selected from each of the four disciplinary fields, namely, hard-applied (Health Sciences and Computelanr Science); hard-pure (Biology and Medical Psychology); soft-applied (Education and Public Administration); and soft-pure (Educational Psychology and History). All participants were purposively selected because they taught multi-cultural classes on a regular basis. For instance, all the selected senior lecturers handled or had handled at least three multicultural classes in the academic years 2018/2019 and 2019/2020. Similarly, lecturers selected for this study had taught at least two multicultural classes in the past four academic years.

While we planned to interview more lecturers, we were able to terminate after interviewing the eighth participant because data redundancy was apparent as guided by Woolsey (1985). Face-to-face semi-structured interviews were conducted from June to August 2021. The questions explored whether faculty had developed a cultural diversity knowledge base; the extent to which course curricula and instructional strategies were culturally relevant; and how faculty created caring academic environments in culturally diverse classrooms. The questions also aimed to ascertain how faculty adapted their teaching styles to the learning styles of culturally diverse students and the strategies they used to communicate in multicultural classrooms. Kvale (1996) noted that interviews lead to significant discoveries about beliefs and action dynamics in the participants' ecosystem and socio-cultural setting.

Document analysis was also employed to enable triangulation and improve the validity of the findings (Yin, 2011). Based on the interview themes, they included the IUIU Act; course curricula, course outlines, memoranda of agreement, the IUIU Strategic Plan (2016-2021), annual reports, graduation booklets, Rector's reports, and policies such as the Cultural Associations' Policy and that of Public Relations. The documents were obtained through website searches and from the Office of the University Secretary. Each was checked to identify the core issues linked to cultural diversity management. This provided a context to interpret the interview data. According to Yin (2011), "the most important use of documents is to corroborate and augment evidence from other sources" (p. 80). Data from the documents were analysed in line with the already established themes from the semi-structured interview data and the analytical framework.

The data gathered from semi-structured interviews were analysed using the inductive-deductive method, which is data and concept-driven. We read and re-read the dataset carefully to generate in vivo (inductive) codes. In vivo codes that emerge by directly exploring the data (Yin, 2011) enabled us to identify patterns or the key ideas emerging from the data set. The participants' voices on their shared experiences of managing students' cultural diversity in multicultural classrooms helped us to generate the in vivo codes. We compared the in vivo codes with the deductive or *a priori* sub-themes in the analytical framework set out in Table 1.This enabled us to use an a priori sub-theme to represent or merge a particular chunk of data within in vivo codes. This allowed the findings to emerge and eased their interpretation.

In summary, inductive analysis was based on the raw data (in vivo codes) to capture the participants' voices and, as suggested by Thomas (2006, cited in Bookers and Campbell-Whatley, 2018), to assist us in comprehending the meaning of the complex data through the development of summary themes or categories from the raw data. For its part, deductive analysis followed the *a priori* sub-themes derived from the analytical framework, our prior experience, and the literature. According to Reiner (2012), the inductive-deductive method fits with the interpretive paradigm as it recognises that emergent sub-themes (responses) are socially produced and that previous knowledge is vital in aiding interpretation.

We assigned each participant a pseudonym according to their academic rank and disciplinary category to ensure confidentiality and anonymity. Based on academic ranks, SL denotes senior lecturer and LE lecturer. HA denotes hard-applied, HP hard-pure, SA soft-applied, and SP soft-pure for the disciplinary categorisation. Thus, the following pseudonyms were used for the senior lecturers' category: SLHA, SLHP, SLSA, and SLSP. For the group of lecturers, the pseudonyms were: LEHA, LEHP, LESA, and LESP.

Findings

The presentation of the findings was guided by constructs derived from Gay's (2000) culturally relevant pedagogical framework. They revealed that across the disciplinary fields, most faculty have a basic understanding of the cultural characteristics of the different international cultural

groups in their classes and teach curricula that are not fully multi-culturalised. However, the results also showed that faculty endeavour to demonstrate caring academic environments, use various strategies to communicate in multi-cultural classrooms, and adopt different strategies to multi-culturise their teaching for culturally diverse students in culturally diverse classrooms.

Faculty's Cultural Diversity Knowledge Base and Awareness of their Ethnocentrism and Biases

Consistent with section 65, sub-section 2 of the IUIU Act (1990), which requires that 50% of admitted students shall be international students, and in line with the Rector's Report (IUIU, 2019b), the findings showed that classrooms are very culturally diverse. Minority students come from Somalia, Nigeria, Tanzania, Kenya, Comoros, Gambia, Ghana, Turkey, Rwanda, Zanzibar, Algeria, Eritrea, Burundi, Ethiopia, Egypt, Sudan, South Sudan, India, Sierra Leone, Yemen, and Senegal (IUIU, 2019b, 2021a). Nonetheless, all the participants agreed that they have a limited cultural diversity knowledge base and only a basic understanding of the international students' cultural worldview. A senior lecturer shared:

> I have some basic knowledge of their cultural characteristics, which mainly develops after interacting with them. There are no prior efforts to orient us about their cultures. Through classroom and one-on-one interactions, I have learned that Nigerians and Somalis are emotional and not very patient under certain conditions; perhaps this is part of their culture, I don't know if I am right (SLSA).

SLSP, a senior lecturer also admitted to limited understanding of the cultural characteristics of international students and referred to the influence of stereotypes:

> I have little understanding of their cultural characteristics except for the stereotypes we read in the media. For instance, I have heard that Somalis want immediate attention. So, we work with such stereotypes. I have also discovered that the Somalis always expect a lot of marks. I think this is not a stereotype. For the East Africans like the Tanzanians and Kenyans, I just have some knowledge about Swahili with less understanding of their inside culture (SLSP).

Lecturers concurred. One, LESA said:

> I don't need to know about the different cultural groups in class. I have to teach, and whoever comes into my class qualifies. So, I make sure that my expectations from the students are met. Even when I realise that there are international students, my focus is to ensure that teaching goes on. Although sometimes I come in to help some students with learning difficulties, I don't care whether there are international students or not. I subject all the students in my class to the same standards (LESA).

It is evident that across the disciplinary fields, some cultural disconnect exists between faculty and international students in multicultural classrooms. This is contrary to the IUIU Public Relations, Community Outreach, and International Relations Policy (IUIU, 2021b) which stresses the need to orient international students and university lecturers on cultural diversity issues. Therefore, it is not surprising that several participants (LESP, SLSP, LEHA) highlight the need for information on the cultural characteristics of the diverse groups that they teach. The findings also showed that the little that faculty knows aboutminority students' cultures is acquired during classroom and office interactions. For example, LEHA noted that, "I try to understand their cultural background through the conversations I have with them", while SLHA remarked: "... as you interact with these students, you tend to learn some of those traditional practices. ..."

Despite limited awareness of international students' cultural worldview, seven participants demonstrated understanding of their values and biases and how these affect their perception of students and management of culturally diverse classrooms. A lecturer said:

> I am aware of my values. As an individual whose character has been shaped by so many forces, I exude some character uniqueness, which shapes my values and the way I manage culturally diverse classrooms. I value self-respect, respecting others, and timelines. When I give an assignment, I expect students to submit it on time. Because I appreciate timekeeping, those who do not keep time cross my line because time management is a significant value for teaching and learning (LESA).

Similarly, LEHP noted that his values of respect for others, punctuality, and engaging in clear communication, among others, shape the way he perceives students in multicultural classes.

Designing Culturally Relevant Curricula

The findings indicated that most academic staff at the IUIU teach curricula that are not fully multiculturalised. This means that they rarely draw on international students' cultural experiences to shape curriculum and instruction. SLSP remarked, "No! Our departmental course curricula are not multiculturalised to a greater extent. Cultural aspects are implicit in our curricula and largely manifest in how we teach." SLHP corroborated this:

> Our course curricula are not directly culturally responsive. The ways we design our curriculum finally end up supporting cultural diversity just by default. Otherwise, because the issue of having very culturally diverse classes is recent, caused by the mushrooming of private universities that seek to increase their intake, universities are yet to respond effectively. That is why this study is critical in the current state of affairs. So many of the methods we use may be somewhat inclusive in terms of culture but by default (SLHP).

It, therefore, appears that academics scarcely draw on international students' cultures to shape curricula to make them meaningful to diverse learners. This led LEHP to point to the need for training on how to multiculturalise curricula. Another critical point raised was that some courses curricula areunintentionally multiculturalised, meaning that deliberate University-wide attempts to ensure this are lacking.

However, a perusal of the approved History curriculum (IUIU, 2016) showed that some course units such as Themes in African History (offered in year one, semester one) and History of Socio-economic Transformation (year two, semester two) have a semblance of multiculturalism. Similarly, a review of the Bachelor of Nursing curriculum (IUIU, 2018) revealed that the course on Transcultural Nursing (categorised as a non-core but good-to-know course for Nursing students) is fairly culturally relevant. Consistent with this finding, participants LESP and SLHA from the History and Nursing

departments, respectively, confirmed that their curricula are somewhat multiculturalised. SLHA disclosed that:

> In the Nursing curriculum, we have a course unit called Sociology, where we teach students how to deal with different societies. It is a requirement of the National Council for Higher Education (NCHE). In that course, we look at how different cultures interact, their values, and how they affect their health. However, it is not so detailed! In another course (Trans-cultural Nursing), we teach about providing culturally competent nursing care and how to handle people from different cultures (SLHA).

Whereas a semblance of curriculum multiculturalisation is evident, multiculturalisation is often a requirement of the NCHE, implying that deliberate institutional-wide attempts to multiculturalise have yet to be implemented. These findings negate the spirit of the IUIU Act (1990), which, by stating that 50% of students shall be international students, makes veiled reference to the need to deliberately design and implement culturally relevant curricula.

Care and Concern for Culturally Diverse Students in Multicultural Classes

Although, as shared by LESA, some Ugandan lecturers tend to characterise minority students as weak, impatient, or disrespectful, some participants stated that they try to foster a classroom climate that is conducive to learning for culturally diverse students. They noted that they offer additional support to international students by creating a learning environment that allows for and/or encourages all students to participate. For instance, LESA commented:

> I sympathise with the minority students because they are physically and psychologically away from home. My role is to identify where they need help, and I give it. I encourage them to share whatever answers they have. Even when it is wrong, I give support with statements like "did you mean to say this?" I encourage students with problems to come to my office, and while there, the environment is always free. I mind my tone and language (LESA).

Another lecturer, LEHA intimated that he could build a learning community by, among other things, knowing students by their names, never addressing them using terms such as "you Nigerian", and interacting with them outside the classroom in order to get to know them better. The senior lecturers also stated that they create classroom climates conducive to learning for culturally diverse students. For instance, SLSP shared:

> When Ugandans dominate in class, I ask for the opinion of the minority students. I then wrap it up to show that no group has the upper hand. I generalise by saying that "Africans are generally the same because the Nigerian experience has a striking resemblance to that of Uganda". I never outrightly say that the argument of a Ugandan student is correct and that of a foreigner is wrong (SLSP).

From the above responses, it is evident that lecturers use different strategies such as counselling to create a more conducive classroom climate that promotes cultural caring and improved learning for culturally diverse students. They also encourage minority students to share theirexperiences while being mindful of using offensive terminology. The evidence also suggests that the lecturers are aware of the need to offer constructive, culturally-sensitive feedback.

Furthermore, theresults indicate that faculty engage in out-of-classroom interactions to bond with minority students such as inviting them to their offices to counsel them and understand their learning difficulties, while also encouraging them to participate in on-campus activities such as end-of-year parties. This is in line with the IUIU Cultural Association's policy (IUIU, 2007) which provides that when any cultural group holds an annual party on or off campus, they should invite members from other cultural groups to promote cultural integration.

While these findings point to care and concern, much remains to be done to ensure that faculty deepen the creation of classroom climates that demonstrate cultural caring. It is for this reason that SLSA, SLHP, SLHA, LEHP and LEHA raised the need for more training to foster attitudinal change towards foreign students. According to SLSA, understanding, training and knowledge could dissuade lecturers from making judgements like "that group is weak!" and "those are aggressive".

Strategies Used by Faculty to Communicate in Multicultural Classrooms

The majority of the participants intimated that they employ several strategies to facilitate the exchange of information in culturally diverse classrooms, such as ensuring clarity; learning and using some words from minority students' languages; maintaining eye contact; avoiding offensiveexamples; active listening; using gestures, elongating words, and building on students' responses. LEHP divulged that:

> I straighten my pronunciation so that minority students understand. If it is good, I say "gooood". I also pinpoint them and ask, "can you hear me very well?" I do this for those who have difficulty in English. I also go at a slow pace. I usually encourage them to ask questions so that their colleagues correct them as they talk. I also encourage them to learn how I talk. I read their gestures and facial expressions. I am always audible. I make my teaching interactive to improve their communication (LEHP).

Complementing LEHP's remarks, LESP said:

> When I communicate, I am aware that students are at different levels. I try my best to know them by name and to share with them as individuals. But I also try to maintain eye contact. I do not use complex vocabulary, and I am brief. Because some, like Somalis, talk very fast and have a lot of Arabic and mother tongue interference, I listen hard and try to learn their accents. Many times, I end up rephrasing my questions for clarity (LESP).

However, according to LESA, some faculty are either oblivious of or completely ignore cultural variations and differences in English proficiency when communicating in multicultural classrooms. This interviewee divulged that such academics often use complex vocabulary, switch to local dialects, and only speakto Ugandan students. LESA's submissions notwithstanding, as shared by LEHP and LESP in the quotes above, individual attempts to improve faculty communication in multicultural classrooms are evident. Senior lecturers added that they use the University's standard greeting, which is "Asalaam Alaikum", and follow it up with "good morning" or "good afternoon" to accommodate non-Muslims (SLSP); ensure that they adopt a warm tone when they talk (SLHP); request minority students who speak very fast to slow down so that they can be understood (SLHA); use different words to communicatean idea to facilitate understanding (SLHA); and avoid jargon (SLHA).

From these observations, a semblance of cross-cultural communication in the IUIU's multicultural classrooms seems evident. However, as shared by LESA above, it appears that more needs to be done. The majority of the study participants (SLSA, SLSP, LESA, LEHP and LEHA) conceded that they need to learn more about the principles of cross-cultural communication.

Instructional Strategies in Multicultural Classes

Seven participants revealed that they adjust their teaching to suit the learning styles of different cultural groups by employing various instructional styles. SLSP shared that, "I combine different learning styles to take care of the diversity like using the lecture method, giving a handout of summarised notes, and allowing students [to record the lesson]". SLHA noted that:

> Some minority students learn by either recording, taking notes, or asking for a handout. To adapt my teaching style, I will have a PowerPoint and a video to take care of those whose cultures have taught them to learn by seeing. Then, at the end of the lecture, I practice taking care of those whose culture has taught them to learn by touching. So, I adopt the most suitable method depending on who, what, and when I am teaching. Sometimes, I end up using several methods in a lecture (SLHA).

Although these findings may not be generalisable, they show that some academic staff are aware that students' cultural characteristics should form the basis for designing and modifying instructional strategies. This implies that an academic in a multicultural university should be adaptable, culturally sensitive, and grounded in the methodology of instruction. Indeed, to accommodate all the cultural groups, most IUIU faculty endeavour to use several teaching styles and methods such as: conducting practicals; using PowerPoint presentations; giving take-home assignments, using group and lecture methods, making presentations, and using audio-visual presentations. Complementary

information obtained from memoranda of understanding between the IUIU and foreign universities whose staff pursue postgraduate courses at theIUIU revealed that the institutionis required to adapt its courses and faculty's teaching styles to suit the socio-cultural characteristics of international students (IUIU, 2020a, 2020b).

Despite the aboveindividual efforts to align instructional strategies to the learning styles of culturally diverse students, more needs to be done to enable faculty to utilise more culturally relevant classroom teaching styles. It is in light of this that six participants (LESA, SLSP, LESP, SLHP, LEHP and SLHA) agreed on the need for more training in teaching skills in culturally diverse classes.

Discussion

This study explored faculty perspectives on students' cultural diversity management in multicultural classrooms based on Gay's (2000) five components of preparation for and the practice of CRCM and teaching, namely, developing a cultural diversity knowledge base; designing culturally relevant curricula; demonstrating cultural caring; cross-cultural communication; and cultural congruity in classroom instruction. Overall, across the disciplinary fields, the results showed that faculty have abasic understanding of the cultural characteristics of the different international cultural groups in their classes; teach curricula that are not fully multiculturalised; createa caring academic environment; use various strategies to communicate in multicultural classrooms, and adopt different ways to multiculturalise their teaching in culturally diverse classrooms. The results are thus partially consistent with Gay's (2000) framework, at least in the context of the IUIU. This implies that more needs to be done to improve students' cultural diversity management in the IUIU's multiculturalised classrooms.

Developing a Cultural Diversity Knowledge Base and Awareness of Faculty's Ethnocentrism and Biases

The findings illustrate that IUIU's classrooms are culturally diverse and that the majority of faculty recognise their beliefs and biases with regard to human conduct and how these affect their perceptions and management of students in culturally diverse classrooms. These results are consistent withZeichner and Hoeft's (1996) recommendation that,

in order to engage in CRCM teachers should first understandtheir future students' socio-cultural characteristics. However, the study found little evidence that faculty possess knowledge of students' cultural backgrounds. This is contrary to previous research, which recognises that teachers must possess knowledge of students' cultural backgrounds in order to develop skills for cross-cultural interaction (Sheets, 2000; Sheets and Gay, 1996). However, the findings of this case study support Mclaren's (1995) contention that teachers are sometimes unwilling to talk about cultural characteristics for fear of highlighting differences between groups and that information about minority students' cultures may do more harm than good as it has the tendency to create or reinforce labels.

Designing Culturally Relevant Curricula

The study found that faculty has done little to design and implement multicuturalised curricula. The participants demonstrated limited awareness of the importance of international students' cultural experiences in shaping curriculum and instruction. This finding is contrary to the notion that "although the curriculum may be dictated by the school system, teachers teach it. Where the curriculum falls short in addressing the needs of all students, teachers must provide a bridge . . ." (Richards, Brown, and Forde, 2007, p. 68). It is also inconsistent with Hollie's (2012) conclusion that teachers must embrace a culturally diverse curriculum in order to cater for students' cultural needs. Multiculturalising the curriculum enhances teachers' potential to engage in CRCM (Weinstein, Tomlinson-Clarke and Curran, 2004). As observed by Jabbar and Mirza (2017), this calls for a re-examination of university curricula so that their design and implementation together with learning approaches, policies and procedures support culturally inclusive perspectives and approaches in order not to disadvantage minorities.

Demonstrating Cultural Caring and Building a Learning Community

The results showed that academic staff generally seek to create a caring academic environment by creating a classroom climate that is conducive to learning for culturally diverse students. The participants noted that their internationalised classrooms have made them more empathetic and appreciative of others' cultural values. The case study unveiled an

assortment of strategies adopted by faculty to nurture caring classroom communities in which minority students feel a sense of belonging and connectedness, such as minimising teacher-student boundaries; encouraging minority students to participate in class while applauding their efforts; minding the teacher's tone; and addressing minority students by their names, among others.

The above findings cohere with the social constructivist view that learning is about individual sense-making and constructing knowledge within social processes rooted in teachers' use of students' experiences to expand their academic achievement (Gay, 2002). They also concur with those of earlier studies that CRCM as a mechanism that is informed and informs culturally relevant teaching requires the teacher to be alert to upsetting comments while making it clear that such behaviour is improper (Weinstein, Tomlinson-Clarke, and Curran, 2004); actively engage students (Dietz and Burns, 1992); increasetheirstudents' sense of classroom belonging that promotes participation (Watkins, 2005); and incorporate cultural patterns that are known to students from their home experiences into teaching (Villegas and Lucas, 2002).However, the case study exposed some challenges,the primarily one being that some faculty tend to characterise minority students as weak, impatient, or disrespectful.

Cross-cultural Communication

The results showed that the participants use several strategies to facilitate exchange of information with students from culturally diverse backgrounds. The majority employ an array of cross-cultural communication strategies such as ensuring clarity; slowing down and amplifying their voices; using some words from minority students' languages; maintaining eye contact; avoiding the use of offensive examples; active listening; using gestures, elongating words, and building on students' responses, among others. According to SLHP, these strategies enable the teacher to communicate with warmth as opposed to being arrogant and biased. This finding offers insight into the process of acquiring cross-cultural compassion, which, according to Barker (2015), calls for communication behaviours that are "respectful, sensitive, considerate, and appropriate when interpreted as such by host-culture – rather than home-culture – members" (p. 26). It is consistent

with Chen and Young's (2012) observation that the behavioural component of cross-cultural communication rests on both awareness and sensitivity.

Cultural Congruity in Classroom Instruction

We found that almost all the study participants employ various teaching styles to suit the learning styles of different cultural groups. For example, theycombine different learning styles; provide summarised notes; allow lectures to be recorded; give handouts; conduct practicals; use PowerPoint presentations; set take-home assignments, usethe group method; make presentations; use the lecture method, and employ audio-visual aids. These findings support and validate those of previous researchers who concluded that diversity in multicultural classrooms could be managed better by adopting several appropriate teaching styles (Gay, 2000; Hanley, 1998)including storytelling, cooperative group learning; autobiographical case studies; open discussions; linking teaching to students' interests; dramatising teaching; and devoting a high percentage of instructional time to giving examples and scenarios to demonstrate how information, principles, concepts, and skills operate in practice.

Conclusion and Recommendations

Based on the study's findings, we conclude, at least in the context of the IUIU, that whereas the majority of faculty recognise their beliefs, biases, values, and assumptions about human conduct and how these affect their perception of students in culturally diverse classrooms, they demonstrate inadequate knowledge of international students' cultural backgrounds and rarely implement multiculturalised curricula. However, the study showed that the majority attempt to create a caring academic environment and classroom climates that are conducive to learning for culturally diverse students. Faculty across disciplinary fields also adopt different forms of communication to facilitate the exchange of information with students from culturally diverse backgrounds and employ various teaching styles to accommodate the learning styles of different cultural groups.

