

BISHOP STUART UNIVERSITY



QUALITY OF HIGHER EDUCATION AND EMPLOYABILITY OF GRADUATES FROM SELECTED UNIVERSITIES IN SOUTHWESTERN UGANDA

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**A THESIS SUBMITTED TO THE DIRECTORATE OF GRADUATE STUDIES,
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REQUIREMENT FOR THE AWARD OF THE DEGREE OF DOCTOR
OF PHILOSOPHY IN DEVELOPMENT MANAGEMENT
OF BISHOP STUART UNIVERSITY**

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DECLARATION

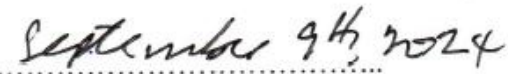
I, Milton Rwiita Nuwabimpa, hereby declare that all the work herein is original, except where otherwise acknowledged. This work has not been presented to any other University or Institution of higher learning known to me for any award.

Milton Rwiita, Nuwabimpa

Date

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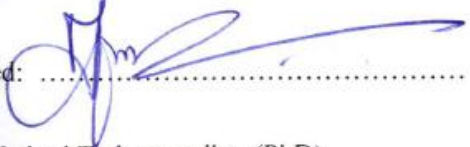
APPROVAL

This study entitled “Quality of Higher Education and Employability of Graduates from Selected Universities in South Western Uganda”, authored by Milton Rwiita Nuwabimpa, has been conducted under our guidance and supervision. It is now ready for submission to the Directorate of Graduate Studies, Research and Innovations, in partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy of Bishop Stuart University.

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DEDICATION

This work is dedicated to my beloved parents, Kezekia Rwiita and Jaireth Rwiita, my wife Monica Karungi Nuwabimpa, and our children: Mercy Nimurungi, Emmanuel Nomwesigwa and Mathias Nembabazi, who found my absence inconvenient but stood by me in this PhD journey.

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LIST OF ABBREVIATIONS

AMOS:	Analysis of Moments of Structures
AVE :	Average Variance Extracted
BBA :	Bachelor of Business Administration
BCS :	Bachelor of Computer Science
BIT :	Bachelor of Information Technology
BSC ED:	Bachelor of Science with Education
BSU :	Bishop Stuart University
BTVET:	Business, Technical, Vocational Education and Training
CVI :	Content validity Index
DV :	Dependent Variables
ESD :	Education for sustainable Development
EM :	Expectation Maximization
GoU :	Government of Uganda
HCT :	Human capital theory
HEIs :	Higher Education Institutions
HEST :	Higher education, Science and Technology
IMF :	International Monetary Fund
IUCEA :	Inter University Council of East Africa
IV :	Independent Variable
MCAR:	Missing Completely at Random
MUST:	Mbarara University of Science and Technology
NCHE:	National Council for Higher Education
QHE :	Quality of Higher Education
SEM :	Structural Equation Modeling
SPSS :	Statistical Packages for Social Sciences

ST	:	Signaling Theory
UK	:	United Kingdom
VIF	:	Variance Inflation Factor

ABSTRACT

The study investigated the relationship between the quality of higher education and the employability of graduates from selected universities in Southwestern Uganda. The research focused on three main objectives: to determine the relationship between quality of curriculum and employability of graduates from selected universities in Southwestern Uganda, the quality of students enrolled in the University and employability, and the quality of teaching and employability of graduates from selected Universities in southwestern Uganda. Using correlational and survey research designs, data were collected through questionnaires and interviews, and analyzed with SPSS version 27 and AMOS version 28 for Structural Equation Modeling (SEM).

Findings revealed a strong correlation between quality of curriculum and employability of graduates from selected Universities in Southwestern Uganda ($r = .594, p < .01$), quality of students and employability of graduates in Southwestern Uganda ($r = .589, p < .01$), and quality of teaching and employability of graduates from selected Universities in Southwestern Uganda ($r = .560, p < .01$). The study concluded that modifications in the curriculum directly impact graduate employability, with curriculum enhancements improving employability. Curriculum content was identified as a significant predictor of employability, along with improved teamwork and change management skills. The relevance of academic programs was also crucial. Quality curriculum and academic grades were essential, while quality teaching and assessment improved employability. However, teaching methods were less significant in influencing employability.

The study found that 60.7% of graduate employability was explained by the variables in the model: 35.2% by quality of curriculum, 17.7% by Quality of students, and 7.8% by quality of teaching, with 39.3% influenced by other factors. Overall, a positive association exists between the quality of higher education and employability of graduates from selected universities in Southwestern Uganda.

Recommendations included periodic curriculum reviews involving industries, employers, and other stakeholders, a focus on students' academic performance, conduct, and mentoring programs, and increased investment in faculty development, infrastructure, and other teaching and learning facilities.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This study aimed to investigate the relationship between the quality of Higher Education and the Employability of graduates from selected Universities in Southwestern Uganda. This chapter covers the background to the study highlighting the issue under investigation, the general and specific objectives of the study, research hypotheses, expounds on the significance of the study, outlines the scope of the study, and the conceptual framework.

1.2 Background to the Study

The issue of employability of university graduates is a matter of concern by various stakeholders across the globe, as highlighted by (Cheng *et al.*, 2022; Kinash *et al.*, 2018; Zhang *et al.*, 2022). This is reflected in the historical, theoretical, conceptual, and contextual perspectives, which serve as the foundation for this study.

1.2.1 Historical Background

The concern of employability has been a topic of interest since the 1950s when interventions were made to stimulate entry into the labor market to achieve full employment (Arranz *et al.*, 2022; Kariuki *et al.*, 2016). Higher education stakeholders across the world are deeply concerned about the employability of graduates, and universities are under immense pressure to produce graduates who are employable (Aman, 2021; Boateng *et al.*, 2015; Clarke, 2018; Majid *et al.*, 2022).

Employers often complain about the lack of skills and competencies among graduates (Aliu *et al.*, 2019; Ghani *et al.*, 2018). This concern has existed since the inception of education (Tran, 2017; Clokie & Fourie, 2016).

Given the substantial investment in university students, they are expected to acquire skills that will make them employable upon completion of their studies (Martinez *et al.*, 2014; Su and Zhang, 2015; Weligamage, 2009) also observed that quality education enhances an individual's skill acquisition and productivity. This concern is based on the fundamental concepts of the current quality of higher education and students' performance. Across the world, the labor market is struggling with inadequate graduate employability. A study in Vietnam, for instance, revealed that employers were not satisfied with new entrants in the labor market (Tran, 2017). Numerous scholars have also noted a mismatch between graduates' training and the needs of the labor market (Brewer, 2013; Guàrdia *et al.*, 2021; Palmer, 2017).

The lack of essential employability skills is a major concern in numerous countries (Miguel and Barbosa, 2016; Othman *et al.*, 2017; Tristan and McCowan, 2014). Graduate employability has been a driving force in Australian and United Kingdom (UK) universities since the 1980s (Clarke, 2018). In China, graduate employability has been a topic of discussion since 2005, as more than one million labor market entrants were unable to secure work placements each year (Su and Zhang, 2015). Additionally, in Nigeria and Delta State, graduates' skills fall short of employers' expectations (Eze *et al.*, 2016). It was further observed that Engineering students in sub-Saharan African universities do not have adequate job market skills which affect their transition to the labor market. High rates of shortage of job market skills for graduates have been reported in Uganda at 63%, Tanzania at 61%, Burundi at 55%, Rwanda at 52%, and Kenya at 51% (Mutambala *et al.*, 2021). In Uganda, over the years the unemployment rate has continued to increase, recorded at 9% in 2019 and 12% in 2021 (UBOS, 2021), 9.7% while Youth unemployment was 13% in 2017 (Uganda Bureau of Statistics, 2018). Graduate employability is a concern in East Africa and the time taken for the graduate to get a job after graduating in Uganda

is also a concern as it reflects low employability levels (Godfrey *et al.*, 2021; Mutambala *et al.*, 2020).

Higher educational institutions, such as Farah Bay in Freetown, were introduced in Africa by the Church Missionary Society as far back as 1827 to train clerics, and the University of Cape Town in 1829 to train teachers. Their functions were influenced by socio-political and economic forces among states and societies (Clarke, 2018; Woldegiorgis and Doevenspeck, 2013). Students were trained to acquire skills that could be beneficial to their communities. The primary objectives of higher education were to produce high-level human resources, advance research, promote public service, and create, store, and disseminate knowledge.

Furthermore, it has been posited by other erudite scholars that the conventional purposes of higher education were to inculcate individuals with the norms and values of their respective societies, promote their social advancement, and provide a foundation for the impartial yet vigorous exploration for truth (EPRC, 1989). It is noteworthy that numerous parents endeavor by all available means to secure for their offspring access to higher education, to study courses that can unlock opportunities in the labor market. Universities encounter challenges in the provision of quality education, which have resulted in discontentment with the skillset of graduates in the labor market. According to the research conducted by the Inter-University Council of East Africa (IUCEA), fifty percent of all graduates in the East African region are unprepared for employment (Walker *et al.*, 2019).

Given the escalating demand for higher education, augmented enrollment in universities, and technological advancements, it is imperative to devise strategies to enhance graduates' competencies to meet the growing current labor force. Higher Educational Institutions, as one of Key stakeholders in enabling employability, must continue to shoulder the responsibility of determining how to refine the skills of graduates to satisfy the necessities of employers (Weligamage, 2009)

After the Second World War, the first Higher Education Institution was established at Makerere as a technical college, which came into existence in 1922. Gradually, it developed

into Makerere College, which was affiliated with the University of London until 1963, and subsequently became a constituent college of the University of East Africa. In 1970, Makerere University was declared an independent University through an act of Parliament. The quality of education was under the control of colonial masters, who were responsible for managing the curriculum and teaching. Furthermore, Woldegiorgis and Doeverspeck,(2013) cited Ashby (1961) in asserting that higher education was limited to a few selected individuals who would be provided with all they needed and a conducive learning environment. Until 1988, there was only one University in Uganda, yet the demand for higher education increased. University enrolment grew from 1550 in 1962 to 6000 in 1988, while universities were admitting only 20% of eligible candidates (Tibarimbasa, 2010). Since then, this percentage has increased significantly due to the Liberalization of Education, which has also resulted in an increase in the number of universities. The liberalization of University Education has resulted in the establishment of numerous universities in the country. Public universities in Uganda have increased from two in 1989 to nine universities in 2017, while private universities have increased from one in 1988 to 47 universities in 2017 (Tibarimbasa, 2010; Alemiga and Kibukamusoke, 2019; NCHE, 2018; UVCF, 2017). There is increased enrolment, leading to many students graduating from universities to join the labor market. In southwestern Uganda, universities have increased from one in 1989 to eight in 2017. However, this growth has not been matched with the facilities for aiding the teaching and learning process, leading to a decline in the quality of learning and graduates (Sifuna & Sawamura, 2010).

The demand for quality education and graduates has become a paramount issue in higher education due to liberalization, commercialization, globalization, and stiff competition amidst limited resources. Higher Educational Institutions are facing increasing public pressure to demonstrate the quality of education offered as it significantly affects the employability of graduates (Cheng, 2016). The Higher Education Institutions in Uganda are concerned about their graduates' and employers' expectations not being met (Guàrdia *et al.*, 2021; Ngoma and

Ntale, 2016). Uganda's Vision 2040 highlights a significant challenge of having a labor force that is under or unemployed due to a lack of appropriate skills. To achieve Uganda's Vision 2040, enhancing graduate employability skills is an important task that must be undertaken by all Universities in the country to ensure that people have decent jobs.

In Uganda, according to the Universities and Other Tertiary Institutions Act of 2001, as amended in 2006, the National Council for Higher Education was established and bestowed with the crucial responsibility of overseeing the quality of higher education. In addition, the council is mandated to accredit curricula, scrutinize the relevance of the programs offered, and ensure that adequate facilities and conducive learning environments are provided, among other pivotal roles. Furthermore, a quality assurance framework has been put in place to furnish institutions with guidance on the quality of higher education that should be dispensed to produce highly employable graduates (NCHE, 2014a). Numerous factors, including the field of study, workplace training, individual traits, and the quality of academic qualifications have been identified as affecting the employability of graduates in world over and in Uganda (Jiang *et al.*, 2023; Tindimwebwa *et al.*, 2022). However, this study focuses on the quality of higher education, among other factors, as it is critical to employability.

1.2.2 Theoretical Background.

This study was guided by Human Capital theory and supplemented by Signaling theory. The theory of Human capital, initially developed by Schultz (1961) and later improved by Becker (1964) and Porath (1967), seeks to examine the economic value of education. Human capital theory describes how education can develop a person's skill level and asserts that investing in people yields economic benefits for both individuals and society (Baily *et al.*, 2021; Khaykin *et al.*, 2020; Merwe, 2010b; Sweetland, 1996). Schultz (1961) emphasized the importance of investing in human resources as a means of improving productivity and economic development while Becker (1964) noted that apart from formal education, Human

Capital Theory also considers on-the-job training, experience, and other factors that contribute to an individual's productivity which is important in developing ones skills. According to the theory, individuals invest in themselves by acquiring different types of human capital, including formal education, knowledge, and information, to increase market productivity. Becker (1964) argues that educated individuals produce high levels of long-term economic growth. Human capital (HC) is defined as the 'knowledge, information, ideas, skills, and health of individuals' (Becker, 1994), or as 'the human factor in the organization; the combined intelligence, skills and expertise that gives the organization its distinctive character.. Human capital is further referred to as the stock of knowledge or acquired characteristics by a person that contributes to their economic productivity(Tan, 2014).

Human Capital theory (HCT) assumes that formal education is highly instrumental and necessary to improve the production capacity of individuals (Merwe, 2010; Nafukho et al., 2004; Okemakinde, 2008). Quality of higher education develops graduates' skills that make them employable (Bridgstock, 2017). Education is viewed as an investment that yields future benefits(Popov, 2014), and HCT explains how people in an organization contribute their knowledge, skills, and abilities to enhance organizational capability (Phillips and Gully, 2013). The theory postulates that individuals invest in education and training in the hope of getting employment and higher income (Tan, 2014). Also, Mwita and Mwakasangula (2019) suggest that education is expected to nurture individuals towards meeting the needs of the labor market, and higher education is assumed to provide graduates with the skills and knowledge that can benefit both themselves and society as a whole. HCT proposes that education determines the productivity of labor, which in turn affects earnings and employability of graduates.

Higher education prepares individuals for work, and through education, individual skills that are needed in the world of employment are acquired (Marginson, 2019). HCT has been used to explain the value of education (Merwe, 2010), the value of post-secondary education (Jog,

2015), predicting employability(Berntson & Sverke, 2016), the rationality behind investment in education (Okemakinde, 2008), preparation of students for employment (Kalufya and Mwakajinga, 2016), and how education and training raise the productivity of workers(Mutamba, 2016). The contribution of Human Capital Theory (HCT) to graduate employability is significant, as it emphasizes the crucial role of higher education in determining the productivity , enhancing graduates' skills and knowledge, making them more desirable to employers (Shivoro and Shalyefu ,2017).

However, HCT has been criticized for failing to explain the extent to which education is directly related to improvement in occupation and income. In the study by Novak and Znidaršič (2018) ,Kuhnen and Oyer (2012) suggested that firms consider potential employees using a real options approach, taking into account factors such as uncertainty in workers' productivity and competition in the labor market. As a result, the traditional human capital approach to education and the labor market is too insufficient to address the problems of graduate underemployment and income dispersion caused by structural changes to the global labor market. Secondly, it has failed to account for the growing gap between people's increasing learning efforts and the diminishing number of jobs in which to apply the increasing knowledge investment (Okemakinde, 2008). Additionally, the theory has failed to explain how education arguments productivity (Marginson, 2019). Therefore, to some extent Human Capital theory is relevant in this study as it assumes that for one to invest in quality education, they are expected to produce highly employable graduates but does not show how they are placed in different job positions. Signaling theory is used as a supplement to address this issue.

Signaling theory as an extension of Human capital theory focuses on ways in which schooling serves as a signal to characteristics that lead to high productivity(Weiss, 1995). Signaling theory was developed by Spence (1973) and improved by Stiglitz ,1975;Cai, 2014). It explains how education acts as a signal for pre-existing abilities of individuals and

indirectly communicates personal characteristics to others by basing on educational qualifications (Ghazarian, 2016). Signaling theory asserts that the education level acquired by an individual indicates some characteristics such as dedication, time management skills, problem-solving, creativity, and ability to follow instructions (Tan, 2014). According to Sunjoo (2016), Signaling Theory proposes that education functions as a mechanism for sorting individuals, by signaling their abilities and characteristics to prospective employers. Spence's job market signaling model suggests that education plays a crucial role in addressing the lemon market issue, by providing a credible indication of an individual's quality and employers use graduates' education credentials to signal their ability on recruitment (Fossati, 2020) .

It is based on the assumptions that individuals differ in productivity which is fully personal specific and not affected by schooling. Secondly, more schooling entails more costs and increased earnings. Thirdly, it assumes asymmetrical information where individuals know their productivity while employers do not, and fourthly that schooling costs can be observed without incurring a cost. Signaling theory is useful for describing behaviour when two parties have access to different information, the potential employers lack information about the quality of job candidates but their educational qualification signals their quality to reduce the information asymmetries (Connelly *et al.*, 2011).

Essentially, this means that higher levels of education are viewed as indicative of greater competence or proficiency and qualifications are significant to the employer, which ultimately translates to higher salaries (Tomlinson and Anderson, 2021). Signaling model also implies that education may not only enhance an individual's skills or productivity, but rather bestows upon them a certification that employers hold in high regard and acts as a sorting device (Ghazarian, 2016; Sharma, 2014; Zheng, 2019). This aids the prospective employer in selecting an employable graduate by considering his ability.

In this study, the graduate knows the abilities they possess but the employer may not know all the abilities possessed but can only use the academic credentials to select the prospective employee that is later subjected to an interview to evaluate the skills and abilities as per the job specifications. Based on Signaling theory, education serves as a way in which potential workers inform employers of their skills (Ghazarian, 2016), thus the relevancy of the theory together with HCT.

1.2.3 Conceptual Background

This research focuses on the quality of higher education as the independent variable (IV) which is hypothesized to influence the employability of graduates. Employability is conceptualized as the dependent variable (DV). Employability has been looked at differently by various authors. Hillage and Pollard (1998) defined Employability as the capability to move self- sufficiently within the labour market to realize potential through sustainable employment, while (Harvey, 2010) considered it as the ability of the graduate to get a satisfying job.

Furthermore, employability is looked at as a set of achievements, skills, understandings, personal attributes that make graduates more likely to gain employment and be successful in their chosen careers which benefit themselves, the work force, the community and the economy (Knight and Yorke, 2002; Yorke, 2018) . In the same vein, it is an individual's capacity to understanding and acquiring personal attributes, knowledge, skills and abilities to gain employment, satisfying employer as well as sustain it (Bhola, 2017). Also, McQuaid and Lindsay(2005); Tristan and McCowan C2014) looked at employability as “the possession of relevant knowledge, qualities and competencies essential in attaining a worthy employment, meet the fluctuating needs of employers and customers by an individual that help in realizing their ambitions and potential at work. Employability in this study is

measured in terms of employment skills that help in acquiring the job, employment retention and growing within it from one level to the other.

Higher education refers to the level of education and training that takes place after the secondary level (Sunder, 2016). It includes post-secondary Institutions like Polytechnics, colleges, and Universities (Alemu, 2018). This education is obtained from higher education Institutions (HEIs). In Uganda, Higher educational institutions are categorized into three distinct types in addition to being clustered as public or private: (i) universities, (ii) other degree awarding institutions, and (iii) tertiary institutions /colleges (NCHE, 2014; NCHE, 2018).

Among the roles of higher education is to develop human resources necessary for economic and social development, skills development through training, updating human skills, and providing opportunities for improving skills (Marginson *et al.*, 2023).

This includes leaders in different sectors in terms of the labour force. Higher Education Institutions entrench employability skills in the curriculum and its implementation that are important at the workplace. The programs also expose students to the nature of the skills demanded by employers (Clarke, 2018). Universities and other tertiary institutions ACT, 2001, defines University as “Any Institution, School, Institute or Centre of Higher Education, other than a Tertiary Institution, one of the objects of which is the provision of post-secondary education offering courses of study leading to the award of certificates, diplomas and degrees and conducting research and publishing” Alemu(2018) also defines University as a higher learning institution that elevates those who join to a higher level of Intellectual development both professionally and academic.

In this study, 'Higher Education' signifies education that exceeds the advanced secondary level. This study, in particular, concentrates on the higher education component obtained from universities and at the degree level

Quality in higher education is defined by different scholars in various ways. For instance, (Harvey, 2010) characterizes it as the extent to which tasks are executed, the fulfillment of specifications, or stated outcomes. Similarly, Støren and Aamodt (2010) define quality as the degree of fitness for purpose, while the National Council for Higher Education (NCHE, 2014) refers to it as a set of standards and the fulfillment of intended objectives. Gawlik (2015) on the other hand, conceives of it as superior or excellent.

Quality of higher education as per the Hand book for Quality Assurance in Higher Education process (The Inter-University Council for East Africa, 2010) is considered as an Input - output process. This involves the program or curriculum with its expected learning outcomes, the students as raw materials, the staff to implement the curriculum and graduates as the output. It is worthy to note that quality is a subjective term, and its definition varies across different stakeholders in higher education, depending on the context (Sunder, 2016). Longanecker and Blanco (2003) noted that the quality of higher education is determined by the identity of the teacher and the methodology of instruction. It is again reported that learning environment, status of students and availability of extracurricular activities determine quality of higher education (Akareem and Hossain, 2016). The quality of higher education is measured in terms of the quality of the curriculum, quality of students, and quality of teaching in this research. There are other different ways quality of higher education is categorised. These include: transcendent quality, which is the result of the academic staff's status and expertise; manufacturing-based quality, which is where the service meets the stipulated standards and is fit for the anticipated mode; user-based quality, which considers the needs, wants, and preferences of students; product-based quality, which emanates from a solid curriculum and proficient academic staff and results in enhanced student learning; and value-based quality, which pertains to an acceptable level of performance at an acceptable price (IUCEA, 2015). As NCHE (2014) states, the definition of quality in higher education is fitness for purpose. Quality is a multidimensional concept that is subjective and lies in the eye of the

beholder. Also quality of higher education is measured by the outcome of the process (Woya, 2019).

This study focuses on product-based quality and added value, emphasizing students' learning to produce employable graduates through quality curriculum, students, and teaching. The quality of higher education is expressed as the quality of the curriculum, students, and teaching, resulting in good academic performance and employable graduates. Therefore, the quality of higher education is crucial for the development and success of students' socio and economic development (Alemiga and Kibukamusoke, 2019; Espling, 2022). The quality of higher education is an evaluation of the extent to which education meets the requirements of the education subjects and their satisfaction level. This evaluation is a value judgment accepted by the public and influenced by the internal attributes of higher education. The satisfaction of requirements is subjective due to the variability of user requirements, making it challenging to establish a unified quantitative standard for quality. Nevertheless, professional knowledge and skill mastery can be measured directly or indirectly. A significant factor in measuring the quality of higher education is students' engagement in studying (Agemaiti *et al.*, 2015; Wang *et al.*, 2022). High-quality education is one that meets the needs of students at a particular moment and promotes their future development. This requires teachers to understand different types of learning and accommodate students' preferred learning styles (Kundu, 2019).

Brockerhoff *et al.*,(2015), Dicker *et al.*,(2019); as well as Rohanai *et al.*, (2020) contend that stakeholders in education have different perspectives on quality in higher education. Students, for example, may express dissatisfaction if the education offered does not align with their expectations, while employers may be uncomfortable if graduates lack the expected competencies. The National Council for Higher Education has developed a Quality Assurance Framework to ensure that it collaborates with higher educational institutions to achieve and enhance the quality of higher education. This framework outlines guidelines for

parameters such as the quality of courses and academic programs, the quality of academic staff, the quality of students (both input and output), and the quality of the learning environment, including facilities, among others (NCHE, 2014). It is worth noting that the term quality is relative and defined differently by different stakeholders. For instance, academicians view quality as excellence; students, employers, and external assessors consider quality as the fitness of purpose (Akareem and Hossain, 2016), while the government and taxpayers consider quality as value for money (IUCEA, 2015). Furthermore, the optimal utilization of resources and the provision of accurate educational products and services with zero defects are also critical components of Quality (Harvey, 2010; Kundu, 2019). When discussing higher education, the concept of quality encompasses learning tasks, learner characteristics, and instructors, all of which are related to the quality of input (faculty expertise and level of student), process (delivery of knowledge and mode of delivery), and output, which includes knowledge enhancement by graduates (Tanweer and Qadri, 2016). It is important to note that the term Quality is relative and understood differently by various stakeholders.

Within the context of this research, the examination of the perspectives of both students and employers was undertaken. Quality, in this case, is defined as the level of fitness for purpose and educational products that exhibit zero defects, thereby providing user satisfaction. The concept of quality of higher education also combines the literature works of Harvey (2010), Støren and Aamodt (2010), and NCHE (2014) and refers to education that meets set specifications, standards, and expresses fitness for purpose. In this study, the quality of higher education is indicated by the quality of the curriculum, quality of students, and quality of teaching. It is higher education that produces graduates that are employable.

Curriculum has been looked at in a different way by different scholars. Curriculum is a conscious and systematic selection of knowledge, values and skills: that shapes the way teaching, learning and assessment processes are organized (UNESCO, 2016). It is all planned

learning experiences with the aim of achieving some outcomes while recognizing the importance of unintended outcomes. It is a totality of student experiences that occur in the educational process. It include academic content taught in a course or program(MoES, 2019)

Furthermore, curriculum is defined as a “consciously orderly identification of what is to be learned and values which shape the way of teaching and learning” (UNESCO, 2016). Relatedly, Støren and Aamodt (2010) regards curriculum as a systematic and interrelated element of the study program and its implementation. The above definitions consider orderliness and content but the modes of assessment are neglected. Furthermore, UNESCO (2016) considers curriculum as an explanation of what learners should be taught, identifying the objectives and at what stage of education. This brings out the way teaching is handled.

Considering the differences in definitions, the quality of curriculum in this study is a combination of two words adopted from(UNESCO, 2016) and (Støren and Aamodt, 2010) as the systematically designed program of a study showing the content, delivery mode, and assessment that best fits the purpose. The quality of curriculum provides the structure of quality learning, that is to say, it determines the extent to which higher education is of quality and provides the bridge between education and employability (UNESCO, 2016). The quality of the curriculum is explained about learning and skills acquisition but not much has been recorded on the quality of the curriculum and the employability of the graduates.

It is a program document written, published and accredited by the regulatory authority. In this study, we considered program document accreditation by National Council for Higher Education (NCHE). All programs must meet minimum standards set by NCHE as per section 5 (i) of the Act for instance, each course has to indicate course name, a course code, level, the name of the staff teaching the course, course outcomes, a full description of the course content and time/hours to be spent on each component.

All courses and programs must be taught by sufficient and qualified staff using adequate educational facilities in order to meet curricular standards set by statutory instrument

No. 85 of 2005 (NCHE, 2014). In this study, the quality of curriculum is looked at by considering the curriculum designs which involve curriculum organization and arrangement of curriculum component, course content as per minimum standards of NCHE and the relevancy of the program to Education stake holders. Quality of the students input is one of the factors that affect the learning outcome (Ekaviana and Nurkhin, 2016). The input in higher education involves students admitted at the programme of their choice, the learning environment and teaching / learning process. The input in the context of the quality of students is the entry grades. Grades are essentially a measure to quantify learning and intellectual progress using objective criteria. To join the University, the admission criteria have been set for both Diploma and University degree. The measure of quality of students was considered in terms of those admitted as per the set criteria by the University which is in line with one from National council for Higher Education. The minimum entry requirements are set by (NCHE, 2014) as follows:

- a) For direct entry from Schools, one should possess Uganda Certificate of Education (UCE) with at least 5 passes and at least 2 principal passes at Uganda Advanced Certificate of Education (UACE) or its equivalent.
- b) Mature age entry: One should be aged 25 years and above and has passed the mature age entry examinations with at least 50% mark. The mature age entry examinations must have been accredited by National Council for Higher education.
- c) Diploma obtained at credit or Distinction level in the relevant field from recognized Institution.
- d) Must have completed and obtained a certificate in the bridging course accredited by NCHE.

More so, the grades scored during the course of study were considered since they signal the mastery of the content and skill. Discipline is defined as “socially and morally responsible behavior motivated by intrinsic factors, not solely by anticipating external rewards or fear of

punishment” (Santosa *et al.*, 2021; Tentama *et al.*, 2019)). Disciplined students are ones whose behaviors, actions and inactions conform to the predetermined rules and regulations of the school (Simba *et al.*, 2016). However, discipline is not only adhering to rules and regulations but also includes the learner’s ability to discern what is right or wrong (Gitome *et al.*, 2013). Indiscipline is displayed in several ways, such as disobedience, destruction of school property, poor attitude to learning, immoral behaviour, drug abuse, stealing, lateness, being quarrelsome, use of abusive language and rudeness.

In the context of this study, discipline referred to actions that conform to the accepted standards of the society. Quality of teaching is an important issue in education as it is the one of the inputs in the education process that produces quality graduates (NCHE, 2014). Quality teaching is the use of pedagogical techniques to produce learning outcomes for students (Roseveare, 2012). It involves effective design of curriculum and course content, use of a variety of learning contexts including: guided independent study, project-based learning, collaborative learning, experimentation, among others; to solicit and use feedback, effective assessment of learning outcomes, well-adapted learning environments and student support services (Atwebembeire and Namubiru, 2018; NCHE, 2014; Roseveare, 2012; OECD, 2012).

Quality of staff and staff development is central to the quality of higher education because it helps to build a culture of excellence and a professional team of motivated workers crucial for the achievement of national inspirations for economic development ((Malunda and Atwebembeire, 2019; Tiberondwa, 2000). In this study, the quality of teaching was considered in terms of quality of staff, teaching methods, quality of assessment and quality of learning environment. In Uganda, National Council for Higher Education which is a regulatory body gave the standard measure of the quality of Academic staff for the University. Universities are required to employ staffs that meet the standards set. These are ; Teaching Assistant must have first class or upper second degree, Assistant Lecturer - Master’s degree, Lecturer-Master’s degree but on PhD track, Senior Lecturer- PhD and Publications, Associate

Professor- teaching experience of 7 years and publications and Professor- 7 years teaching experience and publications (NCHE, 2014). In this study the quality of staff is as per set standards by NCHE which is people with the right qualifications and skills to teach in the University.

Teaching methods are the principles of how to deliver classroom instruction. Teaching- learning methods are also defined as a mechanism that is used by the learning facilitator to organize and implement a number of educational means and activities to achieve certain goals (Al-rawi, 2013). In the context of this study, teaching methods are means through which learning instructions are delivered. These include: field attachment, project work, group work, problem-based learning and class presentations among others. Assessment is explained as a process of documenting in measurable terms , knowledge, skills, attitudes and beliefs of learners and facilitators (Sawand *et al.*, 2015). Assessment may be both formative and summative. It determines what students learn and the way it is done, what is taught and the methodologies used. Assessment is used to establish the students' acquisition of learning material, skills and the quality of learning. Results of assessment may be communicated differently to users. In this case we consider grades and the application of skills acquired.

The learning environment refers to the surroundings that aid the learner to find solutions to their problems and to have access to the materials to help them achieve their goals(Özerem and Akkoyunlu, 2015). As a result of interaction with the environment, the learners gain some experiences which are crucial. It widens the exposure for the students and helps them to develop their repertoire of skills, knowledge, attitudes, and behaviors in order to meet 21st century competencies. The learning environment has a strong impact on students' learning experiences and outcomes. It dictates what, how and why students learn (Ahmed *et al.*, 2018). The learning environment goes hand in hand with available facilities. It comprises the educational, physical, social and psychological context in which students are

dipped, and is thought to play a significant role in their professional, moral and skills development. In the context of this study, the learning environment is all that surrounds the learning process such as the facilities.

Employability is a term that is conceptualized differently by various scholars as there is no single definition to capture its essence. According to Lees *et al.*,(2002), employability was defined by (Hillage and Pollard, 1998) as the ability to get and retain fulfilling work (Jowah and Beretu, 2019),” while (Bhola, 2017; Mtawa *et al.*, 2021) defined it as “the propensity of the graduate to exhibit the attributes that employers anticipate will be necessary for future effective functioning of their organization.” This is measured by the nature of employment, time taken by the graduate to get employed after graduation, discipline and a range of attributes which include: team work, communication, risk-taking and problem-solving.

Yorke and Knight (2004) take employability to be a set of achievements, skills, undertakings, and personal attributes that make graduates more likely to gain employment and be successful in the chosen field, while (McQuaid and Lindsay, 2005), consider employability as the ability to move to and within the labor market, sustain and keep a satisfying job. Employability is also defined as a set of traits, abilities, and understanding that all labor market participants should possess to ensure a job placement and the capability of being effective at the workplace to the benefit of themselves, employers and the wider economy (Gishan *et al.*, 2015; Knight & Bennett, 2019) . Majid *et al.*,(2022) differentiated the term employment and employability where by “employment is taken as the potential to secure a job at a work place, while employability is the potential to get, keep and advance in a specific position at that work place.”

Weligamage, (2009) cited Lee, (2002) who argues that employability is the process of producing graduates that are capable and able to compete in the workplace and know how to learn. The set of employability skills identified include independence inclusive of: self-

management, accepting obligations, time management, initiative, networking, and planning (Kalei, 2015), People skills were identified as inclusive of: teamwork, communication skills, respecting others (Bakar, 2020; Lerman, 2013), and interpersonal skills while for (Seman, 2023), general occupation skills include: problem-solving skills, application of numeracy, and literacy.

Possession of employability skills is an important aspect of being able to be employable. Employability capacity is the basic skills necessary for acquiring, keeping and performing the job got well. Some of the skills include: problem solving, communication, teamwork, change management and time management which are developed through education. The definition of employability in this thesis was adopted from Hillage and Polland (1999), and Yorke and Knight (2004). In the context of this study, it refers to the competencies, attributes, and skills that graduates possess and which make them get initial employment, progress to higher levels, keep a satisfying job and be able to move to another one when the need arises, and keep learning new skills as lifelong learning after graduation. In the context of this study, employability was characterized by employment skills which include: problem solving, communication skills and application of numeracy, performance at work including team work, accepting obligation and change management, in addition to employment retention which include time management and conduct at work.

A report by Inter University Council of East Africa (IUCEA ,2015) expounded on the concept of a graduate as an individual who has successfully completed an educational program at a level of no less than a bachelor's degree. Advanced Oxford learner's dictionary consider a Graduate as an individual who has fulfilled the requirements of a specialized and advanced education in an academic discipline or a professionally-oriented study program; has a university degree. Within the scope of this study, a graduate is an individual who has been conferred a university degree subsequent to the completion of a particular course of study, as evidenced by inclusion in the University graduation book.

1.2.4 Contextual Background

Enhancing graduate employability through quality education has become one of the central tenets in many Universities worldwide (Tran, 2017). They aim at attaining a level where the graduates are able to gain and retain meaningful sustainable employment (Clarke, 2018) by using acquired skills and abilities from educational institutions (Woya, 2019). Universities prioritize employability as a primary purpose of personal and public investment (Jowah and Beretu, 2019). Quality higher education as the totality of features that include the quality of the curriculum, quality of students, and quality of teaching is important in promoting employability. NCHE (2014) defines curriculum as the coherent set of courses leading to the award of a degree or diploma. A high quality curriculum encourages work attachment, adds skills training in the program, provides quality careers, and keeps a record of achievement of students that promotes employability. The quality of curriculum and nature of teaching does not however open enough room for students to gain employable skills (Knight and Yorke, 2010).

Okolie *et al.*, (2020) in the study to enhance graduate employability, most of the Universities are struggling to align their curricular to practical based learning so as to eliminate a disconnection between what is offered by higher educational institutions and the requirements of industries. Universities and Other Tertiary Institutions Act (2001 as amended in 2006) provides for the establishment of NCHE to streamline standards of universities and other institutions of higher education. NCHE sets and coordinates national standards for admission of students, ensures minimum standards for a course of study, and endeavors to include in its teaching, the practical solutions to social and economic problems in the community aimed at ensuring quality education. The quality assurance framework for universities and the licensing process for higher education institutions specify standards for quality education. This focus on adherence to the minimum requirements of the course of study in terms of content, duration, contact hours, assessment, and what is taught, should be relevant to the job market (NCHE,

2014b). It is further specified by NCHE that in curriculum design, course units should have course name, course code, level of study, name of staff, course outcomes, and description of course content. Each course unit should have a minimum of 3 hours of study per week and for practical classes, education should have 8 weeks of school practice a year, and science courses 15 hours of practicals per semester.

The NDP III identified the aspiration of Agenda 2030, SDG4, African agenda 2063 (Goal 2), and EAC Vision 2050 as to have an inclusive and equitable quality education, promotion of lifelong learning opportunities, and skills revolution underpinned by science, technology, and innovation (National Planning Authority (NPA), 2020). It had earlier been reported that Uganda's, human capital is characterized by low labor productivity which is a result of a weak foundation for human capital and a lack of appropriate knowledge skills and attitudes among other factors (Uganda Bureau of Statistics, 2017). Furthermore, Tran (2017) reports that the needs of employers are not met due to ill preparation by Universities and the curriculum used in the higher education system which does not impart the skills and competencies needed by employers. Relevancy of the curriculum, teaching methods, and guidance to students may affect employment among graduates in Uganda (Kiranda *et al.*, 2017). Also, New vision of January 21, 2015 reported Youth Unemployment at 62%. The Monitor of Tuesday, July 9, 2019, on its part, reported that many University graduates in Uganda lack the required skills for the job market.

Also Uganda's National Development Plan II (NDP II (2015/16 -2019/20) had noted that the pressing challenge in skills development included: inadequate skills to support increased production and expansion, poor work readiness of many young people entering the labour market for the first time, inadequate linkages between training institutions and employers as well as lack of basic numeracy and work based training. The number of universities and other degree-awarding institutions increased from 34 in 2011 to 60 in 2017 and University enrolment increased from 139,683 to 162,299 students over the same period. The Uganda

National development plan 3 (NDPIII) again noted that there is high youth unemployment at an average of 38% and a low transition rate from training to employment at 35%. This increased numbers and enrolment amidst declining quality of education facilities and infrastructure, signified by increased congestion in Lecture rooms, lack of teaching materials, and limited reading space affect the quality of education (Marwa and Kagundu, 2022; NCHE, 2018).

It is further noted that the quality of higher education is sometimes affected by socio-economic factors, high ratio of undergraduate students to the lecturer, and inadequate teaching-learning materials, which affects the skills gained for employability (Ssempebwa, 2019). The Daily Monitor of March 11th, 2017 observed that nine out of every ten Ugandans who graduate from Higher Education Institutions are unemployed. Graduates lack employment skills, performance at work, and employment retention skills needed by the labor market. There are persistent complaints from stakeholders about the decline in quality of teaching (Ezati *et al.*, 2017), quality of higher Education (Gawlik, 2015).

NCHE(2019) in the state of higher education report 2018/19 reported that Universities graduated 78,500 in 2017/2018 and 78,300 in 2019. Unemployment rate of the youth of 18years to 30 years was at 13.3% and 31 to 64 years 4.8 % (Uganda National Housing Survey (UNHS),2016/2017 (UBOS, 2021) higher than country unemployment rate of 9.2%. UBOS (2022) further reported an increase in unemployment rate to 12% and youth unemployment 17% among which university graduates fall. Also the Uganda Vice Chancellors' Forum(2017) bulletin reported that Ugandan youth unemployment rate due to skills gap was 63% which was higher than the rest of other East African countries where Tanzania was 61% , 55% for Burundi ,52% for Rwanda and 51% for Kenya.

1.3 Statement of the Problem

Higher education promotes skills development, Knowledge acquisition, certification and credentials, work experience, networking, Innovativeness and lifelong learning (Smith *et al.*, 2018).

In an effort to increase the employability of graduates, Universities and other institutions of higher learning in South Western Uganda have used different strategies. These include creating collaborations with enterprises, revising curricula to incorporate internships, work placements, field tours, career fairs, guest lectures, and international student exchanges (Clarke, 2018; Tran, 2017; Shivoro *et al.*, 2018). Additionally, national programs such as Skilling Uganda under BTVET and The Support to Higher Education, Science, and Technology (HEST) project by the Uganda Manufacturers Association (UMA) focus on developing human capital to meet labor market demands and enhance graduate employability.

Despite these efforts, many Higher Education Institutions (HEIs) in Uganda still face significant challenges in achieving the desired levels of graduate employability. Public and employer criticisms often highlight that graduates fail to meet employment demand requirements (Kalufya and Mwakajinga, 2016). The concern over graduate employability is growing among various stakeholders, both globally and in Uganda (Tran, 2017; Clokie and Fourie, 2016). This issue is further underscored by the fact that 63% of graduates in Uganda remain unemployed after graduation due to skills gaps, poor job performance, and inability to sustain jobs (The Uganda Vice Chancellors' Forum, 2017).

Many scholars have written about factors that influence internal and external employability such as career management practices (Gloria *et al.*, 2017; Juhdi *et al.*, 2010; Rashid and Hinai, 2020), entrepreneurship (Nabi *et al.*, 2017; Tagulwa *et al.*, 2023)) and employability skills in graduate (Guàrdia *et al.*, 2021) but little is said on the quality of higher education and employability graduates. It is not clear whether the state of low graduate employability could be explained by the quality of higher education. This study, therefore, seeks to examine the relationship between the quality of higher education and the employability of graduates from selected Universities in South Western Uganda.

1.4 General Objective of the Study

To examine the relationship between the quality of higher education and employability of graduates from selected Universities in South western Uganda.

1.5 Specific Objectives

- 1) To determine the relationship between the quality of the curriculum and the employability of graduates from selected Universities in South western Uganda.
- 2) To establish the relationship between the quality of students enrolled in the University and the employability of graduates from selected Universities in South western Uganda.
- 3) To establish the relationship between the quality of teaching and the employability of graduates from selected Universities in South western Uganda.

1.6 Hypothesis

The research objectives listed in section 1.5 were verified by testing the following research hypotheses:

1. The quality of the curriculum has a significant relationship with employability of graduates from selected Universities in Southwestern Uganda.
2. The quality of students enrolled in the University has a significant relationship with the employability of graduates from selected Universities in Southwestern Uganda.
3. The quality of teaching has a significant relationship with the employability of graduates from selected Universities in Southwestern Uganda.

1.7 Justification of the Study

The Universities and Tertiary Institutions Act of Uganda 2001 provides for the establishment, control, and management of universities and other tertiary institutions in the training of students by delivering approved and accredited curriculum by National Council for Higher Education. Through the Act, public and private universities have been established in

the country. Considering the increasing number of Universities in Uganda and the rate of enrolment, the numbers that graduate every year have continued to increase. However, there is no guarantee of a graduate's employability in the labor market. It is noted that the quality of higher education mainly through quality of teaching needs to be considered (Atwebembeire and Namubiru, 2018). It is not clear if the curriculum delivered, quality of students and quality of teaching are tailored towards responding to employment needs. Considering the high University enrolment and labor rate of employability, there is a need to investigate the quality of the curriculum, quality of students, and quality of teaching at the University. This study provides researched information on the quality of higher education and employability of graduates from selected Universities in South Western Uganda. The information may be useful to stakeholders, including the government and universities for intervention in the production of quality and employable graduates. This study is therefore necessary and timely.

1.8 Significance of the Study

1. To the Universities:

The findings from this study can assist universities in refining their curricula, training programs, and teaching methods. By focusing on the provision of transferable skills, universities can better prepare students to be employable in the labor market. This ensures that graduates are not only knowledgeable but also equipped with practical skills that are in demand. The study makes recommendations and helps Universities and other higher education stakeholders appreciate the significance of quality of the Curriculum, Quality of the students enrolled in the University and quality of teaching as drivers of graduate employability.

2. Policy and Management Implications:

Government policymakers and university management can use the study's findings to oversee and enhance the quality of students admitted to universities, the training processes they undergo, and their readiness for the labor market. Specifically, the

National Council for Higher Education (NCHE) can benefit by reviewing and improving its university monitoring processes to ensure that all aspects necessary for quality education are addressed, aligning educational outcomes with labor market demands.

3. To the Researchers

The study serves as a foundation for future researchers and other research users who may want to venture into a similar area of examining the Quality of Higher Education and Employability of graduates. The findings also provide a valuable resource for future researchers seeking literature on employability, especially in the context of Ugandan universities in Southwestern Uganda.

More so, the research would serve as reference material for scholars and help to generate academic arguments and further areas of study.

4. To existing Literature:

This study adds to the existing body of knowledge on the quality of higher education and the employability of graduates for the benefit of policy makers, educationists, Universities and Academicians both within Uganda and beyond. By filling gaps in the current research landscape, it provides a foundation for further exploration and development in this critical area.

1.9 Scope of the Study

This considered the coverage of the study which is broken down into content, geographical, and time scope.

1.9.1 Content Scope

This study focused on the quality of higher education and employability of graduates from selected Universities in Southwestern Uganda. The quality of higher education was

operationalized by the quality of the curriculum, quality of students enrolled in the University, and quality of teaching. Quality of curriculum was measured by program design, content, and relevancy of the Academic program. The quality of students enrolled in the University was measured by students' grades and discipline from the time of admission through the time at University up to graduation.

Quality of teaching was measured by the quality of staff in terms of size and qualifications, teaching methods, quality of assessment, and learning environment. Employability of graduates has been measured by skills acquired such as employment skills, performance at work, and employment retention skills. These skills help the graduate in employment attainment, performance, and keeping the job acquired.

1.9.2 Geographical Scope

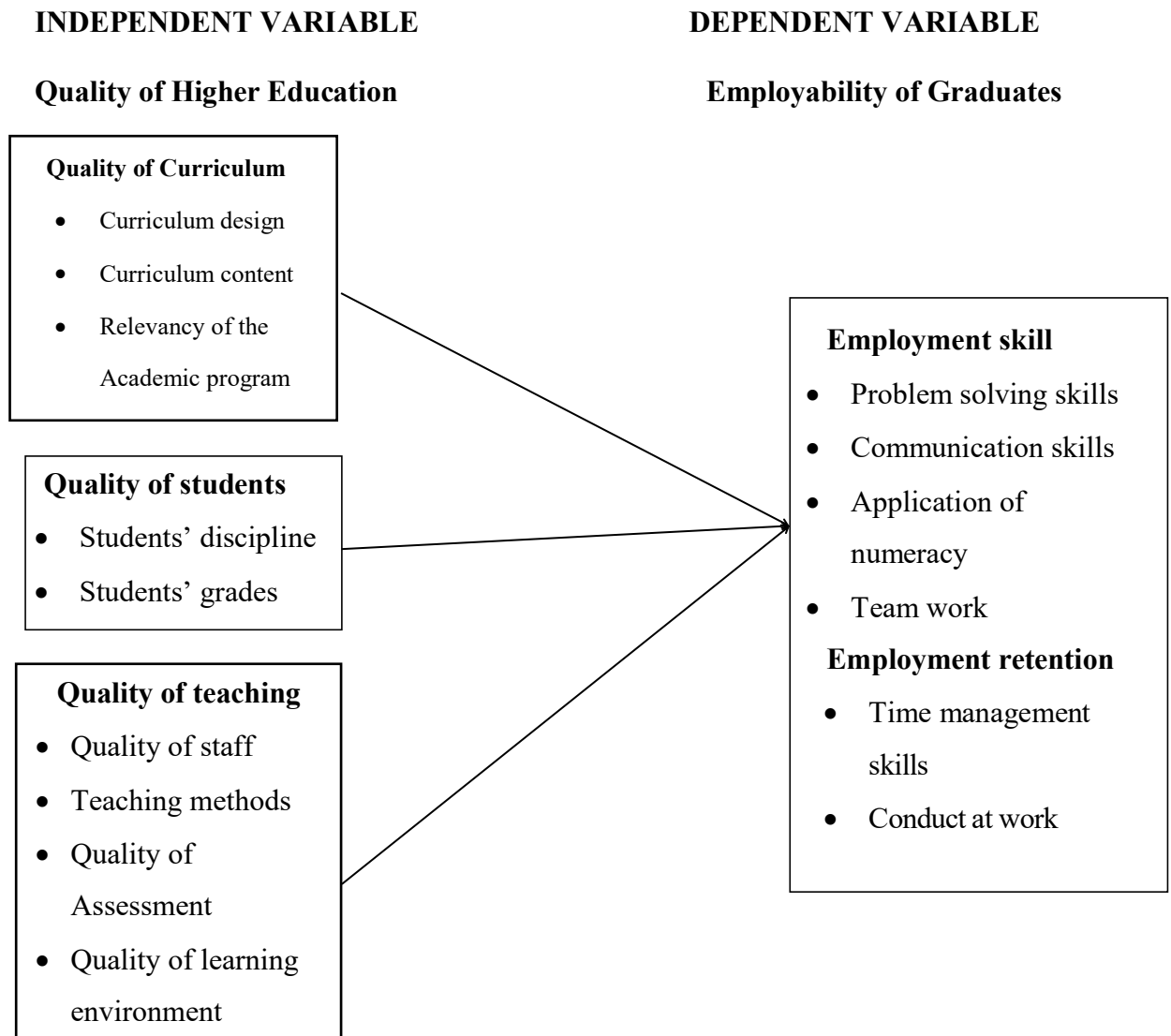
The study population consisted of staff and graduates from Mbarara University of Science and Technology (MUST) and Bishop Stuart University (BSU) as selected Universities in South Western Uganda since at the time of selection were chartered, independent not campuses or study centers, had taken a longer time in operation than others and had the highest enrolment as compared to others in the region. These Universities are in Mbarara City in Mbarara District. MUST is a Science-based government University that lies on the banks of River Rwiizi in Mbarara City along Kabale high way approximately 286 Kilometers Southwest of Kampala capital city of Uganda. It had a student population of about 3593 and an academic staff of 241 (MUST Strategic plan for 2016/2017 – 2025/2026). BSU is a Church founded private University located on Kakoba hill along Buremba road - approximately 5 Kilometers East of city Centre, and it is approximately 295 Km southwest of Kampala by road. It had a student population of around 5000 and an academic staff of 160 (BSU Academic Registrar's Office records 2017/2018). The graduates of 2017 to 2019 of the

programs offered in both institutions were considered. This period is long enough to give valid information.

1.9.3 Time Scope

This study takes into consideration the period 2017 to 2019. This corresponds with the time when National Council for Higher Education (NCHE) Quality Assurance Framework for Universities and licensing process for Higher Education Institutions was revised and put in place. The first graduates were in 2017. For this study, the graduates considered were only those that completed their studies from 2017 to 2019.

1.10 Conceptual Frame Work



Source: Author's conceptualization from Literature Review (Dicker *et al.*, 2018; Støren and Aamodt, 2010; Knight *et al.*, 2010).

Figure 1: Conceptual frame work

The model in figure 1, shows the association between the Quality of Higher Education and Employability of graduates. The independent variable is Quality in Higher Education while the dependent variable is Employability of Graduates.

In Figure 1, the conceptual framework illustrates that the quality of higher education, which is the independent variable (IV), is hypothesized to significantly influence the employability of graduates, which is the dependent variable (DV). The quality of higher education is measured by the quality of the curriculum, quality of students enrolled in the University, and quality of teaching. The quality of curriculum includes curriculum design, curriculum content, and relevancy of academic programs. The quality of curriculum has a direct impact on students' skills acquisition which, in turn, affects the employability of graduates. Additionally, the quality of teaching is indicated by the quality of staff, teaching methods, quality of the assessment, and the learning environment in which teaching takes place. The quality of students is measured by students' grades upon admission and students' discipline, both of which significantly impact students' employability. The quality of teaching has a direct impact on skills' acquisition, which, in turn, affects the employability of graduates.

The dependent variable, employability of graduates, is measured by employment skills, performance at work, and employment retention. Employment skills include: problem-solving, literacy, communication skills, and application of numeracy; while performance at work entails accepting obligations, teamwork, and change management. Employment retention is measured by time management and conduct at work.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature related to the quality of higher education, and the employability of graduates. It focuses on three thematic areas that include; the quality of the curriculum, the quality of students, and the quality of teaching, in relation to the employability of graduates.

2.2 The Quality of Curriculum and Employability of Graduates

The concept of quality is a relative term that is defined differently by various stakeholders. In a handbook for Quality Assurance in Higher Education by IUCEA (2015), academicians view quality as excellence, with an emphasis on high-level standards. However, students, employers, and external assessors consider quality as the fitness of purpose (Akareem and Hossain, 2016), while government and taxpayers regard it as value for money. Quality is also seen as products and services conforming to a stated mission/vision or a set of specifications, requirements, or standards, including those defined by accrediting and/or regulatory bodies (Kundu, 2019; Schindler *et al.*, 2015). It is characterized by the optimal use of resources and the delivery of accurate educational products and services with zero defects (Harvey, 2010; Tanweer and Qadri, 2016). The quality of higher education encompasses learning tasks, learner characteristics, and instructors, which involve the quality of input (faculty expertise and level of student), process (delivery of knowledge and mode of delivery), and output, including knowledge enhancement by graduates (Tanweer and Qadri, 2016). In this study, quality is defined from the perspectives of students and employers, where it denotes the fitness of purpose and educational products with zero defects that bring satisfaction to the user. Producing employable graduates is among the goals of the university

program and to meet this, teaching / learning program referred as curriculum is necessary (Eimer and Bohndick, 2023).

Curriculum is a conscious and systematic selection of knowledge, values and skills: that shapes the way teaching, learning and assessment processes are organized (UNESCO, 2016). It is all planned learning experiences with aim of achieving some outcomes while recognizing the importance of unintended outcomes Planned learning experiences with intended outcomes while recognizing the importance of possible unintended outcomes. It is a dynamic system which involves planning, implementation and evaluating the substance of education (Wang *et al.*, 2022) and is further considered as an aggregation of all activities designed by training institutions to provide various experiences for students within the class room and outside (Tian, 2023). Støren and Aamodt (2010) regards curriculum as a systematic and interrelated element of the study program and its implementation. These definitions agree that curriculum comprises students' learning experiences. However, they ignore the content, goals, teaching methods, and assessment.

Furthermore, UNESCO (2016) considers curriculum as an explanation of what learners should be taught, identifying the objectives and at what stage of education and different dimensions of curriculum such as planning, enacting and evaluating also considered.

Considering the differences in definitions, quality curriculum in this study came up as an amalgamation of views from UNESCO (2016); and Støren and Aamodt (2010); Wang *et al.*, (2022) and Tian, (2023).

It is viewed as a systematically designed program of study showing the content, delivery mode, and assessment that best fits the purpose. Quality curriculum provides the structure of quality learning, determining the extent to which higher education is of quality and providing the bridge between education and employability (UNESCO, 2016). The quality of the

curriculum is explained in terms of learning and skills acquisition, but not much attention has been given to the quality of the curriculum and the employability of the graduates.

Globally, employers have expressed concern regarding the inadequacy of undergraduate curricula in producing individuals with requisite skills (Majid *et al.*, 2022). It is suggested that universities must evaluate their curricula to align with labor market demands and train individuals with team-building, problem-solving, and presentation skills, enhancing their employability prospects (Hogg, 2018). A well-structured curriculum that fosters quality learning and competency is crucial in promoting graduate employability (Clemente *et al.*, 2020), a view that aligns with SDG4, which emphasizes equitable and inclusive quality education.

Olujuwon and Olubukola (2020) did research on Curriculum and employability skills of Tertiary Institutions graduates in Lagos State Nigeria and a correlation analysis discovered a weak positive correlation with core skills, moderate positive correlation with personal quality skills and high positive correlation with process skills. The research was carried out on only tertiary institutions graduates where the population was different from quality of higher education and employability of graduates from selected universities in Southwestern Uganda where graduates, employers, Lecturers, heads of department, deans and quality assurance officers were used. The pivotal role that the curriculum plays in enriching the employability of graduates in today's contemporary world is of utmost importance and cannot be overstated. It is therefore essential to incorporate employability skills into higher education curriculum to serve as a catalyst for graduates to become relevant in the ever-evolving world of work.

In another study carried out to track down the employability of teacher education graduates of Isabela State university in 2019, using graduate tracer study considering 85 respondents, revealed that teacher quality and relevance of curriculum impact the

employability of graduates(Vidania *et al.*, 2023). Much as this study found that that the relevance of the curriculum has an impact on the employability of graduates, it only considered graduates of one year while this study considers a period of 3 years, thus time scope gap.

Tagulwa *et al.*, (2023b) in the research done in Kyambogo University on the effectiveness of Curriculum review in improving Quality, Relevance and Students' employability in University education in Uganda, the results showed the positive correlation between curriculum review and students' employability. It was further said that employability is enhanced through professional, personal and interpersonal skills development. A sample of 66 full time Lecturers were considered in in the study. The regression results ($\beta = 0.75$, $P = 0.00 < .05$) , indicate a significant influence of curriculum review on employability. The study was carried out in Central Uganda which is different from Southwestern Uganda thus geographical gap.

Additionally ,Karnain ,Widiastuti and Suharno (2018) in their study carried out in a Vocational training School in Indonesia on Curriculum design and graduate's technical competences, it was established that as part of the Academic Curriculum apprenticeship is important. The apprenticeship includes industrial training and teaching practicum and these train hands on skills. This is in agreement with what is crucial in curriculum design for employability skills relevant to graduates. The study was done in a newly industrialised developed country which is different from Uganda a developing country thus the gap.

Aamodt and Havnes (2008) utilize the notion of job mastery to understand the correlation between the qualities of a study program, on-the-job training, and the working environment. However, (Ergün, 2021; Pool and Sewell, 2007) argue that employability may be influenced by personal factors such as skills acquired during the course of study, and

networking (Mcquaid and Lindsay, 2005). Employability is again considered as possession of competencies and skills that are relevant to the labour market (Posadas *et al.*, 2021).

Furthermore, Støren and Aamodt (2010) in the study on the quality of higher education and employability of graduates noted that employability can be viewed as an aspect of the quality of higher education which pertain to the benefit and usefulness of the study program for career and work tasks. A comparative survey of graduates in 13 European countries reveals that the characteristics of the study program have a significant impact on the value of the program in the world of work five-to-six years after graduation. They further noted that quality indicators have a minor influence on the chance of obtaining a job but a significant effect on doing the job. In the study, quality of the program was seen from the graduates' point of view but neglected employers' view and other curriculum implementors which is the gap. This study is carried out in Southwestern Uganda considering students' views, employers' and all other curriculum implementors.

Furthermore, Oraison *et al* (2019) posits that the purpose of the university curriculum is to cultivate a human being who is open to the world. To achieve this, the curriculum should equip students with interdisciplinary knowledge and practical competencies. However, (Guàrdia *et al.*, 2021; Mihm-herold, 2010) noted that there exists a gap between the skills of graduates and the requirements of the workplace. The gaps can be bridged through a higher education curriculum that focuses on developing work-related learning as a way of enhancing employability. This can only be achieved if there is a good curriculum design and delivery of teaching activities. To meet market needs, a professionally-oriented curriculum must be designed at the expense of academic competencies (Støren and Aamodt, 2010). A well designed curriculum influences employability competence and increases chances for graduate employability (Misni, Nik Mahmood, *et al.*, 2020).

Mwebia and Kyuli,(2016) in the study on the Influence of University Curriculum Design on Employability of Graduates revealed that possessing qualifications alone does not necessarily guarantee an individual the ability to secure employment opportunities. This study was carried out on employers in supermarket in Kenya considering perspective of Public Universities. The research concluded that experiential learning should be deliberately designed as employers highly value work experience, thus geographical and contextual gap. This study on quality of curriculum and employability of graduates was carried out in Southwestern Uganda, considering different categories of employers wherever the graduates are employed, considering graduates from both private and public Universities.

Various scholars, such as Guàrdia *et al.*,(2021); Mihm-herold,(2010); Bosco and Ferns, (2014); Smith *et al.*, (2016) have supported the integration of work-related learning in the curriculum designing process in order to promote graduate employability. Their research findings have demonstrated that curriculum design plays a crucial role in shaping the employability of graduates. Therefore, it is imperative to prioritize the implementation of such learning opportunities to ensure that graduates are well-equipped with practical skills and knowledge that will enhance their employability.

Aamodt and Havnes (2008) further noted that employability is the quality of the professional curriculum including the study styles and job mastery is an indicator of employability. These studies are in agreement with the quality of the curriculum which affects the quality of higher education.

Also Kabanga,Mugimu and Oonyu (2018) in their study on the Appropriateness of Curriculum Content in Competence based education training carried out in Mulago Kampala found that competent based education curriculum content used was appropriate.

It was further suggested that the use of an appropriate curriculum, delivery methods, and quality of the program improves graduates' employability. Also, achieving employability

aligned to good learning by higher education requires program-level focus rather than on individual study units (Lundberg *et al.*, 2020; Mbabazi, 2013). Therefore, curriculum that incorporates work-related learning, interdisciplinary knowledge, technical knowledge and brings out skills and capabilities is crucial for employability among University graduates.

In the same vein, other different scholars, such as (Björck, 2021; Eden & Eden, 2014; 2017; Smith *et al.*, 2016), have voiced their support for the incorporation of work-related learning into the curriculum designing process. They contend that this approach would be instrumental in advancing the employability of graduates. The results from their research have demonstrated the critical role that curriculum design plays in shaping the employability of graduates. Hence, it is crucial to prioritize the implementation of such learning opportunities to ensure that graduates possess practical skills and knowledge that will bolster their employability.