The results are partially consistent with Gay's (2000) framework as they reflect both negative and positive perceptions of cultural diversity

management within multicultural classrooms. They are also somewhat inconsistent with the social constructivism view that diversity plays a central role in classroom management and learning. This implies that more needs to be done to fully entrench CRCM practices for culturally relevant teaching. Major enablers suggested in this study include deliberate university-wide attempts to multi-culturise the curriculum, providing information about the cultural characteristics of the diverse groups that faculty teach, and appreciating the existence of diversity in classrooms, how it manifests, how it should be addressed and its benefits.

We recommend that HE managers' research agendas and policies should, among others, focus on the most promising culturally responsive classroom management and teaching practices and policies. Faculty need to learn about students' cultural experiences and the type of cultural content that should be provided; how multiculturalised curricula can be designed and implemented; the most relevant classroom management strategies for minority students; and pedagogical practices that respect and affirm diversity. They also need to learn how to alternate their management and communication strategies to accommodate minority students, understand the difference between CRCM practices and conventional classroom management styles, and re-examine their own biases to improve their perceptions of minority students in culturally diverse classrooms. Howard (1999) observed with regard to multiracial schools, "we can't teach what we don't know". Similarly, we contend that faculty need to know more about CRCM and that such learning opportunities should be systematically incorporated into and implemented as part of the curriculum in teacher education at university.

References

Altbach, P. G. (2006). *Comparative higher education: Knowledge, the University and development*. Boston, MA: Boston College Centre for International Higher Education.

Ayebare, J., and Onen, D. (2021). The effect of internationalising the student community on graduate students' global citizenship: A case from Uganda. *International Journal of African Higher Education [IJAHE]8*(1), 1-26. DOI: https://doi.org/10.6017/ijahe.v8i1.13361

Banks, J. (1996). The historical reconstruction of knowledge about race: Implications for transformative teaching. In J. A. Banks (ed.) *Multi-cultural education, transformative knowledge, and action: Historical and contemporary perspectives,* pp. 64-87. New York: Teachers College Press.

Barker, G. G. (2015). Choosing the best of both worlds: The acculturation process revisited.
International Journal of Intercultural Relations45, 56-69.

Biglan, A. (1973). The characteristics of subject matter in different academic areas. *Journal of Applied Psychology* 57(3), 195-203.

Boland, G., Sugahara, S., Opdecam, E., andEveraert, P. (2011). The impact of cultural factors on students' learning style preferences, *Asian Review of Accounting* 2011. ISSN:1321-7348 DOI: 10.1108/13217341111185155

Bookers, C. K., and Campbell-Whatley, D. G. (2018). How faculty create learning environments for diversity and inclusion. *Insight:A Journal of Scholarly Teaching13*, 14-27.

Bourn, D. (2011). From internationalisation to global perspectives. *Higher Education Research and Development 30*(5), 559-571. DOI: 10.1080/07294360.2011.598447.

Brooks, R., and Waters, J. (2009). International higher education and the mobility of UK students. *Journal of Research in International Education 8*(2), 191-209.

Chen, G. M., and Young, P. (2012). Intercultural communication competence. In A. Goodboy and K. Shultz (eds) *Introduction to communication: Translating scholarship into meaningful practice*, pp. 175-188. Dubuque, IA: Kendall-Hunt.

Creswell, J. W. (2007). *Qualitative Inquiry and Research Design. Choosing among Five Approaches*. Thousand Oaks, London: SAGE Publications.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th edition.). Thousand Oaks, California: Sage.

De Vita, G. D. (2001). Learning styles, culture and inclusive instruction in the multi-cultural classroom: a business and management perspective. *Innovations in Education and Teaching International38*(2), 165-174

Dietz, T., and Bums, T.R. (1992). Human agency and the evolutionary

dynamics of culture. *Acta Sociologica 35*, 187-200.

Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. New York: Teachers College Press.

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education 3*(2), 106-116.

Guba, E. G., and Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin and Y. S. Lincoln (eds) *Handbook of qualitative research,* pp. 105-117. Thousand Oaks, CA: Sage.

Hanley, M. S. (1998). *Learning to fly: Knowledge construction of African American adolescents through drama*. Unpublished doctoral dissertation. University of Washington, Seattle.

Hegarty, N. (2014). Where we are now – The Presence and Importance of International Students to Universities in the United States. *Journal of International Students*4(3),223-235. ISSN:2162 – 3104 http://jistudents.org/

Hollie, S. (2012). *Culturally and linguistically responsive teaching and learning: Classroom practices for student success*. Huntington Beach, CA: Shell Education.

Howard, G. R. (1999). *We can't teach what we don't know: White teachers, multiracial schools.* Teachers College Press.

IUIU. (2018). *Bachelor of Nursing Approved Curriculum - 2018/2019-2021-2022*. Faculty of Health Sciences. Islamic University in Uganda, Mbale.

IUIU. (1990). *Islamic University in Uganda Act (1990) Cap: 131.*

IUIU. (2007). *Islamic University in Uganda Students' Cultural Associations Policy*. Islamic University in Uganda, Mbale.

IUIU. (2016). *Revised and Approved Curriculum for History Papers: Degree Program, BEd External Program, and Remedial Program - 2016/2017-2020/2021*. Faculty of Arts and Social Sciences, Department of History.

IUIU. (2019a). *Enrolment analysis report, ERP Department,* Islamic University in Uganda. Mbale, Uganda.

IUIU. (2019b). *Rector's Report to the 32nd University Council Meeting.* Islamic University in Uganda, Mbale.

IUIU. (2020a). *Memorandum of Agreement between IUIU, Mbale, and the University of Bosaso, Garowe (UOBG), Puntland State of Somalia*. Postgraduate Diploma in Teaching and Management at Higher Education (DIMATHE). February 2020 – February 2026. Islamic University in Uganda, Mbale.

IUIU. (2020b). *Memorandum of Agreement Between IUIU, Mbale, and East Africa University (EAU) the Puntland State of Somalia*. Collaboration on Postgraduate Academic Programs and Research Activities. October 2020-October 2025. Islamic University in Uganda, Mbale.

IUIU. (2021a). *Graduation Booklet, 29th Graduation Ceremony: 10th April 2021*. Islamic University in Uganda, Mbale.

IUIU. (2021b). *Public Relations, Community Outreach and International Relations Policy*. Islamic University in Uganda, Mbale.

Jabbar. A., and Mirza, M. (2017). Managing diversity: academic's perspective on culture and teaching. *Race Ethnicity and Education22*(5), 569-588. DOI: 10.1080/13613324.2017.139532

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* New Jersey: Prentice-Hall

Kvale, S. (1996).*Interviews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA: Sage.

Ladson-Billings, G. (2000). Fighting for Our Lives: Preparing Teachers to Teach African American Students. *Journal of Teacher Education*. https://doi.org/10.1177/002248710005100300 8

Lin, C. (2020). Understanding cultural diversity and diverse identities. *Quality Education*, 929-938. DOI: 10.1007/978-3-319-69902-8-37-1

Marginson, S. (2010). Higher education in the global knowledge economy. *Procedia Social and Behavioral Sciences 2*, 6962-6980.

McLaren, P. L. (1995). White terror and oppositional agency: Toward critical multiculturalism. In C. E. Sleeter and P. L. McLaren (eds) *Multi-cultural education, critical pedagogy, and the politics of difference,* pp. 33-70. Albany: State University of New York Press.

Montagu, A., and Watson, F. (1979). *The human connection*. New York: McGraw-Hill.

Morais, D., and Ogden, A. (2011). Initial development and validation of the global citizenship scale. *Journal of Studies in International Education15*(5), 1-23. doi:10.1177/1028315310375308.

Muniz, R. (2019). *Immigration law and undocumented students' fates*. Invited Speaker for the Diversity Challenge: Race, Culture, and WHMP: Survival, Resistance, and Healing in Current Social

Climate for the Institute for the Study and Promotion of Race and Culture, Boston, MA.

Murphy, A. (2019). *Four African Countries for International Students.*, Manchester, England:Keystone, Masterstudies.

National Council for Higher Education. (2014). *The state of higher education in Uganda. A Report on higher education delivery and institutions 2013/4*. Kampala, Uganda.

Paris, D., and Alim, H. S. (2017). *Culturally Sustaining Pedagogies. Teaching and Learning for Justice in a Changing World.*New York: Teachers College Press.

Reiner, G. M. (2012). Understanding the differences between Husserl's (descriptive) and Heidegger's (interpretive) phenomenological research. *J. Nurs Care 1,* 119. DOI: 10.4172/2167-1168.1000119

Richards, H. V., Brown, A. F., and Forde, T. B. (2007). Addressing diversity in schools: Culturally responsive pedagogy. *Teaching Exceptional Children39*(3), 64-68.

Samovar, L. A., Porter, R. E., and Jain, N. C. (1981). *Understanding Intercultural Communication*. Belmont, CA: Wadsworth.

Samuels, A, J. (2018). Exploring Culturally Responsive Pedagogy: Teachers' Perspectives on Fostering Equitable and Inclusive Classrooms. *SRATE Journal27*(1), 22-30. http://files.eric.ed.gov

Schapper, J., and Mayson, S. (2004). Internationalisation of the curriculum: an alternative to the Taylorization of academic work. *Journal of Higher Education Policy and Management 26*(2), 189-205. doi:10.1080/1360080042000218258.

Sheets, R. H. (2000). Advancing the field or taking centre stage: The White movement in multi-cultural education. *Educational Researcher29*(9), 15-21.

Sheets, R. H., and Gay, G. (1996). Student perceptions of disciplinary conflict in ethnically diverse classrooms. *NASSP Bulletin80*(580), 84-94.

Spencer-Oatey, H. and Dauber, D. (2017). *Internationalisation and the development of 'global graduates': Hearing the students' voices.* Global PAD Working papers. Available at Global PAD Open House http://www. warwick.ac.uk/globalpadintercultural.

Ssempebwa, J., Eduan, W., Nassir, F., and Mulumba, N. F. (2012). Effectiveness of university bridging programs in preparing

students for university education: A Case from East Africa. *Journal of Studies in International Education 16*(2), 140–156. DOI: 10.1177/1028315311405062

European University Association [EUA]. (2012). *EUA's Public Funding Observatory (June 2012)*.

UNESCO Institute for Statistics. (2018). *Education Data release: September 2018*. http://data.uis.unesco.org/

Varghese, V. N. (2020). Internationalisation and Cross-Border Mobility in Indian Higher Education. *International Journal of African Higher Education [IJAHE] 7*(2), 123- 139. https://doi.org/10.6017/ijahe.v7i2.12901

Villegas, A. M., and Lucas, T. (2002). Preparing Culturally Responsive Teachers: Rethinking the Curriculum. *Journal of Teacher Education 53*(1), 20-32. DOI: 10.1177/0022487102053001003

Watkins, C. (2005). Classrooms as Learning Communities: A review of research. *London Review of Education* 3(1), 47-64. DOI 10.1080/14748460500036276

Weinstein, C. S., Tomlinson-Clarke. S., and Curran. M. (2004). Towards a conception of culturally responsive classroom management. *Journal of Teacher Education* 2004(55), 25 DOI: 10.1177/0022487103259812

Woolsey, L.K. (1985). *Women's networks: Strengthening the bonds between women friends and family*. Paper presented at the meeting of the Canadian Research Institute for the Advancement of Women, Saskatoon, Sask.

Yamauchi, L. A., Taira, K., and Trevorrow, T. (2016). Effective Instruction for Engaging Culturally Diverse Students in Higher Education. *International Journal of Teaching and Learning in Higher Education28*(3), 460-470. http://www.isetl.org/ijtlhe/ ISSN 1812-9129

Yin, R. K. (2011). *Applications of case study research.*Sage.

Zeichner, K., and Hoeft, K. (1996). Teacher socialisation for cultural diversity. In J. Sikula, T. Buttery, and E. Guyton (eds) *Handbook on research on teacher education* (2nd edition.), pp. 525-547. New York: McMillan.

What is the Digitalised Curriculum for: Qualification, Socialisation and/or Subjectification?

Makhulu Makumane

Abstract

The emergence of the deadly corona virus, popularly known as COVID-19, caused a hasty and ill-prepared paradigm shift in higher education institutions. Formerly reliant on the face-to-face mode of teaching and learning, the need for physical distancing recommended by the World Health Organization forced them to adopt a digitalised curriculum. This article exploreswhether the digitalised curriculum adopted by a higher education institution in Lesotho was for qualification, socialisation and/or subjectification. In other words, it investigates which propositions are influenced by the digitalised curriculum. Purposive sampling was used to select five studies conducted in Lesotho during/post the COVID-19 pandemic. The tree three rings theory was used to frame the study, with thematic analysis through critical discourse analysis employed to analyse the data. The findings suggest that, to some extent, the use of a learning management system favours qualification at the expense of both socialisation and subjectification. In addition, the digital divide was glaringly evident in the adoption of online learning. Formal incorporation of social media sites is recommended to enable students to socialise with prescribed content and to utilise their unique experiences with digital technologies to achieve their prescribed goals.

Key words: digitalised curriculum, learning management system (LMS), qualification, social media sites (SMS), socialisation, subjectification

Résumé

L'émergence du virus corona mortel, communément appelé COVID-19, a provoqué un changement de paradigme précipité et mal préparé dans les établissements d'enseignement supérieur. Autrefois tributaires du mode d'enseignement et d'apprentissage en face à face, les établissements ont été contraints d'adopter un programme d'études numérisé en raison de la nécessité d'une distanciation physique recommandée par l'Organisation mondiale de la santé. Cet article examine si le programme numérisé adopté par un établissement d'enseignement supérieur au Lesotho visait la qualification, la socialisation et/ou la subjectivation. En d'autres termes, il étudie quelles propositions sont influencées par le programme numérisé. Un échantillonnage raisonné a été utilisé pour sélectionner cinq études menées au Lesotho pendant/après la pandémie de COVID-19. La théorie de l'arbre à trois anneaux a été utilisée pour encadrer l'étude, et une analyse thématique par le biais d'une analyse critique du discours a été employée pour analyser les données. Les résultats suggèrent que, dans une certaine mesure, l'utilisation d'un système de gestion de l'apprentissage favorise la qualification au détriment de la socialisation et de la subjectivation. En outre, la fracture numérique est apparue de manière flagrante dans l'adoption de l'apprentissage en ligne. L'intégration formelle de sites de médias sociaux est recommandée pour permettre aux étudiants de socialiser avec le contenu prescrit et d'utiliser leurs expériences uniques avec les technologies numériques pour atteindre les objectifs prescrits.

Mots clés : curriculum numérisé, système de gestion de l'apprentissage (SGA), qualification, sites de médias sociaux (SMS), socialisation, subjectivation.

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Introduction

The emergence of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), also known as COVID-19, forced paradigm shifts in the way different sectors operated due to restrictions put in place to curb the spread of the virus across the globe (Makumane, 2021a). COVID-19 was first recorded in Wuhan, China in 2019, and was declared a pandemic on 30 January 2020 by the Director-General of the World Health Organization (WHO) Dr Tedros Adhanom Gheoreyesus (WHO, 2021). This led to countries imposing different restrictions, with the most notable being physical and social distancing as the virus is transmitted through coming into contact with infected people's respiratory droplets (WHO, 2020). Higher education institutions (HEIs) were abruptly closed

in order to adhere to the recommendations, and modes of teaching and learning other than the traditional face-to-face approach were required to complete the academic year (Henaku, 2020; Mpungose, 2020a). Tamrat and Teferra (2020)note that mostHEIs swiftly moved to online teaching and learning, calling for the digitalisation of their curricula. However, Adnan and Anwar (2020) assert that, for some institutions,this rapid shift merely involved the transfer of educational content to the digital world without necessarily adopting online teaching and learning methods. Adedoyin and Soykan (2020) concur and describe online teaching and learning during the pandemic as emergency remote teaching as its quality, efficiency and effectiveness were questionable. Seemingly, a lack of resources in some institutions inhibited a fully-fledged move to a digitalised curriculum, which is considered to be a plan for and/or of teaching and learning (Hoadley and Jansen, 2014; Mabuza and Khoza, 2020), since online teaching and delivery methods were somewhat neglected.

This seems to have been the case at a HEI in Lesotho, where a Learning Management System (LMS), software that is used as a depository for course content to be accessed by students at their convenience (Khoza, 2020a),had to be hastily adopted to salvage the academic year. Although this LMS existed prior to the COVID-19 pandemic, it was seldom used by lecturers and students as it was an optional platform that aimed to promote blended learning (Makumane, 2021a). It is also worth noting that at the time the LMS was launched, there was no clear exposition of the underpinning theory and policy framework to guide its effective implementation (Makumane, 2021a; Mashinini, 2020). Coupled with the challenges ofdigital technology illiteracy, poor Internet connections and/or a lack of technological resources, this led to intended users opting to use teaching and learning modes that supported their habitual pedagogical practices, with face-to-face teaching and learning predominating (Makumane, 2021a; Mpungose 2019a). Mashinini (2020) asserts that the imposition of online teaching and learning in HEIs during the COVID-19 pandemic presented numerous challenges, especially in ill-resourced institutions that lackedhardware (HW) and software (SW) resources. Lecturers and students that were unfamiliar with the use of digital technologies experienced technostress, with many resisting the shift to online platforms (Khoza, 2020a; Mpungose and Khoza, 2021).

Duvenage, Correia, Uink, Barber, Donovan and Modecki (2020) observe that students consciously use technology to enable autonomous knowledge construction (qualification), to socialise (socialisation) and to develop their unique identities (subjectification). However, the forceful imposition of technology, especially for educational purposes seemingly disrupted their 'norm', leading to negative experiences and reactions that caused technostress. Duvenage et al. (2020) attribute this to the fact that the youth tend to use technology to escape the 'real' world (unpleasant offline experiences), and note that the adoption of digitalised curriculum demandeda constant online presence. Dhira, Yossatornc, Kaurb, and Chen (2018) state that technostress, which they term 'social media fatigue', affects students both mentally and physically. They define it as a situation in which users of technology, in this case students, suffer from mental exhaustion due to technological, information and communication overload through participating in different digital platforms, resulting in resistance to their use.

Prensky (2001) posits that individuals who resist the use of digital technologies are often digital immigrants who have worked for many years without these technologies. Khoza (2021)differentiates between digital natives (fluent users of technology) and digital immigrants (those who learn to use technology). The COVID-19 pandemic disrupted the 'norm' and required both categories to shift their teaching and learning modalities through the forced use of digitalised curriculum. Indeed, Adedoyin and Soykan (2020) are of the view that it led to a digital transformation that would otherwise have taken years to effect in a 'normal' situation. Khoza and Mpungose (2020) posit that a move to online platforms requires Fourth Industrial Revolution (4IR) technologies. Butler-Adam (2018) notes thatthe 4IR calls for skills that support effective enactment and management of the curriculum while working with the new technology as well as with humans. Butler-Adam (2018) adds that there is a need for people to adapt to these platforms in order to achieve their educational goals.

Khoza and Biyela (2020) note that most undergraduate students are digital natives, that is, they were born during the digital era. This suggests that they are conversant with 4IR technologies. However, Khoza and Biyela (2020) highlight that digital natives also encounter challenges in using technology to master the content prescribed

for their qualification (factual). Khoza (2020b) adds that in order to promote knowledge-building that addresses their needs, students need to be adept at socialisation whilst still adhering to prescribed content to achieve learning outcomes. This suggests that students' experiences of the 4IR prior to joining university are mainly unstructured and socially influenced as they use technology for socialisation through social media sites (SMSs) such as WhatsApp and Facebook (Mpungose, 2019b). This article is based on the premise that students' backgrounds and unique experiences with technology through their use of digitalised curriculum (subjectification) help them to invent their own unique identities that inform their acquisition of prescribed content (qualification) and skills that allow them to be active participants in society (socialisation) (Biesta, 2015; Makumane, 2020, 2021b).

Digitalised curriculum is expected to address the three domains of education identified by Biesta (2015): qualification, socialisation and subjectification. Biesta (2015) adds that this means that education should promote transmission and acquisition of factual knowledge as well as skills that help individuals to address societal needs; and should assist individuals to create unique identities in their interaction with the digitalised curriculum. This suggests that ideally, qualification and socialisation should nurture independent and responsible individuals with unique personal identities that are moulded by education (Biesta, 2015; Khoza, 2020b). However, some studies show that one or more of these three propositions is usually neglected during the enactment of digitalised curriculum (Adnan and Anwar, 2020; Biesta, 2015; Khoza, 2020a, Khoza and Mpungose, 2020; Makumane, 2021a; Mpungose, 2019b). It is against this background that this article explores which proposition(s) are influenced by a digitalised curriculum at a HEI in Lesotho, where formal use of an LMS, and informal use of WhatsApp have been adopted to facilitate the teaching and learning process. It argues that the digitalised curriculum should embrace the three propositions in order to promote effective attainment of goals that support performance (qualification), competence-based (socialisation) and pragmatic (subjectification) curricula. These propositions are discussed in more detail in the following section.

Literature Review: Digitalised Curriculum and the Three Propositions

The word curriculum is derived from the Latin word, *currere*, which means to run (Le Grange, 2017; Le Grange and Reddy, 2017). According to Pinar (2012), the notion of *currere* highlights students' experiences as one of the important aspects of education. It thus aims to understand the impact that education has on students' understandings of their personal (subjectification), social (socialisation) and professional (qualification) lives (Le Grange, 2017; Pinar, 2012). Pinar (2012) regards curriculum as complex interaction among content, lecturer and student, with the lecturer tasked with affording students meaningful learning experiences.

Digitalised curriculum talks to the notion of *currere* as it is a plan for and/or of teaching, learning and research that relies on HW, SW and ideological ware (IW) resources (Khoza, 2019; Khoza and Mpungose, 2020). This suggests that it introduces the use of 4IR technologies and resources. According to Schwab (2017), these are a revolutionary advancement on 3IR technologies that call forthe use of educational technologies that blur the line between the physical and the digital world. These educational technologies comprise HW, SW and IW resources (Khoza, 2019; Makumane, 2021a). Hardware resources are tangible material that can be seen and can be connected to the Internet. They include computers, mobile phones, and tablets, etc. and support the use of anLMS which was mandatory for knowledge-building during the uncertainty presented by COVID-19 (Henaku, 2020; Khoza, 2020b). As noted earlier, LMSs existed in HEIs prior to the pandemic, although they were not widely utilised by lecturers and students who were digital immigrants (Khoza and Mpungose, 2020; Mpungose and Khoza, 2020). Different HEIs introduced the mandatory use of LMSs for blended teaching and learning before the pandemic, including the University of KwaZulu-Natal (Moodle); University of Cape Town (VULA); Durban University of Technology (Blackboard); University of South Africa (MyUNISA); and the National University of Lesotho (THUTO), to name but a few (Khoza and Mpungose, 2020). Learning management systems support a performance curriculum as they influence content ('what' students learn) as well as how that content is shared and deciphered in order to support knowledge-building. They therefore represent qualification since they determine educational objectives, content, technologies/resources, instructional procedures

and evaluation that 'qualify' students in their different fields (Biesta, 2015; Makumane, 2021b). Qualification in this article refers to reasoning that is informed by factual sources on specific disciplines that are based on schooled knowledge (Bernstein, 1999; Hoadley and Jansen, 2014; Makumane and Khoza, 2020). Consequently, the cognitive domain is engaged in order to facilitate retention of concepts, theories, ideologies and knowledge. Content is taught from the lowest to the highest levels guided by prescribed objectives, whilst using digital technologies (Khoza, 2019; Makumane, 2021b). In other words, qualification is concerned with the 'what' of the curriculum to address discipline needs that are presented as facts (Khoza, 2021). Therefore, the use of LMSs drives the structured systems of a digitalised curriculum whereby lecturers are seen as depositors of knowledge and students as mere recipients using HW resources that requires the use of cognitive intelligence. Van Deursen and van Dijk (2021) note that the use of cognitive intelligence is essential, especially in using digitalised curriculum through LMSs, as it denote the ability to reason, plan, solve problems, understand complex data, learn quickly and learn from experience. In other words, the use of LMSs requires students to acquire and apply knowledge in order for them to be deemed as 'qualified'. Qualification thus forms part of the digitalised curriculum in order to qualify students through acquisition of knowledge, skills and dispositions (Biesta, 2015; Schiro, 2013). This suggests that in using LMSs, students are drilled in terms of prescribed content. However, they are not active participants in their learning process and are therefore unable to socialise with knowledge in order to meet their societal needs. This suggests the need to incorporate SMSs in order to facilitate easy access of content and to encourage active communication. Makumane (2021, p. 15) supports this assertion and adds that some LMSs do not support socialisation and this negatively impacts students' ability to "socialise with the content as [they do] not permit flexible communication between students and lecturers and among students themselves."

Socialisation, therefore, requires the use of SMSs to support students' active participation in their knowledge-building (Khoza, 2020b; Mpungose and Khoza, 2021). Social media sites are used through SW resources, which are tools that are produced for the HW to facilitate the display of information during the teaching and

learning process (Makumane, 2018; 2021a). Online SW resources are made available through the Internet and promote a social presence since they allow socialisation. During the COVID-19 pandemic, some HEIs adopted the use of SMSs such as Facebook, WhatsApp, Twitter, etc., which enable students to actively participate in their knowledge construction (Mpungose and Khoza, 2020; Sokhulu, 2020). Notably, the 4IR has introduced SMSs that promote socialisation through the use of competence-based curriculum. In other words, during the pandemic, some HEIs incorporated SMSsthatare preferred by students as they interact with their lecturers and oneanother in digital spaces that they are most familiar with, and this seemingly contributes to effective attainment of learning outcomes (Mpungose, 2020b). Thus, SMSs promote effective outcomes, activities, facilitation by lecturers, generated content and peer assessment, which are the principles of competence-based curriculum. Competence-based curriculum facilitates construction of knowledge that addresses the 'how' question in education (Khoza, 2021). This type of curriculum thus promotes collaboration and interactivity that contribute to the attainment of learning outcomes (Mpungose and Khoza, 2020; Sokhulu, 2020).

Biesta (2015) posits that socialisation in education seemingly "reproduces existing social structures, divisions and inequalities," (p. 77). This suggests that the use of SMSs may perpetuate what Van Deursen and Van Dijk (2019) refer to as the digital divide. The digital divide is the social gap in the use of the digitalised curriculum, where factors such as socio-economic issues, social class and technological knowledge determine the feasibility of online learning (Mpungose, 2020c; Van Deursen and Van Dijk, 2019; 2021). The use of 4IR technologies calls for adequate resources and facilities to bridge the digital divide between financially capable individuals and those that are struggling financially, especially in terms of devices and costs (Makumane, 2021a; Van Deursen and Van Dijk, 2019). The abrupt changes brought about by the COVID-19 pandemic were a challenge as 4IR technologies are a luxury in sub-Saharan countries due to poor Internet connectivity, costly data and network issues (Moralista and Oducado, 2020; Tamrat and Teferra, 2020). These issues required the application of IW resources, which manage and encompass students' personal needs as they facilitate learning with educational technologies that incorporate HW and SW resources (Khoza, 2013).

Ideological ware resources are theories and ideas that help students to effectively use HW (qualification) and SW (socialisation) resources (Khoza, 2019).In other words, these resources address students' unique needs and help manage actions that guide effective use of digitalised curriculum. Notably, IW resources facilitate the application of HW and SW resources as they are less concerned with technology and more inclined to ideology (Amory, 2010; Khoza, 2013). Thus, the use of IW resources breeds what Biesta (2015) refers to as subjectification. Subjectification, according to Biesta (2015), denotes unique individual experiences that are shaped by facts (qualification) and society (socialisation). This is supported by Sokhulu (2020), who avers that subjectification is brought about by combining the strengths of qualification and socialisation through the use of educational technologies in order to help students to self-actualise. Sokhulu's (2020) study explored Master's students' experiences of using digital technologies to conduct their research during the COVID-19 hard lockdown. The findings indicated that the students used their unique subjectification experience to handle any challenges. This suggests that they relied on the theories and ideas that they deemed most appropriate to address their needs and thus established their existence as subjects of initiative who are responsible for creating their own unique identities (Biesta, 2015). Therefore, in this case, individuals produce pragmatic curriculum, which is a convergence of performance curriculum and competence-based curriculum (Kaushik and Walsh, 2019; Ngubane-Mokiwa and Khoza, 2021). According to Kaushik and Walsh (2019), this convergence informs unique thought that influences how an individual processes facts and social experiences to promote subjectification. Subjectification places individual and personal needs at the heart of learning. In other words, when digitalised curriculum addresses subjectification, it allows students to mould their unique identities that are aligned to their idealised self (Biesta, 2015; Thompson and Erdil-Moody, 2016). Khoza (2019)affirms that pragmatic curriculum is driven by personal needs, the researcher role, blended learning, theories of technology and formative assessment and that these principles enable an individual to undertake logical action to attain desired educational experiences. Pragmatic curriculum therefore nurtures independent, responsible individuals with unique personal identities moulded by education through subjectification (Biesta, 2015, Khoza, 2020a). Subjectification answers the 'who' (who is learning) question in education as it addresses personal needs that promote unique personal identities, which in turn create self-actualised individuals who are creative and problem-centred (Khoza, 2020b; Mabuto, 2020).

Khoza (2013) argues that should there be a paradigm shift in the teaching and learning process, it will only be effective and plausible if it is dominated by a combination of the three propositions (qualification-HW; socialisation-SW; and subjectification-IW). This article is premised on the assumption that ideally, digitalised curriculum should adopt the three propositions of education in order to reduce the teaching and learning distance between an HEI, its students, lecturers and content during and/or post COVID-19. It explores if this premise holds true in the context of a HEI in Lesotho. Itthus investigates the propositions that are evident in a digitalised curriculum through the use of anLMS and anSMS (WhatsApp) to facilitate the teaching and learning process. The following section discusses the theory that framed this study,Khoza's (2013) Tree Three Rings Theory (TTTRT).

The TTTRT and the Three Propositions

The TTTRT was introduced by Khoza (2013) as a framework to guide an online teaching and learning process. According to Khoza (2013, p. 62), "facilitators should imagine themselves working as farmers (facilitators), who are trying to grow fruit trees (teaching process) using three big machines/tools (three rings) in order to produce fruit (qualified students/learners)." In the TTTRT, lecturers facilitate teaching and learning processes using the digitalised curriculum that is driven by HW, SW and IW resources. In this process, students are seen as active participants who become professionals through the facts provided (qualification), productive members of society who contribute meaningfully to social development (socialisation), and who mould their unique identities that are aligned to their idealised self (subjectification) (Biesta, 2015; Mabuza and Khoza, 2020). The TTTRT addresses the three educational domains which are behaviourism, constructivism and cognitivism and these are aligned to qualification, socialisation and subjectification, respectively (Khoza, 2013; 2021). Figure 1 below presents the TTTRT.

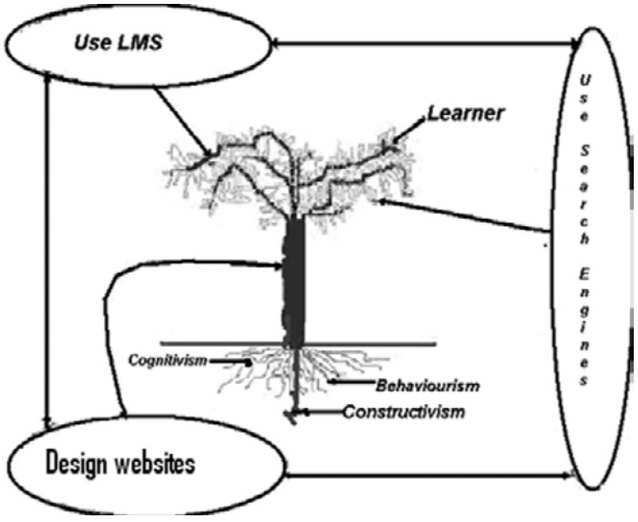

Figure 1: The TTTRT (adapted from Khoza, 2013)

Figure 1 demonstrates the theory that uses a representation of a tree to demonstrate what happens when using digitalised curriculum. The root system is represented by the educational domains (behaviourism, constructivism and cognitivism). The roots feed the trunk, which helps transport nourishment that produces fruit (students) through the use of LMSs, search engines/SMSs and designed websites. According to Khoza (2021), behaviourism as a root favours the use of LMSs to breed qualification; constructivism favours the use of SMSs to produce socialisation; and cognitivism feeds the design of websites to breed subjectification. In other words, behaviourism suggests that students systematically use the educational technologies prescribed by their HEIs in a conscious, planned manner that helps them attain qualification. In constructivism, students subconsciously use SMSs that they have personal experience of and that magnify their learning strengths and needs to facilitate effective learning through socialisation (Mpungose, 2019a; 2020b). Notably, in cognitivism, students unconsciously engage their habitual actions towards educational technologies to design their unique *modus operandi* that ideally encompasses both behaviourism and constructivism in order to facilitate effective attainment of learning outcomes (Khoza, 2021). The TTTRT is used in this article to explore

and understand the propositions that are embedded in a digitalised curriculum adopted in a Lesotho university during/post the COVID-19 era.

Research Objective and Research Questions

The aim of the study was to explore the proposition(s) influenced by the digitalised curriculum at a Lesotho HEI, where formal use of an LMS and informal use of an SMS (WhatsApp) was adopted for continuation of the teaching and learning process. The questions that guided it were:

1. What is the digitalised curriculum for?
2. What informs the use of the proposition(s) of the digitalised curriculum?

Research Design and Methodology

This study adopted a pragmatic paradigm which allows for either or both qualitative or quantitative data to study actions based on individual needs (Creswell and Creswell, 2018; Morgan, 2014). Morgan (2014) states that the pragmatic paradigm seeks to produce knowledge within a social context through experiences, which are seen as interactions between belief and action. It was appropriate for this study that explored the three educational domains that address action (behaviourism), social belief (constructivism) and experiences (cognitivism). Critical discourse analysis (CDA) was used to analyse and review text from published sources (Ngubane-Mokiwa and Khoza, 2021). Fairclough (2001) affirms that CDA incorporates a variety of approaches to the social analysis of discourse. Fairclough (2001) adds that methodologically, CDA helps to provide information/accounts of ways in which "discourse '(re) constructs' social life in processes of social change" (p. 122). This approach was appropriate as it deals with the social aspect (socialisation) of research by determining how what is claimed to be social reality in the selected texts shapes individuals' factual perceptions (qualification) as well as their unique identity (subjectification).

Sampling

Purposive sampling was used to select five studies conducted in Lesotho on the university under study during the COVID-19 era. In purposive sampling, samples are deliberately selected due to their

ability to provide authentic, trustworthy information relevant to the research objectives and questions (Bryman, 2004; Yin, 2015). The studies selected were conducted by Mashinini (2020); Makafane and Chere-Masopha (2021), Makumane (2021a), Mbambo-Thata (2020) and Sepiriti (2021). These studies were identified as possessing the required information that correlated to the study's objectives and questions. They were able to generate authentic data as they were conducted during/post the COVID-19 era on the HEI under scrutiny. Four principles of trustworthiness were observed and taken into consideration to ensure credibility (truth-value), dependability (use of direct quotations), confirmability (triangulation using multiple studies by different authors to authenticate the findings), and transferability (applicability of the study in different contexts (Makumane, 2021b; Ngubane-Mokiwa and Khoza, 2021).

Data Analysis

Thematic analysis was used to analyse the data. In this type of analysis, both inductive and deductive reasoning are used to identify patterns and themes from selected texts in relation to the research questions (Braun and Clarke, 2012). Thematic analysis enables the researcher to decipher behaviour, beliefs and experiences during interaction with the data through pre-determined (deductive) themes and use inductive reasoning in interaction with the texts (Samuel, 2009). The pre-determined themes were framed by the principles of the TTTRT. Inductively, data were arranged and correlated in order to identify unanticipated patterns, categories and themes that were not deductively identified. Braun and Clarke (2012) affirm that an inductive approach is data-driven as the coding of data is undertaken without trying to fit it into an existing coding frame. Open coding was used to accommodate both deductive and inductive reasoning (Nowell, Norris, White and Moules, 2017).

Presentation and Discussion of Findings

To ensure the truth value of the study, the data discussed are presented using direct quotations. This limits distortion and misinterpretation of data. The findings are presented in line with thethemes that were determined deductively through the use of the TTTRT and those that were inductively revealed through interaction with the data. The themes

are thus: Qualification (behaviourism); Socialisation (Constructivism); Subjectification (cognitivism); and the Digital Divide.

Theme 1: Qualification (Behaviourism)

Qualification is aligned to behaviourism in that it is objective and systematic in applying concepts, theories, ideologies and factual knowledge that impact behaviour through interaction with the digitalised curriculum (Khoza, 2013; Moore, 2011). Qualification is therefore attained through structured systems that are imposed by the mandatory use of anLMS. Mashinini (2020, p. 169) notes that:

> the [LMS] which has since its launch in 2010 operated very negligibly, and picked up slightly since 2014, has finally become fully active to aid teaching and learning ...Therefore by default, COVID-19 has helped the University to implement fully its strategic goal 2, which states that the [University] shall be 'a university of choice providing high quality educational experience and relevant scholarship'.

This excerpt seems to imply that the forced imposition of the LMS in the university under study had a positive impact during the novelty presented by the COVID-19 era. In other words, the pandemic presented a silver lining in that the LMS that had been neglected since its introduction was swiftly adopted to salvage the teaching and learning process and 'qualify' students. The latter assertion is substantiated by Makumane (2021a, pp. 11-12) who asserts that "[students] preferred the use of a professional platform that influences factual perceptions as it grants them access to factual knowledge of their designated courses." This suggests that the use of the LMS was perceived as making a positive contribution to students' acquisition of knowledge in that it enabled them access to content that would 'qualify' them (Biesta, 2015; Sokhulu, 2020). Khoza and Mpungose (2020) affirm that a digitalised curriculum is dominated by performance curriculum as it presents prescribed content guided by objectives, resources, time frames and assessment. Such qualification is attained through LMSs, which facilitate knowledge consumption.

Conversely, some studies unearthed students' qualms about the prescribed LMS. On the one hand, Sepiriti (2021, p. 89) notes that,

"participants [...] revealed that the LMS was not interactive", while Mashinini (2020, p. 173) states:"the biggest challenge was that most students did not participate or come into chatroom sessions where they were organised and this cut the necessary academic communications between lecturers and students in their courses." These assertions seem to imply a lack of interactivity as far as the LMS was concerned. This is seemingly due to two challenges, the first being a lack of the technological skills and knowledge complexities associated with the use of the LMS; and the second apparent rebellious attitudes towards having to use a platform whose existence was somewhat ignored, especially by digital immigrants, before the uncertainty brought about by COVID-19 due to its demanding nature in terms of resources (HW, SW and IW) (Makumane, 2021a; Mpungose, 2019a).

On the other hand, Makafane and Chere-Masopha (2021, p. 135) submit that students were not coping with the use of the LMS and thus resorted to boycotting their studies. "They indicated that students [...] relied on their friends or willing counterparts to assist them with downloading (learning materials such as notes and/or prescribed resources from the Internet and teacher feedback) or uploading (assignment)." The latter assertion talks to the issue of the digital accessibility of the LMS, which was seemingly limited. Makumane (2021a) states that digital accessibility requires the use of HW and SW resources and thatit supports qualification in that it requires that the given instructions (downloading) must be systematically followed to access prescribed content. Therefore, in the case presented by Makafane and Chere-Masopha (2021), qualification was compromised as digitalised curriculum was adopted hastily without proper planning due to the emergence of the pandemic. Adedoyin and Soykan (2020) posit that hasty adoption of the digitalised curriculum should be seen as "emergency remote teaching"rather than online teaching and learning as inadequate planning was invested to ensure quality. In addition, it is apparent that students' needs were not sufficiently taken into account when the use of the LMS was imposed.

Since most students are considered digital natives, they are restricted in terms of using their technological skills to master prescribed content that contributes to their qualification (Khoza and Biyela, 2020; Waghid and Waghid, 2016). Khoza and Biyela (2020) further assert that

competence-based curriculum, which puts students' needs at the centre of teaching and learning, should be incorporated to address socialisation. Similarly, Mpungose (2020c) is of the view that digitalised curriculum should be more student-centred and move away from lecture-centred methods to allow individuals to explore their disciplines outside their 'normal' (face-to-face) context. This suggests the adoption of informal SMSs to promote socialisation with content.

Theme 2: Socialisation (Constructivism)

Socialisation should ideally form part of the digitalised curriculum in order to encompass the issue of 'relationships' in education (Biesta, 2015). These relationships are fostered through the adoption of competence-based curriculum using learning activities, facilitation, a learning community, distance learning and outcomes (Khoza and Mpungose, 2020; Makumane and Khoza, 2020). From the reviewed studies, it seems that these principles of competence-based curriculum were lacking. For instance, Sepiriti (2021, p. 8) attests that, "the challenge is that the [LMS] hinders effective interaction between students and their lecturer [...] they [lecturers] delay/or [do] not respond at all to the questions students have posed on chatroom." This implies that the LMS used did not support socialisation experiences that support individuals' social needs. Sokhulu (2020) states that digital technologies help create a socialisation experience in education. However, this seemed not to be the case as Makumane (2021, p. 15) notes:"[The] LMS did not allow participants to socialise with the content as it did not permit flexible communication between students and lecturers and among students themselves." Makafane and Chere-Masopha (2021, p. 134) observe that,"[students] being trained how to use LMS had been of very little help for effective participation because training did not provide opportunities for hand-on practice." These assertions echo Sepiriti's (2021) finding that limited communication inhibits active participation and interaction with content. Mpunguse (2020c) states that students become more active when they use platforms that they are most familiar with, such as SMSs (WhatsApp, Facebook, Twitter, etc.). Khoza (2020b) thus asserts that an LMSs should incorporate such sites to strengthen professional and societal knowledge-building. Notably, some lecturers became aware of this shortfall and used informal platforms

such as WhatsApp and Zoom to support students' socialisation needs and facilitate achievement of the learning outcomes. However, since there was no implementation framework for these sites, which are not necessarily formally recognised as teaching platforms by the institution, their use required the merging of performance-based (qualification) and competence-based (socialisation) curricula by students to mould their pragmatic curriculum (subjectification).

Theme 3: Subjectification (Cognitivism)

[Students'] statements on the appreciation of the LMS and their recommendation for adaption of SMS thatthey are accustomed to implicitly imply their need to use their unique experiences with digital technologies proved to have a bearing on the content acquired and on the efficiency of technological knowledge in the attainment of goals (Makumane, 2021a, p. 12).

This excerpt alludes to the fact that the use of both HW and SW resources was reliant on students' unique prior experiences with digital technologies. In other words, students already had their own ideologies towards the use of digital technologies, but had to adapt them to what was presented in their HEI to continue the teaching and learning process in a novel situation. Mpungose (2020b) attests that IW resources allow students to use their experiences to construct knowledge socially (socialisation), while also exploring formal platforms such as LMSs to enhance knowledge acquisition (qualification). Makumane and Khoza (2020) add that IW resources are used to control learning actions in order to achieve attained goals. Mpungose (2020b) further highlights that HEIs' failure to formally adopt SMSs inhibits authentic learning that draws on students' experiences. Thus, the HEI under study did not formally acknowledge the use of SMSs to enhance knowledge building that supports both professional and societal development in order to establish personal identities that promote a harmonious working relationship among lecturers, students and other pertinent stakeholders (Khoza, 2020b). It is apparent that the swift adoption of the digitalised curriculum had a negative impact on the use of IW resources that produce subjectification. "[The] hasty and haphazard decision to migrate courses online should be seen as an ingredient for chaos that is likely to damage the quality [of] teaching and learning" (Makafane and Chere-Masopha, 2021, p. 135). This suggests that the quality of teaching and learning was affected by the swift change in the teaching mode that was alien to digital immigrants as well as digital natives. It implies that students had to rely on their limited pedagogical knowledge (subjectification) to blend qualification (through the use of the LMS) and socialisation (through the use of search engines and SMSs). Biesta (2015) and Khoza (2020b) acknowledge that the combination of these three propositions of education facilitates effective teaching and learning that support knowledge-building for the 4IR.