Støren and Aamodt (2010) regard employability as the advantage and usefulness of a study program for career and work participation. Based on students' perceptions, they discovered that program characteristics have an impact on program value in employment, while quality indicators have a minor influence. Quality of the Curriculum impacts graduate employability by meeting job market needs. This can be achieved through regular curriculum evaluation which ensures high quality curriculum content that is relevant to the labour market (Mokhtar *et al.*, 2022). Employability is hinged on the quality of the professional curriculum, including the study styles, explicit integration of skills and diverse learning experiences which enhances self-beliefs about skills (Romanova, 2022). These findings are in concurrence with the notion that the quality of the curriculum has a bearing on the quality of higher education which influences employability of graduates.

Furthermore, Mabonga,(2021) contend that attaining employability aligned with good learning by higher education necessitates a program-level focus rather than on individual

study units. To promote employability among university graduates, it is crucial to design a curriculum that incorporates work-related learning, interdisciplinary knowledge, technical knowledge, and competence-based curriculum that fosters skills and capabilities.

Curriculum development is essential for the advancement of employability, and there is a positive correlation between curriculum design, curriculum delivery, and employability competencies (Misni *et al.*, 2020). A comprehensive curriculum that produces a well-rounded graduate is vital, and extracurricular internships and activities are deemed significant in enhancing employability (Jackson and Bridgstock, 2021). Continuous curriculum review incorporating views of employers enhance students' employability by developing their professional, personal and interpersonal skills positively impact students' employability (Qin, 2023; Tagulwa *et al.*, 2023b).

Furthermore, (Guàrdia *et al.*, 2022; Mainga, *et al.*, 2022; Othman *et al.*, 2017) and opined that graduates lack the skills required for the rapidly changing labor market and, therefore, there is a need to design an employment-focused curriculum. Dicker *et al.* (2018) also noted that employers value personal qualities, while learners and facilitators prioritize the teaching quality and methods utilized to promote employability. In a study conducted in universities in Bangladesh, dissatisfaction was expressed by employers and students regarding employable skills (Othman *et al.*, 2017). This was attributed to the lack of attention given to the quality of the program, which has an impact on the employability of graduates. Employers show that graduates are lacking in crucial areas such as critical thinking skills, numeracy skills, civic responsibility and basic computer skills, prior work experience, communication skills, and technical competencies (Ali Ali, 2016). Embedding these employability skills into curriculum enhances graduate job readiness (Lowe, 2023).

Similarly, work shop proceedings of June 9th -11th 2018 that took place in the University of Xiamen by UNESCO revealed that universities are committed to enhancing

graduates' employability through the provision of high-quality academic programs that are in line with market requirements, offer competence-based education, and collaborate with both internal and external stakeholders in order to promote employability. The achievement of a degree is perceived as the pathway to acquiring skilled employment, and the pivotal factors that contributed to obtaining a graduate job were students completing work experience as part of their degree and relocating away from home to live at university. Although universities play a vital role in cultivating employability skills among undergraduate students, broader contextual factors must be taken into account as graduate employment is not equally accessible to all upon completion of their degree (Chen *et al.*, 2023).

In 2010, Anne and Aamodt conducted a study that aimed at exploring the employability of graduates from institutions of higher learning and their level of preparedness for the practical demands of the working world. The study observed that the proliferation of higher education institutions has given rise to apprehension regarding the applicability of the acquired knowledge to the contemporary job market. Graduates have been found to secure employment in unconventional job markets for which their university curricula did not equip them. Nonetheless, the inquiry sought to investigate the extent to which graduates were equipped with the requisite competencies for performing their assigned job duties. Furthermore, the study analyzed the influence of the characteristics of a study program on the perceived value of the program in the context of the working world.

It was established that the features of a study program are instrumental in shaping the value of the program in the world of work. However, the quality indicators of a program have a negligible effect on the likelihood of securing a job, but they exert a significant impact on the ability to perform the job effectively. In a similar study on the “Assessment of Employability Skills in Uganda's Schools: Challenges and the Way Forward”, (Musisi and Bukirwa, 2019) noted that the quality of the curriculum in Uganda significantly influences graduates'

employability. Many graduates fall short of employers' expectations because the school curriculum primarily focuses on academic achievements. There is a pressing need to track the development of Employability Skills (ES) in Uganda's education system to meet today's labor market demands. The failure of graduates to be practical and turn their local environmental resources into gainful work suggests that the management of formal education in Uganda has not effectively utilized activity-based informal training (Nabayego, 2013).

Higher Educational Institutions often fail to cater for the variety and volume of students' demands and prioritize the unit cost over the quality of graduates. Universities have come up with different strategies through curriculum development, quality of students and quality of teaching to promote employability of graduates (Bates *et al.*, 2019). The rigidity of the curriculum and inappropriate teaching methods may impede the acquisition of skills. It is only through the collaboration of Higher Educational Institutions, Employers, and graduates that employability development opportunities can be pursued, and skills development and practical experience can be enhanced.

2.3 The Quality of Students and Employability of Graduates

Universities have historically been widely recognized as key players in the cultivation of disciplined and skilled graduates, a fundamental attribute that enables them to effectively meet the increasing demands of the rapidly evolving labor market (Fulgence, 2015; Namutebi and Kasule, 2018). The correlation between students' academic performance and graduate employability has been well-established, and the inclusion of employability skills and attributes in higher education has been the subject of ongoing debate. It is, however, widely acknowledged that employability skills are significantly affected by students' ability to apply professional knowledge which is impacted by academic performance (Tian, 2023). Additionally, Simba *et al.* (2016) observed that students are expected to observe the utmost level of discipline by adhering to prescribed rules and regulations since indiscipline students

are prone to being inattentive to educational goals, have poor time management skills, lack respect for others, and exhibit a lack of self-determination (Gitome *et al.*, 2013).

Additionally, Simba *et al.* (2016) further noted that academic performance tends to improve among students with a high level of discipline. The literature also provides evidence to suggest that there is a significant correlation between discipline and employability, as demonstrated by a study conducted among Vocational High school students (Tentama *et al.*, 2019). This indicates that learners who exhibit good discipline are more likely to acquire the skills required by employers and that discipline creates a positive image of the institution and prepares learners for their future careers (Stanley, 2014). Nevertheless, the literature has primarily focused on primary and secondary schools, neglecting the experiences of university students and how their level of discipline may impact their employability.

Faith-based universities have increasingly been devoting their attention to the moral values and character development of their students. However, this has met with resistance not only from some students but also from members of public universities. Nonetheless, employers have continued to emphasize disciplined character as an essential trait of employable graduates (Blasu and Kuwornu-adjattor, 2015). Moreover, universities have started to engage in entrepreneurship training, which, if done successfully, can enable graduates to gain skills, become disciplined, and create their jobs while aligning their skills with private employers' needs. Nevertheless, evidence regarding how such programs shape students' skills and facilitate entry into self-employment remains scarce (Premand *et al.*, 2012). It is yet to be fully established that moral values, character development, and skills development can serve as a channel to enhance employability.

Denisoni (2020) has used the academic grades of students at entry as an indicator of their quality and program completion rates as an indicator of performance. Harvey (2010) argues that students attend university to improve their minds rather than to become skilled in

the recruitment market. It is, therefore, crucial to consider the perspectives of students, employers, and policymakers when developing and embedding employability skills to align academic grades with work performance (Jackson & Bridgstock, 2021). While students frequently cite difficulty in finding employment as their primary concern, proactive students' solution to this problem may lie in achieving high academic grades, as they are often used as a shortlisting tool by employers (Tomlinson, 2012). Additionally, research aimed at determining the relationship between academic achievement and self-concept with students' employability has shown a significant relationship among academic achievement, self-concept, and employability (Tentama *et al.*, 2019).

University students are highly motivated by the belief that obtaining good grades will help them to secure good jobs. However, it is worth noting that employers consider other vital soft skills such as personality. It is essential to understand that good academic performance only translates to success in the public sector (Velasco, 2012). Therefore, striving towards achieving better academic grades is crucial as it could lead to enhanced employability. Furthermore, Manjunath, (2020) in his study, established that high academic performance is closely linked to employability. In this context, employability refers to the set of achievement skills that make graduates more likely to gain employment.

The admission process into universities depends largely on a student's pre-university grades, which are often used to predict their future academic performance. Employers may also use these grades as an additional predictor of employment success (Nelson, 2008). Many universities follow the practice of converting letter grades into numerical values and then applying weights to predetermined essential and desirable subjects before determining a cut-off point (Nshemereirwe, 2014). In Uganda, admission to a university program is determined based on a student's performance in the national examination at the Advanced Level of secondary school, which is also taken into consideration by employers during job placements.

In order to uphold the standard of higher education, universities have implemented a rigorous screening system to assess applicants for different programs, with clearly defined entry requirements for each program at BSU and MUST. Academic achievement is commonly acknowledged as one of the essential learning outcomes that vividly showcase the quality of students' academic work, which can be precisely, measured using course grades or GPA as suggested by Clemente *et al.* (2020). The attainment of learning objectives, skill acquisition, and knowledge assimilation can be gauged at various levels, including the course, program, and institutional levels, which are highly sought-after by the public and employers alike, as convincingly argued by (Yorke, 2018).

Another study conducted on higher education students conclusively established that superior academic performance when combined with active involvement in extracurricular activities inevitably culminates in higher perceived employability, as logically posited by Pinto and Ramalheira (2017). It is worth noting that students' academic performance and graduate employability are closely interrelated, with employability skills and attributes increasingly becoming a topic of debate in higher education, although it is apparent that these skills have the potential to significantly impact academic performance, as cogently demonstrated by (Tian, 2023). In light of this, employers value performance. Educational performance assessment should be aligned with employment models to enhance employability skills which can benefit both students and universities alike.

Furthermore, Clemente *et al.*, (2020) revealed that academic performance. In the same vein, the study by Tentama *et al* (2019) aimed at investigating the relationship between academic achievement and self-concept with student employability showed a significant relationship between academic achievement and self-concept with employability. This implies that higher academic achievement and self-concept lead to higher employability among students and vice versa. The study highlights the importance of academic achievement

and self-concept in improving employability, which is a significant problem that often leads to unemployment. In another study, it was established that higher academic performance and participation in extracurricular activities result in higher level of employability (Pinto and Ramalheira, 2017). Increased participation in extracurricular and co-curricular activities has an effect on students' behavior which has a significant influence on their graduate employability(Jackson and Bridgstock, 2021).

The quality of students affects employment mechanism and market adaptation, universities need to aim at impacting students in discipline, moral stand and performance to meet the market demands(Chen *et al.*, 2023)

In conclusion, while universities have a critical role to play in developing employability skills amongst undergraduate students, consideration of the grades of students when joining the University, the process they go through in training, discipline and performance during the course of study need be taken into account.

2.4 The Quality of Teaching and Employability of Graduates

Quality of education largely depends on quality of teachers. In the research by Ezati *et al.*, (2017) quality of teaching was described by Ngware, Ciera, Musyoka and Oketch (2015) as the standard of instruction provided to learners during the course of teaching and learning. Therefore, the occurrence of good quality teaching is dependent on an instructor's effective instruction that promotes quality and student learning outcomes through best practices. The influence of staffing on the quality of teaching in Uganda's public universities is noteworthy, as staff recruitment, staff training, and development have a statistically significant impact on the quality of teaching (Ezati *et al.*, 2017). It is noted that quality teaching is a consequence of good recruitment and faculty development(Crebbin & Crebbin, 2006; Qin, 2023). The role of university faculty in building graduates' employability is substantial. This suggests that the more effective the staff recruitment and development

functions in an institution, the higher the quality of teaching, which enhances the attainment of transferable skills and helps in the creation of employability. Quality of teaching also refers to the characteristics and practices that fulfill the expectations and standards of education (Ryan *et al.*, 2021). In a higher education, quality teaching is crucial as it has a big impact on the quality of education and the caliber of graduates.

Ferns (2011) have also supported that "effective staff recruitment and development make teachers more knowledgeable and professional, thereby enabling them to perform their teaching function satisfactorily." Furthermore, it was noted that quality teaching is more student-centered and aids students' learning (Lees *et al.*, 2002; Qin, 2023). The attention should not only be on the teacher's pedagogical skills but also on the learning environment that must address the students' personal needs. This is so because these factors affect skills acquisition by graduates. Stephen and Joseph (2020) echoed that teachers' innovativeness and competence promote the acquisition of quality higher education skills. Ohei and Brink,(2021) also stated that a lack of skills limits the ability of graduates to be employed, since these skills are passed on by skilled academic staff. The shortage of skills is likely to affect the employability of graduates.

Atwebembeire and Namubiru (2018); Roseveare (2012) have also noted that quality of teaching involves applying the right pedagogical techniques in teaching. Additionally, National Council for Higher Education NCHE (2014) has considered quality of teaching as the process of passing on knowledge using the right pedagogical techniques. It argues that quality is important for managing the university and producing competent graduates to fit into the labor market. NCHE has also pointed out that recruitment and deployment policies, the right student-staff ratio, and staff development must be managed in the correct order to produce the appropriate quality of education in Uganda as well as other countries in the region.

The quality of teaching is a result of a good teaching and learning environment. It refers to tangible and intangible conditions and factors may generate an exciting learning experience (Zamani *et al.*, 2022). Learning environment is important as is it determines the elements that could encourage students' intense towards their studies and impact on their academic achievement. It is imperative for higher education institutions to recognize the importance of cultivating students' practical ability, professional competence, innovation ability, and comprehensive quality to enhance the quality of teaching. Efforts have been made to enhance the quality of teaching, but it is crucial for the employability of graduates. Professional experience partnerships between initial teacher education providers and schools have been linked to graduate employability (Walker *et al.*, 2019).

Cepraga and Gogoi (2023) put forward the proposition that the learning environment encompasses not only the physical space in which learning takes place, but also the technology used, the methods of teaching and learning employed, and the wider societal and global contexts within which learning occurs. Moreover, the learning environment may also encompass the behavioral and cultural dimensions, which examine the role of both students and parents in the acquisition of employability skills. The Organization for Economic Cooperation and Development (OECD), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), and the European Union are some of the prominent international players that have strongly recommended that educational institutions prioritize the development of their learning environments (Zamani *et al.*, 2022). Furthermore, Wijenayake and Wickramasinghe (2017) asserted that the learning environment involves not only the physical facilities such as the library, lecture rooms, information technology facilities, students' welfare facilities, departmental computer rooms, sports facilities, and hostel facilities but also the ways in which these facilities aid learners in the learning process.

As per (Cepraga and Gogoi (2023) the learning environment encompasses all the surrounding conditions in which learning takes place, which can have a direct impact on the graduate's ability to acquire and apply skills in the workplace, and hence on their employability. The availability of adequate facilities for effective teaching and learning enhances the students' acquisition of skills. (Zamani *et al.*, 2022) contend that the primary and significant responsibility of higher education institutions is to provide students with a learning environment that empowers them to develop their knowledge, skills, and values. However, while this literature recognizes the importance of the learning environment and the quality of staff, it overlooks the quality of assessment and teaching methods, which are also vital for the quality of teaching. This study considers the quality of teaching as a combination of the quality of staff, teaching methods, the quality of assessment, and the learning environment.

The quality of education is largely dependent on the quality of its teachers (MoES, 2019). Quality of teaching is an important factor that improves the employability through improving quality of learners, learning environment and quality of the content (Kowang *et al.*, 2022).

Kechagias (2011) notes that the assessment of employability skills involves observing a particular activity or task as it is being performed. Kiranda *et al.* (2017) also highlight the importance of effective teaching and learning, which is best inferred from their effectiveness in assessment. It was noted that effective staffing plays a key role in improving the quality of teaching and learning in Ugandan universities (Ezati *et al.*, 2017). Universities are required to recruit competent staff that would help learners get knowledge, skills, and positive attitudes that are relevant in the labour market (IUCEA, 2014).

Successful delivery of student employability skills within the program, as with other areas of learning, requires the use of a wide range of learning and instruction approaches,

including lectures, tutorials, seminars, role play, workshops, directed activities, field placements, problem based learning and internships (Li *et al.*, 2020). Unless learners go through higher education using these instructional methods, it will be difficult to attain skills valued by the labor market (Bennett *et al.*, 2020). Overall, quality teaching involves the active engagement of students in learning, the knowledge and commitment of teaching staff, and the use of feedback and performance measures to raise teaching standards (Ryan *et al.*, 2021).

Career education advisors play a pivotal role in enhancing the quality of teaching and improving students' employability skills after completing higher education (Zahid, 2014). It was also established that professional experience in Teacher Education and establishment of partnerships with the schools facilitates easy transition to labour market (Walker *et al.*, 2019). To attain graduate employability agenda, universities need to focus on development of soft skills to meet the strong community expectations (Munishi, 2022).

Furthermore, Bagonza *et al.* (2021) in the study carried out among graduates from Kyambogo University showed that teaching that produces adequate skills improves employability level. This is supported by the study carried out by Tindimwebwa *et al.*, (2022) that showed that employability chances of economics graduates is positively and significantly influenced by possession of both hard and soft skills.

The findings from the an investigation on the extent to which university graduates exhibit employability skills as perceived by employers in Kenya, revealed that: literacy and numeracy proficiency, critical thinking abilities, interpersonal skills, and a strong work ethic are highly valued by employers (Kirui, 2019). In a similar study, it was discovered that skills that include: creative thinking, problem-solving, planning and organizing, interpersonal skills, and willingness to take risks were the fundamental competencies learned through education,

and there is a significant positive correlation between acquired skills and employability among the youth (Kuya, 2017).

In another investigation on the influence of institutional facilities and the standard of university education in Uganda, they were found to have a significant positive correlation (Bagonza *et al.*, 2019). The institutional facilities were considered in terms of: lecture room space, library facilities, laboratory facilities, computer and internet access. Enhancement of university facilities can improve quality of teaching which improve the quality of university graduates and their ability to get jobs.

Furthermore, the investigation on the ability of academic personnel at private universities in Uganda, with particular attention to the policies regarding recruitment, training, promotion, and termination; revealed that the policies are in place, but their implementation, monitoring, and evaluation are insufficient, leading to a decline in the quality and productivity of education (Alemiga and Kibukamusoke, 2019). The quality of staff, quality of learning environment, quality of assessment and teaching methods continue to make quality of teaching important in promoting employability of graduates.

2.5 Synthesis of Literature

The synthesis of literature on the topic of quality of higher education and the employability of graduates reveals that the existing literature does not sufficiently explain the linkage between the quality of higher education and employability of graduates. Numerous scholars have studied employability, and their research support the development of employability skills but little is mentioned linking quality of the curriculum, students teaching and employability. In order to have a quality curriculum, education must be inclusive with quality learning that promotes lifelong knowledge acquisition and transferrable skills. Continuous quality improvement is necessary to achieve a quality curriculum.

Scholars have noted that academic performance, experience, international exchange, internship, and industrial attachment of students increase graduate employability. However, little attention has been paid to the linkage between the quality of higher education and employability of graduates in the form of employability skills, job retention skills, and performance at work. This gap in the literature is the focus of this research.

To improve the quality of students, engagement in entrepreneurial skills development programs and formal mentoring have been shown to improve discipline and academic performance. However, previous studies have mainly focused on secondary schools and public universities in central Uganda, leaving out the southwestern region and some private universities. This gap in the literature needs to be addressed.

Staff recruitment, training, and development are crucial in influencing the quality of teaching and graduate employability. Moreover, the teaching methods and learning environment have not been adequately considered. Additionally, there is no clear link between the quality of teaching and the employability of graduates from selected universities in southwestern Uganda. This research addresses these gaps in the literature by focusing on selected universities in southwestern Uganda. The key common issues identified in the literature are the importance of transferrable skills and the link between academic performance and employability. However, the key differences or contradictions in the literature are the lack of attention paid to the linkage between the quality of curriculum and employability of graduates, quality of students and employability of graduates, quality of teaching and employability of graduates, and the inclusion of all regions and types of universities in the research. The gaps in the literature suggest the need for further investigation into these areas.

The subsequent chapter seeks to provide an in-depth explanation and analysis of the research methodology, approach, and design utilized in this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the methodology that was used in carrying out this study to address the research objectives and hypothesis. It described the research paradigm and philosophical stance underpinning this study. This was followed by research design, research approach, study population, inclusion and exclusion criteria, sample size, sampling techniques and procedures, data collection methods and instruments, construct measurement and Operationalisation, data collection procedures, processing, analysis and quality control.

3.1 Research paradigm and Philosophical stance

A research paradigm refers to the collective set of beliefs and assumptions guiding scientists in understanding and resolving problems within their field (Kuhn, 1962; Doyle *et al.*, 2016; Levin, 2005). These paradigms, such as positivist and interpretivist (quantitative and qualitative approaches, respectively), along with pragmatism, constructivism, and post-positivism, provide frameworks that shape research methodologies (Cresswell, 2014).

These paradigms are built upon foundational assumptions ontology, epistemology, methodology, and axiology that underpin research endeavors (Creswell, 2014; Creswell and Creswell, 2018; Easterby-Smith *et al.*, 2015). Ontology explores the nature of reality, questioning whether reality is singular, multiple, or non-existent. Epistemology examines how knowledge is acquired and validated, influencing researchers' approaches to understanding reality. Methodology defines the procedures for investigating and confirming knowledge, including data collection, hypothesis testing, and result interpretation. Axiology addresses the management of personal and ethical values in research, impacting interactions with study subjects (Creswell and Creswell, 2018; Easterby-Smith *et al.*, 2015).

The positivist paradigm is grounded in the belief that a singular reality exists and that reliable knowledge is derived solely through objective observation and measurement (Creswell, 2014). Consequently, researchers adhering to this paradigm predominantly employ quantitative methods. They formulate empirical hypotheses, which are then tested through systematic data collection and analysis. In this framework, researchers are expected to gather and interpret data impartially, with findings typically being quantifiable and analyzed using statistical techniques. This paradigm adopts an atomistic ontological perspective, viewing the world as composed of discrete, observable components that interact in predictable and measurable ways using a deductive approach (Mingers, 2014). The researcher's stance is one of detachment, focusing exclusively on factual data to minimize personal biases and maintain objectivity (Creswell, 2014).

In contrast, the interpretivist paradigm posits that multiple realities exist and aims to capture and understand diverse perspectives on lived experiences (Robson & McCartan, 2016). The primary objective is to gain an in-depth understanding of participants' social interactions with their realities, employing qualitative methods and subjective analysis. This approach is significantly influenced by the researcher's personal viewpoints.

Post-positivism acknowledges the existence of a reality while recognizing that our understanding is inherently imperfect and that observations are subject to revision (Creswell, 2014). Critical realism, a variant of post-positivism, critiques the certainty of our knowledge of reality. This approach emphasizes the use of multiple measures and observations to account for various types of errors, advocating for triangulation to enhance insights into reality (Morgan, 2014; Saunders *et al.*, 2019). It maintains that observations should be both factual and theory-driven, with an acknowledgment of inherent limitations and the need for continuous revision (Creswell, 2014).

Post-positivism was utilized in this study because of its intricate methodology for understanding complex social phenomena.

The investigation into the quality of higher education and employability of graduates involve multifaceted factors. Utilizing various methods and data sources, as emphasized by post-positivism, aided in capturing the different aspects of these phenomena. This approach is crucial for comprehending how educational experiences influence employability outcomes.

It provides a structured yet flexible research framework, allowing researchers to maintain objectivity while being open to revising theories based on empirical evidence.

Integration of quantitative and qualitative data as a result of use of post-positivism was possible and this offered a comprehensive view of how quality of higher education affects graduates' employability.

In this context, the ability to employ multiple methods and data sources was beneficial in reducing biases that could arise if only one method was relied upon. This strengthened the reliability and validity of findings related to higher education quality and graduates' employability.

Furthermore, this study focused on exploring the relationship between the quality of higher education and employability of graduates. The theoretical frameworks in this study suggested an empirical context to investigate theoretical paths derived from existing literature through hypothesis testing. The statistical relationships among the variables under scrutiny were examined. However, the research aimed not only to collect data to measure correlations but also to understand the diverse interpretations and meanings attributed by respondents to their experiences, acknowledging that perceptions of higher education quality are also shaped by individual experiences. A mix of both quantitative metrics from surveys and qualitative insights from interviews was employed, aligning with post-positivism's emphasis on utilizing diverse data sources to validate findings and overcome limitations of a single method. The

study followed a theory-driven approach, starting with established theories and hypotheses on how higher education quality influences graduates' employability, which were then tested through empirical data collection, analysis, and drawing conclusions.

3.2 Research Design

The study utilized both correlational and descriptive survey research designs to explore and gain a clear understanding of the quality of higher education and employability of graduates. The research design is explained as an overarching logical plan to guide data collection, analysis, and interpretation of findings (Thakur, 2021). A survey can be described as an organized and systematic undertaking that acquires data pertaining to specific attributes of importance from a portion or entirety of a population, utilizing clearly defined principles, techniques, and protocols. Specifically, the survey research design was utilized to collect data related to the quality of higher education and employability of graduates from selected universities in South Western Uganda using questionnaires and interviews from the selected sample. Correlational research design entails determining whether or not two or more variables are related (Sekaran and Bougie, 2009; Oso and Onen, 2008; Thakur, 2021). In this design, the views of respondents on the quality of the curriculum, quality of students, and quality of teaching in relation to employability were used to test the hypothesis.

For this study, undergraduate students who graduated 2017, 2018, and 2019 were considered based on their year of graduation and program of study. They were carefully selected based on year of graduation from the graduation list and were followed up to evaluate the questions in areas under consideration.

3.3 Research Approach

The examination of the relationship between the quality of higher education and the employment prospects of graduates from selected universities in south western Uganda required the utilization of a dual research methodology incorporating both quantitative and

qualitative approaches for data collection and analysis. Creswell and Plano Clark (2009) delineated this methodology as one that integrates the collection and analysis of both types of data within a single study, aimed at deriving dependable and credible solutions to the research question. The research methodology employed in this investigation entailed complementing quantitative data with qualitative information

Extensive questionnaires containing closed-ended inquiries were distributed to a sizable number of graduates, employers, and lecturers. These inquiries delved into the standard of the curriculum, quality of teaching, quality of student, and employability competencies. Analytical techniques, such as statistical analyses, were applied to scrutinize responses, pinpointing correlations, and conducting regression analyses to unveil trends and connections between the quality of higher education and employment outcomes. Detailed interviews were conducted with heads of departments, deans, quality assurance personnel, academic registrars, Officers from the Directorate of Quality Assurance at the National Council for Higher Education, and some employers to acquire key perspectives on their encounters and viewpoints. For instance, dialogues with employers can shed light on the degree to which graduates are equipped for professional roles. Content analysis was employed to categorize and elucidate data into various themes and configurations in the interview feedback. This methodology yielded a profound comprehension of how the quality of higher education impacted the employability of graduates.

By employing these methodologies, researchers are equipped to utilize an array of strategies, melding both inductive and deductive reasoning, and remedying the restrictions of solely conducting quantitative or qualitative research through a complementary strategy that optimizes the advantages of each data gathering type (Creswell, 2009). This approach facilitated a more exhaustive comprehension of employability dilemmas and potential resolutions.

3.4 Study Population

Given the focus of this study on the employability of graduates from select universities in South Western Uganda, the population of interest comprised 1,715 graduates (AR's records 2017, 2018, 2019) who completed their studies between 2017 and 2019. There were many Universities in southwestern Uganda which included, Mbarara university of Science and Technology, Bishop Stuart University, Kabale University, Metropolitan International University, Valley University of Science and Technology, Ankole Western University, Ibanda University and Greater lakes University. Also, there is Bishop Barham university college, Kampala international university and Makerere university Business School which are study centers or branches where main campuses are in other regions. The selection criteria considered Chartered Universities which were Independent, not a branch of another one, had more than 15 years of operation and an enrolment above 3500 students. Bishop Stuart University and Mbarara University of Science and Technology were selected from which to get primary respondents. From the selected Universities, the graduates from the four programs that appeared in both universities were selected which included Bachelor of Computer Science, Bachelor of Information Technology, Bachelor of Business Administration, and Bachelor of Science Education which alignment with national development priorities (NDPIII, SDGS, and PEAP 1997). The study also included Lecturers, Deans , Heads of Departments, Quality Assurance officers, Academic Registrars , graduates, employers and Officers from Directorate of Quality assurance from National Council or Higher Education. The Lecturers were chosen based on their involvement in teaching, curriculum development, and implementation. Deans and Heads of Department were selected because they serve as supervisors in teaching, curriculum development, implementation, and handling most of the students' issues. Academic Registrars were included considering that they coordinate all academic matters such as admissions, curriculum design, review, and

implementation, which are core to the quality of higher education. Quality Assurance Directors/Officers were chosen because they are responsible for overseeing and monitoring quality standards in the university. Key officers of the National Council for Higher Education were selected bearing in mind that this body guides the establishment of institutions of higher learning, accredits the programs, and ensures delivery of quality and relevant education.

The study considered a population of 1,950, composed of 1,715 graduates, 162 employers, 69 university staff, and 4 officers from the Directorate of Quality Assurance of the National Council for Higher Education. The primary respondents were graduates of October 2017 to 2019 from Bachelor of Computer Science, Bachelor of Information Technology, Bachelor of Business Administration, and Bachelor of Science Education, which appear in the two Universities. These are graduates who were admitted starting with 2014 when the National Council for Higher Education (NCHE), Quality Assurance Framework for Universities, and licensing process for Higher Education Institutions were revised, put in place, and the first graduates were in 2017. This group of graduates of the three years was deemed large enough to test the employability. Additionally, 69 university teaching staff, including Faculty Deans and Heads of Departments where the programs fall, and at least 6 lecturers from each program were selected as curriculum implementers. Six lecturers were chosen because, on average, 6 course units are taught per semester to cover the minimum graduation load for a Bachelor's degree. Lecturers participate in quality teaching in class, assessing and grading the students. Also, Academic Registrars and University Quality Assurance Officers as managers of quality were considered. All 6 Deans and 11 heads of department in which the programs fell were considered. Furthermore, key employers were selected based on the proportionate number of sampled graduates per program, then randomly selected from employers within the region of location of the universities. Supervisors were chosen based on referral by selected employed graduates because they are

the ones in contact with the graduate employees. Graduates were the key units of analysis as they are the ones affected by employability.

Table 1 herein below exhibits the data concerning the graduates hailing from the chosen Universities over the course of three years for each respective program. The numerical values contained were procured from the records obtained from the Academic Registrars' Offices, with reference to the comprehensive list of individuals that were included in the graduation booklets.

Table 1 Graduates from selected programs 2017 – 2019 from BSU and MUST

	2017		2018		2019		Total
ITEM	MUST	BSU	MUST	BSU	MUST	BSU	
Bachelor of Computer Science (BCS)	32	3	26	7	27	7	102
Bachelor of Information Technology (BIT)	68	19	54	16	45	12	214
Bachelor of Business Administration (BBA)	160	154	87	148	96	183	828
Bachelor of Science with Education (BSC ED)	137	51	95	88	102	98	571
Total	397	227	262	259	270	300	1715

Source: BSU and MUST Graduation lists October 2017, 2018, 2019

Table 1 shows the comprehensive and detailed population of graduates categorized by course of multiple years as got from university graduation lists of years under consideration. Table 2 shows the population category and the precise percentage contribution that each of these categories represent in relation to the total population that is currently the object of our study, from which the we have selected a representative sample.