Theme 4: The Digital Divide

"Data cost is a major digital divide that inhibits access to learning in digital spaces" (Mbambo-Thata, 2020, p. 34). The digital divide is compounded by the forced use of digitalised curriculum and the exorbitant cost of data perpetuates it (Henaku, 2020; Tamrat and Teferra, 2020). Van Deursen and Van Dijk (2019) suggest that the digital divide socially divides individuals according to resources that grant them access to online learning. The HEI made an effort to address it by negotiating with service providers to offer zero-rated access to online platforms. Mashinini (2020, p. 170) notes that it approached major network providers "to assist it to cope with costs of access to online learning through providing ... free access to [the LMS] for online teaching and learning." Mbambo-Thata (2020, p. 34) comments that "[the university's] adoption of reverse billing broke the digital divide that often prohibits access to online content." These assertions suggest that the HEI ensured that data costs were not an impediment to using the digitalised curriculum.

However, digital accessibility proved to be a somewhat insurmountable obstacle as it required individuals to have personal gadgets (laptops, tablets, smartphones, etc.) that could access the required software, network and the Internet, in order to facilitate effective online learning. Makafane and Chere-Masopha (2021, p. 133) state that "many of the [participants] indicated that because of their socio-economic background, they do not have access to personal digital resources and [a] dedicated learning space." Mashinini (2020, p. 160) suggested earlier that:

> the online teaching that universities have resorted to due to COVID-19 must ensure that all students, including those from

> highly economically disadvantaged groups, which they call the 'missing middle' are afforded access to connectivity, digital devices and data, inter alia, to be able to take part in the online teaching and learning too.

These excerpts suggest that the forced use of 4IR technologies through digitalised curriculum perpetuated the digital divide as most participants seemed to have limited material access, and some hadpoor quality HW. Van Deursen and Van Dijk (2019) argue that the quality of HW resources owned by an individual may exacerbate the digital divide because different devices do not permit the same online access.

The HEI devised ways of curbing this challenge, albeit at a later stage. "The [...] management allowed some students affected [...] to come back into campus residence from where they could be able to do so" (Mashinini, 2020, p. 171-172). Mpungose (2020c) contends that HEIs should address the digital divide in order to promote effective online learning. Ostensibly, the HEI in question strove to do this by negotiating zero-rated access and granting physical access to students who were struggling with HW and SW resources. However, such efforts were limited as not all students were granted access to campus. In fact, Makafane and Chere-Masopha (2021, p. 134) report that, "the findings of this study established that all the students did not think the university was doing enough to support online learning, particularly by making digital infrastructure and resources available and accessible to ensure that no student was disadvantaged." Hence, Makumane (2021, p. 15) suggests that HEIsshould explore "inexpensive and reliable digital technologies that may be used to promote professionalisation, socialisation and personalisation in the use of online learning in the Lesotho context, where digital technologies are seen to promote digital divide due to access to the internet, poor connectivity and costly data." This implies provision of digital technologies (mostly HW), especially to financially disadvantaged individuals to access online learning. For instance, the HEI should not resort to selective access to campus, but rather negotiate with service providers to provide laptops to all students in urgent need, with the repayments deducted from their monthly stipends.

Conclusion

This article explored which proposition(s) are influenced by the digitalised curriculum in an HEI in Lesotho, where formal use of an LMS, andinformal use of an SMS (WhatsApp) were adopted to facilitate the teaching and learning process. The findings indicate that the institution's digitalised curriculum is more inclined to qualification, whilst neglecting both socialisation and subjectification. In other words, the design of the digitalised curriculum seemed to support structured systems through the mandatory use of the LMS. This suggests that the LMS allowed students to access prescribed content that influences attainment of factual knowledge which qualifies them in their different disciplines and programmes (Biesta, 2015; Khoza, 2021). However, the findings showed that the accessibility of such knowledge was compromised by students' lack of technological skills and knowledge complexities in using digital technologies.

These are in line with those of Adedoyin and Soykan (2020) who contend that hasty adoption of the digitalised curriculum resulted in a lack of planning which usually accompanies the introduction of a paradigm shift. In turn, this resulted in insufficient training, especially for digital immigrants who tend to experience techno-stress when faced with obligatory use of educational technologies (Khoza, 2020b). In relation to socialisation, the findings indicated that the LMS was limited in terms of enabling students to socialise with prescribed content. This implies that they were not able to actively participate and interact with the content in order to meet their needs. Some lecturers informally used WhatsApp and/or Zoom to address this challenge although they are not formally recognised by the HEI as teaching platforms.

Thus, on a larger scale, socialisation was neglected, and this had a bearing on subjectification, whereby students needed to use their prior unique experience of educational technologies to help them navigate both formal use of the LMS and informal use of SMSs. It is thus concluded that the digitalised curriculum in this instance is for qualification, and is found wanting in terms of socialisation and subjectification. This implies that the curriculum does not promote a sound education; Biesta (2015) notes that quality education is a blend of these three domains/propositions as "they cannot really be separated" (p. 78). Based on these findings, revision of the digitalised curriculum is

recommended in order to merge the three domains. An implementation framework is also recommended to guide proper use of an LMS that formally incorporates different SMSs that talk to the needs of students andenable them to self-actualise.

References

Adedoyin, O. B., and Soykan, E. (2020). Covid-19 pandemic and online learning: the challenges and opportunities. *Interactive Learning Environments,* DOI:10.1080/10494820.2020.1813180.

Adnan, M., and Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students perspectives. *Journal of Pedagogical Sociology and Psychology 2*(1), 45-51.

Amory, A. (2010). Education technology and hidden ideological contradictions. *Educational Technology and Society 13*(1), 69-79.

Bernstein, B. (1999). Vertical and horizontal discourse: An essay. *British Journal of Sociology of Education 20*(2), 157-173.

Biesta, G. (2015). What is Education For? On Good Education,Teacher Judgement, and Educational Professionalism. *European Journal of Education 50*(1), 75-87.

Braun, V., and Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, and K. J. Sher (eds) *APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological,* pp. 57-71. American Psychological Association. https://doi.org/10.1037/13620-004

Bryman, A. (2004). *Social Research Methods*. Oxford: Oxford University Press.

Butler-Adam, J. (2018). The Fourth Industrial Revolution and education. *S Afr J Sci 114*(5/6), 1.

Creswell, J. W., and Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. London: SAGE Publications, Inc.

Dhir, A., Yossatorn, Y., Kaur, P., and Chen, S. (2018). Online social media fatigue and psychological wellbeing—A study of compulsive use, fear of missing out, fatigue, anxiety and depression. *International Journal of Information Management 40*, 141-152.

Duvenage, M., Correia, H., Uink, B., Barber, B. L., Donovan, C. L., and Modecki, K. L. (2020). Technology can sting when reality bites: Adolescents' frequent online coping is ineffective with momentary stress. *Computers in Human Behavior 102,* 248-259. https://doi.org/10.1016/j.chb.2019.08.024

Fairclough, N. (2001). Critical discourse analysis as a method in social scientific research. In R. Wodak and M. Meyer (eds) *Methods of Critical Discourse Analysis,* pp.121-138. London: Sage.

Henaku, E. A. (2020). COVID-19: Online Learning Experience of College Students: The Case of Ghana. *International Journal of Multidisciplinary Sciences and Advanced Technology 1*(2), 54-62.

Hoadley, U., and Jansen, J. (2014). *Curriculum: Organising knowledge for the classroom* (3rd ed.). Oxford University Press Southern Africa.

Kaushik, V., and Walsh, C. A. (2019). Pragmatism as a Research Paradigm and Its Implications for SocialWork Research. *Social Sciences 8*(255), 1-17.

Khoza, S. B. (2013). Can they change from being digital immigrants to digital natives? *Progressio 35*(1), 51-68.

Khoza, S. B. (2019). Lecturers' Reflections on Curricular Spider Web Concepts Transformation Strategies. In E. N. Ivala and C. L. Scott (eds) *Transformation of Higher Education Institutions in Post-Apartheid South Africa,* Vol. 1, pp. 15-26. New York: Routledge - Taylor and Francis Group.

Khoza, S. B. (2020a). Students' Habits Appear Captured by WhatsApp. *International Journal of Higher Education 9*(6), 307-317. doi:https://doi.org/10.5430/ijhe.v9n6p307

Khoza, S. B. (2020b). Academics' "Why" of Knowledge-Building for the Fourth IndustrialRevolution and COVID-19 Era. *International Journal of Higher Education 9*(6), 247-258

Khoza, S. B.,and Biyela, A. T. (2020). Decolonising technological content knowledge of firstyear mathematics students. *Education and Information Technologies*. DOI:https://doi.org/10.1007/s10639-019-10084-4.

Khoza, S. B., and Mpungose, C. B. (2020). Digitalised Curriculum to the rescue of a Higher Education Institution. *African Identities 18*(4), 1-21. doi:https://doi.org/10.1080/14725843.2020.1815517

Khoza, S. B. (2021). Can Teachers' Identities Come to the Rescue in

the Fourth Industrial Revolution? Technology, Knowledge and Learning. DOI: https://doi.org/10.1007/s10758-021-09560-z.

Le Grange, L. (2017). Contemporary curriculum theories and their influence on teaching and learning. In L. Ramrathan, L. Le Grange, and P. Higgs (eds) *Education Studies for Initial Teacher Development,* pp. 112-124. Cape Town: Juta and Company (Pty) Ltd.

Le Grange, L., and Reddy, C. (2017). Curriculum development and design. In L. Ramrathan, L. Le Grange, and P. Higgs (eds) *Education Studies for Initial Teacher Development,* pp. 125-138. Cape Town: Juta and Company (Pty) Ltd.

Mabuto, M. P. (2020). *Educators Enacting Non-Formal Education Policy-Case of Three Schools in Masvingo District, Zimbabwe- An Exploration*. Unpublished PhD thesis. University of KwaZulu-Natal, Durban.

Mabuza, D. C., and Khoza, S. B. (2020). Educators' reflections of the instructional time in JC integrated consumer science curriculum. *International Journal of Home Science* 5(1), 1-17.

Makafane, D. T., and Chere-Masopha, J. (2021). COVID-19 Crisis: Challenges of Online Learning in One University in Lesotho. *African Perspectives of Research in Teaching and Learning* 5(1), 126-138.

Makumane, M. (2018). Educators' enactment strategies of the French integrated curriculum in Lesotho: An action research Unpublished doctoral thesis. University of KwaZulu-Natal.

Makumane, M. (2020). Secondary School Educators' Enactment Strategies of the French Integrated Curriculum Content. *European Journal of Foreign Language Teaching* 5(1), 150-164.

Makumane, M.,and Khoza, S. B. (2020). Educators' Reasonings and their effects on successful attainment of curriculum goals. *South African Journal of Higher Education 34*(2), 95-111.

Makumane, M. A. (2021a). Students' perceptions on the use of LMS at a Lesotho university amidst the COVID-19 pandemic. *African Identities 2021*(1), 1-18. doi:https://doi.org/10.1080/14725843.2021.1898930.

Makumane, M. A. (2021b). Theory of Enactment Strategies as a Way forward in Enacting a French Integrated Curriculum in Lesotho. In K. G. Fomunyam and S. B. Khoza (eds) *Curriculum Theory, Curriculum Theorising, and the Theoriser,* pp. 295-319. Boston: Brill Sense.

Mashinini, V. (2020). COVID-19 and National University of Lesotho: Experiences and Challenges. *International Journal of Education and Research 8*(9), 157-180.

Mbambo-Thata, B. (2020). Responding to COVID-19 in an African university: the case the National University of Lesotho library. *Digital Library Perspectives 2020*(4), 28-38.

Morgan, D. L. (2014). Pragmatism as a Paradigm for Social Research. *Qualitative Inquiry 2914*(20), 1045-1053. Retrieved from http://qix.sagepub.com/content/20/8/1045

Mpungose, C. B. (2019a). Is Moodle or WhatsApp the preferred e-learning platform at a South African university? First-year students' experiences. *Education and Information Technologies*. DOI: https://doi.org/10.1007/s10639-019-10005-5

Mpungose, C. B. (2019b). Is Moodle a Platform to Decolonise the University Curriculum? Lecturers' Reflections. *Africa Education Review*. DOI: 10.1080/18146627.2018.1479645.

Mpungose, C. B. (2020a). Are Social Media Sites a Platform for Formal or Informal learning? Students' Experiences in Institutions of Higher Education. *International Journal of Higher Education 9*(5), 300-311. doi:https://doi.org/10.5430/ijhe.v9n5p300

Mpungose, C. B. (2020b). Beyond limits: Lecturers' reflections on Moodle uptake in South African universities. *Education and Information Technologies 2020*(4), 1-20. DOI: 10.1007/s10639-020-10190-8

Mpungose, C. B. (2020c). Emergent transition from face-to-face to online learning in a South African University in the context of the Coronavirus pandemic. *Humanities and Social Sciences Communications 7*(1), 1-9.

Mpungose, C. B., and Khoza, S. B. (2020). Postgraduate Students' Experiences on the Use of Moodle and Canvas Learning Management System. *Technology, Knowledge and Learning 28*(4), 1-16. doi:https://doi.org/10.1007/s10758-020-09475-1

Mpungose, C. B., and Khoza, S. B. (2021). Students' Reflections on the Use of Zoom Video Conferencing Technology for Online Learning at a South African University. *International Journal of African Higher Education 8*(1), 1-18.

Moralista, R.B., and Oducado, R.M.F. (2020). Faculty perception toward

online education in a state college in the Philippines during the coronavirus disease 19 (COVID-19) pandemic. *Universal Journal of Educational Research 8*(10), 4736-4742. DOI: 10.13189/ujer.2020.081044.

Moore, J. (2011). Behaviourism. *The Psychological Record, 61* 449-464.

Ngubane-Mokiwa, S. A., and Khoza, S. B. (2021). Using Community of Inquiry (CoI) to Facilitate the Design of a Holistic E-learning Experience for Students with Visual Impairments. *Education Sciences 11*(152), 1-12. doi:https://doi.org/10.3390/xxxxx

Nowell, L.S., Norris, J. M., White, D. E., and Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods 16*,1-12.

Pinar, W. (2012). *What is Curriculum Theory? (2nd Edition)*. New York: Routledge.

Prensky, M. (2001). Digital natives, digital immigrants Part 1. *On the Horizon* 9(5), 1-6. Doi:10.1108/10748120110424843

Samuel, M. A. (2009). On becoming a Teacher: Life history research and the force-field model of Teacher Development. InDhunpath, R., and Samuel, M.A. (eds) *Life history research-Epistemology, methodology and representation,* pp. 3-18. Rotterdam: Sense Publishers.

Schiro, M. S. (2013). *Curriculum theory: Conflicting visions and enduring concerns* (2nd ed.). Thousand Oaks: Sage.

Schwab, K. (2017). *The Fourth Industrial Revolution*. Cologny: World Economic Forum.

Singh, H. (2003). Building Effective Blended Learning Programs. *Educational Technology43*(6), 51-54.

Sepiriti, S. (2021). Investigating the Effects of Using Thuto Learning Management System: A Case of the National University of Lesotho. *Journal of Online and Distance Learning 2*(1), 1-11.

Sokhulu, L. H. (2020). Students' experiences of using digital technologies to address their personal research needs during the COVID-19 lockdown. *African Identities 18*(3), 1-17. Retrieved from https://doi.org/10.1080/14725843.2020.1801384. doi:10.1080/14725843.2020.1801384

Tamrat, W., and Teferra, D. (2020, April 9). COVID-19 poses a serious threat to higher education. *University World News*. Retrieved from https://www.universityworldnews.com/post.php?story=20200509103755715

Thompson, A. S.,and Erdil-Moody, Z. (2016). Operationalising multilingualism: language learning motivation in Turkey. *International Journal of Bilingual Education and Bilingualism 19*(3), 314-331.

Van Deursen, A. J., and van Dijk, J. A. (2019). The first-level digital divide shifts from inequalities in physical access to inequalities to material access. *New Media Soc.* 21(2), 354-375. https://doi.org/10.1177/1461444818797082.

Van Deursen, A. J., and van Dijk, J. A. (2021). IQ and digital inequality: An empirical investigation. *New Media and Society 00*(0), 1-23. DOI: 10.1177/14614448211024012.

Waghid, Z., and Waghid, F. (2016). Examining Digital Technology for (Higher) Education through Action Research and Critical Discourse Analysis. *South African Journal of Higher Education 30*(1), 265-284.

World Health Organisation (WHO). (2020, 8 March). *Timeline: WHO's COVID-19 response*. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline/.

World Health Organisation (WHO). (2021, 9 July). *Modes of transmission of virus causing COVID-19: Implications for IPC precaution recommendations*. Scientific Brief. https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations.

Yin, R. K. (2015). *Qualitative research from start to finish*: Guilford Publications.

From Contact to Online Learning in a Crisis: An Initial Investigation of Auditing Students' Online Behaviour Patterns

Zakiyyah Varachia, Dannielle Cerbone and Talya Segal

Abstract

The COVID-19 pandemic caused an abrupt change to the education system as most South African universities were forced to halt all face-to-face teaching and learning activities and shift to an online curriculum. This study aimed to provide an initial overview of the online behaviour of second-year South African Auditing students. Using reports from the Learning Management System, it investigated the time taken by students to access online resources, the type of resources accessed and if this behaviour had an association with students' marks. The analysis revealed that, on average, only 23% of the resources provided were accessed and also provided evidence that students did not access resources promptly. On average it took them 130 days after initial upload to access the online material. Students took longer to access tutorial videos (234 days) than other resources such as lecture videos (89 days). Significant, negative associations were established between student marks, time to access resources, and the percentage of resources accessed. This implies that, while face-to-face and online learning may be substituted for each other in an ordinarily contact university, the efficacy of online resources is dependent on the student's online behaviour.

Keywords: COVID-19, online learning, self-regulation, time management, higher education

Résumé

La pandémie de COVID-19 a provoqué un changement brutal dans le système éducatif, la plupart des universités sud-africaines ayant été contraintes d'interrompre toutes les activités d'enseignement et d'apprentissage en face à face et de passer à un programme d'études en ligne. Cette étude visait à fournir un premier aperçu du comportement en ligne des étudiants sud-africains de deuxième année en audit. En utilisant les rapports du système de gestion de l'apprentissage, elle a examiné le temps pris par les étudiants pour accéder aux ressources en ligne, le type de ressources consultées et si ce comportement avait un lien avec les notes obtenues par les étudiants. L'analyse a révélé qu'en moyenne, seuls 23 % des ressources fournies étaient consultées et a également prouvé que les étudiants n'accédaient pas rapidement aux ressources. En moyenne, il leur a fallu 130 jours après le téléchargement initial pour accéder au matériel en ligne. Les étudiants ont mis plus de temps à accéder aux vidéos des didacticiels (234 jours) qu'à d'autres ressources telles que les vidéos de cours (89 jours). Des associations négatives significatives ont été établies entre les notes des étudiants, le temps d'accès aux ressources et le pourcentage de ressources consultées. Cela signifie que, bien que l'apprentissage en face à face et en ligne puisse se substituer l'un à l'autre même dans une université où les contacts sont normaux, l'efficacité des ressources en ligne dépend du comportement en ligne de l'étudiant.

Mots clés : COVID-19, apprentissage en ligne, autorégulation, gestion du temps, enseignement supérieur

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Introduction

The coronavirus (COVID-19) outbreak across the globe significantly disrupted life in 2020 (de Villiers et al., 2020; Gonzalez et al., 2020; Rapanta et al., 2020). The education sector was not spared andmost South African universities were forced to move from face-to-face teaching and implement an online alternative (Gonzalez et al., 2020). The pandemic is not the first disruption experienced by the country's universities which were previously impacted by the *#FeesMustFall* protest which began in October 2015 and halted university activities (Mpungose, 2020b; Wangenge-Ouma and Kupe, 2020). However, unlike previous disruptions, COVID-19 resulted in a national lockdown that prevented physical contact and ordinary university activities for an extended period (de Villiers et al., 2020; Wangenge-Ouma and Kupe, 2020). In this context, universities were forced into emergency

remote learning to ensure that the academic year could be completed (Wangenge-Ouma and Kupe, 2020). The change to online learning was implemented on an urgent, unplanned basis without any transition or 'easing in' period which usually accompanies major educational change (Gonzalez et al., 2020; Mishra et al., 2020). Only one South African university is dedicated to distance learning, with all others dependent on face-to-face teaching (Mpungose, 2020b; Wangenge-Ouma and Kupe, 2020). At the University of the Witwatersrand, face-to-face contact was suspended from 16 March 2020 and by 20April 2020 online learning was used to deliver the remainder of the academic programme.

Online education is a relatively new concept (Zimmerman, 2000) with most research on this mode of teaching and learning being theoretical (Peters, 1999). It is gaining momentum at the global level, due to the higher costs associated with traditional teaching and learning (Çakýroglu, 2014; Queiros and de Villiers, 2016). Other advantages include its cost-effectiveness, convenience, accessibility and flexibility (Pollard and Hillage, 2001; Rodriguez et al., 2008). Online learning is often referred to as digital learning, remote learning, or e-learning (Moore et al., 2011; Mayer, 2019; Mpungose, 2020b) and can be broadly defined as non-face-to-face learning (Mpungose, 2020b; Mpungose, 2020a). Teaching material and instructions are delivered via the Internet on a device and the learning process is not dependent on the student's physical location (Clark and Mayer, 2016; Singh and Thurman, 2019). According to Ally (2004), online learning extends beyond using the Internet to deliver teaching material; it is also about the learner and the learning process.

Students who are successful online learners are self-directed, self-determined, self-motivated, self-regulated, and display self-efficacy (Dabbagh, 2007; Cunningham, 2010; Hong et al., 2011; Lehmann et al., 2014; Stephen et al., 2020). A lack of motivation, regulation, or self-discipline renders success unlikely (Cunningham, 2010; Hong et al., 2011; Stephen et al., 2020). Self-regulation specifically concerns the online student and his/her ability to control his/her own learning (Lynch and Dembo, 2004; Moore et al., 2011). It has different attributes such as goal orientation, self-efficacy for learning and performance, time management, help-seeking, and Internet competency(Lynch and Dembo, 2004).

The change from face-to-face to online learning was sudden, unexpected and rapid for lecturers and students and required a change in behaviour both in terms of teaching methods and students' approaches to studying (Mpungose, 2020b; Wangenge-Ouma and Kupe, 2020). As this was the first time that online learning was fully used for the traditional face-to-face accounting degree at the University of the Witwatersrand, the researchers sought to gain an initial view of students' online behaviour. Using information obtained from the Learning Management System (LMS) reports, the areas investigated were the type of resources accessed, the extent of resources accessed, and the time taken to access them. The study aimed to provide researchers in South Africa with initial findings in a local context to understand how the country's university students responded to online learning. It also aimed to provide lecturers at tertiary institutions with information regarding students' behaviour in an online environment which may assist in the design of future courses.