Table 2 : Study Population

Category	Number	Percentage
Graduates	1715	87.94
Employers	162	8.31
Lecturers	48	2.46
Heads of Department	11	0.56
Faculty Deans	6	0.31
University Quality Assurance Directors/ Officers	2	0.103
Academic Registrars	2	0.103
NCHE Quality Assurance Directorate	4	0.21
Total Population	1950	100

Source: Field data 2019

3.5 Inclusion and Exclusion Criteria

The criteria for inclusion and exclusion were carefully considered in this study. Universities that had been in operation for more than 15 years were included while those that had spent less than 15 years of operation were left out. This decision was made based on the belief that universities that had been in operation for at least 15 years would have established themselves and implemented policies and systems to control the quality of education.

Furthermore, only chartered universities that are independent and not just campuses or study centers were included. These universities had fully satisfied all the minimum requirements set by NCHE and the Government of Uganda to award degrees. The enrollment of the university should have been above 3500 by 2017, as this is a substantial number that needs attention in terms of facilities, teaching, and handling. Additionally, only programs with students who graduated in October 2017 and were appearing in the two selected universities were considered. Graduates who had graduated between October 2017 and 2019

and appeared on the graduation list were also included in the study. Furthermore, lecturers who taught students between 2014 and 2019 and employers who had graduates from BSU or MUST among their employees were included as well. In summary, the criteria for exclusion and inclusion were carefully selected to ensure utmost accuracy and validity of the study.

3.6 Sample Size

The sample size of 512 participants was selected from the target population of 1950. The study sample size of 512 respondents broken down as presented in the table was determined using Yamane, (1967) formula $n = \frac{N}{1+N(e)^2}$ where n is the sample size, N population size and e is the error level 0.05. $n = 1715 / 1 + 1715 (0.05)^2 = 324$ n = 324 Graduates. Using proportional sampling formula $n_i = (N_i / N)n$ where n_i is sample size for subgroup, N_i is size of the group, N is total group population and n sample size. The distribution of graduates is shown in Table 3. To get the number of lecturers, the minimum standards as per NCHE on number of course units per program per semester with a minimum of 6 course units was. The assumption that each course unit was handled by an individual and that is how 6 Lecturers per program was considered. To get population of Key employers 0.5 of the sampled graduates was used, after which, the Taro Yamane formula was used to get the sample. Table 3 shows the computed sample size from each program of study using Yamane (1967) formula.

Table 3: Sample Size of Graduates per Program of Study

ITEM	Group size	Group sample
Bachelor of Computer Science (BCS)	102	19
Bachelor of Information Technology (BIT)	214	40
Bachelor of Business Administration (BBA)	828	157
Bachelor of Science with Education (BSC ED)	571	108
Total	1715	324

Source: Field Data,2021

Table 4 shows the sample size in each category and the sampling technique used for the particular category under consideration

Table 4: Sample size and sampling technique

Population category	Target population	Sample size	Sampling Technique
Graduates	715	324	Simple random
Employers	162	115	Simple random
Lecturers (at least 6 from @program in @ university) (6*4*2)	48	48	Simple random
Faculty Deans 3@ University	6	6	Purposive
Heads of Department	11	11	Purposive
University Quality Assurance Directors / Officers	2	2	Purposive
Academic Registrars	2	2	Purposive
NCHE Quality Assurance Directorate	4	4	Purposive
Total	1950	512	

Source: Field Data, 2021

3.7 Sampling Techniques and Procedures

Sampling was done using stratified random sampling, simple random sampling and purposive sampling. Stratified random sampling technique was used to categorize the population into different strata in the Universities which were similar. This method identifies subgroups in the population and gets homogeneous groups with similar characteristics and ensures that each group is equally represented (Sekaran and Bougie,

2009; Kumar, 2011). Stratified sampling was used to generate the strata for each University and the program of study. These include: Bishop Stuart University and Mbarara University of Science and Technology and then programs of Bachelor of Computer Science, Bachelor of Information Technology, Bachelor of Business Administration and Bachelor of Science with Education. The lists of graduates from 2017 to 2019 were got from the records in the Academic Registrar 's office from which the strata of the programs were made.

The graduates list for each program, year by year, was entered into a Microsoft Excel Computer package and random reference numbers generated with the aid of a formula = RAND () *n where n is the value of the upper bound and then apply simple random sampling. Also, lecturers were identified with the guidance of Heads of Department. They were selected using simple random sampling. This ensured that each selected participant had an equal chance of being included in the sample and eliminated bias(Saunders *et al.*, 2019, 2023). Purposive sampling was used on technocrats in NCHE, Academic Registrars, Quality Assurance officers /Directors, Faculty Deans, and Heads of Departments because of their position and key knowledge in quality of curriculum, students and teaching. Saunders *et al.*, (2019) also noted that purposive sampling enables the researcher to use their judgment to select the best knowledgeable respondent to meet the needs of the research question.

3.8 Data Sources

The present study utilized a combination of primary and secondary data sources. The researcher employed both quantitative and qualitative approach to gather data from both primary and secondary sources and then have it combined. The primary data, obtained from respondents, served as the primary source of information. Meanwhile, secondary data was collected from various sources such as university records, journals, publications from the

National Council for Higher Education, reports, unpublished theses, and the internet. Furthermore, secondary data was also obtained from existing literature on higher education quality and employability. Additionally, documentary reviews were conducted to assess the extent of existing gaps

3.9 Data collection methods

The collection of data is a critical aspect of research methodology, as asserted by (Kothari, 2004). To ensure the effectiveness of data collection methods, it is advisable for researchers to consider both primary and secondary data. In this study, the data was primarily collected through the use of self-administered questionnaires and key informant interviews. Additionally, program documents were methodically analyzed to obtain secondary data.

3.9.1 Questionnaire Survey

A structured questionnaire survey method was employed to collect data on demographics and study variables from graduates, lecturers, and Employers. Questionnaires are a commonly utilized instrument for data collection during surveys, as they provide a cost-effective method of gathering large-scale data from respondents in their natural setting (Sekaran and Bougie, 2009). The collected data is typically structured numerically (Cohen and Morrison, 2018). According to (Roopa and Rani (2012), a questionnaire is a list of questions that a researcher uses to gather data. It is completed by or for the respondent to give opinion. Based on these definitions, the researcher in this study perceives a questionnaire as a data collection tool that includes a list of questions guided by the research objectives or questions under investigation. To ensure a high response rate and target the appropriate respondents, the questionnaire was administered by the researcher together with research assistants. Close - ended questions were utilized in the questionnaire, as they are easy to fill out and analyze.

This questionnaire instrument consisted of both closed and open-ended questions and

was used due to its efficiency and cost-effectiveness in gathering data from a large sample (Kumar, 2011). The researcher administered questionnaires on selected graduates, employers and Lecturers. This gave the respondents adequate time to provide responses that were well thought through. Respondents in the sampled universities were numerous, widely dispersed, yet able to read and write, making questionnaires an ideal choice. Some questionnaires were emailed, while others were filled out online or delivered by the researcher or research assistants. Section A of the questionnaire covered demographic characteristics, while section B focused on the quality of the curriculum, section C on the quality of students, and section D on the quality of teaching. The majority of the questionnaire consisted of five-point Likert scale questions ranked by the respondents based on their responses to research questions. Additionally, some questions aimed to elicit demographic information to determine the characteristics of the respondents who participated in the study.

3.9.2 Interviews

Face-to-face interviews were employed as a means of gathering the opinions of key informants in this study. The interviews were administered by the researcher together with research assistants to individuals in positions of authority, including: Heads of Department, Faculty Deans, Academic Registrars, Quality Assurance personnel, and technocrats from the NCHE Directorate of Quality Assurance. These participants were selected based on the researcher's belief that they possessed adequate information that was essential to the study and were directly responsible for academic processes, procedures, and policy management. The interviews were conducted using key informant interview guides, which allowed for the collection of detailed information on the study variables. The researcher had control over the line of questioning. Modifications to the interview environment were possible so as to ensure a flexible approach to data collection. The questioning techniques used in the interviews were tailored to the unique situations of each respondent, allowing for a

multisensory approach to data collection. While the order of the interview was controlled, unexpected responses were welcomed to avoid rigidity.

However, the interview process was found to be time-consuming, and respondents could not be hurried. Prolonged engagement in the field was necessary for the detailed data collection required for this study. Despite the challenges associated with the interview process, it was deemed the most appropriate method for collecting data on people's perceptions for a deeper understanding of phenomena. Semi-structured interviews provide in-depth data that cannot be obtained using questionnaires, making them an essential tool in qualitative research. Open-ended interview questions were posed to key informants to yield adequate narrative data that could best inform the study. The questions were formulated from the emerging issues identified from quantitative analysis for in-depth analysis before conclusions were drawn. It should be noted that anonymity was difficult to ensure with interviews. However, the researcher clearly explained the purpose of the research to the respondents, who were forthcoming in providing information.

3.9.3 Documentary Review

Documentary review as data collection method involves analysing and evaluating documents to gather information using a documentary check list (Bretschneider *et al.*, 2017). The researcher reviewed a number of documents that included University records such as accredited program books, admission records, teaching and examination timetables, external examiners' reports, graduation records, and other reports; National Council for Higher Education program minimum standards, journal papers, books both published and unpublished. This was done to examine the quality of the curriculum, quality of students, and quality of teaching, in order to establish adherence to set standards. A checklist was used to verify the quality standard, as specified by the National Council for Higher Education (NCHE). The course outline in the accredited program book was checked in

terms of learning outcomes, teaching modes, assessment and facilities specified were checked in relation to physical verification to the learning environment. The teaching timetables were inspected in order to determine the hours allocated to the course unit, and sampled students' files were analyzed to check if they met the admission criteria. Documentary review, as a secondary data method, served to substantiate data with other sources of information. Additionally, it facilitated the researcher in obtaining thoughtful data, as informants dedicated enough time and attention to compiling it.

3.10. Operationalization and Measurement of Variables

As identified within the conceptual framework, wherein dependent and independent variables were established, the variable of independence, namely, the quality of higher education, was assessed through the measurement of the quality of the curriculum, the quality of students, and the quality of teaching. The constructs of the aforementioned variable are presented in Table 5 below, which outlines the operationalization of the variable.

Table 5: Operationalization and measurement of variables

Global Variable	Dimensions	Operationalization	Measurement	Sample questionnaire items
Quality of Curriculum	Curriculum Design	Curriculum design pertains to the strategic placement of curriculum components; arrangement of course units (Misni, Hasnaa, <i>et al.</i> , 2020)	Respondents rank seven items included in the questionnaire on a 5-point scale.	“the curriculum design developed my problem-solving skills.”
	Curriculum Content	Content can be defined as the information that is imparted in educational institutions. It is also known as knowledge that encompasses a compilation of facts, concepts, generalizations, principles and theories.	Respondents rank eight items included in the questionnaire on a 5-point scale.	“Curriculum content developed my capacity to accept and do work assigned to me without grumbling.”
	Relevancy of the Academic program	The relevance of an academic program is determined by the educational experience which is essential and linked to the authentic real-life circumstances of learners, both within and beyond the confines of the academic institution.	Respondents rank five items included in the questionnaire on a 5- point scale.	“programs guide learners in handling do all my activities at work place”
Quality of Students	Students‘ discipline	It is defined as the conduct of learners. (Jumoke, 2021).	Respondents rank seven items included in the questionnaire on a 5-point scale.	“Students who get recommendations from the University easily find jobs and retain them”
	Students‘ Grades	Grade is the assigned value of achievement in terms of score in figures or letter to rank the performance (Allen, 2015) .	Respondents rank eight items included in the questionnaire on a 5-point scale.	“students join University with good grades”

Quality of Teaching	Quality of Staff	Quality of staff refers to possession of relevant academic qualification, competences and skills, experience (NCHE, 2014) , use the right pedagogical techniques to produce quality graduates (Roseveare, 2012)	Respondents rank four items included in the questionnaire on a 5-point scale.	“The teachers quipped me with right skills”
	Teaching Methods	Teaching methods are effective ways of organizing and guiding learning including teaching activities and management strategies used for classroom instruction (Skutil <i>et al.</i> , 2016).	Respondents rank five i t e m s included in the questionnaire on a 5-point scale.	“Team work was encouraged in teaching”
	Quality of assessment	Assessment is the process of documenting, often times in measurable terms, knowledge, skills, attitudes and beliefs (Sawand <i>et al.</i> , 2015)	Respondents rank five i t e m s included in the questionnaire on a 5-point scale.	“The student assessment was consistent in time and between programs”
	Learning environment	Learning environment refers to tangible and intangible conditions and factors that may generate an exciting learning experience (Zamani <i>et al.</i> , 2022)	Respondents rank five i t e m s included in the questionnaire on a 5-point scale.	The school library was well located in a conducive environment.
Employability of Graduates	Employment skills	Employability skills are defined as a set of achievements, skills, understandings and personal attributes that make graduates more likely to gain quality and meaningful employment (Clarke, 2018),doing and keeping the job (Bhola, 2017)	Respondents rank three items included in the questionnaire on a 5-point scale.	<i>The graduates we get h a v e good communication skills</i>

	Performance at work	Performance at work is defined as the effectiveness with which job occupants execute their assigned tasks to fulfill organization's vision (Abas and Imam, 2016)	Respondents rank three items included in the questionnaire on a 5-point scale.	The graduates we get have good knowledge in Information and Communication Technology
	Employment retention	Employment retention is the process with which employees maintain the employment within the organization (Kumar, 2011)	Respondents rank three items included in the questionnaire on a 5-point scale.	The graduates have the ability to keep the job acquired

3.11. Data Collection Procedure

Upon completion of the proposal and subsequent approval by the supervisors, it was presented to the Doctoral Committee and the Directorate of Graduate Studies, Research, and Innovations of Bishop Stuart University for further approval. A letter of introduction was obtained from the aforementioned Directorate of Graduate Studies, Research, and Innovations of Bishop Stuart University, introducing the researcher to the Research Ethics Committee (REC) of Mbarara University of Science and Technology. The approved proposal was then taken to the Research Ethics Committee and subsequently to the National Council for Science and Technology for clearance. Following clearance and permission to conduct the study, the researcher arranged appointments with the selected respondents. The researcher, along with research assistants, administered questionnaires to the respondents and conducted interviews to gather their opinions and address any misunderstandings. Afterwards, a follow-up was conducted to obtain feedback. The collection of data was carried out with strict adherence to confidentiality protocols.

3.12 Data Processing and Analysis

After the data collection exercise, quantitative data was input into Statistical Package for Social Science (SPSS) version 27 and subjected to a thorough cleaning before hypothesis testing. Two statistical software packages were utilized to analyse the data collected. Specifically, SPSS version 27 was used for preliminary data analysis, while Analysis of Moments of Structures (AMOS) version 28 was used for Structural Equation Modelling (SEM). For qualitative approach, content analysis was used. Details are discussed next.

3.12.1 Data Cleaning

The data cleaning process demands careful consideration, as it significantly affects the final statistical results. Data is cleaned in order to: (i) Find out if the responses indicated in questionnaires have been entered correctly (ii) Check if missing values existed and decide on how to deal with them (iii) Check for and deal with outliers and (iv) Check if the data meets the parametric assumptions.

Outlier Identification and Treatment

An outlier is a data point that is extreme distance from other similar points (Hair *et al.*, 2010). Outliers can be mild or extreme. A data point beyond an inner fence on either side is considered to be a mild outlier and a point beyond an outer fence is an extreme outlier. Outliers may be as a result of variability in the measurement or may indicate experimental errors. An outlier check was conducted using minimum and maximum frequency counts, and means. The four out of range values were detected and corrected. Scatter plots were also used to identify outliers. The results indicated a closely packed distribution, thus confirming that there were no values that were out of range. A missing value analysis was performed next.

Missing Value Analysis

A missing value analysis was performed to evaluate the degree to which there is missing data. Missing value analysis helps address several concerns caused by incomplete data (Tabachnick and Fidell, 2019). If cases with missing values are systematically different from those without missing values, the results can be misleading. In addition, missing data may reduce the precision of calculated statistics because there is less information than originally planned. Another concern is that the assumptions behind many statistical procedures are based on complete cases, and missing values can complicate the theory required (Field, 2005). Nonetheless, since the data collection was made by the researcher in relation to self-reported survey or mail survey, effort was made to complete the questionnaire. Even when the respondent was not in a position, a call back was arranged to finish the questionnaire at that particular time. Consequently, there were no missing values detected and there was no need for further missing value analysis. This step was followed by conducting diagnostic tests.

3.12.2 Diagnostic Tests

Given the conceptualization of this study and the hypotheses generated for testing, it requires conducting parametric tests. But before this can be done, there is need to run some tests to establish whether the data meets the assumptions for parametric tests. Specific assumptions that were tested included normality of the distribution of the data, homogeneity of variance, linearity of the data and multi-collinearity using procedures prescribed by (Field, 2005).

a) Normality test

A common rule of thumb test for normality is to check the skewness (symmetrical) and kurtosis (peakedness) of each measured variable. Whereas the skewness and kurtosis

indicate the deviations from normality, they deal with only one aspect of non-normality each (Field, 2005). In addition, they work well with large samples. The interest in the current study is to determine whether the distribution as a whole deviate from a comparable normal distribution. This was done both statistically and graphically.

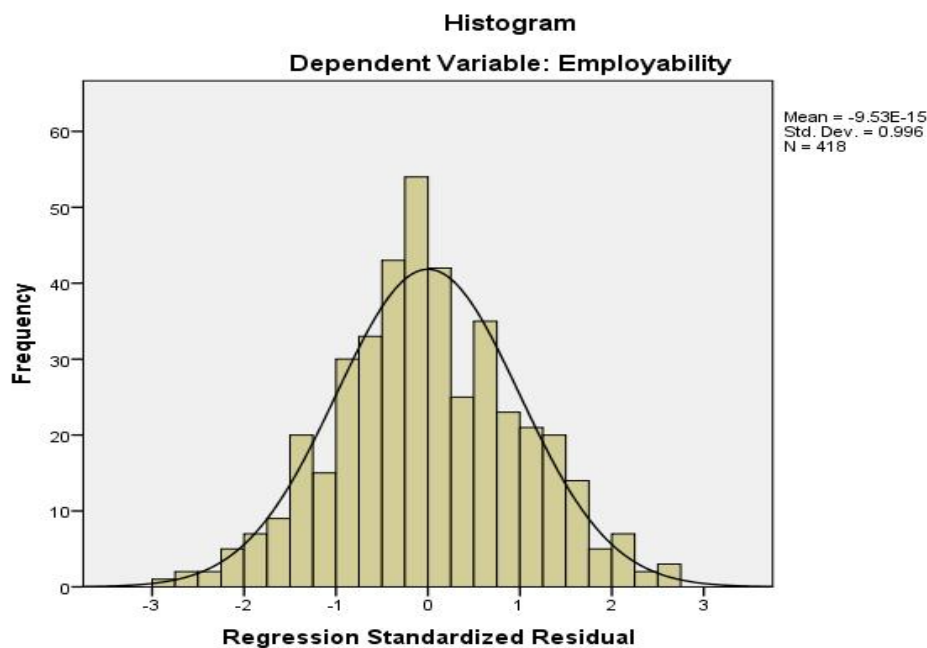
Different normality tests are used, depending on convenience of the technique. The tests include: the Shapiro-Wilk (SW) test, the Kolmogoro-Smirnov (KS) test, the Anderson-Darling (AD) test and Lilliefors (LF) test (Tabachnick & Fidell, 2019). Among the mentioned tests for normality, Shapiro-Wilk test has better power property and produces better results compared to other tests (Keya and Rahmatullar, 2016). that is why it was employed. According to Field (2005), the Shapiro-Wilk test compares the scores in the sample to a normally distributed set of scores with the same mean and standard deviation. If the sig. value of Shapiro-Wilk test is greater than .05, then the data is normal. If it is less than .05 then the data significantly deviates from a normal distribution. The test results were presented in table 6 as follows:

Table 6: Test of Normality - Shapiro-Wilk test

	Statistic	df	Sig.
Employability	.973	78	.064
Quality of the curriculum	.962	78	.533
Quality of students	.961	78	.460
Quality of teaching	.960	78	.337

According to Sharpiro – Wilk test, the data was tested to establish whether it was normally distributed at the level of significance 0.05 with 95% level of confidence. The rule of acceptance or rejection was if p- value is less than 0.05 meaning it is significant and when its greater than 0.05 that it is not significant. Table 6 shows p- values of variables as follows: employability 0.064; quality of curriculum 0.533; quality of students 0.460; quality of teaching 0.337. From the analysis, all the variables met the normality assumption and

therefore were analysed using parametric tests as there was no need for data transformation. Graphically, normality was confirmed using histograms with bell shaped curve superimposed as shown in figure 2. A bell-shaped histogram indicates that data is normally distributed.



Source: Primary Data, 2021

Figure 2: Histogram showing the test for Normality of Study Variables

Figure 2 shows a histogram with bell shaped curve superimposed. Considering the histogram above, the results in this study reveal a fairly bell-shaped histogram. One can conclude that employability, quality of curriculum, quality of students and quality of teaching approximately follow a normal distribution, thus upholding the normality assumption.

b) Homogeneity test

To further ensure the suitability of the data for parametric tests, the homogeneity test was performed. According to Field (2005), homogeneity assumes that the variance of one variable should be stable at all levels of other variables. Levene's test is one of the commonly used tests for homogeneity. Field (2005) states that if the Levene statistic is non-significant ($p > .05$), then the data is homogeneous (the differences between the variance is close to zero)

and vice versa. The results presented in table 7 show that the assumption of homogeneity of variances was upheld.

Table 7: Test of Homogeneity of variances

Variables	Levene Statistic	df1	df2	Sig.
Quality of the curriculum	1.044	4	403	.463
Quality of students	1.454	4	403	.320
Quality of teaching	1.087	4	403	.420
Employability	1.423	4	403	.592

Table 7 shows p- values of variables as follows: employability 0.592; quality of curriculum 0.463; quality of students 0.320 and quality of teaching 0.420. From the analysis, all the variables met the homogeneity assumption and therefore were analysed using parametric tests. Graphically, a scatter plot was drawn by plotting the residuals against the dependent variable. The result of the scatter in fig 3 shows that the points are evenly dispersed around zero, thus providing evidence that the homogeneity assumption was met.

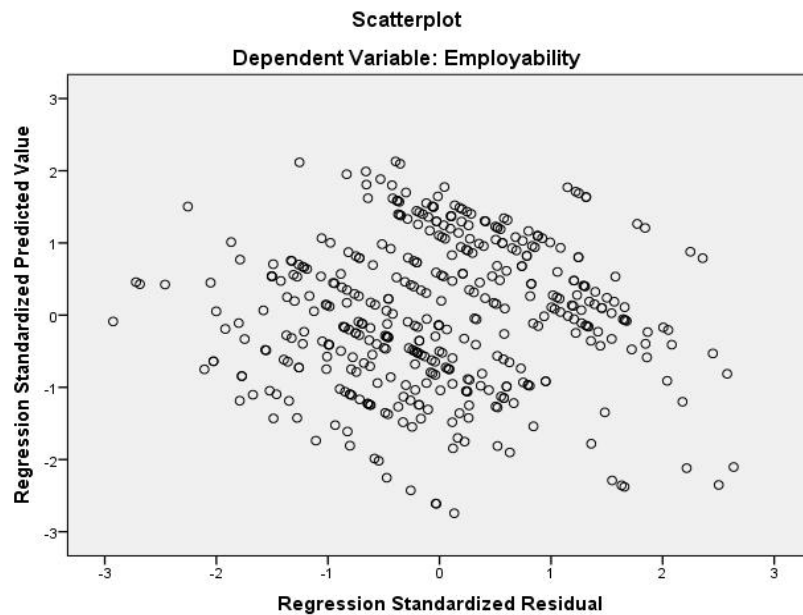
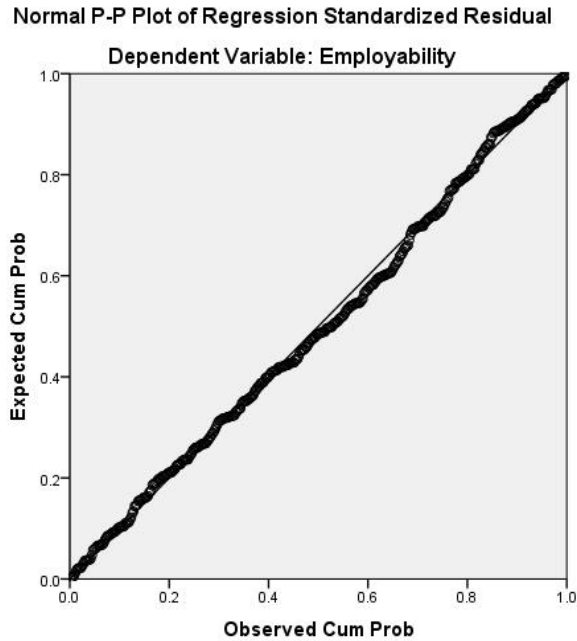


Figure 3: Scatter plot – homogeneity test

c) Linearity Test

Linearity means there is a straight-line relationship between two variables. This assumption is important because regression analysis only tests for linear relationship between the independent variables (IVs) and the dependent variables (DVs). Linear data is where scores are seen to be in a fairly straight line, not a curve. In the current study, a normal probability plot (normal Q-Q plot) was used to plot the residuals against the predicted scores in the figure 4.



Source: Field Data, 2021

Figure 4: A Normal Probability Plot (normal Q-Q plot)

Considering the normal probability plot in figure 4 above, the results revealed a fairly straight line thus the data passed the linear assumption test. Therefore, a relationship between quality of curriculum, quality of students, quality of teaching and employability can be tested.

d) Multicollinearity test

Multicollinearity exists if the predictor variables correlate highly when regressed against each other. A collinearity diagnostic test was carried out to determine whether each of the predictors – quality of curriculum, quality of students and quality of teaching have a linear relationship with each other. Under this procedure, two values are given, the tolerance and the variance inflation factor (VIF). The tolerance value is an indicator of how much of the variability of the specified independent variable is not explained by the other independent variables in the model. The VIF is the inverse of the tolerance value. Basing on the tolerance figures, various scholars indicate different cut off points for the accept/reject standard. According to Menard (1995), if the tolerance values are below .2, that shows the existence of

multicollinearity, while VIF values above 10 indicate serious concern (Myers, 1990; Bowwerman and O’Connell, 1990).

Table 8: Multicollinearity Results

<i>Independent Variables</i>	<i>Collinearity Statistics</i>	
	<i>Tolerance</i>	<i>VIF</i>
Quality of the curriculum	0.846	1.182
Quality of students	0.816	1.225
Quality of teaching	0.818	1.223

Source: Field Data, 2021

From the data presented in Table 8, it can be observed that the Variance Inflation Factor (VIF) for the quality of curriculum is 1.182, while the VIF for the quality of students and the quality of teaching are 1.225 and 1.223, respectively. Notably, all these values are below the set threshold of 10, indicating that there is no severe multicollinearity present in the data. Additionally, the Tolerance values for quality of curriculum, quality of students, and quality of teaching are 0.846, 0.816, and 0.818, respectively, which is significantly above the minimum acceptable value of 0.2. Based on these findings, it can be concluded that there is a lack of multicollinearity among the variables under consideration.

Qualitative Data Analysis

The process of analyzing qualitative data pertains to the transcription of typed notes and data from interviews, which were then subjected to content analysis technique. This was done through the utilization of thematic content analysis as recorded during face-to-face interviews. The researcher opted to employ a quick impressionist summary in analyzing qualitative data, wherein key findings were summarized through the notation of responses given by the respondents during the interview, particularly in relation to various themes

concerning the quality of curriculum, students, and teaching, and how they affect the employability of graduates from selected universities in South Western Uganda. It is noteworthy that this particular technique of qualitative data analysis was chosen due to its time-saving and not overly expensive nature. As such, interviews were listened to with utmost attention and discernment in order to identify emerging themes. Through a process of sorting, recording, reflection, and interpretation of the meaning of data, the analysis was further strengthened (Amin, 2005; Kambo and Tromp, 2006; Souza, 2009; Nsubuga, 2008).

3.13 Data Quality Control

The maintenance of acceptable levels of validity and reliability of instruments is a crucial aspect in ensuring quality, as postulated by Oso and Onen in 2008. This necessitates the use of rigorous and comprehensive measures to guarantee that the instruments employed in this study are capable of producing consistent and accurate results, thereby ensuring the validity and reliability of the data.

3.13.1 Testing for Content Validity

Since validity is the required proof that a test is measuring what it claims to measure, different validity tests were run. The questionnaire was pre-tested through seeking the views from 10 academicians and 10 practitioners. These experts rated the questionnaire items on a scale of 1 (not relevant) to 4 (highly relevant). This was first done to check whether questions would work as intended or would be understood by respondents during the final survey and Secondly, to make improvements to the instrument (Melillo *et al.*, 2022). On the basis of responses from raters (i.e the proportion of items rated as relevant to the total number of items per construct), we computed content validity index (CVI) using Aiken's (1985) coefficients and as can be seen from the results of the content validity analysis in Table 9, the obtained CVI for quality of curriculum, quality of students, quality of teaching and

employability are above 0.7 as recommended by (Amin, 2005). This confirmed to the researcher that the questionnaire items were relevant.

Table 9: Validity and Reliability Results

Variable	CVIs	Cronbach's Alpha	Items
Quality of the curriculum	0.884	0.702	18
Quality of students	0.875	0.802	13
Quality of teaching	0.833	0.830	34
Employability	0.815	0.850	12

Source: Field Data 2021

Table 9 displays the CVI obtained for the quality of curriculum, quality of students, quality of teaching, and employability, which were recorded as 0.884, 0.875, 0.833, and 0.815 respectively. These values are above the recommended threshold of 0.7, as stipulated by Amin (2005). Thus, the researcher was able to confirm the validity of the questionnaire. The quality of the curriculum was assessed using 18 items, exhibiting a Cronbach's alpha of 0.702. Similarly, the quality of students was evaluated using 13 items, with a Cronbach's alpha score of 0.802. The quality of teaching consisted of 34 items, with a Cronbach's alpha value of 0.830. Lastly, employability was measured using 12 items, with a Cronbach's alpha of 0.850. The Cronbach's alpha score for each of these variables was above 0.7, indicating a high level of internal consistency in how the items measured the same variable. Having observed the alpha value of all the items in the questionnaire, we can conclude that the internal consistency of the questions was achieved. Therefore, the questionnaire could produce findings that were deemed reliable.

3.13.2 Testing for Construct Validity

Factor Analysis

Exploratory factor analysis was used and it helped to test the construct validity at pilot stage where both Convergent validity i.e. the degree to which the construct measures are associated and discriminant validity: the degree to which the construct measures are disassociated, were ascertained. In ascertaining the construct validity, the researcher was guided by exploratory factor analysis assumptions: sample size has to be 150+, the correlations should be equal or greater than .5, Kaiser-Meyer-Olkin (KMO) should be .6 or above and with a significant ($P < .05$) Bartlett's test of sphericity (Tabachnick and Fidell, 2019). The study was able to discover patterns in variables and establish linear relationships among items and components through principle component analysis (Bennett, 2011). Varimax rotation approach was used in principal components extraction process, simply because according to (Podsakoff and Mackenzie, 2015), Varimax rotation has the ability to maximize the dispersion of loadings within factors where it loads a smaller number of variables onto each factor.

Kaiser criterion, guided this process where only elements with Eigenvalues (variances extracted by the factors) greater than one and items with loadings higher than 0.5 were retained. Kaiser, (1960), the proponent of Eigenvalues as a criterion for retaining measures, assumes that eigenvalues represent the amount of variation explained by a factor and that an eigenvalue of greater than 1 represents a substantial amount of variation, which is the major reason among other why it was preferred. It is apparent in this study that the exploratory factor analysis assumptions were met since the study sample size was 512 which is far above 150, considered only items with loadings above 0.5 from the rotated solution, as indicated in (Table 10-14). More still, KMO were above .6, and Bartlett's test of sphericity was highly

significant ($p<.001$) for all constructs, as indicated in (Table 10-14) which depicts a good model fit for the data (Bennett *et al.*, 2020; Podsakoff and Mackenzie, 2015).

Factor Structure of Quality of the Curriculum

The results in Table 10 show the underlying factor structure of quality of curriculum, which exhibits the underlying combination of its dimensions namely; curriculum design, curriculum content and relevancy of the academic program

Table 10: Factor Analysis for Quality of the Curriculum

	Curriculum Design....	Curriculum content	Relevancy of the Academic program
.... improved my skills in written communication	0.775		
...helped me in counting and application numbers	0.739		
.... sharpened my critical thinking skills	0.693		
.... developed my problem-solving skills	0.685		
.... improved my skills in oral communication	0.682		
...developed my capacity to accept and do work assigned to me without grumbling		0.784	
...developed my ability to work in a team with others		0.781	
.... helped me to develop the ability to plan my own work		0.761	
...helped me to developed time management skills		0.704	
...helped me to be confident in tackling and solving unfamiliar problems		0.701	
...helped in managing change at work		0.654	
...improved my conduct at the work place		0.652	

The academic program has....			
...courses which are coherent and up to date			0.804
...guided me in handling all my activities at the work place			0.753
...been relevant to the needs of the Labour market			0.744
... helped me in formulating work outcomes			0.743
...helped me to program my activities			0.742
... specified weeks of study and hours allocated to each topic			0.722
Variance (%)	21.668	16.872	19.276
Cumulative variance (5)	21.668	38.54	57.816
Eigen values	3.575	2.526	1.884
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. .684			
Bartlett's Test of Sphericity	Approx.		
	Chi-Square	2247.693	
	Df	171	

"Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation Converged in 6 Iterations.

The empirical findings in Table 10 demonstrate that the structural composition of the quality of curriculum is a multifaceted construct, consisting of three distinct dimensions that are all statistically significant. In terms of their relative significance, these dimensions are: curriculum design, relevancy of academic programs, and curriculum content, which account for 21.668%, 19.276%, and 16.872% of the variance, respectively. It is noteworthy that only factors with ratings exceeding the predetermined cutoff of 0.5 were deemed salient and, thus, included in the final analysis.

Factor Structure of Quality of Students

The findings as presented in Table 11 serve to demonstrate the fundamental factor construct of the quality of students, which in turn showcases the fundamental amalgamation of its constituent dimensions, namely the discipline of the students and their academic performance as reflected in their grades.

Table 11: Factor Analysis for Quality of Students

Items	Students' discipline	Students' grades
Morals and ethics of learners 'greatly influence their employability	0.775	
Academically excellent and well-behaved students are retained by the	0.739	
Well behaved Students get employment recommendations from their	0.693	
Students who never appeared before disciplinary committee easily got	0.685	
Students who were well behaved got jobs easily.	0.682	
Students are admitted on programs of their choice		0.904
Students joined University with good grades		0.853
Students admitted on bachelor programs got at least 2 principle passes.		0.844
Students' entry grades influence their performance at University		0.843
Good academic grades help a graduate to get a job easily.		0.814
The class of the degree is mostly considered by employers at recruitment.		0.783
The grades students get at the end of the programme enabled them get first employment		0.764
Employers prefer workers with good academic records		0.743
Variance (%)	38.535	19.276
Cumulative variance (5)	38.535	57.811
Eigen values	2.552	1.503
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.771
Bartlett's Test of Sphericity	Approx. Chi-Square	666.019
	df	78
	Sig.	.000

"Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation Converged in 6 Iterations.

The present study presents the findings from an empirical investigation aimed at examining the factor structure for quality of students. Specifically, the results obtained from the analysis, as displayed in Table 11, reveal that the two dimensions of student discipline and student grades are of great significance. Moreover, the former dimension accounts for a

substantial proportion of the variance, specifically 38.535%, whilst the latter dimension is also found to be of importance, though to a lesser extent, accounting for 19.276% of the variance. Notably, it is worth mentioning that factors with ratings above a specific threshold of 0.5 were retained, in order to ensure the reliability and validity of the study.

Factor Structure of Quality of Teaching

The results in Table 12 show the underlying factor structure of quality of teaching, which exhibits the underlying combination of its dimensions namely; quality of staff, teaching methods, quality of assessment and learning environment

Table 12: Factor Analysis for Quality of Teaching

Item	Quality of staff	Teaching methods	Quality of assessment	Learning environment
I use both field based and book knowledge in conducting my lectures	0.804			
Learners who attend my Lectures are equipped with skills relevant to field of work.	0.773			
We usually get refresher courses in teaching skills	0.754			
I have continued to study and add on my qualifications to handle course units I am handling with confidence.	0.743			
I use a minimum of 3 hours per week for each course unit to conduct Lectures.	0.704			
The courses are taught in reference to the job market		0.935		
The minimum of 8 weeks for school practice / internship are fully utilized and supervised		0.939		
Learners' communication skills are developed during the course of study as we allow them to express themselves.		0.893		
Feedback on students' assignment and tests is given promptly after marking		0.885		
Learners participate in practical lectures		0.782		
The student assessment is objective and trustworthy		0.781		
Course outlines used are consistent with the approved curriculum		0.780		
I use adequate learning materials		0.775		
There is a special program put in place at the department for weak students.		0.769		
The department provides students with knowledge of education patterns, placement/Internship opportunities		0.753		
Team work is encouraged in teaching		0.744		
Experiential learning is used in teaching and helps learners get employment skills		0.732		
There is involvement of students and working as a group to develop team work skills while lecturing.		0.725		
Guest speakers from the public are invited to give lectures		0.697		
The student assessment is consistent in time and between programs			0.795	

The students assessment is adequate and efficient			0.779	
I use progressive assessments/continuous assessment tests			0.763	
The exams assess the cognitive skills			0.762	
The exams assess the skills taught			0.752	
The exams assess the knowledge acquired			0.745	
There is a better reading environment at the university				0.885
The school library is well located in a conducive environment				0.839
There is a quiet environment for reading				0.787
The internet connection is always stable				0.785
We have better sound systems in our lecture rooms				0.782
Technology is used to assist learning				0.775
The lecture rooms are always big enough to accommodate all students in class				0.717
Variance (%)	22.96	13.28	22.67	19.226
Cumulative variance (5)	22.96	36.24	58.91	78.136
Eigen values	5.976459	2.633797	4.205556	3.574984
KMO and Bartlett's Test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			0.870678	
	Approx.			
Bartlett's Test of Sphericity	Chi-Square	666.0191		
	Df	95		
	Sig.	3.66E-94		

"Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

The aforementioned tabular presentation, denoted as Table 12, showcases the outcomes of the research conducted on the factor analysis on quality of teaching. The results indicate that each of the four dimensions, namely: quality of staff, quality of assessment, learning environment, and teaching methods; are of significant value. Moreover, these dimensions have been ranked in order of their significance, with quality of staff being of utmost importance, followed by quality of assessment, learning environment, and teaching methods, respectively, with the respective percentages of 22.96%, 22.67%, 19.226%, and 13.28%. It is worth noting that only the factors that had ratings surpassing the value of 0.5 have been retained.

3.13.3 Validity Test for the Qualitative Approach

Validity and reliability tests were conducted in order to ensure that the intended phenomenon or attribute was accurately captured, as is the primary focus of qualitative

research. This is achieved by capturing lived experiences of individuals and presenting them in a convincing manner, which demonstrates that the investigator has a thorough understanding of the case (Creswell and Creswell, 2018; Lukka and Modell, 2010). Various authors suggest that validity tests such as conformability, credibility, and transferability are necessary (Kumar, 2011 ; Jiang *et al.*, 2023). Also Kothari (2004) echoed out that to evaluate the reliability of qualitative data, it is essential to conduct an assessment of trustworthiness.

Confirmability.

This corresponds with construct validity in quantitative research and is used to evaluate whether data interpretation is conducted in an objective and logical manner. To ensure that the conclusions drawn from the data were reasonable, a confirmability audit was conducted during both the data collection and analysis stages.

This involved reviewing the recorded interviews and field notes to ensure that logical inferences and quality findings were retained.

Credibility

This refers to the confidence in truth of the findings and it corresponds to internal validity which ensures that the inquiry was conducted in a manner that ensures credibility. Two carefully trained research assistants were employed to collect the data, and researcher self-monitoring was conducted to ensure credibility (Kumar, 2011). Credibility was assured via prolonged engagement at research sites to substantiate the data collected, which was further enhanced by providing detailed descriptions of the data to empower readers to derive their own interpretations. A thorough account of the researcher's interactions with participants in the field, encompassing the challenges encountered and the strategies implemented to address them, also served to reinforce the trustworthiness of the study. Extended engagement in the field, together with member checking, bolstered trustworthiness specifically in the context of interviews (Creswell, 2009; Creswell & Creswell, 2018).

Transferability, which is analogous to external validity or generalizability in positivism, was achieved by utilizing specific procedures in coding and analysis, as recommended by Miles and Huberman (1994).

Trustworthiness of Qualitative Data

In the pursuit of eliciting responses to the research inquiries, the potential for personal biases was systematically mitigated through the application of a variety of research instruments sourced from a representative sample. The impact of personal opinions during both the data collection and analysis phases was substantially reduced by a conscious effort to uphold neutrality. In the context of this study, trustworthiness incorporated core tenets such as integrity and honesty (Shenton, 2004). This was achieved through strict adherence to established ethical standards governing research.

The trustworthiness and credibility of the research were contingent upon its truth value, consistency, and transferability. The implementation of a mixed methods approach enabled a significant level of triangulation and included a pilot study that ensured the credibility of the findings.

3.14 Structural Equation Modelling (SEM)

According to Tabachnick and Fidell (2001), Structural Equation Modeling (SEM) is a statistical technique that encompasses a collection of methods designed to examine a set of relationships between one or more independent variables. Hair, *et al.* (2010) assert that SEM's primary objective is to elucidate the pattern of a series of inter-related dependence relationships concurrently between a group of latent variables (unobserved constructs), each measured by one or more observed variables. The scholars further posit that SEM is predicated on the assumption of causal relationships, where a change in one variable is posited to result in a change in another variable.

Additionally, SEM is efficient for other types of analyses such as estimating variance and covariance, confirmatory factor analysis, test hypotheses and conventional linear regression (Hair, *et al.*, 2010). SEM also has the capacity to evaluate the unidimensionality, reliability, and validity of each construct (Hair, *et al.*, 2010; Kline, 2005). In summation, it provides an overall test of the model fit and individual parameter estimate tests simultaneously. Therefore, given the numerous advantages outlined, SEM was utilized in this study to explore statistical relationships among the items of each factor and between the independent variables (quality of teaching, quality of curriculum, and quality of students) and the dependent variable (employability).

A two-stage SEM recommended by Anderson and Gerbin (1984) was employed, with stage one entailing estimating a measurement model using confirmatory factor analysis (CFA), and stage two involving estimating the structural model. The SEM approach commences with the specification of the model that links the variables assumed to affect other variables (Kline, 2005). Through the process of estimation, fit statistics were evaluated to determine whether the proposed model fit the data or not and whether any modification was required to increase the fit. This evaluation considered the following model fit indices: the Goodness-of-fit index (GFI), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Incremental Fit Index (IFI), and the normed chi-square index (CMIN/DF). Table 13 summarizes the selected fit indices and the cut off points for evaluating the model fit in this study.

Table 13: Summary of Fit Indices Used in this Study

Fit Index	Level of Acceptance	Comments
Absolute fit indices		
GFI	.90 or greater	Value close to 1 indicates a perfect fit
RMSEA	.05 - .08	Value less than .50 is considered acceptable
Incremental fit indices		
IFI	.90 or greater	Value close to 1 indicates a perfect fit
TLI	.90 or greater	Value close to 1 indicates a perfect fit
CFI	.90 or greater	Value close to 1 indicates a perfect fit
Parsimonious fit indices		
CMIN/DF	$1.0 \leq \chi^2/df \leq 5$	Lower limit is 1.0, upper limit is 3.0 or as high as 5

3.15 Ethical Concerns

The researcher, in the pursuit of conducting a rigorous and morally upright study, took the initiative to obtain a clearance letter from Bishop Stuart University Directorate of graduate studies, Research and Innovations in order to ensure that all necessary protocols were adhered to. Following this, the researcher also sought ethical clearance from Mbarara University of Science and Technology Ethical Review Committee, emphasizing the importance of upholding ethical standards in the research field. In a further display of ethical conscientiousness, the researcher went on to seek clearance from the Uganda National Council for Science and Technology (UNCST), as this regulatory body is mandated to clear research studies in Uganda.

To ensure that all stakeholders were informed and on board with the study, the researcher secured an introductory letter from Bishop Stuart University Directorate of graduate studies, research and innovations, which introduced the researcher to the areas from where the data was to be collected. In addition, the researcher sought permission from both the participants and University administrators to interview respondents, while placing the utmost emphasis on the confidentiality of the data and the respondents.

To ensure that the study was conducted in a manner that upheld the rights of all participants, the researcher made it a point to inform the participants of their rights, which

were strictly observed throughout the entire research process. Informed consent and voluntary participation were also ensured, as the researcher took time to explain the purpose of the study to the participants and made it clear that participation was entirely voluntary and they had the right to withdraw from the study at any point without any repercussions.

The researcher also made it clear that all information gathered would only be used for the purposes of the study and treated with the utmost confidentiality. As such, the names of the respondents were not captured during the reporting process, and the views of individuals were not reported in a manner that would allow them to be identified. These ethical considerations were all in line with the recommendations of Sekaran and Bougie (2009) on ethical issues during research, and were indicative of the researcher's commitment to conducting a study that was both thorough and morally upright.

1.16 Limitations of the study

Like any other research, this study faced a number of limitations which slowed down the progress and they included the following:

1. The questionnaires were distributed to research participants but there was a delayed response which was overcome by continuous follow up. Those who had received on line questionnaires were continuously sent a reminder and later they responded by filling the questionnaire and sending it back.
2. As the data was collected from graduates who were in different parts of the country, it was not easy to get in touch with them. This was tackled by getting their contact from the database of the university from which they graduated and then contacted either on phone, email or physical to get information

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.0 Introduction

This study investigated the relationship between the quality of higher education and the employability of graduates from selected universities in Southwestern Uganda. This inquiry was prompted by the observation that graduates who have completed their higher education still struggle to secure employment. The collected data underwent preliminary analysis utilizing SPSS version 27 and Structural Equation Modeling (SEM) was done using Analysis of Moments of Structures (AMOS) version 28. Using SEM, models were formulated as different hypotheses of the study.

4.1 Response rate

The primary objective of the researcher was to gather quantitative data from a grand total of 487 respondents. Regrettably, due to unforeseen circumstances, the researcher was only capable of obtaining information from 418 respondents, which in reality constitutes a response rate of 85.8%. Furthermore, in an endeavor to collect qualitative data, the researcher aimed at approaching a total of 24 respondents. Nonetheless, the research process was halted after the 15th interviewee when the respondents were giving the same views repeatedly. Despite these limitations, the researcher was able to procure data from a total of 433 out of 511 respondents, resulting in a response rate of 84.7%. It is worthy to note that this response rate is greater than the recommended 75% threshold as suggested by (Oman, 2003).

The high response rate of 84.7% can be attributed to the utilization of a personalized approach for data collection. This approach was deliberately selected to facilitate a face-to-face interaction between the researcher and the respondents, thereby enhancing the quality and rate of response. Furthermore, the researcher established and maintained valuable

contacts with the graduates, who proved instrumental in the identification of relevant sampled respondents and in fostering positive associations with them, resulting in outstanding response rates. Additionally, a self-administered questionnaire approach was adopted, taking into consideration the literacy level of the graduates and the extended duration required for completion.

4.2 Sample Characteristics

It was necessary to understand the demographic characteristics of the respondents who provided the usable data. The results are presented in table 14

Table 14: General Demographic Characteristics

Category	Item	Frequency	Percent
Type of the organization	Private	314	75.1
	Government	104	24.9
	Total	418	100.0
Gender	Male	240	57.4
	Female	178	42.6
	Total	418	100.0
State your age bracket	20years -30years	222	53.1
	30 years-40year	156	37.3
	40years –50 years	35	8.4
	Above 50 years	5	1.2
	Total	418	100.0

Source: Field Data, 2021

Table 14 shows that majority of the respondents were in the private sector (75.1%) and those in government were 24.9%, an indication of private sector dominance in the provision of employment. In addition, most of the respondents were male (57.4%) and their female counter parts were 42.6%. The results also show that majority of the respondents were between the age bracket of 20 years to 30 years old (53.1%) and the least number of

respondents were above 50 years (1.2%). That was an indication that the majority of the respondents were fresh graduates who had not spent many years in field.

Table 15: Demographic Characteristics of the Employed Graduates

Category	Item	Frequency	Percent
Which University did you graduate from?	BSU	168	56.0
	MUST	132	44.0
Program studied at the University	Bachelor of Computer Science	15	5.0
	Bachelor of Information Technology	36	12.0
	Bachelor of Science with Education	145	48.3
	Bachelor of Business Administration	104	34.7
Nature of employment you are doing	Permanent	121	40.3
	On contract	179	59.7
Are you happy with the job you are doing?	Yes	126	42.0
	No	174	58.0
Period taken to get the first job after graduation	Less than 6 months	15	5.0
	Between 6 and 12 months	63	21.0
	More than 1 year	222	74.0

Source: Field Data, 2021

Table 15 illustrates that majority of the participants were associated with Bishop Stuart University (BSU) with a percentage of 45.8%, while Mbarara University of Science and Technology (MUST) represented 54.2% of the respondents. This difference in percentage is attributable to the high enrollment at MUST as compared to BSU in the courses examined, leading to a higher number of graduates from the former. The findings provided additional insight that a considerable number of the students under analysis opted for a degree in Bachelor of Science with Education (48.3%). However, the smallest proportion belonged to those who completed a degree in Bachelor of Computer Science (5%). Additionally, it was

established that a portion of graduates who were employed under contract arrangement are 59.7%, while 40.3% were engaged in other permanent employments.

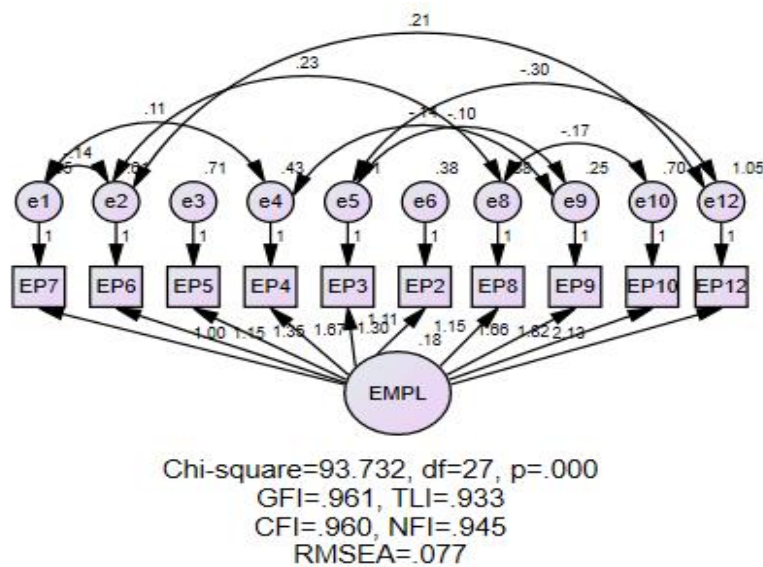
Furthermore, the data indicated that 58% of the employed graduates were dissatisfied with their current jobs, while only 42% experienced job satisfaction. This phenomenon implies that a considerable fraction of graduates who are not contented with their current jobs are persistently seeking better job opportunities. Lastly, it was shown that 74% of employed graduates waited for more than a year before securing their first job, and only 5% succeeded in getting the job within the first six months. This finding is indicative of the low employability level among graduates, as evidenced by the prolonged duration they take before obtaining their initial job.

4.3 Results on Confirmatory Factor Analysis

Confirmatory factor analysis was performed using AMOS 28.0™ to assess construct validity. Construct validity refers to the extent to which operationalization of a construct does actually measure what that theory purports (Arifin *et al.*, 2016; Creswell & Creswell, 2018). This is used to test how well the measured variables represent the number of constructs. These are explained as follows;

4.3.1 CFA Measurement model for Employability

A measurement model employing CFA was utilized in the current study to evaluate employability using a one-factor model with twelve items. However, after careful analysis, two items with poor loadings (namely, 'EP1' and 'EP11') were removed, leaving the remaining items as displayed in figure 5. It is noteworthy that the removal of these items did not alter the construct's conceptualization or content.



Source: Primary Data, 2021

Figure 5: CFA for Measurement of Employability

Figure 5 depicts that the fit indices resulting from the Confirmatory Factor Analysis (CFA) fall within the acceptable range. The initial CFA outcomes indicated that although the standardized parameter estimates were all statistically significant ($p < .001$), the fit indices were below the acceptable level, which indicates a poor fit of the measurement model. This necessitated a re-specification process by iteratively eliminating items that did not meet the standard criteria. The aim of repeating the filtering process was to remove items as minimally as possible, while considering the need to derive a more parsimonious model. Examination of the Modification Indices (MIs) revealed misspecifications associated with 'EP1' and 'EP11.' Two out of the total twelve items were then iteratively removed in the last model before proceeding with further analysis.

The removal of these items did not alter the content of the indicator as it was initially conceptualized, since the retained items were significant and had standardized factor loadings exceeding the recommended level of .50. Thus, the meanings of the factors were preserved. Table 16 provides a more detailed explanation of this phenomenon through the utilization of

the standardized regression estimate pertaining to the items of employability that have been retained.

Table 16: Standardized Weights for Employability

Code	Items	Standardized regression estimates	C.R (t)
EP7	The graduates are good at time keeping	0.597	
EP6	The graduates we get have good knowledge in Information and Communication Technology	0.529	6.432
EP5	The graduates we get have good communication skills	0.560	7.128
EP4	Teaching and Learning strategies used at University promote skills	0.733	8.312
EP3	University curriculum is helping graduates for employability	0.652	7.374
EP2	Graduates are appropriately qualified and prepared for work place	0.602	7.335
EP8	The numeracy level of graduates we get is well developed	0.618	7.392
EP9	The graduates we get are good independent thinkers	0.816	7.938
EP10	The graduates are creative	0.676	7.628
EP12	Quality teaching can promote graduate employability	0.658	7.519

Achieved Fit Indices

CMIN/DF	RMS EA	GFI	CFI	TLI	NFI
3.472 (93.732 / 27)	0.077	0.961	0.96	0.933	0.945

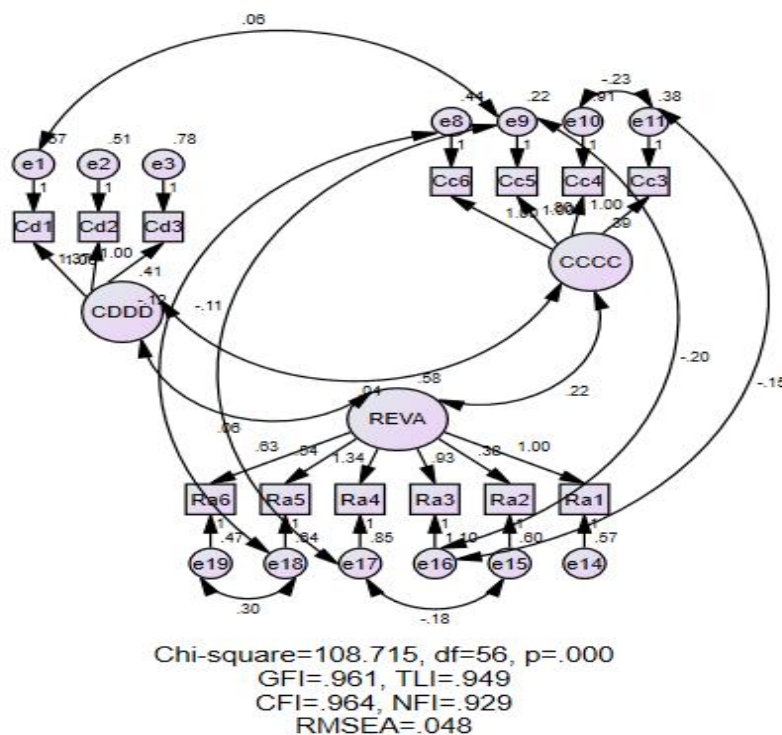
Source: Field Data, 2021

Table 16 indicates that the standardized parameter estimates for all the retained indicators were statistically significant ($p < .001$) and loaded on this factor. In addition, the results confirm the validity of the model with adequate model fit statistics for this construct

measure. The composite reliability was. 0.843, which is well above the acceptable level for scales tested in a new context (Nunnally and Bernstein, 1994) as in (Mainga et al., 2022) ; and the AVE is 0.854. The CFA results confirmed the validity of the final model with excellent model fit statistics for this construct measure.

4.3.2 CFA Measurement Model for Quality of the Curriculum

A measurement model employing CFA was utilized in the current study to evaluate the quality of the curriculum using a three-factor model. Quality of curriculum was measured using curriculum design, curriculum content and relevancy of academic program. The analysis is shown in figure 6.



Source: Primary Data, 2021

Figure 6: CFA for Quality of the Curriculum

Figure 6 depicts that the fit indices resulting from the Confirmatory Factor Analysis (CFA) fall within the acceptable range. The initial CFA results indicated that although the standardized parameter estimates were all significant ($p < .001$), the fit-indices were below the

acceptable level, thus signifying a poor measurement model fit. This necessitated a re-specification by iteratively removing items that did not meet the acceptable criteria. The purpose of repeating the filtering process was to remove as few items as possible, taking into account the need to derive a more parsimonious model. Examination of the modification indices (MIs) revealed misspecifications affiliated with 'cd4', 'cd5', 'cd6', 'cc1', 'cc2', and 'cc7'.

Six out of nineteen items in total were iteratively removed in the final model prior to further analysis. While the number of deleted items was relatively lower compared with the total, their removal did not change the content of the construct as it was conceptualized. This is so because the retained items were significant and had standardized factor loadings higher than the recommended level of .50. Thus, the meanings of the factors were preserved. Table 17 provides a more detailed explanation of this phenomenon through the utilization of the standardized regression estimate pertaining to the items of quality of curriculum that have been retained.

Table 17: Standardized Weights for Quality of Curriculum

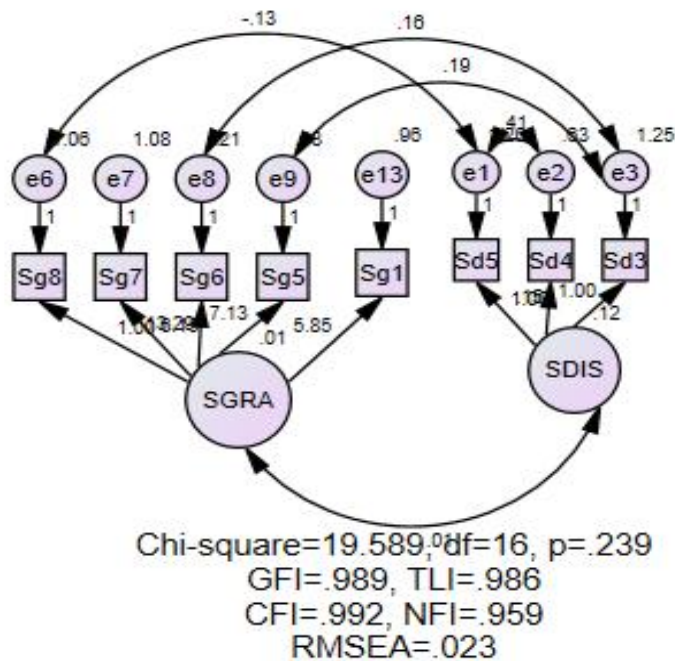
Code	Items	Standardized regression estimates	C.R (t)
Curriculum design			
Cd1	 develop learners' problem solving skills	0.65	
Cd2	 sharpen students critical thinking skills	0.778	9.709
Cd3	 improve student skills in written communication	0.59	
Curriculum content			
Cc6	...help learners' to developed time management skills	0.687	
Cc5	...help in managing change at work	0.799	15.663
Cc4	...help students to be confident in tackling and solving unfamiliar problems	0.566	8.357
Cc3	...develop learners' ability to work with others in a team	0.712	
Relevancy of curriculum			
Ra1	...guide learners in handling and do all activities at work place	0.710	
Ra2	...helped learners to program their activities	0.547	5.85
Ra3	... help graduates in formulating work outcomes	0.559	9.822
Ra4	...courses are coherent and up to date	0.743	11.605
Ra5	... specified weeks of study and hours are allocated to each topic	0.657	
Ra6	...courses are relevant to the needs of the Labour market	0.570	10.092
<u>Achieved Fit Indices</u>			
CMIN/DF	RMSE A	GFI	CFI
1.941	0.048	0.961	0.964
(108.715 / 56)		0.949	
			TLI
			NFI

Source: Field Data, 2021

Table 17 indicates that the standardized parameter estimates for all the retained indicators were statistically significant ($p < .001$) and loaded on this factor. In addition, the results confirm the validity of the model with adequate model fit statistics for this construct measure. The composite reliability (CR) was. 0.841, which is well above the acceptable level for scales tested in a new context (Nunnally and Bernstein, 1994); and the average variance extracted (AVE) is 0.834. The CR value of 0.841 implies that the latent construct has a high internal consistency and the indicators are highly reliable measures of quality of curriculum. The AVE of 0.834 indicates a strong convergent validity and indicators of quality of curriculum are closely related to each other. The CFA results with high CR and AVE values shows a strong reliability and validity of the final model with excellent model fit.