The article begins with a review of the literature related to online learning, self-regulation, and time management. This is followed by the background to the research and the methodology employed to conduct the study. Lastly, the results, implications and suggestions for further research are presented.

Literature Review

Online learning

The key elements of online learning include that there is physical distance between the lecturer and student, the use of the Internet and students' use of a device to access learning material (Ally, 2004; Gonzalez and St Louis, 2008; Clark and Mayer, 2016; Singh and Thurman, 2019). Mayer (2019) divides online learning into three components, namely, the 'what', the 'how' and the 'why'. The 'what' relates to the teaching material which can be verbal and/or visual such as pictures, diagrams, or videos (Mayer, 2019). The 'how' is the medium used for online learning and refers to electronic devices such as laptops, desktops, tablets or mobile devices (Mayer, 2019). Lastly, the 'why' relates to the reason for online learning, which is to impart knowledge to students (Mayer, 2019).

Online learning can be synchronous or asynchronous or a

combination of the two (Shahabadi and Uplane, 2015). Asynchronous learning occurs where there is a time delay in the delivery of resources such as pre-recorded lectures or communication is via email or forums, enabling students to plan according to their requirements (Gonzalez and St Louis, 2008; Shahabadi and Uplane, 2015). Online learning can also occur in real-time (synchronous learning), for instance, via Skype, Microsoft Teams, or live chats where there is live interaction between lecturers and students (Gonzalez and St Louis, 2008; Dhawan, 2020). Synchronous learning is more aligned to traditional learning as there is real-time contact between students and lecturers even though it is virtual (Aliyyah et al., 2020). Given that students face different obstacles such as limited Internet connectivity and poor access to devices, asynchronous learning was the best approach to online learning during the unexpected switch (Bharuthram and Kies, 2013; Queiros and de Villiers, 2016).

A weekly schedule was provided to assist students with better planning. The weekly planner included the lecture topic, the tutorials that would be covered for the week and a list of the tasks students were required to complete for the module. Tutorials are regarded as active learning as students engage in meaningful tasks because they have ownership of the content (McGown et al., 1996). Previous research has found that regular attendance at tutorials has a positive impact on examination results (Hutcheson and Tse, 2006; Horn and Jansen, 2009). Kirby and McElroy (2003) found that tutorial attendance has a greater impact on grades than lecture attendance. It has also been found that students who attend both tutorials and lectures benefit less than those who only attend one of the two (Horn and Jansen, 2009). With the change to online learning, no live lectures or tutorials could be held, and all learning occurred online with lecture and tutorial content recorded and uploaded for students (asynchronous learning). An advantage of this is that students can pause the video, rewind and re-watch content to gain a better understanding (Hughes, 2009). Videos have also been found to be beneficial to learning as multiple senses are used through viewing images, reading text and listening to content (Robertson and Flowers, 2020).

Although online learning has advantages, appropriate resources and commitment are required for it to succeed (Rossett, 2002). Ali and Leeds (2009) found that the drop-out rates for online courses were much higher than for traditional face-to-face learning. This is largely

attributed to a lack of self-regulation (Lee and Choi, 2011) and personal reasons cited by students (Nichols, 2010).

Self-regulation and Online Learning

Given the COVID- 19 pandemic and the move to online learning, the concept of self-regulation has become a key concept (Gonzalez et al., 2020). Students have had to adjust their environment and behaviour to become self-regulated (Zimmerman, 2000; Gonzalez et al., 2020). Self-regulated learning is defined as the extent to which learners are meta-cognitively, motivationally, and behaviourally active in achieving their learning outcomes (Peters, 1999; Zimmerman, 2000; Jung, 2001). It is a critical factor in online academic success; given the physical absence of a lecturer, online learning gives students more control overlearning material than traditional learning (Jung, 2001; Garrison, 2003; Dabbagh, 2007). It should be noted that overall educational practices are moving from teacher-centred to learner-centred practices which require self-regulation (Shahabadi and Uplane, 2015; Delen and Liew, 2016). Students who exhibit self-regulation traits focus on their learning strategies, engage in goal setting and complete tasks with fewer distractions (Zimmerman, 2000). They seek assistance as and when they need it, control important parts of their environment to ensure that their learning environment is conducive to learning and are active participants in their learning (Pintrich, 2000; Zimmerman, 2000). In a traditional face-to-face lecture, it is easier for lecturers to monitor students' understanding (Song and Hill, 2007). In an online setting, particularly with asynchronous learning, the student has to be self-regulated as he/she is responsible for his/her own learning and if issues are experienced the student is required to seek the necessary help (Song and Hill, 2007).

Students who dropout of online learning lack self-regulation traits as they underestimate the time required to complete tasks, display a lack of coping strategies and do not show commitment to goals (Artino, 2008; Cho and Jonassen, 2009). Self-efficacy refers to a student's belief that he/she can achieve something (Alqurashi, 2016). A student who lacks self-efficacy will not make an effort to complete tasks, will avoid obstacles and omit difficult tasks (Alqurashi, 2016). Goal orientation also impacts students' success in terms of online learning (Lynch and Dembo, 2004). Studies have shown that students who adopt performance-based goals

have higher levels of achievement in online learning (Zimmerman, 2000; Wang and Newlin, 2002). Students' experience of the Internet and the use of computers is also a key element for online learning success (Schrum and Hong, 2002). Those with superiorInternet competency have been found to be more goal-orientated than students with lower levels of Internet competency(Schrum, 1998; Zhang et al., 2001). Insufficient time management has been cited as a major reason for students failing online courses (Michinov et al., 2011; Yang et al., 2020). It is important to note that within the South African context, there are additional challenges such as studentsfrom disadvantaged backgrounds, economic inequality, a lack of access to infrastructure and technology and Internet costs (Brown et al., 2008; Bagarukayo and Kalema, 2015; Queiros and de Villiers, 2016), which also play a role in students' success. The purpose of this study was, however, not to consider the reasons for a lack of self-regulation but to rather gain initial insight into self-regulation patterns.

Time Management

Balduf (2009) found that a lack of time management is one of the causes of underachievement. Given the autonomy provided to students in an online setting, they tend to struggle with time management (Brophy, 2010). Studies from as far back as 1977 (Ellis and Knaus, 1977) and 1992 (Schouwenburg, 1992) indicated a widespread lack of time management amongst university students. Time management involves the adoption of a set of habits, rules and recommendations to manage one's personal time effectively to do as much work as possible within the given amount of time (Lynch and Dembo, 2004; Foltýnek and Motycka, 2009). Within the university environment, there are frequent academic deadlines for tests, examinations and assignments, as well as administrative deadlines such as submitting application forms (Popoola, 2005). Balduf's (2009) interviews with university students revealed that university provided them with freedom and more distractions, resulting in them sleeping during the day, choosing social events over academic commitments, struggling to keep up with the syllabus, being unable to manage their time and studying just before examinations rather than planning their studying. Students thought they had free time because of the structure of university and did not plan their studying or use their time effectively

(Balduf, 2009). Bembenutty (2009) notes that students who plan their studying are willing to sacrifice immediate enjoyment to achieve academic success. Moore et al. (2011) and Peters (1999) concluded that web-based, online courses can require double or triple the time investment in comparison to a face-to-face course. A learner's ability to effectively manage his/her time becomes very important in an online setting (Lynch and Dembo, 2004). Elvers et al. (2003) found that the content accessed by students peaked the day before an examination and even on the day it was written. It was also found that students do not follow the schedules provided to them to guide their online learning (Elvers et al., 2003).

Effective time planning has been found to improve students' level of achievement (Zimmerman, Greenberg, and Weinstein, 1994) and reduce drop-out rates (Gibson, 1998; Eastin and LaRose, 2000). Students who use their time efficiently are more likely to learn and/or perform better than students who do not have good time management skills (Zimmerman, 2002; McCarthy and Kuh, 2006). Learners who are aware of deadlines and can manage them appropriately due to their awareness of the length of time it will take to complete an assignment perform better than those who are unaware of such (Lynch and Dembo, 2004). When students do not plan their schedules, they experience pressure to complete the work, which may result in inaccurate,lower-quality work (Van Eerde, 2003). Furthermore, a lack of time management increases a student's stress levels (Macan et al., 1990). Studies have established negative correlations between procrastination, grades, learning and completion of course work (see, for example, Solomon and Rothblum, 1984; Macan et al., 1990; Michinov et al., 2011). Students who do not manage their time encounter issues with their allocated learning such as preparing for examinations, submitting assignments on time and dealing with deadlines (Balduf, 2009; Visser et al., 2018). They are also less able to retain information in the longterm than students who study on a regular basis (Melton, 1970).

Methods

This study adopted a correlational research design and drew on archival data on full-time students enrolled in Auditing II at the University of the Witwatersrand. The data were used to compare both student online

activity[1] and student academic performance (measured by final course grade). While a correlational design does not allow for an explicit finding of causation (Fraenkel et al., 1993; Tuckman and Harper, 2012), in this study, itwas able to strongly suggest whether or not online behaviour has an association with student academic performance. Furthermore, since a correlational design takes place after data collection without any manipulation or intervention, it enablesthe exploration of naturally occurring relationships between groups.

The population and purposeful sample consisted of all 705 students registered for the Auditing II module in 2020. Auditing II is part of the second-year syllabus for students pursuing a Bachelor of Commerce in Accounting degree or those registered for the Chartered Accountant qualification (Bachelor of Accounting Science), for which it is a prerequisite. In a traditional setting, lectures were offered once a week with a live tutorial every second week. Lectures and tutorials were not recorded, and students had to attend to benefit from the class. Most content such as lecture notes and tutorial material was printed for students. Whether printed or not, it was always uploaded for students on the LMS. Lectures comprised of a lecturer going through the content with students. A revision lecture would also be held before examinations or tests. The pandemic changed all this and required a switch to online learning.

Data Collection

All data were collected from the detailed access logs of the LMS (Sakai) and internal records of student academic performance. Resources were categorised into seven categories, namely, Revision, Lecture Material, Lecture Videos, Tutorial Material, Tutorial Videos, Self-Reflection and Extra Material. Revision relates to additional material on content already lectured. Lecture Material and Tutorial Material refer to documents electronically provided to students for lectures and tutorials, respectively. Lecture Videos and Tutorial Videos are asynchronous recordings provided to students for lectures and tutorials, respectively. Self-Reflection refers to the content which provided students with detailed explanations of their test results. Lastly, Extra Material is any document provided to the

1 Online activity was measured by considering the resources accessed and time to access resources.

students on the course content but not specifically lectured. It included professional guidance, industry examples and research articles of interest to students.

Hypothesis Development

The study aimed to gain initial insight into students' online behaviour during the first implementation of online learning in an ordinarily face-to-face learning environment. To achieve this purpose, four research sub-questions were developed. Firstly, as noted by Queiros and de Villiers (2016), students can experience obstacles when accessing online content (see also, Bharuthram and Kies, 2013). The first research question (RQ1) was thus developed to understand if students were accessing the online resources provided to them:

RQ1: To what extent are students accessing the online resources provided?

Once the extent of access was determined, the researchers aimed to understand the association between resources accessed and academic performance (Robertson and Flowers, 2020). Research question 2 (RQ2) was formulated as follows:

RQ2: Is there an association between online resources accessed and the academic performance of students?

In addition, students have historically had an issue with time management (see, for example, Ellis and Knaus, 1977; Schouwenburg, 1992; Balduf, 2009; Brophy, 2010). Research question 3 (RQ 3) was developed to determine the extent to which students delayed accessing content or if content was accessed on time.

RQ3: How long did students take to access online content after the initial upload onto the LMS?

Lastly, the literature suggests that time delays have a negative association with performance (see, for example, Solomon and Rothblum, 1984; Macan et al., 1990; Michinov et al., 2011). The study thus aimed to determine if there is an association between the time taken to access content and academic performance within a South African context.

RQ4: Is there an association between the time taken to access content and students' academic performance?

Data Analysis

For RQ1, descriptive statistics were calculated based on the categories of online material. These included the average total number of resources, percentage of resources accessed and the difference in access depending on students' marks. For RQ2, a Kendall's-Tau b correlation analysis was performed to assess if there were any correlations amongst the percentage of online resources accessed and student academic performance. Mann Whitney-U tests were used to support the correlations. For RQ3, the difference between when the resource was uploaded on the LMS and when students accessed the data was calculated. All students with a log of online activity were included in the sample (n=702). Descriptive statistics were then calculated to provide an understanding of the average total access times and for each of the categories. For RQ4, a Kendall's-Tau b correlation analysis was performed to assess if there were any correlations amongst the access times and student academic performance. Student academic performance was measured by the final course grade. As with research question two, correlations were supported by Mann Whitney-U tests to assess whether or not the access times differed for passing and failing students.

Results

Table 1: Detailed composition of the resources provided to Auditing II students

Categories	Revision	Lecture Material	Lecture Videos	Tutorial Material	Tutorial Videos	Self-Reflection	Extra Material	Total
Resources uploaded	24	30	40	125	111	36	21	387
Percentage (%)	6%	8%	10%	32%	29%	9%	5%	100%

Overview of Resources Provided

Table 1 provides a breakdown of the 387 resourcesuploaded for the Auditing II course. Tutorial content (notes and videos) accounted for the most resources (61%) uploaded, followed by lecture content (notes and videos) (18%). Tutorial content constitutes a large percentage of the resources because a wide range of tutorials are provided to students to facilitate application of the lecture content. On average, nine tutorials

were provided to students per lecture topic and a video was provided for each to explain the question and solution. Fifteen weekly planners were provided to students and on average only 273 (39%) accessed some planners. Only 45 students (6%) accessed all 15 planners, while 94 (13%) did not access any. Thisis in line withElvers et al.'s (2003) finding that students do not use the schedules provided to guide their studies.

Extent of Access by Students

In terms of resources accessed, 695 (99%) of the students accessed some type of online resource provided, with only ten (1%) not accessing any. Of the ten,seven students did not write the final paper.

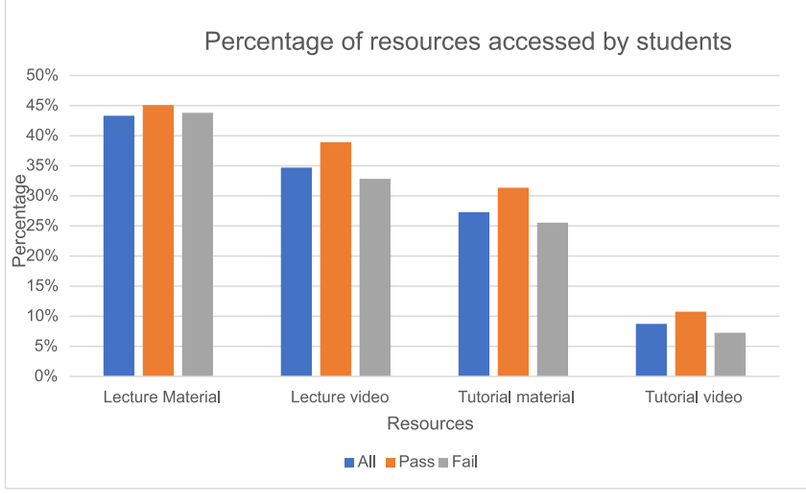

Figure 1: Percentage of resources accessed by Auditing II students

Figure 1 provides an overview of the percentage of all students accessingthe resources, and a breakdown of the figures for those who passed and failed.On average, the students only accessed 23% of the resources provided. Lecture material was accessed the most (43%), whiletutorial videos were accessed the least, with only 9% of the content accessed. The tutorial material accessed was also low at 35%. The low access rates indicate that students may have not completed the majority of the tutorials. This could be because they did not watch the lectures or did not see the benefit of watching the tutorial video. Although studies

by Kirby and McElroy (2003), Hutcheson and Tse (2006) and Horn and Jansen (2009) highlight the positive outcomes of tutorials, the high level of accessing lecture content when compared to tutorial content suggests that students relied on the lectures rather than the tutorials to improve their knowledge. Furthermore, the low levels of accessing lecture videos suggests that students did not gain an understanding of the content or used alternative means to substitute for the lectures and tutorials.

The Association between Accessing Resources and Students' Marks

Figure 1 points to similar trends among passing and failing students, with lecture material being the most accessed and tutorial videos the least. However, access across the resource types is statistically different ($p<0.05$) between passing and failing students[2]. This suggests that accessing more of the content has a positive association with academic performance. The correlations of a Kendall's tau-b presented in Table 2 complement the finding that different types of information are associated with the students' final mark. There is a positive, but weak correlation, between the final marks and the content accessed.

Table 2: Correlation between students' marks and type of resources accessed

		Revision	Lecture material	Lecture video	Tutorial material	Tutorial video	Self-reflection
Final mark	**Correlation Coefficient**	.066*	0.004	.076**	.105**	.058*	.056*

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

As indicated in Table 3, passing students were stratified into percentage ranges. Those in the 70% or above range accessed more resources than students in the lower ranges, particularly with regard to lecture material and tutorial material. Students in the 60%-69% and 50%-59% ranges had a similar access history. This indicates that other factors affected the academic performance of students in the 50%-69% range. Tutorial videos were the least accessed by students who achieved 70% or more. This provides evidence that, in an online setting, lectures and tutorials can be substituted for each other.

2 Findings in an untabulated Mann-Whitney U.

Table 3: Association between level of resources accessed by students and marks range

Topic	Content accessed by Passing students			Content accessed by Failing students
	50% - 59%	60% - 69%	70% or more	< 50 %
Lecture Material	45	45	49	44
Lecture Videos	38	40	43	33
Tutorial Material	30	31	36	26
Tutorial Video	12	10	5	7
Revision	13	12	21	11
Self-reflection	14	15	13	13

Time to access resources

Overall access behaviour

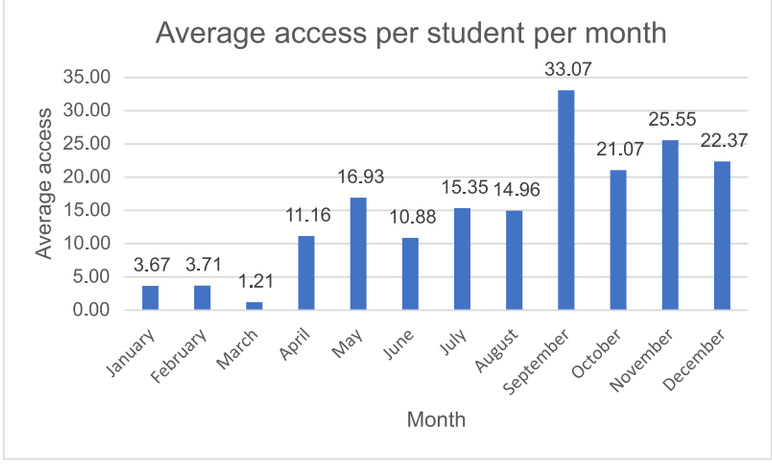

Figure 2: Average resources accessed per month by students

Figure 2 provides an overview of the average access per student per month. Online learning was introduced in April2020 which explains the low access for January to March as traditional lecturing was still in place during this period. However, even when online learning was introduced, overall resource access by students was low. The access patterns suggest

that students accessed resources just before they wrote examinations or tests, rather than accessing content as it was released. The sudden peaks in May, September and November coincide with the assessments written during the academic year. This increase in access before assessments is consistent withElvers et al. (2003) and Balduf (2009) who found that students tend to access resources on a larger scale before or on the day of examinations. The sudden increase in resources accessed by students just before assessments indicates that they may lack the ability to set goals, plan activities and maintain schedules, pointing to ineffective time management (Bembenutty, 2009). The large increase in average resources also suggests that access to the Internet or the ability to access the content (Bagarukayo and Kalema, 2015; Queiros and de Villiers, 2016) may be less of a hindrance to online learning.

Time Taken per Online Resource Content

Resources were uploaded weekly as per a schedule provided to students. As a result, it was expected that students would have accessed resources close to the upload date and would not have taken longer than seven days to do so. However, on average, they took 130 days (approximately four months) to access the resources provided to them. Further analysis of access to the different types of resources is more concerning. The average number of days to access lecture material and lecture videos was 64 and 89, respectively, with students accessing the tutorial material on average after 119 days and tutorial videos accessed 234 days later. The reason for the delay may be that students could access lectures and tutorial content at any point once the content was made available (Hughes, 2009; Robertson and Flowers, 2020). It may also indicate that students were unable to self-regulate their learning, often referred to as procrastination where students voluntarily delay the completion of academic tasks, despite knowing the consequences (Solomon and Rothblum, 1984; Day et al., 2000).

Within a South African context, the lack of time management cannot only be attributed to procrastination. Various factors may influence this behaviour, including connectivity issues, unsuitable/ lack of resources for online learning, home circumstances,the cost of accessing the Internet and a lack of IT skills (Brown et al., 2008; Isabirye and Dlodlo, 2014).

Table 4: Average days to access resources for failing and passing students

Topic	Failing students - Average days	Passing students- Average days	Difference - Average days
Lecture Material	65	56	9
Lecture Videos	102	67	36
Tutorial Material	129	94	36
Tutorial Video	245	214	31
Revision	212	176	36
Self-reflection	70	50	20
Overall average	**137**	**110**	**28**

Table 4 sets out the average number of days that failing and passing students took to access resources. On average, failing students took longer (137 days) to access all resources than passing students (110 days). Failing students accessed lecture material within a similar time period as passing students; however, they took almost a month longer to access the other types of resources.