4.3.3 CFA Measurement Model for Quality of Students

A measurement model employing CFA was utilized in the current study to evaluate quality of students using a two-factor model. Quality of students was measured using students' discipline and students' grades. The analysis is shown in figure 7.



Source: Primary Data, 2021

Figure 7: CFA for Quality of Students

Figure 7 depicts that the fit indices resulting from the Confirmatory Factor Analysis (CFA) fall within the acceptable range. The initial CFA results indicated that although the standardized parameter estimates were all significant ($p < .001$), the fit-indices were below the acceptable level signifying a poor measurement model fit. This necessitated a re-specification by iteratively removing items that did not meet the acceptable criteria. The purpose of repeating the filtering process was to remove as few items as possible, taking into account the need to derive a more parsimonious model. Examination of the modification indices (MIs) revealed misspecifications affiliated with 'sd1', 'sd2', 'Sg2', 'Sg3' and 'Sg4'.

Five out of thirteen items in total were iteratively removed in the final model prior to further analysis. While the number of deleted items was relatively lower, compared to the total, their removal did not change the content of the construct as it was conceptualized. This is so because the retained items were significant and had standardized factor loadings higher than the recommended level of .50. Eventually, the meanings of the factors were preserved. Table 18 provides a more detailed explanation of this phenomenon through the utilization of the standardized regression estimate pertaining to the items of quality of students that have been retained.

Table 18: Standardized Weights for Quality of Students

Code	Items	Standardized regression estimates	C.R (t)		
Students' Discipline					
Sd5	Students who were well behaved got jobs easily	0.704	0.306		
Sd4	Morals and ethics of learners greatly influence their employability	0.764			
Sd3	Academically excellent and well-behaved students are retained by the University	0.698			
Students' Grades					
Sg8	The grades students get at the end of the programme enabled them get first employment	0.676	4.285		
Sg7	Students entry grades influence their performance at University	0.720			
Sg6	The class of the degree is mostly considered by employers at recruitment	0.915			
Sg5	Employers prefer workers with good academic records	0.647			
Sg1	Students are admitted on programs of their choice	0.522			
<u>Achieved Fit Indices</u>					
CMIN/DF	RMSE A	GFI	CFI	TLI	NFI
1.224	0.063	0.989	0.992	0.986	0.959
(19.589 / 16)					

Source: Field Data, 2021

The results in table 18 indicate that the standardized parameter estimates for all the retained indicators were statistically significant ($p < .001$) and loaded on this factor. In addition,

the results confirm the validity of the model with adequate model fit statistics for this construct measure. The composite reliability was **0.812**, which is well above the acceptable level for scales tested in a new context (Nunnally and Bernstein, 1994); and the AVE is **0.793**. The CR value of 0.812 implies that the latent construct has a high internal consistency and the indicators are highly reliable measures of quality of students. The AVE of 0.793 indicates a strong convergent validity and indicators of quality of students are closely related to each other. The CFA results with high CR and AVE values shows a strong reliability and validity of the final model with excellent model fit for this construct measure. .

4.3.4 CFA Measurement Model for Quality of Teaching

A measurement model employing CFA was utilized in the current study to evaluate quality of teaching. Using a four-factor model, quality of teaching was measured using quality of staff, teaching methods, quality of assessment and learning environment. The analysis is shown in figure 8.

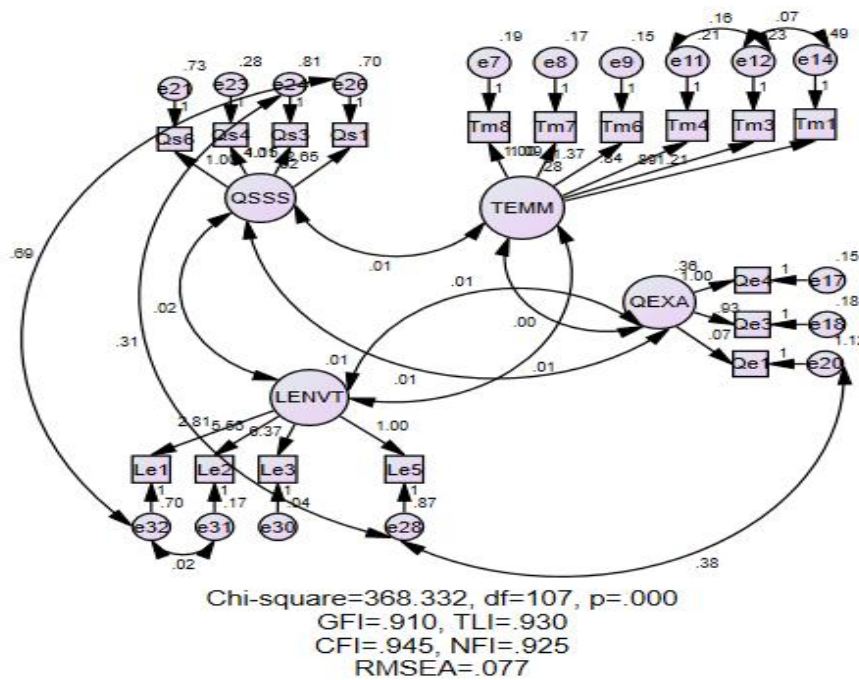


Figure 8: CFA for Quality of Teaching

Figure 8 depicts that the fit indices resulting from the Confirmatory Factor Analysis (CFA) fall within the acceptable range. The initial CFA results indicated that although the standardized parameter estimates were all significant ($p < .001$), the fit-indices were below the acceptable level signifying a poor measurement model fit. This necessitated a re-specification by iteratively removing items that did not meet the acceptable criteria. The purpose of repeating the filtering process was to remove as few items as possible, taking into account the need to derive a more parsimonious model. Examination of the modification indices (MIs) revealed misspecifications affiliated with ‘Qs2’, ‘Tm2’, ‘Tm5’, ‘Tm9’, ‘Tm10’, ‘Tm11’, ‘Tm12’, ‘Tm13’, ‘Tm14’, ‘Qe2’, ‘Qe5’, ‘Qe6’, ‘Le4’, ‘Le6’, ‘Le7’ and ‘Le8’.

Sixteen out of thirty-three items in total were iteratively removed in the final model prior to further analysis. While the number of deleted items was relatively high compared with the total, their removal did not change the content of the construct as it was conceptualized. This is so because the retained items were significant and had standardized factor loadings higher than the recommended level of .50. In this way, the meanings of the factors were preserved. Table 19 provides a more detailed explanation of constructs based on their relative importance through the utilization of the standardized regression estimate pertaining to the items of quality of teaching that have been retained.

Table 19: Standardized Weights for Quality of Teaching

Code	Items	Standardized regression estimates	C.R (t)
Teaching methods			
Tm8	I use adequate learning materials	0.775	
Tm7	Course outlines used are consistent with the approved curriculum	0.812	17.271
Tm6	The student assessment is objective and trustworthy	0.884	18.807
Tm4	Feedback on students’ assignment and tests is given promptly after marking	0.699	14.534
Tm3	Learners’ communication skills are developed during the course of study as we allow them to express themselves	0.707	14.716
Tm1	The courses are taught in reference to the job market	0.678	14.038

Quality of assessment					
Qe4	The exams assess the cognitive skills	0.836			
Qe3	I use progressive assessments/continuous assessment tests	0.796			4.642
Qe1	The student assessment is consistent in time and between programs	0.739			0.773
Quality of staff					
Qs5	We usually get refresher courses in teaching skills	0.158			
	I have continued to study and add on my qualifications to handle course units				
Qs4	I am handling with confidence	0.721			3.133
Qs3	I use a minimum of 3 hours per week for each course unit to conduct Lectures	0.173			2.344
	Learners who attend my Lectures are equipped with skills relevant to field of				
Qs1	work	0.74			2.978
Learning environment					
Le5	We have better sound systems in our lecture rooms	0.624			
Le3	There is a quiet environment for reading	0.966			2.695
Le2	The school library is well located in a conducive environment	0.845			2.693
Le1	There is a better reading environment at the university	0.367			2.559
Achieved Fit Indices					
CMIN/DF	RMSE	GFI	CFI	TLI	NFI
	A				
3.442	0.077	0.91	0.945	0.93	0.925
(368.332 / 107)					

Source: Field Data, 2021

The results in table 19 indicate that the standardized parameter estimates for all the retained indicators were statistically significant ($p < .001$) and loaded on this factor. In addition, the results confirm the validity of the model with adequate model fit statistics for this construct measure. The composite reliability was 0.792, which is well above the acceptable level for scales tested in a new context (Nunnally and Bernstein, 1994); and the AVE is 0.803. The CFA results with high CR and AVE values show a strong reliability and validity of the final model with excellent model fit for this construct measure.

4.4 Correlation Analysis

A correlation analysis was conducted to determine the correlation between the quality of higher education and the employability of graduates from selected universities in the South Western region of Uganda. The purpose of this analysis was to establish the relationship between the study's objectives and its variables. The Pearson coefficients were utilized to calculate the extent, strength, and direction of a linear relationship. The outcomes of this examination are included in Table 20.

Table 20: Correlation Matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Curriculum Design (1)	1												
Curriculum content (2)	.262**	1											
Relevancy of the academic program (3)	.085	.296**	1										
Quality of the curriculum (4)	.724**	.692**	.641**	1									
Students' discipline (5)	.105*	.222**	.068	.182**	1								
Students' grades (6)	-.068	.430**	.368**	.307**	.104*	1							
Quality of students (7)	.029	.434**	.286**	.326**	.764**	.721**	1						
Quality of staff (8)	-.083	.458**	.245**	.251**	.123*	.370**	.326**	1					
Teaching methods (9)	-.003	.099*	.107*	.089	-.032	.045	.007	.108*	1				
Quality of assessment (10)	.037	.422**	.181**	.276**	.199**	.325**	.350**	.090	.031	1			
Learning environment (11)	-.074	.340**	.267**	.220**	.075	.351**	.279**	.705**	.149**	.207**	1		
Quality of teaching (12)	-.046	.507**	.310**	.323**	.139**	.420**	.369**	.721**	.524**	.521**	.798**	1	
Employability (13)	.127**	.797**	.425**	.594**	.213**	.679**	.589**	.543**	.175	.390**	.452**	.560**	1

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

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

Source: Field Data, 2021

The findings presented in table 20 indicate that there exists a noteworthy correlation between the employability of graduates and the quality of the curriculum ($r = 0.594$, $P < 0.01$), the quality of students ($r = 0.589$, $P < 0.01$), as well as the quality of teaching ($r = 0.560$, $P < 0.01$). Such results suggest that the employability of graduates is significantly linked to the aforementioned factors, namely the quality of the curriculum, quality of students, and quality of teaching. The empirical analysis reveals a positive linear relationship between these variables and the employability of graduates from selected universities in South Western Uganda. It can be deduced that there is a positive correlation coefficient ($r = 0.594$) between the quality of the curriculum and employability. This suggests that a well-designed curriculum that meets the needs of the industry and provides practical skills can significantly improve the prospects of graduates finding employment. The strong positive correlation ($r = 0.589$) between the quality of students and their employability indicates that students with strong academic abilities, critical thinking skills, and relevant knowledge are more likely to secure employment after graduation. The positive correlation coefficient ($r = 0.560$) between the quality of teaching and graduates' employability implies that effective teaching practices, and supportive learning environments contribute to better employment outcomes for graduates. However, among the components of constructs of quality of teaching, the teaching methods are insignificant to employability of graduates. This implies that the teaching methods used do not have any association with the employability of graduates.

4.5 Hypothesis Testing

A structural model was specified to assess the associations between employability, quality of curriculum, quality of students and quality of teaching. To achieve the parsimonious fit between the data and the theoretical model, all possible exogenous latent variables were allowed to covary in the proposed model. The regression models for testing the hypotheses were estimated in the form of:

$$Y_1 = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_n X_{ni} + \varepsilon$$

Where: Y_1 is the dependent variable

X_i are the independent variables

β_i are the regression coefficients

ε is the random variable, error term

The predicted model is as $EMPPPP = \beta_0 + \beta_1 QUCCC + \beta_2 QUSTD + \dots + \beta_3 QUTTTT + \varepsilon$

EMPPPP= Employability of Graduates as a dependent variable

QUCCC = Quality of Curriculum as an independent variable

QUSTD= Quality of students as an independent variable

QUTTTT= Quality of teaching as an independent variable

4.5.1 Testing the Direct Relationships between the Global Variables

Following the guidance by Hair, *et al* (2014) competing models were specified to test the hypotheses. The objective is to settle for the one that fits the data better. Specifically, four models were explicated – Model 1 without the control variables (age and Education). Model 2 with age and education level. Model 3 with age only and Model 4 with education level only. On examining the accept/reject criteria suggested by Morgan and Hunt (1994), even though the hypothesized paths were significant in all the models, Model 4 provided a better fit premised on the model fit statistics (χ^2 , df, p-value, RMSEA, CFI, NFI) as reported in table 20. Therefore, the study hypotheses are tested using the results in Model 4 (fig. 9)

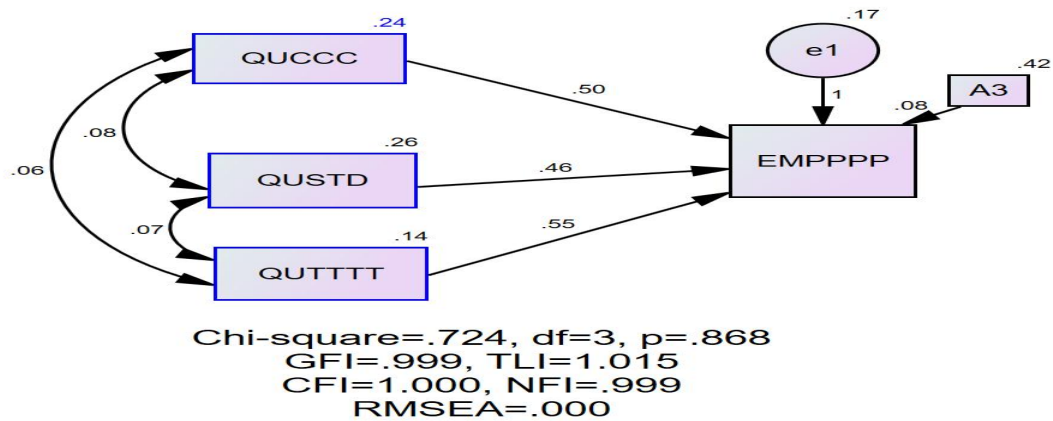


Figure 9: Model for components of quality of higher education and the employability of graduates. **Legend:** QUCCC = Quality of Curriculum, QUSTD= Quality of students, QUTTTT= Quality of teaching and EMPPPP= Employability of Graduates

The findings depicted in Figure 9 display the emergence of a developed model that establishes the relationship between the various components of quality of higher education: The quality of curriculum, quality of enrolled students, quality of teaching, and the employability of graduates. This was additionally demonstrated in Table 21, which presents the Hierarchical regression model outcomes.

Table 21: Hierarchical Regression Model

	Model 1			Model 2			Model 3			Model 4		
Variable	β	t	Sig.	β	t	Sig.	β	t	Sig.	β	t	Sig.
constant	3.072	39.979	0.000	-0.228	0.219	1.100	-1.031	-5.230	0.000	-2.205	-9.957	0.000
Age bracket	0.066	1.346	0.179	0.057	1.436	0.152	0.072	2.131	0.034	0.076	2.464	0.014
Quality of the curriculum				0.593	15.059	0.000	0.448	12.598	0.000	0.377	11.308	0.000
Quality of students							0.445	12.516	0.000	0.354	10.418	0.000
Quality of teaching										0.309	9.109	0.000
R	.066 ^a			.597 ^b			.730 ^c			.782 ^d		
R ²	0.004			0.356			0.533			0.611		
AdjR ²	0.002			0.353			0.530			0.607		
R ² -Change	-			0.352			0.177			0.078		
F-Change	1.813			226.768			156.645			82.981		
Sig. F-Change	0.179			0.000			0.000			0.000		

A .Dependent Variable: Employability

Source: Field Data, 2021

The regression models for testing the hypotheses were estimated in the form of:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_n X_{ni} + \varepsilon$$

Where:

Y_i is the dependent variable

X_i are the independent variables

β_i are the regression coefficients

ε is the random variable, error term

$$\text{Predicted model: } Emp = \beta_0 + \beta_1 Age + \beta_2 QUCCC + \beta_3 QUSTD + \beta_4 QUTTT + \varepsilon_i$$

where QUCCC = Quality of the Curriculum, QUSTD= Quality of students, QUTTTT= Quality of teaching and EMP= Employability of Graduates

$$\text{First model: } Emp = 3.072 + 0.066Age$$

$$\text{Second model: } Emp = -0.228 + 0.057Age + 0.593QUCCC$$

$$\text{Third model: } Emp = -1.031 + 0.072Age + 0.448QUCCC + 0.445QUSTD$$

Fourth/Final model

$$Emp = -2.205 + 0.076Age + 0.377QUCCC + 0.354QUSTD + 0.309QUTTT$$

Results of Model 4, the final model, as presented in Table 21, indicate that the control variable (age bracket) contributes a statistically significant relationship with employability of graduates. The value of the intercept in the model indicates that when all the independent variables considered in the investigation are held constant, the projected employability will amount to -2.205 ($B = -2.205$, $p < .01$).

4.5.1.1 Relationship between the Quality of the Curriculum and Employability of Graduates

Testing hypothesis was carried out to establish the relationship between the quality of the curriculum and employability of graduates. The outcomes are as indicated in Table 21. Hypothesis 1 was tested.

Hypothesis 1: The quality of curriculum has significant relationship with employability of graduates from selected Universities in South western Uganda.

Model 2 shows that an addition of quality of curriculum to the equation, accounts for 35.2% of the variance explained by the model (R^2 change= .352; $f\Delta$ = 226.768; $p<.001$). The findings further confirm a positive and significant relationship between the quality of the curriculum and employability of graduates (β = .0377; $p<.01$). This further implies that a unit increase in the quality of the curriculum would result in 0.377 units increase in employability of graduates. Therefore, we accept the hypothesis which states that *“the quality of curriculum has a significant relationship with employability of graduates from selected Universities in South Western Uganda”*. This is further explained by interview results based on the emerged themes as per the objectives of the study.

From the in-depth interviews, the theme of the quality of the curriculum and subtheme curriculum design and development, quality of program content and relevancy of the program emerged .

4.5.1.1.1 Curriculum Design

It is noted that good quality higher education leads to high chances of employability and good quality of the study program impacts the employability of the graduates. From the interview carried out, participants were asked on how they ensure that the Curriculum designs meet the needs of the labour market. The views of participants were captured: they suggested that practical and relevant content to the field of work should be the focus of curriculum development and be aligned to national development goals. They further highlighted the need for

skills training to be incorporated in the curriculum as the skills are important in the field of employment. Furthermore, periodic reviews of the curriculum were identified as one way of keeping it relevant and ensure conformity with Sustainable Development Goals (SDGs) and National Development Goals (NDP) (Participant 3).

It was reported that the curriculum development process involves various stages;

Lecturers conduct thorough groundwork, including stakeholder analysis and market research, before submitting the program to the Head of Department (HOD). The program goes through scrutiny by the HOD, dean, faculty committee, and Quality Assurance Office/Directorate to ensure compliance with NCHE standards. Subsequently, the Academic Registrar (AR) evaluates the program before submission to the Senate and finally to NCHE, which conducts expert evaluation for accreditation (Participant 4). Also, in agreement with the above, needs assessment, stakeholder analysis, involvement of the world of work, potential clients and employers, university staff, alumni, and students are sometimes carried out to come up with the curriculum (Participant 11).

From the views of the participants interacted with, they are in agreement that curriculum design and development is a process that involves all stake holders to keep it relevant to the job market.

This was further supplemented by results from the document analysis which indicated that there was an accredited program book by National Council for Higher Education that indicated the matrix of courses that are taught from first year to final year of study semester by semester. The course units were assigned Credit hours which reflected the time commitment and learning outcomes expected from students. There is a variation in the number of course units offered across different programs reflecting a diversity in course objectives. Computer Science, Information and Communication Technology have higher number of specialized course units while Bachelor of science with Education have general courses named Professional Courses and others grouped as per subject combinations for example Mathematics has its own courses and the same to Physics, Chemistry, Biology and Agriculture which is offered as double main. This is different from Business Administration courses that has interdisciplinary, core and specialized courses.

This clearly show that curriculum design is well thought of with clear objectives and arrangement of courses that generate specific skills that are needed by the labour market.

4.5.1.1.2 Quality of the Curriculum Content

It is noted that having high quality program content produces practical oriented graduates that fit well in the labour market, which increases their employability. In the interview, questions related to how the quality of the program content was aligned to promoting graduate employability were asked. Majority of the respondents demonstrated the measures implemented to ensure the program's quality, and established a connection to the skills that are in high demand in the current job market which include: practicability, being a problem solver and having a high ability to communicate. Different participants had this to say:

“Basic skills required by employers are identified and, in the program, and how to achieve them is shown. Specialists and practicing employers assess the program. Clearly stated and feasible learning outcomes are checked and included in the program. Curriculum, content and all activities should be at par with industries, stakeholder needs and current demands of the job market.” (Participant 1) In a way to ensure quality of program content, a team of assessors pass through the program and features /issues like course units to be taught, competences/skills that learners will acquire facilities available; are ascertained and sometimes a team from NCHE carries out spot checks.

In checking and guiding curriculum developers we emphasize the practical part of the content and skills training.” (Participant 2) In the same vein, another participant reported that as a way of ensuring quality of the program and promoting employability, relevant and up-to-date content is used in teaching and this is achieved through having regular reviews of the course material (Participant 12).

Also in considering quality content, industries are involved in design and delivery of the content where practical skills and hands-on exposure is emphasized to bridge the gap between theory and practice. This is done through industrial training, internship, school practice. Also, departments and faculties develop partnerships with some employers or industries (Participant 10)

This shows that quality of the program content is ensured by involving employers, reviewing curriculum regularly, using up-to-date materials and considering competencies the learners get from the program.

This was further supplemented by results from the document review which indicated that Practical skills were emphasized in the program. In Computer Science, Information, communication and technology, practical field projects and Internship were included while in science education, school practice and Practical Sessions in the laboratory were considered important. This ensured that practical skills are passed on to students with aim of making them employable.

4.5.1.1.3 Relevance of the Academic Program

Ensuring the program relevancy to labour market is key in promoting graduate employability. Concerning how to ensure the continuing relevance of the programs in the University to promote graduate employability, participants had different issues they reported. From the interviews, it was reported that;

Programs are accredited for 5 years and thereafter reviews are done Program self-assessment is carried out by institution, gaps identified, improvement plan shown and then review follows ” (Participant 1).

Another participant was in agreement with the above and reported that;

Regular curriculum review is conducted every five years to ascertain its relevance. This process involves departments, faculties, Quality Assurance Office (QAO), and Academic registrar review before submission to National Council for higher education for re-accreditation. In this process, there are regular consultations with the industry, professional bodies and employers. Curriculum development as a process includes industry repetitive to ensure that programs align with the skills and knowledge required by employers (Participant 5).

When asked whether the needs of the market are considered to keep the curriculum relevant, participant 9, remarked:

‘The curriculum review and evaluation process consider market demand, and the Quality Assurance Office is responsible for coordinating the process. Tracer studies are conducted to establish the employability of graduates. Education stakeholders such as current students, alumni, employers, education technocrats and the general public are involved in curriculum development. We also conduct labour market analysis, though not regularly, to establish changing trends in the labour market so as to have relevant programs’.

Asked how this could be achieved in the program, participant 13 reported that Industry input should be incorporated in the curriculum, practical skills provided, and emphasis on innovation and entrepreneurship among learners, using project-based learning and field placements advocated for.

Concerning the process followed to review the program, the participants opine thus:

The guidelines of NCHE govern regular curriculum review, and educational objectives must be met. International standards for computer courses are also

considered. A needs assessment is carried out. The relevancy of the program is considered with respect to what is required by employers (Participant 11).

The accreditation process requires the program to undergo review every five years, beginning with the third cohort. Feedback is provided by stakeholders, including students and the market, on program performance (Participant 12). Quality is guaranteed through a bureaucratic reporting process, starting from lecturers to HOD, Dean, AR, and NCHE (participant 13). “The program to start has to be initiated by lecturers via serious ground work and then submitted to the HOD. Stakeholder analysis is carried out and the market is looked out for. The program goes to the HOD, to the dean (that has a committee), to QAO (to ensure it is fit basing on the standards of NCHE), to AR, then senate, then council is informed and AR submits it to NCHE. The NCHE also evaluates it via expert evaluators to either reject or accredit it (Participant5.)

“.... Installing QA office and Bureaucracy in reporting ensures quality that is from lecturer to HOD to Dean to AR. We expect the graduates to have skills that help them to perform well at the work place. The skills needed are team work, effective communication, problem solving and respect for others (Participant 8).

Concerning the extent to which employability is integrated in the curricula, respondents

had this to say:

“Objectives of the program must be followed. Field-based activities like internship or field placement, research and tours are in place and case studies are used (Participant 10). Also one of the participants echoed that there are co- curricular activities at the University and some students get jobs because of their talents (Participant 8). Participant 11 said,” Yeah, they have co - curricular activities like sports and others which can help graduates be employed” Participant 10 echoed that employability is integrated because students are equipped with practical skills. Also participant 15 confirmed this by saying that employability is integrated because students are trained to work independently using different approaches of teaching that bring in problem solving skills and innovativeness.

The development and assessment of a curriculum is a rigorous undertaking that requires the involvement of numerous stakeholders in order to guarantee that graduates acquire the essential and applicable competencies for employment. The involvement of stakeholders plays a pivotal role in determining the content and relevance of the curriculum to graduate employability. Interviews with various individuals revealed their participation in the development of the curriculum. The process may involve needs assessment, stakeholder analysis, involvement of the world of work, potential clients and employers, university staff, alumni, and students; to create a well-crafted curriculum. The groups that participate in the needs assessment comprise potential clients and employers, academic staff, alumni, specialists in the field, students, the market, and key partners. The assessment of the curriculum is conducted by employers and departmental

personnel through meetings to ascertain the fulfillment of the objectives. However, the engagement of employers of the alumni, though desirable, is not frequently executed.

Involving industry and labor market participants is achieved through internships, stakeholder meetings, and follow-up on students. Furthermore, a Memorandum of Understanding (MOU) is occasionally signed with some sectors in the labor market. Employers who hire graduates during school practice provide verbal feedback. The requirements and syllabus of professional bodies, such as CPA, are taken into account, although they are not frequently involved in curriculum development. Staff members review programs and, if necessary, involve other experts. Feedback from participants suggests that curriculum developers must consider various factors to create programs that are relevant and promote graduate employability. Although all stakeholders in higher education are involved in curriculum development to produce employable graduates, the extent of their involvement varies. Thus, careful consideration of curriculum quality elements is essential in promoting graduate employability.

The findings indicate that the importance of the quality of the curriculum, from its inception to its execution, cannot be overstated. It is critical that the content and relevance of the academic programs offered are carefully considered to ensure the employability prospects of graduates. Therefore, the quality of the curriculum is upheld by all education stakeholders. A high-quality curriculum leads to a greater number of employment opportunities for graduates.

4.5.1.2 The Relationship between the Quality of Students Enrolled in the University and Employability of graduates

Testing hypothesis was carried out to establish the relationship between the quality of Students Enrolled in the University and employability of graduates. The outcomes are as indicated in Table 21 and Hypothesis 2 was tested. **Hypothesis 2: The Quality of students enrolled in the University has no significant relationship with employability of graduates from selected Universities in South Western Uganda.**

The addition of quality of students in Model 3, reveals an extra 17.7% of variations in employability of graduates at (R^2 Change =.177; $f\Delta=156.645$, $p<.01$). The model results also show that there is a positive and significant relationship between quality of students enrolled in the University and employability of graduates ($\beta= .354$; $p<001$). This further implies that a unit increase in quality of students would result into 0.354 units increase in employability of graduates. Therefore, we reject the null which states that *“the quality of students enrolled in the University has no significant relationship with employability of graduates from selected Universities in South Western Uganda”*. We accept the alternative hypothesis which concludes that there is a significant relationship between quality of students and employability of graduates. This is further explained by interview results based on the emerged themes as per the objectives of the study. From the Interviews carried out the theme of quality of students enrolled emerged based on objectives of the study and sub themes on students’ discipline and academic grades/performance.

High-quality higher education is widely believed to have a positive impact on the employability of graduates, with the quality of students' grades and discipline playing a crucial role in this regard. As part of the study, participants were queried on the extent to which the quality of the students enrolled in a program affects the employability of the program's graduates. The respondents reported on how ensuring quality of admission is done, package of programs offered, facilitators’ morals and ethics and grades acquired which affect the quality of students and their employability.

4.5.1.2.1 Quality of Students’ Discipline.

Employers value discipline as it reflects the students’ ability to adhere to rules, regulations and deadlines at the work place. Participants were asked how students’ discipline is ensured and they responded as indicated;

To promote academic discipline, students are oriented about university rules and regulations and are required to sign on these rules as a symbol of acceptance that they are the ones governing them while at University. Also lecture attendance, and

timely submission of coursework are closely monitored to ensure compliance. Lecturers' guidance, counseling, and support in promoting students' academic discipline is important (Participant 11). In support of the above, the University has Policies in place approved by the university council. There are university rules and regulations. Students are taken through some of these during orientation and there is also examination policy in place. All these are in students' hand books which are given to students upon registration (Participant 5). One of the heads of department echoed that the discipline of students in the University has a big impact on their learning, performance in class and at work, he noted that there are dedicated staff who handle issues concerned with discipline (participant 13).

Ensuring good morals and ethics of the University students is an all-around process which involves all stake holders. There are support services through, Dean of students, chaplaincy and others.

We have a strong chaplaincy and among its activities, it works on morals and ethics. Students are also having cross cutting courses like Christian Ethics and in some programs, ethics related to specific professions are taught. University Counselors, lecturers and others counsel students in the process of teaching them (Participant 14).

Ensuring students' discipline builds their sense of responsibility and accounts for whatever they do as they take ownership of their actions.

4.5.1.2.2 Quality of Students' Grades and Performance

In the process of recruiting for employment, students' academic grades signal their ability to perform. This was reported by one Head of department who had this to say;

We have minimum standards for each program as per NCHE and other regulatory bodies which are followed. There are guidelines and admission criteria and the Academic Registrar always ask us to verify. We access academic papers of students and look at essentials of students to undertake specific courses. We run accredited programs; have qualified lecturers using adequate teaching materials, have a clear assessment of the learning process, course works and exams are clearly assessed and Internship process with a clear guideline is followed. Also monitoring and evaluation of teaching and learning process. The discipline of students in the University has a big impact on their learning, performance in class and at work.