Table 5: Average days to access resources for passing students per marks range

Topic	Average days for passing students			Average days for failing students
	50% - 59%	60% - 69%	70% or more	Failing - < 50%
Lecture Material	58	54	45	65
Lecture Videos	75	61	36	102
Tutorial Material	107	83	68	129
Tutorial Video	217	215	218	245
Revision	186	173	124	212
Self-reflection	50	47	55	70
Overall average days	**115**	**105**	**91**	**137**

Passing students were stratified in terms of marks range (Table 5). The average number of days to access a particular resource decreased for all types of resources except tutorial videos and self-reflection. This suggests that the students who achieved higher marks tended to have

better time management skills than those who did not, which is consistent with Macan et al. (1990) and Gibson's (1998) findings. Furthermore, not only is time management associated whether a student passes or fails, but it is also associated with his/her mark. As indicated in previous studies, when students procrastinate, it increases the pressure to complete the work to the required quality and has a negative association with marks (Michinov et al., 2011). It is interesting to note that across all ranges, students took similar times to access tutorial videos; however, the number of days taken to access tutorial material differs across the marks range. Tutorial material refers to students completing the tutorial and therefore being able to identify and correct their errors. Merely watching a tutorial video may not produce the same result and could be why students took longer to access the content, although the tutorial video was meant to explain the tutorial and its approach.

Table 6: Correlation of the average days to access content and student's final mark for the course

Days to access		Revision	Lecture material	Lecture videos	Tutorial material	Tutorial videos	Self -reflection
Final mark	**Correlation Coefficient**	-.108**	-.124**	-.159**	-.149**	-.067*	-.073**

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

Table 6 presents a Kendal's-Tau B correlation of the average days to access content and a student's final mark for the course. There are significant negative correlations between the average days to access the types of material and a student's final mark. This indicates that as the number of days to access course material increases, the mark decreases and vice versa. It confirms Cerezo et al. (2017), Van Eerde (2003), and Michinov et al.'s (2011) finding that procrastination is negatively associated with academic performance. Similar to the correlations presented in Table 2, the correlations are weak; however, the coefficients in Table 6 are stronger than those in Table 2 for the same type of content. This means that students did not benefit as much by merely accessing the content and required sufficient time to understand it.

Conclusion

Online learning is gaining more interest given its advantages such as cost-effectiveness, removing borders in studying and offering flexibility (Çakýroglu, 2014; Kauffman, 2015; Queiros and de Villiers, 2016). However, the drop-out rates in online learning are also cause for concern and can be attributed to different factors such as a lack of self-regulation and self-efficacy (Cho and Jonassen, 2009; Cerezo et al., 2017). This research extendedprevious findings by exploring the shift from face-to-face learning to an online environment in a South African context.

Consistent with Lynch and Dembo (2004), Visser et al. (2018) and Michinov et al. (2011), the study found that a delay in accessing resources is associated with poorer academic performance. Students were expected to have accessed online content within seven days of it being made available; however, on average took 130 days to access the content. Possible reasons for the delay include common issues related to online learning such as a lack of self-regulation, resulting in students not being able to complete tasks (Artino, 2008), their inability to manage time (Michinov et al., 2011; Yang et al., 2020), or because students were not familiar with using a computer and lacked the necessary skills (Schrum and Hong, 2002). Within a South African context, this could also be due to other factors such as students' background which impacts their skills in the use of online resources and access to the required resources such as the Internet and computers (Bharuthram and Kies, 2013; Bagarukayo and Kalema, 2015)

Tutorial videos took the longest to be accessed, at about 234 days on average. However, delayed access to asynchronous tutorials is not associated with academic performance. This suggests that they are not equivalent to contact or synchronous tutorials (McGown et al., 1996; Horn and Jansen, 2009).

The long delay in accessing resources was accompanied by poor access of the total number of resources. On average, students only accessed 23% of the total resources available. Lecture material was the most accessed at 43% of the content. However, this still means that more than half the lecture material was not accessed by students. Unlike Gorissen et al. (2012) and Robertson and Flowers (2020), the research results indicate that Auditing II students did not prefer video content as they accessed the notes rather than the videos.

The results indicate that accessing more online content is associated with better academic performance. The correlation is significant but weak, suggesting that accessing resources is not the only factor to consider when evaluating academic performance in an online setting. This supports Garrison (1997) and Artino's (2008) finding that to achieve success, students need to take responsibility for their learning and be committed.

As with any research of this nature, there are inherent limitations and additional research is required. Most notably, the study did not investigate the reasons for delayed access and low levels of access of resources. Future research could consider students' perceptions of the content provided as this may offer insight into why some content is accessed, and other content is not. An important area to investigate is the underlying reason for students' online behaviour given the unique South African context.

The delay in accessing resources and the low number accessed raise concerns regarding the operationalisation of online learning at a contact university. Althoughthe South African National Plan for Higher Educationplaces emphasis on the use of technology to improve education (Bagarukayo and Kalema, 2015), its effective implementation in the local context has not been sufficiently studied. Future research could consider the barriers and key learnings from multiple universities to determine a possible method of implementing online learning more effectively and efficiently.

References

Ali, R., and Leeds, E. M. (2009). The impact of face-to-face orientation on online retention: A pilot study. *Online Journal of Distance Learning Administration12*(4).

Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., and Tambunan, A. R. S. (2020). The perceptions of primary school teachers of online learning during the COVID-19 pandemic period: A case study in Indonesia. *Journal of Ethnic and Cultural Studies7*, 90-109.

Ally, M. (2004). Foundations of educational theory for online learning. *Theory and practice of online learning2*, 15-44.

Alqurashi, E. (2016). Self-efficacy in online learning environments: A literature review. *Contemporary Issues in Education Research (CIER)9*, 45-52.

Artino, A. R. (2008). Motivational beliefs and perceptions of instructional quality: Predicting satisfaction with online training. *Journal of Computer Assisted Learning24*, 260-270.

Bagarukayo, E., and Kalema, B. (2015). Evaluation of elearning usage in South African universities: A critical review. *International Journal of Education and Development using ICT* 11(2).

Balduf, M. (2009). Underachievement among college students. *Journal of Advanced Academics20*, 274-294.

Bembenutty, H. (2009). Academic delay of gratification, self-efficacy, and time management among academically unprepared college students. *Psychological Reports104*, 613-623.

Bharuthram, S., and Kies, C. (2013). Introducing e-learning in a South African Higher Education Institution: Challenges arising from an intervention and possible responses. *British Journal of Educational Technology44*, 410-420.

Brophy, N. (2010). The impact of e-Learning on student engagement. *Bright Hub Education.(August)*. Accessed at: www. brighthub. com/education/online.

Brown, C., Thomas, H., Van Der Merwe, A., and Van Dyk, L. (2008). The impact of South Africa's ICT infrastructure on higher education. *Proceedings of the 3rd International Conference of E-Learning. Cape Town, South Africa. Academic Publishing Limited,* pp. 69-76.

Çakýroglu, Ü. (2014). Evaluating students' perspectives about virtual classrooms with regard to Seven Principles of Good Practice. *South African Journal of Education34*(2).

Cerezo, R., Esteban, M., Sánchez-Santillán, M., and Núñez, J. C. (2017). Procrastinating behavior in computer-based learning environments to predict performance: A case study in Moodle. *Frontiers in Psychology8*, 1403.

Cho, M. H., and Jonassen, D. (2009). Development of the human interaction dimension of the Self-Regulated Learning Questionnaire in asynchronous online learning environments. *Educational Psychology29*, 117-138.

Clark, R. C., and Mayer, R. E. (2016). *E-learning and the science of instruction:*

Proven guidelines for consumers and designers of multimedia learning. John Wiley andSons.

Cunningham, J. (2010). Self-Direction: A Critical Tool in Distance Learning. *Common Ground Journal,7*(2),89-100.

Dabbagh, N. (2007). The Online Learner: Characteristics and Pedagogical Implications. *Contemporary Issues in Technology and Teacher Education7*, 217-226.

Day, V., Mensink, D., and O'Sullivan, M. (2000). Patterns of academic procrastination. *Journal of College Reading and Learning30*, 120-134.

De Villiers, C., Cerbone, D., and Van Zijl, W. (2020). The South African government's response to COVID-19. *Journal of Public Budgeting, Accounting and Financial Management32*(5),97-811.

Delen, E., and Liew, J. (2016). The use of interactive environments to promote self-regulation in online learning: A literature review. *European Journal of Contemporary Education15*, 24-33.

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems49*, 5-22.

Eastin, M. S., and Larose, R. (2000). Internet Self-Efficacy and the Psychology of the Digital Divide. *Journal of Computer-Mediated Communication6*(1).

Ellis, A., and Knaus, W. (1977). *Overcoming procrastination*. New York: Institute for Rational Living.

Elvers, G. C., Polzella, D. J., and Graetz, K. (2003). Procrastination in online courses: Performance and attitudinal differences. *Teaching of Psychology30*, 159-162.

Foltýnek, T., and Motycka, A. (2009). *Time Management in E-learning*. Faculty of Business and Economics, Department of Informatics, Mendel University, Czech Republic, pp. 112-130

Fraenkel, J. R., Wallen, N. E., and Hyun, H. H. (1993). *How to design and evaluate research in education*. McGraw-Hill New York.

Garrison, D. R. (1997). Self-directed learning: Toward a comprehensive model. *Adult Education Quarterly48*, 18-33.

Garrison, D. R. (2003). Self-directed learning and distance education. *Handbook of Distance Education*,pp. 161-168.

Gibson, C. C. (1998). *Distance Learners in Higher Education: Institutional Responses for Quality Outcomes*. ERIC.

Gonzalez, D., and St Louis, R. (2008). The use of Web 2.0 tools to promote learner autonomy. *Independence 43,* 28-32. Retrieved from http://peoplelearn.homestead.com/MEdHOME2/Technology/WebToos.2.0.autonomy.pdf.

Gonzalez, T., De La Rubia, M., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., and Sacha, G. (2020). Influence of COVID-19 confinement on students' performance in higher education. *PloS one15*, e0239490.

Gorissen, P., Van Bruggen, J., and Jochems, W. (2012). Students and recorded lectures: survey on current use and demands for higher education. *Research in Learning Technology20*(3),297-311.

Hong, B., Haefner, L., and Slekar, T. (2011). Faculty attitudes and knowledge toward promoting self-determination and self-directed learning for college students with and without disabilities. *International Journal of Teaching and Learning in Higher Education23*, 175-185.

Horn, P., and Jansen, A. (2009). Tutorial classes-why bother? An investigation into the impact of tutorials on the performance of Economics students.*South African Journal of Economics, 77*(1), 179-189.

Hughes, G. D. (2009). Using Videos to Bring Lecture to the Online Classroom. *College Quarterly12*, n1.

Hutcheson, T., and Tse, H. (2006). Tutorial attendance and grade achievement. *School of Finance and Economics. University of Technology Sydney 145*, 1-15. Working Paper.

Isabirye, A. K., and Dlodlo, N. (2014). Perceived inhibitors of innovative e-learning teaching practice at a South African University of Technology. *Mediterranean Journal of Social Sciences5*, 390.

Jung, I. (2001). Building a theoretical framework of web-based instruction in the context of distance education. *British Journal of Educational Technology32*, 525-534.

Kauffman, H. (2015). A review of predictive factors of student success in and satisfaction with online learning. *Research in Learning Technology,23*.

Kirby, A., and McElroy, B. (2003). The effect of attendance on grade for first year Economics students in University College Cork.

Lee, Y., and Choi, J. (2011). A review of online course dropout research: Implications for practice and future research. *Educational Technology*

Research and Development59, 593-618.

Lehmann, T., Hähnlein, I., and Ifenthaler, D. (2014). Cognitive, metacognitive and motivational perspectives on preflection in self-regulated online learning. *Computers in Human Behavior32*, 313-323.

Lynch, R., and Dembo, M. (2004). The relationship between self-regulation and online learning in a blended learning context. *The International Review of Research in Open and Distributed Learning5*(2),1-16.

Macan, T. H., Shahani, C., Dipboye, R. L., and Phillips, A. P. (1990). College students' time management: Correlations with academic performance and stress. *Journal of Educational Psychology82*, 760.

Mayer, R. E. (2019). Thirty years of research on online learning. *Applied Cognitive Psychology33*, 152-159.

McCarthy, M., and Kuh, G. D. (2006). Are students ready for college? What student engagement data say. *Phi Delta Kappan87*, 664-669.

McGown, R., Driscoll, M., Roop, P., Sakloske, D., Schwean, V., Kelly, I., and Haines, L. (1996). *Educational psychology: A learning-centred approach to classroom practice*. Scarborough: Allyn and Bacon.

Melton, A. W. (1970). The situation with respect to the spacing of repetitions and memory. *Journal of Verbal Learning and Verbal Behavior9*, 596-606.

Michinov, N., Brunot, S., Le Bohec, O., Juhel, J., and Delaval, M. (2011). Procrastination, participation, and performance in online learning environments. *Computers and Education56*, 243-252.

Mishra, L., Gupta, T., and Shree, A. (2020). Online teaching-learning in higher education during lockdown period of Covid-19 pandemic. *International Journal of Educational Research Open*, 100012.

Moore, J. L., Dickson-Deane, C., and Galyen, K. (2011). e-Learning, online learning, and distance learning environments: Are they the same? *The Internet and Higher Education14*, 129-135.

Mpungose, C. B. (2020a). Beyond limits: Lecturers' reflections on Moodle uptake in South African universities. *Education and Information Technologies25*, 5033-5052.

Mpungose, C. B. (2020b). Emergent transition from face-to-face to online learning in a South African University in the context of the Coronavirus pandemic. *Humanities and Social Sciences Communications7*, 1-9.

Nichols, M. (2010). Student perceptions of support services and the influence of targeted interventions on retention in distance education. *Distance Education31*, 93-113.

Peters, O. (1999). Learning and teaching in distance education: Analyses and interpretations from an international perspective. *Education+ Training 41*(8), 384-386.

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning.*Handbook of Self-regulation*. Elsevier.

Pollard, E., and Hillage, J. (2001). *Exploring e-learning*, Institute for Employment Studies, Brighton.

Popoola, B. I. (2005). A study of the relationship between procrastinatory behaviour and academic performance of undergraduate students in a Nigerian University. *African Symposium: An Online Journal of Educational Research Network*, 60.

Queiros, D., and De Villiers, M. (2016). Online learning in a South African higher education institution: Determining the right connections for the student. *International Review of Research in Open and Distributed Learning: IRRODL17*, 165-185.

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., and Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science and Education2*, 923-945.

Robertson, B., and Flowers, M. J. (2020). Determining the impact of lecture videos on student outcomes. *Learning and Teaching13*, 25-40.

Rodriguez, M. C., Ooms, A., and Montañez, M. (2008). Students' perceptions of online-learning quality given comfort, motivation, satisfaction, and experience. *Journal of Interactive Online Learning7*, 105-125.

Rossett, A. (2002). Waking in the night and thinking about e-learning. *The ASTD e-learning Handbook*,pp. 3-18.

Schouwenburg, H. C. (1992). Procrastinators and fear of failure: An exploration of reasons for procrastination. *European Journal of Personality6*, 225-236.

Schrum, L. (1998). On-line education: A study of emerging pedagogy. *New directions for adult and continuing education*, 78, 53-61.

Schrum, L., and Hong, S. (2002). Dimensions and strategies for online

success: Voices from experienced educators. *Journal of Asynchronous Learning Networks6*, 57-67.

Shahabadi, M. M., and Uplane, M. (2015). Synchronous and asynchronous e-learning styles and academic performance of e-learners. *Procedia-Social and Behavioral Sciences176*, 129-138.

Singh, V., and Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education33*, 289-306.

Solomon, L. J., and Rothblum, E. D. (1984). Academic procrastination: frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology31*, 503.

Song, L., and Hill, J. R. (2007). A conceptual model for understanding self-directed learning in online environments. *Journal of Interactive Online Learning6*, 27-42.

Stephen, J. S., Rockinson-Szapkiw, A. J., and Dubay, C. (2020). Persistence model of non-traditional online learners: Self-efficacy, self-regulation, and self-direction. *American Journal of Distance Education34*, 306-321.

Tuckman, B. W., and Harper, B. E. (2012). *Conducting educational research*. Rowman and Littlefield Publishers.

Van Eerde, W. (2003). A meta-analytically derived nomological network of procrastination. *Personality and Individual Differences35*, 1401-1418.

Visser, L., Korthagen, F. A., and Schoonenboom, J. (2018). Differences in learning characteristics between students with high, average, and low levels of academic procrastination: students' views on factors influencing their learning. *Frontiers in Psychology9*, 808.

Wang, A. Y., and Newlin, M. H. (2002). Predictors of performance in the virtual classroom: Identifying and helping at-risk cyber-students. *THE Journal (Technological Horizons in Education)29*, 21.

Wangenge-Ouma, G., and Kupe, T. (2020). *UNCERTAIN TIMES: Re-imagining universities for new, sustainable futures*. South Africa: Universities South Africa.

Yang, Y., Hooshyar, D., Pedaste, M., Wang, M., Huang, Y.-M., and Lim, H. (2020). Predicting course achievement of university students based on their procrastination behaviour on Moodle. *Soft Computing24*, 18777-18793.

Zhang, J., Li, F., Duan, C., and Wu, G. (2001). Research on self-efficacy of distance learning and its influence to learners' attainments. Proceedings of the International Conference on Computers in Education (ICCE)/SchoolNet,pp. 1510-1517.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. *Handbook of Self-regulation*. Elsevier.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice41*, 64-70.

Communicating during a Pandemic: A South African University's Use of Social Media during the COVID-19 Crisis

Pamela Michelow, Gina Fainman and Gabi Nudelman

Abstract

The COVID-19 pandemic that emerged in late 2019 resulted in many universities across the world switching to emergency remote teaching in order to complete the academic year. This article examines what senior management at one South African university felt was important to communicate to their student body regarding the COVID-19 crisis and emergency remote teaching, and the modalities utilised for this communication. The type of crisis responses enacted by this university are also investigated. Relevant communication events by the university's senior management to their student body during the pivot were examined utilising a bottom-up (thematic analysis) and top-down (situational crisis communication theory) approach. Important themes that emerged included the need to empower and mobilise students, acknowledging unequal access to the devices and data required for online learning, and looking after student's mental health. Crisis response strategies involved justification of the pivot to emergency remote teaching, praising staff for their efforts, expressions of sympathy for students, and provision of data and devices for students in need. The article concludes with recommendations on an approach to communicate with students in the event of a crisis.

Key words: emergency remote teaching, COVID-19, thematic analysis, situational crisis communication theory, social media research

Résumé

La pandémie de COVID-19 qui a émergé à la fin de l'année 2019 a conduit de nombreuses universités à travers le monde à passer à l'enseignement à distance d'urgence afin de terminer l'année académique. Cet article examine ce que la haute direction d'une université sud-africaine a jugé important de communiquer à son corps étudiant concernant la crise COVID-19 et l'enseignement à distance d'urgence, ainsi que les modalités utilisées pour cette communication. Les types de réponses à la crise mises en place par cette université sont également étudiés. Les événements pertinents en matière de communication entre la direction de l'université et ses étudiants pendant le pivot ont été examinés à l'aide d'une approche ascendante (analyse thématique) et descendante (théorie de la communication de crise situationnelle). Parmi les thèmes importants qui ont émergé, citons la nécessité de responsabiliser et de mobiliser les étudiants, la reconnaissance de l'inégalité d'accès aux appareils et aux données nécessaires à l'apprentissage en ligne et la nécessité de veiller à la santé mentale des étudiants. Les stratégies de réponse à la crise ont consisté à justifier le passage à l'enseignement à distance d'urgence, à féliciter le personnel pour ses efforts, à exprimer sa sympathie à l'égard des étudiants et à fournir des données et des appareils aux étudiants dans le besoin. L'article se termine par des recommandations sur une approche de la communication avec les étudiants en cas de crise.

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Introduction

In late 2019, a novel virally-mediated disease emerged in China that quickly spread across the world. The disease, termed COVID-19, was declared a pandemic by the World Health Organization in March 2020. Throughout the world, governments introduced various measures to combat the spread of the virus such as lockdown, curfew and quarantine (Pollard, Morran and Nestor-Kalinoski, 2020). This had a disruptive effect on teaching and learning. Many higher education institutions decided to cease face-to-face tuition and replaced it with online learning (so called emergency remote teaching (ERT)) in order to continue with the academic year (Mohmmed, Khidhir, Nazeer and Vijayan, 2020). In ERT, the main emphasis is on moving online to provide prompt and temporary access to teaching and learning in emergency situations rather than concentrating on producing a "robust educational ecosystem"(Hodges, Moore, Lockee, Trust and Bond, 2020). ERT should be distinguished from typical digital or distance teaching and learning that is designed to be conducted in an online environment and has a

previously planned curriculum (Shim and Lee, 2020).

In an exceedingly short space of time, academic staff had to reconfigure teaching materials to fit an on-line environment, resulting in an additional work burden. Students may not have had access to devices or data where they were now residing,or found themselves in environments not conducive to studying (e.g., crowded conditions), and may have struggled to focus on the online material. Technical support staff were overwhelmed while administrators had to acquire online teaching platforms, ensure that these were compatible with existing IT infrastructure and communicate the process to stakeholders (Mohmmed et al., 2020). In addition, some students, staff and administrators became ill with COVID-19 or other conditions that were harder to access treatment for during the pandemic, further complicating the situation. The pivot to ERT within the setting of COVID-19 was thus challenging for many university stakeholders who needed to be regularly updated to apprise them of the rapidly unfolding situation, as well as to uphold the university's reputation as a provider of higher education. Analysing the nature of this communication is valuableas it provides an indication of what one university (University A) situated in South Africa prioritised during the COVID-19 crisis, as well as what was not communicated.

University A comprises students and staff from diverse backgrounds in terms of socio-economic status, rural or urban origin, ethnicity and religion. In 2020, there were approximately 40 000 enrolled students, 52% undergraduate and 48% postgraduate, with 9% being international students. Thisstudy's findings could assist other universities to formulate an approach to communication should future predicaments arise.

A crisis with respect to an organisation can be defined as an event that has a negative impact on it and its stakeholders. There are three aspects to a crisis, namely, it cannot be predicted, it has the ability to interrupt organisational processes and a crisis can jeopardise the organisation and its stakeholders (Schwarz, Binetti, Broll and Mitschele-Thiel, 2016; Heath, 2009).

The COVID-19 pandemic and its disruptive effect on many aspects of traditional university activities can thus be construed as a crisis. Crisis managers need to develop crisis response plans that both explain the circumstances and provide measures to deal with the situation. Communication is vital during a crisis and evolving communication

with relevant parties will increase understanding of the crisis and reassure stakeholders that the organisation is managing it (Schwarz et al., 2016; Van Rensburg, Conradie and Dondolo, 2017).