Also, another respondent reported that there are guidelines and admission criteria and the AR always asks us to verify suitability of admission. We access academic papers of students and look at their essentials to undertake specific courses (Participant 15). It was further reported that Universities run accredited programs, have qualified lecturers and use adequate teaching materials. The admission process is a rigorous one that ensures quality of admitted students and then in some departments, academic staff mentors the students (Participant 8)

From Quality Assurance office it was reported to ensure quality of students the university has a clear assessment of the learning process, course works and exams are clearly assessed and Internship process has a clear guideline which is followed. There is also monitoring and evaluation of teaching and learning process.

Concerned grading system, it is noted that there is a harmonized grading system and classification of awards set by NCHE and all Institutions were serve a copy to follow (Participant 5)

Based on the findings from interviews, the Universities have in place to ensure quality of students through discipline and grades and academic performance. To ensure that students achieve good grades, universities establish minimum academic standards for program admission and continuously monitor students' academic progress throughout the course of study.

This was further supplemented by results from the review of document from academic Registrar's office indicated that admission criteria documentation seen specify what is needed for each program. It was also noted that there was a specialized admission categories such as affirmative action and scholarship where more students in science programs are sponsored either by the Government or on Higher Education Students Financing board loan scheme compared to Business Administration course which is more private sponsored.

The importance of assessing students' academic proficiency to determine their suitability for specific courses, admission criteria and guidelines are strictly adhered to in order to ensure compliance with national and international standards. Overall, ensuring students' discipline and academic performance is critical to producing competent graduates who are well-equipped to succeed in the workforce.

4.5.1.3 The relationship between the quality of teaching and employability of graduates

Testing hypothesis was carried out to establish the relationship between the quality of curriculum and employability of graduates and the outcomes are as indicated in Table 21. Hypothesis 3 was tested.

Hypothesis 3: quality of teaching has no significant relationship with employability of graduates from selected Universities in South Western Uganda.

Finally, the addition of quality of teaching in the fourth model revealed an extra of 7.8% of the variations in employability of graduates (R^2 Change = .078; $f\Delta=82.981$, $p<.001$). The model further revealed that there is a positive significant relationship between quality of teaching

and employability of graduates ($\beta = 0.309$, $p < .01$). This further implies that a unit increase in quality of teaching would result in to 0.309 units increase in employability of graduates. Therefore, we reject the null which states that *“the quality of teaching has no significant relationship with employability of graduates from selected Universities in South Western Uganda”* and accept the alternative hypothesis and conclude that there is a significant relationship between quality of teaching and employability of graduates.

The predictive power of the variables in the regression model explain an overall to be 60.7% (R Square = .607) variation in the employability of graduates. This further implies that the remaining 39.3% is explained by other factors not considered in this study. This is further explained by interview results based on the emerged theme of quality of teaching as per the objective of the study and sub themes of quality of staff, teaching methods, quality of assessment and quality of learning environment. The quality of teaching in higher educational institutions is believed to have a relationship with the employability of graduates. As part of the study, participants were queried on the extent to which the quality of teaching affects the employability of the graduates. It has been reported through interviews that the quality of teaching has a significant impact on students' employability.

4.5.1.3.1 Quality of the staff

The quality of staff was looked at in terms of qualifications and expertise in their field, pedagogical skills and professional development. It was noted that effective and skilled staff have the ability to provide students with necessary knowledge and skills. Participants were asked on how the quality of staff influences students' employability.

The response was that there are set standards for someone to teach in Higher Institutions of Learning, ranging from the level of Teaching Assistant to Professor and University has qualified staff who help students get the necessary skills but we lack professors (Participant 1). Furthermore, another participant said that we have skilled staff that are able to aid learners

understand the complex concepts, give necessary guidance and mentorship, actively engage learners in the learning process and incorporate practical experience which improves employability of learners (Participant 8). In line with this, the other participants echoed that most of the our work done is hands on and it's what the labor market needs For instance, problem based learning helps students to solve real life problems. Presentations are also key and make students more confident and professionals (Participant 11). Hands on in computer labs and using practical experiments while teaching, simulations and handling problem-based assignments in groups. (Participant 10)

Majority of respondents said that practical skills transferred to learners through internships, field studies using group work, projects and school practice build learners' employability. This is done in the right way by using professional ad skilled staff.

This was further supplement by findings from document reviewed that showed that the staff deployed to teach have required qualifications and specialties as per the requirement of the program. In the analysis of the timetables, the faculty work load was noted to be balanced, there was also a balanced distribution of classes across the week apart from the weekend program where there is excessive clustering of lectures. For the case of the interdisciplinary courses, it was clearly shown that there was a good coordination between departments where time tables had little clashes. All this was a clear indication of the purposeful way to ensure the quality in teaching and learning.

4.5.1.3.2 Teaching methods

Different teaching approaches are used which involve student engagement, problem based and collaborative learning; all these helps develop employability skills. From in-depth interviews, participants reported that students are prepared to meet the challenges of the future for example jobs that do not exist and technology that is changing. Participants reported thus:

*We have foundation courses to help students adjust to any kind of work environment.
We do contextual projects in the final year, which aim at solving real life problems*

with ICT solution.” (Participant 12). In line with the above, another one echoed that Supervised Occupational Educational Programmes (SOEP) are offered i.e. field attachments and practical experiments, practical and case study assignments, group work, continuous assessments, projects and class presentations (Participant 11). Participants were again asked how the used approaches are linked to the labor market. They reported that using problem-based learning helps students to solve real life problems and presentations are also key. (participant 8). In the same vein, another one said, “Yes they are linked because Labour markets want active people thus by engaging them, it improves the quality of their students, who are able to build team spirit through group work.” (participant 12)

From the interviews carried out, different teaching approaches and methods were mentioned: Blended learning (online and face to face), internships and study tours, Problem based learning (PBL), Peer teaching, Group work and presentations, Supervised occupational educational programming (SOEP) i.e. field attachments and practical experiments. The methodology used influences acquisition of employability skills by developing critical thinking and problem-solving abilities amongst students.

4.5.1.3.3 Quality of assessment

Results of students’ assessment are commonly used by employers as a signal of one’s ability in placement for employment. Participants reported that Proper assessment including tests and examinations are done per course unit and students get feedback and know their abilities and this improves their skills and employability (participant 13). Also, one of the respondents reported that accurate *evaluation of students’ skills, knowledge and abilities aid employers in making the right decision on whom to employ* (participant 8).

Also, from the review of external examiner’s reports seen, it was noted that there was balanced marking and grading by most of the lecturers, students’ work reported on project and research reports was not up to the required standards. Furthermore, the external examiner recommended that the curriculum should incorporate the current trends in development and show the linkage between the Community, industry and the Academic world. This calls for improvement in teaching and assessment method.

4.5.1.3.4 Learning Environment

The learning environment in the University is composed of: physical infrastructure (lecture rooms, Laboratories, Library) academic and social support system such as tutoring and mentoring. From the in-depth interviews carried out, it was established that the universities have in place lecture rooms, well stocked libraries and laboratories which are used by students. However, mentoring was said to be carried out by individual lecturers.

One respondent said that; *“we encourage research and innovations and train them how to write CVs, give them the relevant competitive and skills; hence they are able to adapt accordingly. Additionally, entrepreneurial skills and innovations which help students to handle difficult situations using a wider understanding of real-world experiences are also passed on.”* (Participant 13). Another key informant said that *the university has a lot of facilities that are used by students to help them get all necessary skills that would put them in strategic positions for employment* (Participant 5). *There are lecture rooms and computer laboratories with internet available for students* (participant 6).

Concerning students' mentorship participant 11 and others echoed that it is important but not much effort has been given to it. There is no formal arrangement for mentorship.

The significance of research, innovation, and entrepreneurship in empowering students to tackle complex situations through a broader understanding of real-world experience has been emphasized. Fundamental courses are at hand to facilitate students in adapting to any work environment. Final-year contextual projects are purposed towards resolving actual work-related problems with the aid of ICT solutions. The implementation of problem-based learning and presentations in education has proven to be advantageous for students. Additionally, the labor market actively seeks individuals who possess these skills, thereby enhancing their employability. From the qualitative findings, it is evident that the significance of the quality of teaching cannot be overstated in terms of its impact on the employability of graduates. The methods employed in this regard bear a direct correlation to the labor market, as they involve independent work at times, as well as collaborative learning among students. Such an approach facilitates the development of problem-solving and critical thinking skills necessary for finding solutions to various challenges, which is an essential attribute actively sought after by employers.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.0 Introduction

This chapter covers research findings as presented in chapter 4 and then discussions. The results are discussed systematically as per the objectives of the study.

5.1 The Relationship between the Quality of the Curriculum and Employability of Graduates

The first objective of this study was to determine the relationship between the quality of the curriculum and employability of graduates from selected universities in southwestern Uganda. The hypothesis here was framed: The quality of the curriculum has no significant relationship with the employability of graduates from selected universities in South Western Uganda. The results revealed that there is a positive significant relationship between quality of curriculum and employability of graduates from selected universities in South Western Uganda.

This implies that a positive change in the quality of the curriculum is associated with a positive change in the employability of graduates ($\beta = 0.377$; $p < 0.05$) and the reverse is true. This revelation is in tune with the findings of Olujuwon and Olubukola (2020) in the study on the curriculum and employability skills of tertiary Institutions graduates. It was established that the curriculum and graduate employability are significantly correlated. The quality of the curriculum was measured in terms of curriculum design, curriculum content and relevancy of academic program. The study showed that curriculum content and relevancy of the academic program are significant at 99% level of confidence implying that they were predictors of graduate employability. However, curriculum design was not significant in enhancing the graduate employability in this study.

This shows that there is a progressive and significant association between quality of the curriculum and employability of graduates. More so, any improvement in learners' skills such as the development of learners' ability to work with others as a team or managing change at work will result into improved graduate employability; implying that curriculum designers should ensure that in training students at the university, team work spirit and managing change at work must be emphasized. Curriculum content shows that there is a progressive and significant relationship between curriculum content and employability of graduates.

This means that any enhancement in the information, facts, concepts, principles and themes to be learned will improve the levels of graduate employability. Graduates' capacity to accept and do work assigned to them, improved planning skills and confidence in problem solving skills will improve. This is again in agreement with the findings of Olujuwon and Olubukola (2020) whose analysis showed that curriculum was positively correlated with graduate personal skills.

Curriculum content that is relevant to the work environment develops skills that aid graduate employability. This is in tandem with the work of (Mabonga, 2021; Laura, 2013), who noted that skills development is crucial through competence based curriculum and development of core skills through educational content. Relevancy of academic programs shows that there is a progressive and significant association with graduate employability. This means that any enhancement in guiding learners in handling and doing all activities at the work place, together with having courses that are relevant to the needs of the labour market will translate into improved employability status of graduates. This is in line with Kagaari (2007), Sahade and Ngampo (2021) who noted that the practical training, curriculum followed in teaching and industrial training are relevant to the work environment and improve employability of graduates.

Furthermore, (Pisarik and Whelchel, 2018) concur with relevancy of academic program in promotion of employability and noted that educational curricula not only serve as a way of acquiring occupational knowledge and skills but also intellectual skills which are essential for

career self-management and keeping the job acquired. Progressive and significant association between academic programs and graduate employability implies that the learning experience is related to the learner's real-life experience by having an effect on employability of the graduates. Using coherent and up-to-date programs, giving guidance in handling activities and work plans, considering relevant needs of the labour market, formulation of work outcomes and program activities increases the chances of graduates to be employable. It is upon higher education planners and implementers to make sure that the program of teaching has to be relevant to the market need so as to increase the graduates' chances of employability.

More so, One Head of Department reported that curriculum is scrutinized at every stage and even when it is being implemented, it is monitored to ensure that its quality does not divert from the expectations of employers and the labour market at large. Continuous review of the program to keep it relevant is a must as a requirement by National Council for Higher Education (NCHE). After years of accreditation, a programme has to be reviewed and taken back for re-accreditation. This aligns with the findings of Hogg (2018) in their research on Continuous quality improvement in higher education.

They identified various strategies that can be implemented, and concluded that aligning quality education with the needs of the labor market enhances employability. This finding is also supported by Olujuwon and Olubukola (2020), who conducted a study on the correlation between curriculum and employability skills of tertiary institution graduates. They found that program objectives and outcomes are closely linked to employability and are relevant to the world of work. Similarly, Jackson and Bridgstock (2021) investigated effective methods to enhance graduate employability. They found that co-curricular and extra-curricular activities play a significant role in promoting employability. Another study, conducted by Støren and Aamodt (2010), focused on the quality of higher education and its impact on the employability of graduates. Their findings revealed the latter is a direct outcome of the study program, and that the characteristics of the program greatly influence its value in the workplace.

However, the ever-changing dynamics of the labor market render the quality of the curriculum less significant in determining the employability of graduates. Sometimes, the curriculum is not updated regularly, which diminishes its relevance. Additionally, individual factors such as networking and motivation can overshadow the quality of the curriculum and result in an insignificant association with graduate employability (Tomlinson, 2012). Furthermore, employers may have higher expectations that go beyond the coverage of the curriculum. Moreover, the lack of consensus on the definition of employability further complicates its relationship with the quality of the curriculum. Even if the curriculum is of high quality, it may still be insignificant in terms of graduate employability (Smith *et al.*, 2018).

5.2 The Relationship between the Quality of Students enrolled in the university and Employability of Graduates

The results from the study revealed that there was a positive significant relationship between quality of students enrolled in the university and employability of graduates from selected Universities in South Western Uganda. This implies that a positive change in the quality of students, is associated with a positive change in employability of graduates ($\beta = 0.354$; $p < .05$) and the reverse is true. The evaluation of students' quality was conducted by assessing their discipline and grades. The research demonstrates that both factors are statistically significant at a confidence level of 99%, indicating that they serve as predictors of graduate employability.

This indicates that there is a consistent and noteworthy correlation between the quality of students and the employability of graduates. Additionally, the grades of students display a progressive and meaningful connection with their employability status. Thus, an enhancement in academic performance and degree classification could lead to an improved employability status for graduates. The findings are consistent with the research conducted by Zhang *et al.*, (2022), who observed that the grades achieved by students are closely related to their employability.

Furthermore, this corresponds with the study by (Kowang *et al.*, 2022) that explored the correlation between teaching quality factors and employability among Technology Management

students, revealing a significant positive relationship between learner quality and employability. Additionally, this aligns with the research by (Deng, 2020; Ekaviana and Nurkhin, 2016), which found that the competency quality of college students, encompassing knowledge, skills, social roles, self-awareness, characteristics, and motivation, also impacts their employability. This concurs with the conclusions drawn by Santosa *et al.* (2021), who discovered a significant positive relationship between students' discipline and their employability skills.

This is in agreement with the study by Tentama *et al.*, (2019) on Independence ,Discipline and Employability of Vocational High School Students, who established that there was a very significant influence between discipline and employability of graduates. Discipline plays a very significant role in a graduate's job performance and maintenance. In his other research (Tentama *et al.*, 2019)Tentama and Abdillah (2019) in the study to determine the relationship between academic achievement and self-concept with student employability, it was found that there was a significant relationship between academic achievement and self-concept, which has a positive relationship with employability.

Although the study was carried out in a Vocational High School from Accounting class, marketing and visual communication design class,the findings were in agreement with this study. The findings of data analysis indicate that students' discipline and grades or achievement can be emphasized to improve the graduates' employability. Other scholars say that it is not only high achievement but also other soft skills, but good academic performance is valued in the public sector (Velasco, 2012). Also in the thesis by (Nelson, 2008) on the study to establish the relationship between work place skills and grade point averages as predictors for employment, he asserted that work place skills and grade point averages are predictors of employment.

The determination of students' ability to keep up with the ever-changing working conditions is aided by the workplace readiness skill and their grade point averages. Through interviews conducted, it was noted by the respondents that the quality of students is considered from the time of admission into the university up until they graduate and join the labor market.

The respondents reported on the criteria for ensuring the quality of admission, the package of programs offered, facilitators' morals and ethics, and grades acquired, all of which affect the students' quality and employability. This is consistent with the academic policies and guidelines of BSU, 2019, MUST, 2020, Admissions policy, MUST, 2020 Quality Assurance policy, and guidelines that clearly specify the admission criteria and teaching and learning processes. All these are aimed at ensuring the good quality of students by examining the input and output of the graduate.

Furthermore, the students' academic performance in relation to employability is supported by Pinto and Ramalheira, 2017, whose work indicates that high academic performance combined with participation in extracurricular activities result in higher perceived employability of graduates. It is also noted that first-class degree holders have a better advantage in getting jobs as there are high chances of being shortlisted even when the competition is very high (Manjunath, 2020). Similarly, (Win, 2023) noted a moderate positive correlation between academic performance and employability of graduates in the job market. The grade accumulated by graduates significantly affects the employment alignment (Denila *et al.*, 2020). Discipline, in the form of regular class attendance, timekeeping, respect for authority, and adherence to rules and regulations, has a positive relationship with students' academic performance (Andala and Sibomana, 2021; Simba *et al.*, 2016). Moreover, academic influence determines the level of graduates' employability (Pinto and Ramalheira, 2017; Manjunath, 2020).

5.3 The Relationship between the Quality of Teaching and Employability of Graduates

Upon conducting data analysis and interpretation, it was discovered that a positive and significant relationship exists between the quality of teaching and the employability of graduates from selected universities in South Western Uganda. This implies that a positive change in quality of teaching, is associated with a positive change in employability of graduates ($\beta = 0.309$; $p < .01$) whereupon the reverse is true. In this study, the quality of teaching was evaluated based

on the quality of staff, teaching methodologies, quality of assessment, and the learning environment.

The study additionally demonstrated that the quality of staff, quality of assessment, and learning environment are statistically significant at a 99% level of confidence, inferring that they were predictors of the employability of graduates. Furthermore, the methods of teaching in this study was found to be an insignificant predictor of employability, indicating that it does not influence the employability of graduates. It is evident from the research that there is a consistent and noteworthy association between the quality of teaching and the employability of graduates. It follows that any enhancement in the quality of staff, quality of assessment, and methods of teaching would translate into an improved graduate employability.

Higher institutions of learning should prioritize the implementation of refresher courses in teaching skills, the adoption of teaching methodologies that equip learners with skills that are pertinent to their field of work, and the continued education of staff to be proficient and confident in handling course units. This supports the findings of Khalid *et al.*'s (2014) research on the significance of soft skills in an industrial training program, as employers agreed that such training plays a vital role in enhancing employability skills. In this study, the teaching methodology was practical field-based, where learners gained hands-on experience in the skills required in the labor market.

This corresponds with a study on the influence of the Multi-teaching strategy intervention program on college students' absorptive capacity and employability, which established that problem-based learning positively correlates with student employability (Peng *et al.*, 2021). In line with this study, research on the correlation between active learning and employability skills in TVET further supports problem-based learning, as it develops students' employability skills (Rohanai *et al.*, 2020). This is also supported by findings of (Agemaiti *et al.*, 2015 :Kowang *et al.*, 2022) who concluded that quality of teaching enhances students practical aspect and employability

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This chapter sums up the major findings of the study. It is composed of three main sub headings which include; conclusions, recommendations and areas for further study.

6.1 Conclusions

The primary objective of this investigation was to examine the relationship between the quality of higher education and employability of graduates from selected Universities in South Western Uganda. The conclusions reached from this study are presented in alignment with its predetermined objectives.

6.1.1 The Quality of the Curriculum and the Employability of Graduates

From the research findings on the first objective and the hypothesis of the study, it was concluded that the quality of the curriculum is significantly positively associated with the employability of graduates from selected universities in South Western Uganda. This was revealed by Pearson Product moment correlation coefficient and regression analysis, by considering the constructs of quality of curriculum; curriculum content, relevancy of academic program and curriculum design in their order of magnitude of correlation coefficient. It is again concluded that the content of the curriculum, relevancy of academic program and curriculum design are positively (highly, moderately, low) associated with the level of employability of graduates respectively. Thus, if Universities want to increase employability of their graduates, they need pay much attention to the quality of the curriculum which includes curriculum content, relevancy of academic programs and curriculum design. Therefore, in building up graduates with employable skills, the quality of the curriculum is crucial in Higher education.

Similarly, the results indicated a weak positive relationship between curriculum design and employability of graduates from selected universities in south western Uganda.

It is also noted that curriculum design is a process that involves many educational stakeholders and employers who have to be involved. Regular reviews of the curriculum have to be continuously done to keep it relevant to the needs of the labour market, thus promoting graduate employability.

6.1.2 The Quality of Students Enrolled in the University and the Employability of Graduates

From the second objective of the study and the hypothesis, it was concluded that there is a significant relationship between the quality of students and the employability of graduates from selected universities in South Western Uganda. This was revealed by Pearson Product Moment Correlation coefficient that showed the significance and linear regression analysis. From the research findings, it was revealed that there is a positive significant relationship between quality of students and employability of graduates from selected Universities in South Western Uganda. The study showed that the quality of students in terms of students' discipline, academic grades acquired by students and the class of the degree translates into improved employability status of the graduates. The grades acquired are a signal of the academic performance and performance at work to the employer. Good performance while at University increases the chance of employment after graduating.

Similarly, considering dimensions of the quality of students, the results indicated a weak positive relationship between students' discipline and employability of graduates from selected universities in South Western Uganda. While this connection is not very strong, it highlights the importance of considering students' discipline as one of the factors that may influence their employability. It is also noted that the role of the chaplaincy in the University is crucial in raising graduates who are morally up right. Continuous assessment, which tests skills and application is much encouraged as it keeps students updated with the market needs.

Therefore, in elevating graduates with employable skills, the quality of students enrolled in the university is crucial in Higher education.

6.1.3 The Quality of Teaching and the Employability of Graduates

From the research findings, it was concluded that there is a positive significant relationship between quality of teaching and employability of graduates from selected universities in South Western Uganda. Quality of teaching leads to imparting skills and competencies that are relevant in the world of work hence improving the employability level of graduates. By considering the constructs of quality of teaching, it is also concluded that the quality of staff, quality of assessment and learning environment have a positive significant relationship with employability of graduates from selected universities in southwestern Uganda. Furthermore, the findings also indicate an insignificant relationship between teaching methods employability of graduates in selected universities in south western Uganda. It does not matter the methodology used to teach but teaching staff, quality of assessment and learning environment is crucial. It is also echoed that the availability of facilities and competent qualified staff using problem-based teaching and having a formal students mentorship program in place builds graduates' employability. Therefore, in building up graduates with employable skills, quality of teaching is crucial in higher education.

6.2 Recommendations

To achieve improved employability of graduates, the researcher suggests some strategies that can be used to tackle the employability problem of graduates, not only in South Western Uganda but also in Uganda and the world at large. The recommendations are based on quality of the curriculum, the quality of students and the quality of teaching.

The quality of the curriculum has an impact on the type of students that universities produce and enhancing the employability of graduates. Employers prefer graduates who display

exemplary behavior and dedication. The exceptional good academic grades and moral standards of students is signal for potential employers to understand candidates' abilities and achievements. This outstanding performance may be as a result of the standard of teaching in which the paramount importance lies in the quality of staff and the quality of assessment.

Institutions of higher education ought to employ a commendable set of evaluation standards and approaches that effectively apply the acquired competencies.

This study recommends:

1. The continuous periodic reviews of the curriculum, so as to keep it up-to date and relevant to the labour market.
2. The curriculum reviews and development should always involve industries, employers, professional bodies and other educational stake holders to align the curriculum with labour market needs and skills valued highly by employers.
3. Within higher education institutions, Serious attention should be given to students' academic performance and conduct to enhance their employability
4. The universities should continue to invest in faculty development to enhance teaching skills. This will aid learners to get more engaging and effective learning experiences.
5. There should be increased investment in infrastructure such as having modern lecture rooms, well equipped Laboratories and other facilities to enhance purposeful teaching and learning.
6. Students' mentorship programs in universities should be given the necessary attention and be among the key activities at the departmental level.

6.3 Contributions of the Study

The study considered number issues in the context of employability of graduates in selected universities in south western Uganda. In regard to the quality of higher education and employability of graduates from selected universities in south western Uganda, the most notable

one is that out of the employability of graduates, 60.7% is explained by the variables in the model where by 35.2% is explained by the quality of the curriculum and 17.7% by quality of students, 7.8% is by quality of teaching while 39.3% is explained by other factors. Furthermore, in the dimensions of quality of higher education under quality teaching, methods of teaching has been established to be insignificant among graduates in this area.

The empirical findings of this study contribute to the existing body of knowledge in the field of higher education and employability. They provide novel empirical evidence to the literature on the quality of higher education and employability of graduates in general and South Western Uganda in particular. The combination of the Human Capital Theory and Signaling Theory in explaining graduate employability is also employed in the field of education.

The curriculum plays a pivotal role in higher education as it determines the knowledge and skills acquired by students during their studies. A well-designed curriculum of high quality meets the demands of the job market, offers interdisciplinary learning, and ensures that graduates possess updated and relevant knowledge and skills. It should incorporate a balanced fusion of theoretical concepts and practical applications, enabling students to foster critical thinking, problem-solving abilities, adaptability, and hands-on experience, all of which markedly enhance graduates' employability.

Overall, the quality of higher education has a positive significant relationship with employability of graduates indicated by the quality of the curriculum, quality of students and the quality of teaching which are significant in determining employability of graduates in selected universities in South Western Uganda.

6.4 Implications of the Study

The implications of the study conducted on the quality of higher education and the employability of graduates in selected universities in south western Uganda illustrate the interconnected nature and significance of three primary factors: the quality of the curriculum, the quality of the students, and the quality of teaching. To enhance the employability of graduates, it

is important to look into the issues concerning the above factors. This can be done through careful evaluation and reviewing of the curriculum to ensure its relevancy to the job market, having quality students in all aspects, and the provision of continuous professional development opportunities for lecturers to enhance their skills in teaching and guiding students.

It is important for universities to prioritize the enhancement of the curriculum to ensure its alignment with the demands of the job market. This can be achieved by regularly evaluating and revising curricula to incorporate emerging skills and knowledge that are sought after by employers. Establishing stronger collaborations with industries can provide valuable insights into their workforce requirements, enabling the development of programs that are tailored to meet the evolving demands of the work environment. Through these measures, graduates will possess the requisite skills and knowledge, thereby bolstering their employability. Policymakers should prioritize the development of a comprehensive curriculum that encompasses both theoretical knowledge and practical skills by incorporating input from industry leaders, employers, and academic experts in the process of designing and reviewing curricula.

Another potential policy implication is the promotion and implementation of extended internship and work-integrated learning programs, lasting a minimum of four months in fields relevant to the students' areas of study. These programs provide students with the opportunity to gain practical experience and apply their theoretical knowledge in real-world settings. Encouraging greater student participation in internships or field based learning can bridge the gap between academia and industry, thereby enhancing the employability of graduates.

In terms of the quality of students as an additional pivotal aspect that influences the quality of higher education, it is important for universities to ensure that students have access to diverse support services, including the spiritual component through chaplaincy, academic guidance, official mentorship initiatives, and vocational guidance. The provision of such services may help students in developing the essential competencies that are crucial in world of work.

This study underscores the dimensions of quality curriculum, quality students, and quality teaching that greatly influences the employability of graduates in selected universities in south western Uganda. The model has been created as depicted in Figure 10, which establishes the relationship between the various components of the quality of higher education, namely: the quality of the curriculum, quality of enrolled students, quality of teaching, and the employability of graduates.

Effective teaching goes beyond imparting knowledge. It also involves inspiring students, fostering critical thinking, and nurturing a passion for lifelong learning. A lecturer who is an expert in their subject matter and can create an engaging learning environment stimulates intellectual growth and serves as a mentor. Mentors provide valuable insights into industry trends; connect students with professional networks, and offer recommendations or references for job opportunities.

The central proposition of the investigation into the quality of higher education and the employability of graduates in selected universities in the southwestern Uganda focused on examining the relationship between the quality of education provided by universities and the subsequent employability of their graduates. This was achieved through dissecting facets such as the quality of the curriculum, the quality of students, and the quality of teaching with the objective of obtaining profound insights into how these variables impact the capability of graduates to secure employment. This thesis posits that there is a direct positive correlation between the quality of higher education and employability of graduates.

6.5 Areas for further research

1. It is suggested that further study can be done on comparative studies between private and Government universities, Science and Arts based Programs.
2. Apart from university graduates, employability of Diploma holders from Business and Technical colleges can also be investigated.

Their findings would help higher education stake holders to focus resources on and put emphasis on solving the problem of mismatch and unemployment of graduates.

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APPENDICES

Appendix A: SURVEY QUESTIONNAIRE FOR GRADUATES

Dear Sir/Madam

I am Milton Rwiita, Nuwabimpa carrying out a research study entitled “*The Quality of Higher Education and Employability of Graduates in selected Universities in South Western Uganda*”.

This is part of educational fulfillment leading to an award of Doctor of Philosophy (PhD) in Development Management of Bishop Stuart University. This survey is designed to assess your impression about the quality of higher education and employability of graduates in selected universities in south western Uganda, how you perceive the quality of curriculum, quality of students, quality of teaching, and employability of graduates for the last three years (2017 – 2019). We are conducting this survey which is voluntary and all responses are confidential. The outcome of the survey is to develop and refine quality of higher education to produce employable graduates. So please are you willing to take part in answering this questionnaire?

Thank you very much for your time and assistance.

Yours faithfully,

Milton Rwiita, Nuwabimpa

Student

ID Number.....

BACK GROUND INFORMATION Kindly tick (✓) the most appropriate response.

A1. Type of organization you are working in Private (1) Government (2)

A2. Gender

Male	Female
1	2

A3. State your age bracket

Below 20years	20years -30years	30 years-40year	40years –50 years	Above 50 years
1	2	3	4	5

A4. Which University did you graduate from?

BSU

MUST

A5. Indicate the program studied at the University

Bachelor of Computer Science	Bachelor of Information Technology	Bachelor of Science with Education	Bachelor of Business Administration
1	2	3	4

A6. What is the nature of employment you are doing?

Permanent	On contract
1	2

A 7 Are you happy with the job you are doing?

1) Yes

2) **NO**

A8 How long did you take to get the first job after graduation?

Less than 6 months	Between 6 and 12 months	More than 1 year
1	2	3

B. QUALITY OF THE CURRICULUM

Kindly tick the appropriate response that applies to you on a scale ranging from **1** strongly disagree (SDA), **2** Disagree (DA), **3** Not sure (NS), **4** Agree (A) to **5** Strongly Agree (SA).