The next section presents relevant background information, followed by the research questions and the methodology employed to conduct the study. The findings are then deliberated on and an approach to communicating with students in the event of a crisis while maintaining a university's reputation is recommended.

Conceptual Background

Social Media

A bottom-up (thematic analysis (TA)) and top-down (Situational Crisis Communication Theory (SCCT)) approach was utilised to provide a holistic, nuanced and valid description and analysis of University A's crisis communication. This section presents relevant background information with respect to social media, TA and the SCCT in order to situate the study.

There is no universally accepted definition of 'social media'. McCay-Peet and Quan-Haase (2017) define it as "web-based services that allow individuals, communities and organizations to collaborate, interact and build community by enabling them to create, co-create, modify, share, and engage with user-generated content that is easily accessible". In this article, the term 'social media' encompasses emails, news blogs on websites and various platforms such as Facebook and Twitter. For billions of people around the world, including students in higher education, social media has assumed an astonishing significance in their daily lives. Mobile devices such as smartphones, laptops and tablets provide the ability to instantly access, communicate and share material (McCay-Peet and Quan-Haase, 2017). Many social media platforms can be used for communication purposes including email, blogs posted on various digital sites, Facebook, Twitter, Instagram, LinkedIn, Renren, Snapchat, Weibo, etc., each with its own advantages and shortcomings.

Social media is pervasive in many students' lives (Vorderer, Kromer and Schneider, 2016). The literature suggests that, like their global counterparts, South African students are avid and enthusiastic users of social media (Shava and Chinyamurindi, 2018; Ogbonnaya and Mji,

2014). As of August 2020, there were 24 100 000 Facebook users in the country, with the age group 18-34 being the most active. More than eight million South Africans utilised LinkedIn and over five million used Instagram in August 2020 with the most active users again aged 18-34 (Van Rensburg, 2020). In 2018, more than eight million South Africans used Twitter (Kahla, 2019). Facebook, Twitter, Instagram, LinkedIn, YouTube and the ongoing University A news blog were used for the purposes of this study as these are main modalities in which senior management communicates with its student body.

Social media can also be used for research purposes, to make sense of the world and can offer alternative research pathways (Sloan and Quan-Haase, 2017). In the past few decades, the number of academic publications using social media has expanded considerably (Snelson, 2016). Such research can be qualitative, quantitative or mixed method. By utilising social media platforms, researchers have access to a huge volume of varied data. The vast majority of this data is not generated for research but is produced by people and organisations in the real world for real world activities. This content may be different from and perhaps more authentic than that generated in contrived situations such as interviews and questionnaires (Braun and Clarke, 2006). However, concerns have been raised about the accuracy, reliability and quality of data gleaned from social media. Data linkages and supplementation with existing data sets can be used to improve the'veracity' of data in social media. Several ethical issues pertaining to social media research have been raised such as anonymity (Swirsky, Hoop and Labott., 2014).

Social media is taking on a more powerful role in crisis communication. Its attributes such as immediate communication, established usage in many peoples' lives and easy access via smart phones, laptops and tablets ensure that social media is becoming an important instrument in crises (Maal and Wilson-North, 2019; Eriksson, 2018; Eriksson and Olsson, 2016). There are several ways in which social media can be used in a crisis, including two-way exchange of messages that enables crisis responders to collect information to establish what is happening on the ground, informing and updating victims, determining people's attitudes and behaviours during the crisis, advocating for and co-ordinating volunteers, requesting donations and helping to rebuild confidence in an organisation after the crisis.

Alexander (2014) found that people in a crisis or emergency situation reported feeling more supported when social media was widely used. There are, however, negative consequences of the use of social media in crises such as propagation of rumours and false information. Another disadvantage is that the communities who require the most help in a crisis may not have access to the required technology for reasons such as poverty and disability. Technical capabilities such as electricity, batteries and Wi-Fi may be unavailable in a crisis. In addition, the huge amount of information that can be disseminated makes it difficult for users to determine what is relevant to their needs (Alexander, 2014).

University A used social media to quickly disseminate information at the beginning of South Africa's COVID-19 pandemic to inform students how teaching and learning would take place, as well as assure them that the good standing of the university would not be diminished. It is therefore valuable to examine the types of messages that were sent out, as well as the communication platforms used.

Thematic Analysis

Thematic analysis (TA) can be used in qualitative research to help answer a diverse range of research questions. It has been used in many different disciplines but according to Xu and Zammit (2020), few studies have employed TA in the field of education. Thematic analysis is a way of identifying, examining and describing patterns or themes within the data. It involves systematising a data set into significant groupings or concepts and is an iterative, "complex process ... which goes back and forth between bits of data and abstract concepts, between inductive and deductive reasoning, between description and interpretation" (Kawulich, 2016). Thematic analysis can be predominantly inductive or deductive and researchers need to decide beforehand which is most appropriate in a particular situation. The data determines the themes in an inductive approach while in a deductive one, the data is clustered in predetermined themes that may have been derived from previous or similar studies. As noted by Braun and Clark (2006), it is unusual for TA to be completely inductive as researchers will know something of the topic beforehand. There are several advantages to using this approach, including that it is suitable for teamwork, can be employed with large data sets, interpretation is underpinned by the resultant data, and it can

be engaged to both develop theoretical models and assist in dealing with real-world challenges. A disadvantage is that it may fail to identify more nuanced content (Kawulich, 2016; Guest, MacQueen and Namey, 2012). In this study, TA was used to determine what senior management of University A felt was important to communicate to students during the move to ERT. Its application is discussed in the section on methodology.

Situational Crisis Communication Theory

According to Fiske (2011, p. 55), communication can be described as either the "transmission of message" or "production and exchange of meaning". An appropriate communication strategy is essential to protect an organisation and its stakeholders during a crisis. Theoretical frameworks in crisis communication are useful to explain why crises occur and what action should be taken. While different theoretical frameworks can be utilised, what is important in crisis communication is to deal with the requirements of affected populations in order to save lives and minimise harm (Sellnow and Seeger, 2013). Coombs (2015) asserts that crisis communication is an applied discipline as it seeks to resolve actual predicaments. The actions and words that an organisation employs during and after a crisis have important consequences for its reputation. An organisation's (including a university) reputation includes how it is recognised and valued by its various stakeholders as well as the public. Reputation is thus a notable asset and a positive reputation is associated with improved financial health and staff recruitment and enhanced influence (Coombs, 2006; Bacci and Bertaccini, 2020).

The study employed the Situational Crisis Communication Theory (SCCT) to determine what type of communication responses University A produced and transmitted to the student body during the COVID-19 crisis. This theoretical framework that was developed by W. Timothy Coombs in 2006 is based on Attribution Theory that posits that humans seek to allocate causes to events and behaviours. The SCCT proposes that organisations should develop and implement crisis strategies that harmonise with the crisis type and this is based on the responsibility ascribed to the organisation for the particular crisis (Coombs, 2006; Van Rensburg et al., 2017; Fussell-Sisco, 2012). It comprises three central principles, namely, determine the type of crisis; develop a crisis response strategy; and match the crisis situation to the response plan. In order to

determine the crisis type, one has to decide if (1) the organisation is a victim of the crisis, and (2) if its actions unintentionally led to the crisis, or (3) it deliberately placed people at risk, acted improperly or broke a law or regulation. Stakeholders will apportion varying amounts of blame depending on the crisis type. The SCCT distinguishes crisis response plans from what it terms 'instructing information' whereby stakeholders should be informed about what happened, how to shield themselves from hurt and what actions the organisation is taking to ameliorate the situation (Coombs, 2006). Once such information has been provided, a rational and suitable crisis response is required to assist in safeguarding the organisation and its stakeholders. The response strategies can be grouped into 'deny', 'diminish' and 'deal' depending on the crisis type (Table 1). Within these broad groups, more specific responses are presented.

An advantage of the SCCT is that it can be applied in wide-ranging crisis situations and can be utilised as a resource to improve decision making to protect an organisation's reputation. However, it may not take into account financial and legal considerations that will impact a crisis response (Coombs, 2015). The SCCT framework has been utilised in diverse studies. One of itslimitations is that little information is available on how people actually perceive these diverse response strategies. Meta-analyses have shown that matching a communication reaction to the type of crisis is useful but the effect was found to be too weak to re-establish reputation (Ma and Zhan, 2016; Guerber, Anand, Ellstrand and Walker, 2020). However, these studies were undertaken in the corporate sector and the findings may or may not be applicable to higher education institutions. Coombs (2016) cautions that institutions "should not expect miraculous, larger, immediate effects from employing reputation repair strategies". It is likely that people will respond to the crisis itself as well as the crisis response strategy (Ham and Kim, 2019). In addition, there is a dearth of studies on the use of the SCCT in higher education. Van Rensburg et al. (2017) examined management communication and responses to university crises as perceived by university staff. The article concluded that the 'diminish' response strategy was most often employed. In the current study, the SCCT was utilised to determine what response strategy was used by University A's senior management during the implementation of ERT and if this was commensurate with the crisis type.

Table 1: Crisis type and suggested response (Adapted from Coombs, 2006).

Crisis Type	Suggested response	Response strategy
Victim	Deny	Attack Deny Scapegoat
Accident	Diminish	Excuse Justify
Intentional/ preventable	Deal	Ingratiation Concern Compassion Regret Apology

Research Questions

This articles examines how senior management of a South African university (University A) communicated the ERT pivot to students as the COVID-19 pandemic loomed and a national lockdown was effected. An investigation of the nature of this crisis communication, consisting of emails, a news blog and several social media platforms, and how it was disseminated to students is useful in order to understand how one university attempted to protect both itself as an organisation as well as one of its most important stakeholders, namely, students. The findings will be useful in formulating communication strategies in future crises within a higher education milieu.

The study's research questions were:

- What did senior management of University A want their student body to know about the COVID-19 crisis and ERT, and how was this communicated?
- To what extent did the crisis response strategy enacted by University A correspond with that proposed by the SCCT?
- Based on the findings, what recommendations can be made for communicating with students in the event of a crisis?

Methodology

Data Collection

In collecting digital and social media data, researchers can search particular time frames, specified terms, stipulated users and predetermined locations (Braun and Clarke, 2006). In this study, the timeframes were two weeks prior and four weeks following the switch to ERT as it was assumed that the most pertinent communication events would be around this time. Communication events containing specified terms were deemed most appropriateto answer the research questions. Terms such as 'COVID-19/Coronavirus', 'lockdown', 'remote/on-line teaching and learning', 'digital platforms', and 'data and devices' were manually searched for and included as study material. The stipulated users were senior management of University A. In the context of the study, senior management compromises the vice-chancellor, deans of various faculties, and representatives from campus development and planning, marketing, alumni and the convocation. Senior management employ emails, a news blog, Facebook, Twitter, Instagram, LinkedIn and YouTube to communicate with students. The Facebook page, LinkedIn profile, Instagram page and YouTube accounts of University A are all public. The one YouTube video was transcribed by hand. To search for communication events on Twitter, Twitter's advanced search was used with the Twitter handle @University A. Gmail's advanced search tool was utilised to collect senior management emails, specifying the email addresses of senior management and dates. The news blog was directly accessed via University A's website. Communication with staff and other stakeholders was not included, nor was communication by individual faculties with their students as this was beyond the scope of the study. Student and other stakeholder responses to the communication events were neither looked for on social media nor elicited. All the documents are in the public domain; thus, ethical permission was not sought to undertake this study. A total of 55 communication events were documented during the six-week period and collated into a data set (Table 2).

Table 2: Number and type of communication events during the six-week study period

Date	Senior management emails	University A news blog	Facebook	Twitter	YouTube	Instagram	LinkedIn*	Total
Week -2	0	0	1	0	0	0	2	1
Week -1	6	7	14	5	1	0		35
Pivot to emergency on-line teaching								
Week +1	2	0	2	1	0	0	4	5
Week +2	1	0	0	0	0	0		1
Week +3	0	1	2	4	0	0		7
Week +4	1	0	1	0	0	0		6
Total	10	8	20	10	1	0	6	55

*LinkedIn does not state the actual date, only the number of months previously.

Thematic Analysis

Braun and Clark's (2006) six-stage approach was used to perform TA. Three researchers (PM, GF, GN) undertook this part of the study. The section entitled "researcher contributions" sets out the exact nature of their contribution. The stages were:

- Familiarising oneself with the data: PM, GF and GN carefully read the emails, news blog and social media posts separately and several times in order to fully immerse themselves in the various communication events produced by University A's senior management as well as to scrutinise the data in its entirety (Braun and Clarke, 2006; Castleberry and Nolen, 2018).
- Creating initial codes: Coding involves researchers distinguishing meaningful likenesses and differences within the data in order to condense it into smaller and more manageable segments. PM, GF and GN worked independently to code the data to generate preliminary themes. Some of the codes changed or were better defined as the data was read and re-read.
- Determining themes: The codes were then coalesced or divided into overarching themes depending on what fitted well together and connected best with the research questions (Castleberry and Nolen, 2018; Peel, 2020).
- Reviewing themes: PM, GF and GN compared and revised the themes in a discussion forum in order to create themes that encompassed distinct ideas. Table 3 provides an example of a theme that emerged at this stage.
- Naming themes: Working together, PM, GF and GN refined, defined and named the themes in order to convey their meaning in a succinct manner. A fluent account of the data began to emerge. Four themes were agreed upon and named (Figure 1). These are discussed in more detail in the section on the findings and discussion.
- Writing up findings: During this last stage of TA, the researchers identified associations and connections between the themes in order to tell a comprehensive story of what the data meant in conjunction with appropriate information from the literature.

Table 3: Example of an initial code and theme map

Example of text	Initial codes pertaining to one area	Review of codes and themes generated
"We will emerge from this crisis stronger and more resilient than ever…Let us use this time to find each other and work together towards a common goal for our students, staff and our common humanity" (Email and news blog)	War talk	Empowering students
"Our students will have to exercise their own agency and will have to make an extraordinary effort to adapt to remote online learning" (Email and news blog)	Take responsibility for own learning	
"Visit the 'Helping you learn online' site" (Email)	Accessing online materials	
"As you will be working on electronic platforms, it's easy for work to get lost, corrupted or deleted. …Always back up your progress" (Facebook)	Practical tips: online learning	
"Structure your day even with online learning. Keep a calendar close by and watch your time so you can keep to a schedule that helps you deliver on academic timelines" (Twitter and Facebook)	Practical tips: studying remotely	
"We have secured a limited number of devices suitable for educational purposes that will be made available to students in need" (News blog)	Devices and data	Coders felt that this was better placed in the theme "Overcoming IT inequality"

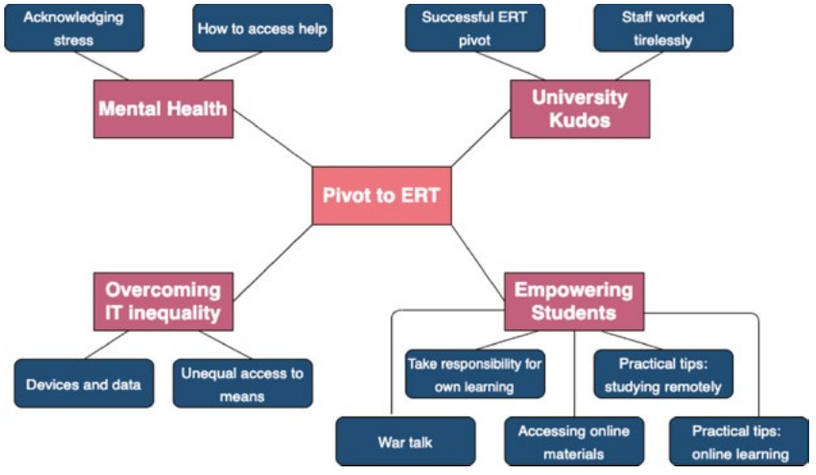

Figure 1: Thematic web of contents

The SCCT

Two researchers (PM, GF) undertook this part of the study. They familiarised themselves with the SCCT by immersing themselves in the literature. Independently, they determined the crisis type, that is, if University A was a victim of the crisis or the cause of the crisis, either accidentally or intentionally. They then determined what the response strategy was and whether its matched the crisis type. PM and GF then compared their respective positions in a discussion forum. These results are discussed in the findings and discussion section.

Validity

In order to enhance this study's validity, several (instead of one) social media sites were utilised as triangulation using different sources endorses the results (Braun and Clarke, 2006). In addition, three researchers undertook TA independently and two individually analysed the results within the SCCT. The results were then discussed. This study is auditable as the documents that were used in data collection and analysis have been retained (Peel, 2020).

Findings and Discussion

Communication in times of crisis can empower people by encouraging preparation, improving understanding of the dangers and fostering co-operation (Tull, Dabney and Ayebi-Arthur, 2017). This requires that important and meaningful information is rapidly communicated to key stakeholders without compromising confidence in the institution (Al-Youbi, Al-Hayani, Bardesi, Basheri, Lytras and Aljohani, 2020). The abrupt pivot to online or remote education that occurred in many higher education institutions during the COVID-19 pandemic is not a new phenomenon and has occurred previously, for example, following the Christchurch earthquakes, the New Orleans floods and during the student protests in South Africa that started in 2015 (Czerniewicz, 2020). It is thus possible to rapidly adapt teaching and learning practices to enable academic activities to continue online in many instances as long as this is well communicated to participants. What senior management of University A considered important to communicate to one of their key stakeholders, namely students, during the pivot to online teaching and learning was determined by content analysis while the quest to maintain trust in the institution was explored using the SCCT. The section concludes with a potential approach to communicating with students in the event of future crises in higher education.

Main Themes

Inductive TA was used, in the main, to answer the first research question. Elaboration of the themes provides an understanding of what University A believed it needed to communicate to its student body (Figure 1). Together with some pertinent literature, a more encompassing account of the switch to ERT emerges.

Theme 1: Empowering Students.

In the two weeks prior to the pivot to ERT, there were several communication events that were initially coded as 'war talk' where the pandemic was likened to a war. Examples include, "We are living through an unprecedented era which has tremendous implications for humanity and for us as the University A community", and "We have no choice but to stand strong in order to overcome this common enemy". The communication further states that University A has opted to switch

to ERT in order to rescue the 2020 academic year. Students are then urged to contribute to the 'war effort' by taking responsibility for their own learning and making an "extraordinary effort to adapt to remote online learning". This is followed by the phrase, "We acknowledge the importance of the University to provide support". What is notable is that this initial information is provided in the form of several very lengthy emails, news blogs and a YouTube video. It would be interesting to determine if students actually read these long communications or watched the video. There is one short LinkedIn post stating that "Persistence and resilience only come from having been given the chance to work through difficult problems". In the few days around the pivot, there are some Facebook and Twitter posts informing students how to access online teaching materials as well as practical tips to improve remote and online studying. There are very few communication events by senior management after that to reiterate or emphasise the ways that students can be empowered.

Several studies have been conducted on how students and teaching staff perceived the shift to ERT, but, to the best of our knowledge, none examined how universities promote the notion of ERT (Affouneh, Salha and Khlaif, 2020; He, Yang, Xu, Ping, Wei, Sun, Li, Zhu and Zhang, 2021; Mohmmed et al., 2020). Czerniewicz (2020) states that one needs to be cognisant of the meanings that are made to explain why face-to-face pedagogy is being replaced by a virtual one to ensure that 'online learning' does not become a politicised term, for example, associated with power. According to Atabekova (2020), during the COVID-19 pandemic, communication with students needs to be "systematised and targeted" and young people need to be included in decisions that alter their lives and encouragedto exercise leadership in rebuilding efforts.

Theme 2: University Kudos

On the day that ERT started, there were several communication events stating that the first day had been very successful. However, no information was provided on how 'success' was defined. There were also posts on the news blog and an email to inform students that a "tremendous effort has been expended by academics and professional and administrative staff in recent weeks, who have tirelessly prepared online material, who have learnt to switch between pedagogies, and

who now have a better understanding of our learning management system". A sudden change to online pedagogy can be beneficial in terms of better use of virtual learning platforms, upgrading of university IT infrastructure, and staff and students exploring alternative teaching and learning options. An institution's impetus to implement digital learning may even be enhanced by the shift to ERT (Tull et al,2020). However, ERT can be associated with significant challenges such as a lack of appropriate IT infrastructure, making such a switch non-viable, staff and students struggling with the use of on-line platforms, additional work for staff as they adapt curricula to suitable online formats, a lack of electricity in some homes, precluding the use of online teaching and learning, students failing to engage with the online content and cybersecurity issues (Oyedotun, 2020). While University A claimed to have done well on the day of the pivot, there was no further communication to confirm or refute this in the following four weeks.

Theme 3: Overcoming IT Inequality

A few days before the shift to ERT, an email and University A's news blog stated: "We are aware that the playing field is uneven and that whilst many in society and our community enjoy greater levels of privilege, the consequences of the pandemic have illuminated and amplified the existing inequalities in our society". A few paragraphs later it is noted that, "Multiple surveys across the university have revealed that 10-15% of students do not have access to appropriate computing devices, adequate access to data or conducive learning environments. To this end, we are putting in place the following measures to ensure the majority of students are able to learn remotely". The measures are then expanded on. This was also discussed on the YouTube video. There are several Facebook posts and two on Twitterat the time of the pivot advising students how to apply for devices and data. This was deemed to be an important aspect of ERT as it was placed on most of University A's social media sites.

When another South African university went online during #FeesMustFall several years previously, one of main stressors for students and staff was the lack of devices and data (Czerniewicz, 2020). A study undertaken of social work educators and students during COVID-19 at a rural-based university in South Africa revealed their

frustration at the lack of access to appropriate technology and training in the use thereof (Tanga, Ndhlovu and Tanga, 2020). This is not limited to South Africa, but has been described in other many other countries around the globe, including well-resourced ones, and is very important to address early in the pivot to ERT (Andrew, Cattan, Dias,Farquharson, Kraftman, Krutinova, Phimster and Sevilla, 2020). There was a single sentence on email and the news blog that data and devices would not be offered to students who are not South African, ostensibly due to lack of resources although foreign students generate income for universities (Cantwell, 2015). South Africa has experienced and continues to experience xenophobic violence (Tella, 2016) that could possibly be exacerbated by such a proviso. Czerniewicz, Trotter and Haupt (2019) observe that "technology is never neutral", requiring educators to delve into the connection between the IT domain and online education to ensure that all actors are able to partake in novel technologies, thus avoiding injustice and inequality.

Theme 4: Mental Health

There are several communication events on all sites (except Instagram and LinkedIn) acknowledging that this is a stressful time for students as evidenced by "We are acutely aware of the anxiety and uncertainty that this mode of learning presents". These posts become more numerous in the latter few weeks when several communication events reiterate that this is a stressful time and how and where to seek help. An example, is this Facebook post "REACH OUT- As the days continue it is normal to feel worried and anxious, or sad and depressed. Acknowledge the feelings. Write them down to make sense of them if you need to...BUT: Reach out for help if needed". This is followed by a telephone number and email address when students can access help. Several studies show that ERT caused stress, anxiety and depression among students (Fawaz and Samaha, 2020; Cao, Fang, Hou, Han, Xu, Dong and Zheng, 2020; Grutsenko, Skugarevsky, Konstantinov, Khamenka,Marinova, Reznik, and Isralowitz, 2020) andmental health is certainly an issue that requires resources in times such as this. University A did emphasise this in its communication events.

What is noteworthy is that ways to combat COVID-19, such as social distancing, handwashing and the use of hand sanitisers, and isolation

and quarantine, were hardly mentioned on any sites. There were several suggestions to "keep well and keep safe" but how to actually do this was almost absent. Also lacking was reiteration of government regulations on what was and wasn't permitted during the various levels of 'lockdown' that students may have found useful. Atabekova (2020) probed numerous universities' official site information and higher education data from international organisations in 2020 regarding the pandemic. She determined that information such as protection against COVID-19, hotlines, contact persons' names, messages from senior management and leadership and educational issues (learning resources, how to utilise digital devices, examinations and assessments, graduations, admissions) and campus processes (such as residences, food, medical facilities) were consistently communicated. Issues such as mental health services, broad psychological recommendations, online social and cultural events, and financial help (such as delaying tuition payment, emergency funds and bursaries) were addressed more erratically.

There were some differences in communication events by University A's senior management on the various digital and social media sites. The "call to arms" was declared in a lengthy email, news blog and a YouTube video. Thus, if students did not read these, the mobilisation message would not have been received. No COVID-19 communication events were posted on Instagram and very few on LinkedIn despite evidence on the popularity of these platforms among South African youth (Van Rensburg, 2020). In general, the communication started by explaining the need to move to ERT and advice on how this should be effected. It then shifted to posts about mental health and how to access help. This was conspicuous on Facebook.

Findings Utilising Situational Crisis Communication Theory

The previous section highlighted the four main themes that emerged from TA. This section explores how University A conveyed the shift to ERT to its student body using an SCCT framework. Initially, organisations need to provide what Coombs (2006) calls "instructing information" which is what stakeholders (in this case, students) need to know when a crisis strikes. This includes informing stakeholders what happened. University A's communication events state that there is a COVID-19 pandemic but do not provide information about the

actual disease or government lockdown regulations in the six weeks under study. As part of instructing information, stakeholders are advised what to do to protect themselves from hurt. There are several communication posts about how to promote students' mental health; however, University A provided very little information on ways to protect oneself from COVID-19 or what to do should one be infected with the virus. Another part of instructing information is what the organisation is doing to correct the issue (Coombs, 2006, 2015). University A tackles this by explaining that the academic year is continuing and provides devices, data and study tips to students.

After instructing information has been delivered, response strategies need to be instituted to minimise organisational reputational damage. It is important to acknowledge that protection of stakeholders supersedes the university's reputation (Snoeijers, Poels and Nicolay, 2014). For organisations like universities, reputation is very important in order to obtain funding, and attract and retain students. University A can be considered a victim of the COVID-19 pandemic and the ensuing national lockdown. However, it had to act appropriately to protect its reputation and keep its stakeholders safe. According to the SCCT, the response strategy for a victim would be to 'deny'. University A chose the 'deal' response in order to complete the academic year while keeping students safe and limiting reputational damage. Students were safeguarded against acquiring COVID-19 at university by ERT while the strategy to limit University A's reputational damage was a 'deal' one. Table 4 illustrates the SCTT's broad and specific responses and what University A chose to adopt. A study at another South African university determined that the justification response strategy was mainly used with other response strategies hardly utilised (Van Rensburg et al., 2017). The current study found that University A employed several response strategies, including justification to inform students that ERT was one of the measures adopted to reduce the time lost in the academic year and maintain the university reputation. Presumably this was added as, despite research to the contrary, online learning is deemed to be of inferior quality (Hodges et al., 2020). Other response strategies included ingratiation to inform students how tirelessly staff had been working to ensure successful ERT, concern for students' health (especially psychological), compassion by providing devices and data to those in need and sympathy for the situation that students found themselves in. Thus, to answer research question two, the crisis response strategy enacted by University A did not fully correspond with the SCCT in that very little instructional information was provided and although the institution was a victim of COVID-19, it adopted a 'diminish' and 'deal', rather than a 'deny' strategy. Further research is required on the long-term effects of this crisis response in terms of student enrolment, university rankings and other indicators (Coombs, 2016).

Table 4: SCCT response strategies enacted by University A (Adapted from Coombs, 2006, 2015)

Crisis Type	Suggested response	Response strategy	Supporting quotes
Victim (University A was considered a victim of COVID-19 in this study)	Deny	Attack: Challenge and oppose person/s asserting that there is a crisis	This response was not utilised
		Deny: Declare that there is no crisis	This response was not utilised
		Scapegoat: Assign blame for the crisis to person/s or events outside the organisation	"We are living through an unprecedented era" (Facebook and news blog)
Accident	Diminish	Excuse: Minimise organisational accountability for the crisis	This response was not utilised
		Justify: Play down the harm arising from the crisis	"University A has instituted an emergency remote teaching and learning programme as one measure to help minimise the time lost in the academic project" (Email, news blog and Facebook)

Intentional/ preventable	Deal	Ingratiation: Stakeholders are praised and reminded of prior organisational success	"We are cognizant of the tremendous effort that has been expended by academics and professional and administrative staff who have tirelessly prepared online material" (Facebook, news blog and YouTube)
		Concern: Organisation articulates anxiety for stakeholders	"We remain concerned about your well-being and want to remind you of a number of services available" (Email and news blog)
		Compassion: Money or products are extended to stakeholders	"University A has provided measures for students to apply for a loan device to ensure that students have access to academic resources" (Facebook post) "University A students get 30GB of data if registered on these networks. This service is at no cost to students" (LinkedIn, Facebook, Email and news blog).
		Regret: Organisation sympathises that crisis occurs	"HANG IN THERE- There are so many countries in the world in lockdown and impacted by the virus. We are all in this together" (Facebook)
		Apology: Organisation acknowledges complete responsibility and requests forgiveness	This response was not utilised

An Approach to Communicating with Students in Crises

Every educational institution, programme and course will have unique challenges and requirements in the event of a crisis. Universities have distinctive attributes including cultural ones that need to be taken into account when implementing change. In addition, context is important and the innovation needs to be relevant in a particular context (Bamber, 2009). However, there are overarching or principle concerns in this regard, namely, ensuring student well-being, providing reasonable, fair and non-discriminatory teaching and learning, and maintaining the organisation's reputation (Nordmann, Horlin, Hutchison, Murray, Robson, Seery, and MacKay, 2020; Snoeijers et al., 2014).

In response to research question three, several aspects should be considered in formulating an approach to communicate with students in the event of a crisis. Based onthe current study's findings and the pertinent literature, several strategies to approach student communication in times of crisis are suggested (Table 5).

Table 5: An approach to communication during university crises

Principle concerns	Objectives	Strategies
Student well-being	Keep students safe and protect them from physical and psychological harm	• Relevant and factual information needs to be provided in order for students to effectively navigate the crisis while ensuring that they are not overwhelmed by extraneous facts. • Hotlines, contact persons' names, and how to access physical and mental care. • Information on online social and cultural activities could be added. • Use communication modalities that are known to be popular with students. • Involve students meaningfully and early in the crisis and continue to actively engage with them as research shows that they can be "effective agents of change for themselves and their communities" (Abbott, Askelson, Scherer and Afifi, 2020). • Keep the academic programme going as far as possible. According to UNESCO, everyone has the right to education and the priority should be safeguarding educational continuity (UNESCO, 2020).

Access to education	Access to reasonable and equitable teaching and learning	• Ensure that students have the means to continue their academic pursuits such as helping students in need with accommodation, food, financial services, and advice on how to learn remotely. • Equitable access to devices and data to enable digital learning. • Employ asynchronous learning as far as possible unless interaction is crucial. Flexibility could assist students in finding a quieter time to engage with online study, enable study to be undertaken when a power supply is available and reduce competition for devices and data that may exist in a particular location (Nordmann et al., 2020).
Uphold university's reputation	Decide what communication response strategy to adopt	• Vice-chancellors and institutional Chief Executive Officers (CEOs) need to communicate with stakeholders as research indicates a positive association between active CEO communication and stakeholders viewing an organisation in a good light post-crisis (Snoeijers et al., 2014). • If using an SCCT framework, universities should consider whether they are victims of a crisis, their actions unintentionally led to the crisis or if their actions deliberately caused the crisis. • Universities must then carefully deliberate what response strategy to adopt as this will impact on their reputation. More than one response strategy could be used. • Some fictional examples of how a university could employ the SCCT include: – In an outbreak of diarrhoeal disease in a residence, a university could decide that it is a victim and use a 'deny' response e.g. scapegoat ("Students attended an off-campus party where they acquired the disease"). – When serious fraud is perpetrated by a staff member, the university could accept this as an intentional act and adopt a 'deal' strategy including ingratiation (e.g. "This University has a good record of fiscal governance"), state that they regret the incident and apologise.

Limitations of the Study

One of the advantages of social media usage is reciprocal communication and giving a voice to those who might not otherwise be heard (McCay-Peet and Quan-Haase, 2017). An important limitation of this study is that only one-way communication was investigated, namely, how senior management communicated events during the pivot to ERT. A broader story would have emerged if students and other stakeholder responses and opinions were also considered. Stakeholder responses, including how communication was enacted by students, should be included in similar future studies. Inclusion of other educational institutions would also have enriched the research.

Conclusion

Using a bottom-up (TA) and top-down (SCCT) approach ensured that the study was informed by both data and a theoretical framework. Fruitful communication strategies adopted by University A include that there were only 55 communication events and students were thus not overwhelmed by social media posts;and that social inequality was acknowledged and access was provided to devices and data, with this well communicated to students. University A acknowledged that it was a stressful time for students, provided details on where to seek counselling, and offered advice on studying remotely. What could have been improved includes provision of information on how to protect oneself from physical (not just psychological) harm, recapping government lockdown regulations; mobilising students to manage the crisis using short social media messages rather than lengthy communication events;and being more forthcoming about how successful or unsuccessful the crisis response strategy was in the weeks following ERT and the ways in which University A responded to this. Furthermore, under-utilisation of popular student social media sites such as LinkedIn and Instagram was noted and foreign students were not eligible for devices and data. What management felt was important to communicate to students regarding ERT could be gleaned predominantly by TA and why they felt this was important to communicate with students while upholding University A's reputation was mainly understood by using the SCCT. Thus, this hybrid approach enriched the description and analysis, allowing for a more complete understanding of one university's approach to student communication in a crisis. These findings may prove useful to other institutions in formulating their student crisis communication responses.

References

Abbott, A., Askelson, N., Scherer, A., and R. Afifi. (2020). Critical reflections on COVID-19 communication efforts targeting adolescents and young adults. *Journal of Adolescent Health 67*(2), 159-160.

Affouneh, S., Salha, S., and Z. Khlaif. (2020). Designing Quality E-Learning Environments for Emergency Remote Teaching in Coronavirus Crisis. *International Journal of Virtual Learning in Medical Sciences 11*(2), 135-137.

Alexander, D. (2014). Social media in disaster risk reduction and crisis management. *Science and Engineering Ethics 20*, 717-733.

Al-Youbi, A., Al-Hayani, A., Bardesi, H., Basheri, M., Lytras, M., and N. Aljohani (2020). The King Abdulaziz University (KAU) Pandemic Framework: A Methodological Approach to Leverage Social Media for the Sustainable Management of Higher Education in Crisis. *Sustainability 12(*11), 4367.

Andrew, A., Cattan, S., Dias, M., Farquharson, L., Kraftman, L., Krutikova, S., Phimster, A., and A. Sevilla. (2020). Inequalities in children's experiences of home learning during the COVID-19 lockdown in England. *FiscalStudies 41*(3), 653-683.

Atabekova, A. (2020). University discourse to foster youth sustainability in society amidst COVID-19: International and Russian features. *Sustainability 12*, 7336.

Bacci, S.,and Bertaccini, B. (2021). Assessment of the university reputation through analysis of student mobility. *Social Indictors Research156*, 363-388.

Bamber, V. (2009). Framework for action: Theme 3 commentary. In Bamber, V. et al. (eds) *Enhancing Learning, Teaching, Assessment and Curriculum in Higher Education*, pp. 103-106. McGraw-Hill Education.

Braun, V., and V. Clarke. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2), 77-101.

Cantwell, B. (2015). Are international students cash cows? Examining the relationship between new international undergraduate enrolments and institutional revenue at public colleges and universities in the US. *Journal of International Students* 5(4), 512-525.

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., and J. Zheng. (2020). The psychological impact of COVID-19 epidemic on college students in China. *Psychiatry Research 287* (May): 112934.

Castleberry, A., and A. Nolen. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacology Teaching and Learning 10*(6), 807-815.

Coombs, W.T. (2006). The protective powers of crisis response strategies: Managing reputational assets during a crisis. *Journal of Promotion Management 12*(3-4), 241-260.

Coombs, W.T. (2015). The value of communication during a crisis: Insights from strategic communication research. *Business Horizons 58*(2), 141-148.

Czerniewicz, L., Trotter, H., and G. Haupt. (2019). Online teaching in response to student protests and campus shutdowns: Academic perspectives. *International Journal of Educational Technology in Higher Education 16*(43).

Czerniewicz L. (2020). What we learnt from 'going online' during university shutdowns in South Africa. *PhilonEdTech* March. Available at: http://https://philhillaa.com/onedtech/what-we-learnt-from-going-online-during-university-shutdowns-in-south-africa/ [Accessed: 15 February 2021].

Eriksson, M. (2018). Lessons for crisis communication on social media: A systematic review of what research tells the practice. *International Journal of Strategic Communication 12*(5), 526-551.

Eriksson, M., and E. Olsson. (2016). Facebook and Twitter in crisis communication: A comparative study of crisis communication professionals and citizens. *Journal of Contingencies and Crisis Management 24*(4), 198-208.

Fawaz, M., and A. Samaha. (2021). E-learning: Depression, anxiety, and stress symptomatology among Lebanese students during COVID-19 quarantine. *Nursing Forum56*(1), 52-57.

Fiske, J. (2011). What is communication? In Fiske (ed) *Introduction to Communication studies* (3rd ed.), pp. 54-57. New York: Routledge.

Fussell- Sisco, H. (2012). Nonprofit in crisis: An examination of the applicability of situational crisis communication theory. *Journal of Public Relations Research 24*(1), 1-17.

Grutsenko, V., Skugarevsky, O., Konstantinov, V., Khamenka, N., Marinova, T., Reznik, A., and I. Isralowitz. (2020). COVID-19 fear, stress, anxiety, and substance use among Russian and Belarusian university students. *International Journal of Mental Health and Addiction 19*(6), 2362-2368.

Guerber, A., Anand, V., Ellstrand, A., and M. Walker. (2020). Extending the Situational Crisis Communication Theory: The Impact of Linguistic Style and Culture. *Corporate Reputation Review 23*, 106-127.

Guest, G., MacQueen, K., and E. Namey. (2012). Introduction to Applied Thematic Analysis. In Guest, MacQueen and Namey (eds). *Applied thematic analysis*, pp. 3-20.United States: Sage Publications.

Ham, C., and J. Kim. (2019). The role of CSR in crises: Integration of situational crisis communication theory and the persuasion knowledge model. *Journal of Business Ethics 158*(2), 353-372.

He, L., Yang, N., Xu, L., Ping, F., Wei, L., Sun, Q., Li, Y., Zhu, H., and H. Zhang. (2021). Synchronous distance education vs traditional education for health science students: A systematic review and meta-analysis. *Medical Education 55*(3), 293-308.

Heath, R. (2009). Crisis communication: Defining the beast and demarginalizing key publics. In Coombs, W. T., and Holladay, S. J. (eds) *The Handbook of Crisis Communication*, pp. 1-14. John Wiley and Sons, Incorporated.

Hodges, C., Moore, S., Lockee, B., Trust, T., and A. Bond. (2020). The difference between emergency remote teaching and online learning. Available at: https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning [Accessed: 17 February 2021].

Kahla, C. (2019). Study finds Twitter uses are better educated than the general public. Available at: https://www.thesouthafrican.com/lifestyle/twitter-users-better-educated-general-public-report/ [Accessed: 15 February 2021].

Kawulich, B. (2016). Qualitative data. In Wyse, D., Selwyn, N., Smith, E., and L. Suter. (eds) *The BERA/SAGE Handbook of Educational Research*, pp 769-788. London: Sage Publications.

Ma, L., and M. Zhan. (2016). Effects of attributed responsibility and response strategies on organizational reputation: A meta-analysis of situational crisis communication theory research. *Journal of Public Relations Research 28*(2), 102-119.

Maal, M., and M. Wilson-North. (2019). Social media in crisis communication- the 'do's' and 'don'ts'. *International Journal of Disaster Resilience in the Built Environment 10*(5), 379-391.

McCay-Peet, L., and A. Quan-Haase. (2017). What is social media and what questions can social media research help us answer? In Sloan, L. and Quan-Haase, A. (eds) *The SAGE Handbook of Social Media Research Methods*, pp. 13-26, London: SAGE Publications.

Mohmmed, A. Khidhir, B., Nazeer, A., and A. Vijayan. (2020). Emergency remote teaching during Coronavirus pandemic: The current trend and future directive at Middle East Oman University. *Innovative Infrastructure Solutions 5*, 72.

Nordmann, E., Horlin, C., Hutchison, J., Murray, J., Robson. L., Seery, M., and J. MacKay. (2020). Ten simple rules for supporting a temporary online pivot in higher education. *PLoS Computational Biology 16*(10), e1008242.

Ogbonnaya, U., and A. Mji. (2014). Use of social media by university students in South Africa. *International Business and Economics Research Journal 13*(4), 715.

Oyedotun, T. (2020). Sudden change of pedagogy in education driven by COVID-19: Perspectives and evaluation from a developing country. *Research in Globalization 2*, 100029.

Peel K. (2020). A Beginners Guide to Applied Educational Research using Thematic Analysis. Peel, K. L. (ed.). *Practical Assessment, Research and Evaluation 25*(2).

Pollard, C., Morran, M., and Nestor-Kalinoski, A., and C. Pollard. (2020). The COVID-19 pandemic: A global health crisis. *Physiological Genomics 52*(11), 549-557.

Schwarz, A., Binetti, J., Broll, W., and A. Mitschele-Thiel. (2016). New technologies and applications in international crisis communication and disaster management. In Schwarz, A., Seeger, M., and C. Auer. (eds).*The Handbook of International Crisis Communication Research,* pp. 465-477. Wiley Blackwell.

Sellnow, T., and M. Seeger. (2013). Introduction to crisis communication theory. In Sellnow and Seeger (eds)*Theorizing crisis communication*, pp. 1-24. United States: John Wiley and Sons, Incorporated.

Shava, H., and W. Chinyamurindi. (2018). Determinants of social media usage among a sample of rural South African Youth. *South African Journal of Information Management 20*(1), 1-8.

Shim, T., and S. Lee. (2020). College students' experience of emergency remote teaching due to COVID-19. *Children and Youth Services*

Review 119, 105578.

Sloan, L., and Quan-Haase, A. (2017). Introduction to the Handbook of Social Media Research Methods: Goals, Challenges and Innovations. In Sloan, L. and Quan-Hase, A. (eds) *The SAGE Handbook of Social Media Research Methods*, pp.1-10. London: SAGE.

Snelson, C. (2016). Qualitative and mixed method social media research: A review of the literature. *International Journal of Qualitative Methods15*(1|).

Snoeijers, E., Poels, K., and C. Nicolay. (2014). #universitycrisis: The impact of social media type, source, and information on student responses towards a university crisis. *Social Science Computer Review 32*(5), 647-661.

Swirsky, E., Hoop, J., and S. Labott. ((2014). Using social media in research: New ethics for a new meme? *The American Journal of Bioethics 14*(10), 60-61.

Tanga, P., Ndhlovu, G., and M. Tanga. (2020). Emergency remote teaching and learning during COVID-19: A recipe for disaster for social work education in the Eastern Cape of South Africa. *African Journal of Social Work 10*(3).

Tella, O. (2016). Understanding xenophobia in South Africa: The individual, the state and the international system. *Politics, Public Administration and International Relations 8*(2), 142-158.

Tull, S., Dabner, N., and A. K. Ayebi-Arthur. (2017). Social media and e-learning practices in response to seismic events: Resilient practices. *Journal of Open, Flexible and Distance Learning 21*(1), 63-76.

UNESCO. (2020). *Universities tackle the impact of COVID-19 on disadvantaged students*. Available at: https://en.unesco.org/news/universities-tackle-impact-covid-19-disadvantaged-students [Accessed: 23 March 2021].

Van Rensburg, A., Conradie, D., and H. Dondolo. (2017). The use of the situational crisis communication theory to study crisis response strategies at a university of technology. *Communitas 22*, 62-74.

Van Rensburg, T. (2020). *South African social media stats for 2020*. Available at: https://www.mediaupdate.co.za/social/149345/south-african-social-media-stats-for-2020 [Accessed: 15 February 2021].

Vorderer P., Kromer N., and F. Schneider. (2016). Permanently online - Permanently connected: Explorations into university students' use of social media and mobile smart devices. *Computers in Human Behavior 63*, 694-703.

Xu, W., and K. Zammit. (2020). Applying thematic analysis to education: A hybrid approach to interpreting data in practitioners research. *International Journal of Qualitative Methods19*, 1-9.