	Statements	SDA	DA	NS	A	SA
CODE	The Curriculum Design.....					
Cd1	developed my problem solving skills	1	2	3	4	5
Cd2	sharpened my critical thinking skills	1	2	3	4	5
Cd3	improved my skills in written communication	1	2	3	4	5
Cd4	improved my skills in oral communication	1	2	3	4	5
Cd5	developed my ability to use ICT	1	2	3	4	5
Cd6	...helped me in counting and application numbers	1	2	3	4	5
	The Curriculum content					
Cc1	...developed my capacity to accept and do work assigned to me	1	2	3	4	5
Cc2	...helped me to develop the ability to plan my own work	1	2	3	4	5
Cc3	...developed my ability to work in a team with others	1	2	3	4	5
Cc4	...helped me to be confident in tackling and solving unfamiliar problems.	1	2	3	4	5
Cc5	...helped me in managing change at work	1	2	3	4	5
Cc6	...helped me to developed time management skills	1	2	3	4	5
Cc7	...improved my conduct at the work place	1	2	3	4	5
	Relevancy of the Academic program					
	The academic program has....					
Ra1	...guided me in handling all my activities at the work place	1	2	3	4	5
Ra2	...helped me to program my activities	1	2	3	4	5
Ra3	... helped me in formulating work outcomes	1	2	3	4	5
Ra4	...have courses which are coherent and up to date	1	2	3	4	5
Ra5	... specified weeks of study and hours allocated to each topic	1	2	3	4	5
Ra6	...been relevant to the needs of the Labour market	1	2	3	4	5

C. QUALITY OF STUDENTS

Kindly tick the appropriate response that applies to you on a scale ranging from **1** strongly

disagree

(SDA), **2** Disagree (DA), **3** Not sure (NS), **4** Agree (A) to **5** Strongly Agree (SA).

	Statements	SDA	DA	NS	A	SA
CODE	Students' Discipline					
Sd1	Students who had never appeared before the disciplinary committee easily got jobs.	1	2	3	4	5
Sd2	Well behaved students get employment recommendations from their lecturers	1	2	3	4	5
Sd3	Academically excellent and well-behaved students are retained by the university	1	2	3	4	5
Sd4	As a student, my morals and ethics greatly influence my chances of getting employed	1	2	3	4	5
Sd5	Students who were well behaved got jobs easily.	1	2	3	4	5
	Students' grades					
Sg1	I was admitted on programs of my choice	1	2	3	4	5
Sg2	I had at least 2 principal passes at A-level	1	2	3	4	5
Sg3	I joined University with good grades	1	2	3	4	5
Sg4	Employers prefer workers with good academic records	1	2	3	4	5
Sg5	The class of the degree was considered by my employers in recruitment	1	2	3	4	5
Sg 6	My entry grades influenced my performance at university	1	2	3	4	5
Sg 7	The grades I got at the end of my programme enabled me to get employment	1	2	3	4	5

D. QUALITY OF TEACHING.

Kindly tick the appropriate response that applies to you on a scale ranging from **1** strongly disagree

(SDA), **2** Disagree (DA), **3** Not sure (NS), **4** Agree (A) to **5** Strongly Agree (SA).

	Statements	SDA	DA	NS	A	SA
CODE	Quality of Staff					
Qs1	The Lecturers quipped me with the right skills	1	2	3	4	5
Qs2	The Lecturers had the right knowledge	1	2	3	4	5
Qs3	Lecturers always taught us at least 3 hours per week for each course unit	1	2	3	4	5
Qs4	The Lecturers had the right abilities	1	2	3	4	5
Qs5	The Lecturers had the right qualifications	1	2	3	4	5
Qs6	The Lecturers went through training of trainers	1	2	3	4	5
	Teaching Methods					
Tm1	The course was taught in reference to the job market	1	2	3	4	5
Tm2	The minimum of 8 weeks for school practice / internship were fully utilized and supervised	1	2	3	4	5
Tm3	My communication skills were developed during the course of Study as the lecturer allowed self-expression in class	1	2	3	4	5
Tm4	Feedback on students assignment and tests was given promptly by lecturers	1	2	3	4	5
Tm5	I used to participate in practical lectures	1	2	3	4	5
Tm6	The student assessment was objective and trustworthy	1	2	3	4	5
Tm7	Course outlines were given to students	1	2	3	4	5
Tm8	Lecturers used adequate learning materials	1	2	3	4	5
Tm9	There was a special program put in place at the department for weak students	1	2	3	4	5

Tm10	The department provided students with knowledge of education patterns, placement / internship opportunities	1	2	3	4	5
Tm11	Team work was encouraged in teaching	1	2	3	4	5
Tm12	Experiential learning was used in teaching and helped me get skills	1	2	3	4	5
Tm13	Involvement of students and working as a group to develop team work	1	2	3	4	5
Tm14	Guest speakers from the public were invited to give lectures.	1	2	3	4	5
Quality of Assessment						
Qe1	The student assessment was consistent in time and between programs	1	2	3	4	5
Qe2	The students assessment was adequate and efficient	1	2	3	4	5
Qe3	I used to have progressive assessments/continuous assessment test	1	2	3	4	5
Qe4	The exams assessed the cognitive skills	1	2	3	4	5
Qe5	The exams assess the skills taught	1	2	3	4	5
Qe6	The exams assess the knowledge acquired	1	2	3	4	5
Qe7	The exams had clear instructions	1	2	3	4	5
Learning Environment		1	2	3	4	5
Le1	There was a good reading environment at the university	1	2	3	4	5
Le2	The University library was well located in a conducive environment	1	2	3	4	5
Le3	We had a quite environment for reading	1	2	3	4	5
Le4	The internet connection was always stable	1	2	3	4	5
Le5	We had a sound system in our lecture rooms	1	2	3	4	5
Le6	Technology was used to assist learning	1	2	3	4	5
Le7	The lecture rooms were big enough to accommodate all students in class	1	2	3	4	5
Le8	There was soundproof in our lecture theatres	1	2	3	4	5

Thank you for participating in this research

Appendix B: SURVEY QUESTIONNAIRE FOR LECTURERS

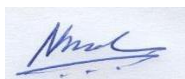
Dear Respondent,

I am Milton Rwiita, Nuwabimpa carrying out a research study entitled “*The Quality of Higher Education and Employability of Graduates in selected Universities in South Western Uganda*”.

This is part of educational fulfillment leading to the award of Doctor of Philosophy (PhD) in Development Management of Bishop Stuart University. This survey is designed to assess your views on the quality of higher education and employability of graduates in selected universities in South Western Uganda, how you perceive the quality of curriculum, quality of students, quality of teaching, and employability of graduates for the last three years (2017 – 2019). We are conducting this survey which is voluntary and all responses are confidential. The outcome of the survey is to develop and refine quality higher education for highly employable graduates for sustainable economic development. We are requesting you to take part in answering this questionnaire. So, please, are you willing to take part in answering this questionnaire.

Thank you very much for your time and assistance. Yours faithfully,

Signature



Milton Rwiita, Nuwabimpa

Student

ID Number.....

BACKGROUND INFORMATION

Kindly tick (✓) the most appropriate response.

A1. Current work station

A2, Gender

Male	Female
1	2

A3. Position at the University

Teaching Assistant	Assistant Lecturer	Lecturer	Senior Lecturer	Professor
1	2	3	4	5

A4. State your age bracket

20 - 29years	30 -39 years	40 – 49 years	50 - 59 years	60 years and above
1	2	3	4	5

A5. Indicate the program you are teaching in at the University

Bachelor of Computer Science	Bachelor of Information Technology	Bachelor of Science with Education	Bachelor of Business Administration
1	2	3	4

B. QUALITY OF THE CURRICULUM

Kindly tick the appropriate response that applies to you on a scale ranging from **1** strongly disagree

(SDA), **2** Disagree (DA), **3** Not sure (NS), **4** Agree (A) to **5** Strongly Agree (SA).

	Statements	SDA	DA	NS	A	SA
CODE	The Curriculum Designs.....					
Cd1	develop learners' problem solving skills	1	2	3	4	5
Cd2	sharpen students' critical thinking skills	1	2	3	4	5
Cd3	improve students' skills in written communication	1	2	3	4	5
Cd4	improve learners' skills in oral communication	1	2	3	4	5
Cd5	develope learners' ability to use ICT	1	2	3	4	5
Cd6	...help students in counting and application numbers	1	2	3	4	5
	The Curriculum Content					
Cc1	...develop learners' capacity to accept and do work assigned to	1	2	3	4	5
Cc2	help learners' to develop the ability to plan their own work	1	2	3	4	5
Cc3	...develop learners' ability to work with others in a team	1	2	3	4	5
Cc4	...help students to be confident in tackling and solving unfamiliar problems	1	2	3	4	5
Cc5	...help in managing change at work	1	2	3	4	5
Cc6	...help learners' to develope time management skills	1	2	3	4	5
Cc7	...improve their conduct at the work place	1	2	3	4	5
	Relevancy of the Academic Program					
	The academic programs					
Ra1	...guide learners' in handling and doing all the activities at work	1	2	3	4	5

Ra2	...help learners' to program their activities	1	2	3	4	5
Ra3	... help graduates in formulating work outcomes	1	2	3	4	5
Ra4	...courses are coherent and up- to- date	1	2	3	4	5
Ra5	... specified weeks of study and hours are allocated to each topic	1	2	3	4	5
Ra6	...courses are relevant to the needs of the Labour market	1	2	3	4	5

C. QUALITY OF STUDENTS.

Kindly tick the appropriate response that applies to you on a scale ranging from **1** strongly disagree

(SDA), **2** Disagree (DA), **3** Not sure (NS), **4** Agree (A) to **5** Strongly Agree (SA).

	Statements	SDA	DA	NS	A	SA
CODE	Students' Discipline					
Sd1	Students who never appeared before the disciplinary committee easily got jobs	1	2	3	4	5
Sd2	Well behaved Students get employment recommendations from their lecturers.	1	2	3	4	5
Sd3	Academically excellent and well behaved students are retained by the university	1	2	3	4	5
Sd4	Morals and ethics of learners' greatly influence their employability	1	2	3	4	5
Sd5	Students who were well behaved easily got jobs	1	2	3	4	5
	Students' Grades					
Sg1	Students are admitted on programs of their choice	1	2	3	4	5
Sg2	Students admitted on Bachelors programs got at least 2 principle passes.	1	2	3	4	5
Sg3	Students joined University with good grades	1	2	3	4	5
Sg4	Good academic grades help a graduate to get a job easily	1	2	3	4	5
Sg5	Employers prefer workers with good academic records	1	2	3	4	5
Sg6	The class of the degree is mostly considered by employers upon recruitment.	1	2	3	4	5
Sg7	Students entry grades influence their performance at University	1	2	3	4	5

Sg8	The grades students got at the end of the programme enabled them get first employment	1	2	3	4	5
-----	---	---	---	---	---	---

D. QUALITY OF TEACHING.

Kindly tick the appropriate response that applies to you on a scale ranging from **1** strongly disagree **1**(SDA), **2** Disagree (DA), **3** Not sure (NS), **4** Agree (A) to **5** Strongly Agree (SA).

	Statements	SDA	DA	NS	A	SA
CODE	Quality of staff					
Qs1	Learners who attend my lectures are equipped with skills relevant to the field of work.	1	2	3	4	5
Qs2	I use both field based and book knowledge in conducting my lectures	1	2	3	4	5
Qs3	I use a minimum of 3 hours per week for each course unit to conduct lectures.	1	2	3	4	5
Qs4	I have continued to study and add on my qualifications so as to handle the course units I have been assigned with confidence.	1	2	3	4	5
Qs5	We usually get refresher courses in teaching skills	1	2	3	4	5
	Teaching Methods					
Tm1	The courses are taught in reference to the job market	1	2	3	4	5
Tm2	The minimum of 8 weeks for school practice / internship are fully utilized and supervised	1	2	3	4	5
Tm3	learners' communication skills are developed during the course of study as we allow them to express themselves.	1	2	3	4	5
Tm4	Feedback on students assignment and tests is given promptly after marking	1	2	3	4	5
Tm5	learners' participate in practical lectures	1	2	3	4	5
Tm6	The student assessment is objective and trustworthy	1	2	3	4	5
Tm7	Course outlines used are consistent with the approved curriculum	1	2	3	4	5
Tm8	I use adequate learning materials	1	2	3	4	5

Tm9	There is a special program put in place at the department for the weak students	1	2	3	4	5
Tm10	The department provides students with knowledge of education patterns, placement/Internship opportunities	1	2	3	4	5
Tm11	Team work is encouraged in teaching	1	2	3	4	5
Tm12	Experiential learning is used in teaching and it helps learners get employment skills	1	2	3	4	5
Tm13	There is involvement of students and working as a group to develop team work skills while lecturing	1	2	3	4	5
Tm14	Guest speakers from the public are invited to give lectures	1	2	3	4	5
	Quality of Assessment					
Qe1	The student assessment is consistent in time and between programs	1	2	3	4	5
Qe2	The students assessment is adequate and efficient	1	2	3	4	5
Qe3	I use progressive assessments/continuous assessment tests	1	2	3	4	5
Qe4	The exams assess the cognitive skills	1	2	3	4	5
Qe5	The exams assess the skills taught	1	2	3	4	5
Qe6	The exams assess the knowledge acquired	1	2	3	4	5
	Learning Environment					
Le1	There is a better reading environment at the university	1	2	3	4	5
Le2	The school library is well located in a conducive environment	1	2	3	4	5
Le3	There is a quiet environment for reading	1	2	3	4	5
Le4	The internet connection is always stable	1	2	3	4	5
Le5	We have better sound systems in our lecture rooms	1	2	3	4	5
Le6	Technology is used to assist learning	1	2	3	4	5
Le7	The lecture rooms are always big enough to accommodate all students in class	1	2	3	4	5
Le8	There is soundproof in our lecture theatres	1	2	3	4	5
Thank you for participating in this research						

Appendix C: INTERVIEW GUIDE FOR (AR, QAD, Deans& HODs)

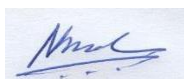
Dear Respondent,

I am Milton Rwiita, Nuwabimpa carrying out a research study entitled “*The Quality of Higher Education and Employability of Graduates in selected Universities in South Western Uganda*”.

This is part of educational fulfillment leading to the award of Doctor of Philosophy (PhD) in Development Management of Bishop Stuart University. This survey is designed to assess your impression about the quality of higher education and employability of graduates in selected universities in South Western Uganda, how you perceive the quality of curriculum, quality of students, quality of teaching, and employability of graduates for the last three years (2017 – 2019). We are conducting this survey which is voluntary and all responses are confidential. The outcome is to develop and refine quality higher education for highly employable graduates for sustainable economic development. We are requesting you to take part in answering this questionnaire. So, please, are you willing to take part in this interview?

Thank you very much for your time and assistance. Yours faithfully,

Signature



Milton Rwiita, Nuwabimpa

Student

1. PART A Background Information

a) What is your position at this

University?

2. PART B: To what extent does the quality of curriculum used affect employability of graduates?

a) What quality assurance measures do you have in place to ensure the quality of the curriculum?

.....
.....
.....
.....

b) Which groups do you involve to come up with your curriculum? Explain how you involve them to do the following:

Carry out needs assessment

Involvement of students.....

Involvement of industry

Involvement of the labour
market.....

Involvement of the
staff

Others (specify).....

c) How are the programs offered at the University linked to the Labour market?

.....
.....

d) What kind of work place skills do you give your graduates to transfer into the world of work

.....
.....

e) To what extent is employability integrated in the curricula you have in place?

.....

.....

.....

f) How does the University support students to take responsibility for their future work?

.....

.....

.....

3. PART C: Quality of Students

How do you ensure quality of students in the University?

.....

...

How do you ensure the quality of admission ?

.....

Are the students admitted on merit?

Do you have an admission policy? What is contained in it?

Do you have admission criteria? What is contained in it?

Is there any system to monitor the progress of students ? How is it done?

How is the discipline of students ensured in the University?

.....

.....

.....

How do you ensure good morals and ethics of the students?

.....

.....

.....

In your own opinion, how does the quality of students influence students' employability in terms of grades and discipline?

.....

.....

.....

4. PART D: Quality Teaching

a) What teaching approaches and methods that are commonly use in the University?

.....

.....

(b) How are the approaches used linked to the labour market?

.....

.....

c) How are practical skills transferred to learners?

.....

.....

c) In your own opinion, how does quality teaching influence students 'employability?

.....

.

.....

.

.....

.

5. General

How can Universities work with employers to make sure that graduates are appropriately prepared for the world of work?

.....

b) How are you preparing your students to meet the challenges of the future e.g. jobs that do not exist, technology that is changing?

.....

...

Thank you for your time.

Appendix D: QUESTIONNAIRE FOR THE EMPLOYERS/SUPERVISORS (English version)

Dear Sir/Madam

I am carrying out a research titled —*The quality of Higher education and Employability of Graduates in selected Universities in South Western Uganda*”. This is part of educational fulfillment leading to the award of Doctor of Philosophy (PhD) in Development Management of Bishop Stuart University. It is against this background that you have been selected to participate in this research study by completing this questionnaire. It would therefore be useful if you kindly assisted by answering the questionnaire as per instructions given at the beginning of each section. You are requested to provide the most appropriate answer in your opinion. All the information you provide will be treated with confidentiality.

Thank you very much for your cooperation.

Yours faithfully,

Signature

A handwritten signature in blue ink, appearing to read 'Milton Rwiita', is placed over a light blue rectangular background.

Milton Rwiita, Nuwabimpa

Researcher

PART A: BACKGROUND INFORMATION

A1: Name of the organization

A2. What is the ownership of your organization?

☐ Private ☐ Public

A3. How many employees do you have in the organization?

A4. How many of these are graduates?

A5. Which programs did they study at University?

☐ BSC EDUC. ☐ BIT. ☐ BCS ☐

BBA

B: Employment of graduates

B1. Which of these skills did you consider when employing the graduates?

Team work skills	
Communication skills	
Respecting others	
Creativity skills	
Risk taking skills	
Problem solving skills	
Information, communication and Technology skills	
Leadership skills	
Personal organization and time management	
Initiative skills	
Adaptability skills	

B2. Mention other skills that are considered while employing university graduates

.....
...
B3. List some of the issues that make graduates fail to get the advertised jobs?

.....
...
.....
..

B4. List the relevant skills that you expect to be possessed by prospective employees

.....
..
.....
..

C : Curriculum

C1. Are the programs offered at Mbarara University of Science and Technology/Bishop Stuart University meeting the employment needs of your organization?

YES

NO

(i) How appropriate is the curriculum used to the work done in this Organization?

.....
.

(ii) How relevant are the academic programs studied by your employees to the world of work?

.....
.....

C2. Please state the extent to which graduates had the following attributes on recruitment

	Very high extent	High extent	Some extent	Limited extent	No extent
Field specific theoretical knowledge					
Foreign language Proficiency					
Computer skills					
Team work skills					
Communication skills					
Respecting others					
Creativity skills					
Risk taking skills					
Problem solving skills					
Information, communication and					
Technology skills					
Leadership skills					
Personal organization and time					
Initiative skills					

C3. List adjustments that you recommend to be made in the program as a whole

.....
.....

C4. How can higher education and industry work together to set standards of programs offered when introducing new programs?

D: Quality of Graduates

D1. To what extent do graduates show the qualities you look for in your prospective employees?

	Very high extent	High extent	Some extent	Limited extent	No extent
Field specific theoretical knowledge					
Field specific practical skills					
Computer skills					
Team work skills					
Communication skills					
Respecting others					
Creativity skills					
Risk taking skills					
Problem solving ability					
Entrepreneurial skills					
Leadership skills					
Personal organization and time management					
Initiative skills					
Planning, coordinating and organizing					

D2. What value is attributed to skills versus qualifications in your organization?

.....

.....

D3. How has this focus benefited or created problems for the organization?

.....

D4. To what extent has the Universities produced sufficient graduates? (Tick the correct)

Very high extent	High extent	Some extent	Limited extent	No extent
-----------------------------	------------------------	------------------------	---------------------------	----------------------

PART C: EMPLOYABILITY

C1: State the extent to which you agree that the university has helped in promoting employability skills by ticking weather you **strongly disagree (SDA) 1, Disagree(DA) 2, Not sure (NS) 3, Agree (A) 4 to Strongly Agree (SA) 5.**

	Statements	SDA	DA	NS	A	SA
EP1	The quality of graduates is appropriate for our employment needs	1	2	3	4	5
EP2	Graduates are appropriately qualified and prepared for the work place	1	2	3	4	5
EP3	University curriculum is helping graduates for employability	1	2	3	4	5
EP4	Teaching and Learning strategies used at University promote skills needed at work place.	1	2	3	4	5
EP5	The graduates we get have good communication skills	1	2	3	4	5
EP6	The graduates we get have good knowledge in Information and Communication Technology	1	2	3	4	5
EP7	The graduates are good at time keeping	1	2	3	4	5
EP8	The numeracy levels of graduates we get is well developed	1	2	3	4	5
EP9	The graduates we get are good, independent thinkers	1	2	3	4	5
EP10	The graduates are creative	1	2	3	4	5
EP11	The graduates are eager to learn and get new knowledge	1	2	3	4	5
EP12	Quality teaching can promote graduate employability	1	2	3	4	5

C2: List the skills and knowledge that the graduates you get lack.

.....

C3: Show how the University curriculum may help its graduates in employability

.....

.....

C4: In which ways do you think students can be well taught for employability?

.....

.....

C5: What can graduates do to enhance their employability?

.....

.....

C6: Which teaching methods can Higher Education Institutions use to promote employability

among graduates?

.....

.....

Thank you for participating in this study.

Appendix E: QUESTIONNAIRE FOR THE EMPLOYERS/SUPERVISORS (Runyankore –Rukiga Version)

Agandi Sebo/Nyabo

Ninkora okucondooza okurikwetwa- *The quality of Higher education and Employability of Graduates in selected Universities in South Western Uganda*. Eki nikimwe ahabirikwetengwa kuhikiirizibwa omukushoma n’okuheebwa diguri ya kashatu (PhD) Omubya Entuguuka n’Obwebembezi eya Bishop Stuart University. Egyo niyo ntandikiriro y’okutoranwa kwawe kwetaba omukucondooza oku orikwijuza ebibuuzo ebirikushangwa omukihandiiko eki. Nahabwekyo kikabiire ekyomugasho wayamba orikugarukamu ebibuuzo ebi nk’oku endagiriho zirikuheebwa ahari burikutandika kw’ekicweka. Noshabwa kuhereza eky’okugarukamu ekihikire munonga omukuteekateeka kwaawe. Amakuru agoraherezeyo goona nigiija kutwarizibwa omukihama.

Webare ahabw’okukwatanisa kwaawe

Ninye

Signature.....

.....

Milton Rwiita,

Nuwabimpa

Omucondooza

PART A: BACKGROUND INFORMATION

A1: Eiziina ry'ekitongore

A2. Bakama b'ekitongore nibaahi? Private..... nari Public.....

A3. Mwiine abakozi bangahi omukitongore? A4. Nibangahi omuryaabo abashomire diguri?

A5. Bakashoma ki aha University?

BSC EDUC. BIT.

BCS BBA

B: Okutunga emirimo kw'abashomire diguri

B1. Nimukoresa emikutu eha okuranga emirimo yanyu?

.....

B2. Nibukugu ki aharyobu obumurikugyenderaho mwaaba nimuhereza abashomire diguri emirimo?

Obukugu omukukora n'abandi	
Obukugu omukugamba	
Okuhereza abandi ekitiinisa	
Obukugu omukuhangaho eby'okukora	
Obukugu omukutatiina kukora ekintu ekirimu akabi	
Obukugu omukumaraho ebizibu	
Obukugu omubya kanyabwengye	
Obukugu omuby'obwebembezi	
Okwereberera nk'omuntu n'okuriinda obwiire	
Obukugu bw'okutandika	
Obukugu omubikwatireine n'okurahuka kukwata	

B3. Gamba Obukugu obundi obumurikugyenderaho mwaaba nimuhereza emirimo

.....

B4. Handiika enshonga zimwe ezirikureetera abashomire diguri baremwa kutunga emirimo eyibarikurangirira?

.....

B5. Handiika obukugu bwo kuteekateka ngu aba koozi ab'oratungye bahikire kuba biine.

.....

.....

C: Engyenderwaho y'okushoma

C1. Enteekateeka ezirikushomesibwa ahari Mbarara University of Science and Technology / Bishop Stuart

University nizihikiiriza ebirikwetengwa ahamurimo omukitongore kyaanyu? Eego ...

Ngaaha.....

(i) Engyenderwaho y'okushoma erikukozesebwa neyamba eta emumirimo eyimurikukora

Omukitongore eki?

.....

(ii) Ebibarikushoma byiine mugasho ki ahabakozi baawe omukukora?

.....

C2. Gamba orurengo oru abashomire diguri babiire biniireho ebirikwetengwa ebi obubatunga emirimo

	Orurengo rwahiguru munonga (1)	Orurengo rwahiguru (2)	Orurengo rukye (3)	Orurengo rutarikuma ra (4)	Tihariho rurengo (5)
Obwengye bw'okumanya ebintu kurungi					
Obukugu omundimi ezaheeru					
Obukugu omuri kanyabwengye					
Obukugu omukukora n'abandi					
Obukugu omukugamba					
Okuhereza abandi ekitiinisa					
Obukugu omukuhangaho					
Obukugu omukutatiina kukora ekintu ekirimu akabi					
Obukugu omukumaraho ebuzibu					
Obukugu omubya kanyabwengye					

Obukugu omuby'obwebembezi					
Okwereberera nk'omuntu n'okuriinda obwiire					
Obukugu bw'okutandika					

C3.Handiika empindahinduka eyorikuhabura kukorwa omunteekateeka yokushoma yoona.

.....

...

C4. Obwegyese bwahiguru n'amakorero nibabaasa bata kukora hamwe kutekaho omutindo gw'enteekateeka haba nihatandikwaho amashomo amasya?.. ..

.....

D : Omutindo gw'Abashomire diguri

D1.Niharurengo ki oru abashomire diguri barikworekyeraho omutindo ogumurikuronda omubakozi abimurikuronda?

	Orurengo rw'ahaiguru munonga. 1	Orurengo rwahiguru 2	Orureng o rukye 3	Oruree ngo rutarik umara 4	Tihariho rurengo 5
Obwengye bw'okumanya ebintu kurungi					
Obwengye bw'okukora ebintu					
Obukugu omuri kanyabwengye					
Obukugu omukukora n'abandi					
Obukugu omukugamba					

Okuhereza abandi ekitiinisa					
Obukugu omukuhangaho					
Obukugu omukutatiina kukora ekintu					
Obukugu omukumaraho obuzibu					
Obukugu bw'okutandikaho					
Obukugu omuby'obwebembezi					
Okwereberera nk'omuntu					
Obukugu bw'okutandika					
Obukugu bw'okuteekateeka,					

D2. Nimuhendoki ogurikubaririrwa obukugu wagyeragyeranisa n'okushoma omukitongore kyanyu?

.....

D3. Ekyokureberaho eki kiyambire nginga kireetire kita ekitongore ebizibu?

.....

D4. Niharurengo ki oru Bishop Stuart University nginga Mbarara University zishohoreizeho abashomire diguri barikumara?

(Kyebera ekihikire)

Orurengo rwahiguru munonga 1	Orurengo rwahiguru 2	Orureng o rukye 3	Orureng orutariku mara 4	Tihariho rurengo5
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PART C: OKUTUNGA EMIRIMO

C1: Gamba Orurengo orw'orikwikiririzaho ngu Univasite eyambire omubukugu bw'okwongyera kutunga emirimo orikukyebera yaba Torikwikiririza kimwe 1 (SDA), Torikwikiriza 2 (DA), Torikumanya 3 (NS), Notikiriza 4 (A), Noyikiririza kimwe (SA) 5

	Statements	SDA	DA	NS	A	SA
EP1	Omutindo gw'abeegi abiturikutunga kuruga ahari za Univasite nigwo guhikire ahabw'ebyetengo byeyitu by'emirimo	1	2	3	4	5
EP2	Abashomire diguri bahikire kurungi kandi bateekateekirwe kuza ahibarikukorera	1	2	3	4	5
EP3	Engyenderwaho yokushoma ya Univasite neyamba abashomire diguri kutunga emirimo	1	2	3	4	5
EP4	Emiringo y'Okushomesa n'Okwega erikukozesibwa aha Univasite neyongyera obukugu oburikwetengwa ahamirimo	1	2	3	4	5
EP5	Abashomire diguri abiturikutunga baine obukugu omukugamba	1	2	3	4	5
EP6	Abashomire diguri abiturikutunga baine amagyezi maingi omubya kanyabwengye	1	2	3	4	5
EP7	Abashomire diguri nibamanya kukwata obwire	1	2	3	4	5
EP8	Orurengo rw'obukugu bw'abashomire diguri abiturikutunga batunguukire kurungi	1	2	3	4	5
EP9	Abashomire diguri abaturikutunga nibamanya kweteekateekyera kurungi	1	2	3	4	5
EP10	Abashomire diguri nibahangaho eby'okukora	1	2	3	4	5
EP11	Abashomire diguri beteekateekire kweega n'okutunga obwengye busya	1	2	3	4	5
EP12	Okushoma kw'omutindo nikureetera abashomire diguri batunga emirimo	1	2	3	4	5

C2: Handiika obukugu n'amagyezi agu abashomire diguri abumurikutunga barikuba bateine?

.....
.....
.....
.....

C3: Yoreka oku engyenderwaho y'okushoma kwa univasite erikubaasa kuyamba abashomire diguri omukutunga emirimo

.....
.....

C4: Nimiringoki eyi orikuteekateeka ngu abeegi nibabaasa kushomesibwamu ahabw'okutunga emirimo?

.....
.....

C5: Abashomire diguri nibabaasa kukoraki kutunga emirimo?

.....
.....

C6: Amatendekyero g'Obwegyese Obwahiguru nigabaasa kukoresa miringoki y'okushomesa okutunguura okutunga emirimo omubashomire diguri?

.....
.....

Webare kukwatanisa niitwe
omukushoma oku.

Appendix F: INTERVIEW GUIDE FOR EDUCATIONAL TECHNOCRATS

Dear Respondent,

I am Milton Rwiita, Nuwabimpa, carrying out a research study entitled “*The Quality of Higher Education and Employability of Graduates in selected Universities in South Western Uganda*”.

This is part of educational fulfillment leading to the award of Doctor of Philosophy (PhD) in Development Management of Bishop Stuart University. This survey is designed to assess your impression about the quality of higher education and employability of graduates in selected universities in South Western Uganda, how you perceive the quality of curriculum, quality of students, quality of teaching, and employability of graduates for the last three years (2017 – 2019). We are conducting this survey which is voluntary and all responses are confidential. The outcome of the survey is to develop and refine quality higher education for highly employable graduates for sustainable economic development. We are requesting you to take part in answering this questionnaire. So please are you willing to take part in answering this questionnaire?

Thank you very much for your time and assistance. Yours faithfully,

Signature



Milton Rwiita, Nuwabimpa

Student

1. Bio data and job experience

a) What position do you hold in NCHE?

b) How long have you been in NCHE?

2. Quality of Curriculum.

How do you ensure that curriculum designs meet the needs of the labour market?

How do you ensure that quality of the program content promotes employability of graduates?

How do you ensure that the programs in Universities are relevant to the labour market?

3. Quality of students and employability of graduates.

Show the means used to ensure quality of students in Higher education?

As overseers of Higher education, how do you ensure proper grading of students in Universities?

4. Quality of Teaching and employability of graduates.

a) How is quality teaching in universities ensured by NCHE?

(b) How do you ensure the quality of assessment of University students and their grading?

(c) How are you involved in ensuring quality of university learning environment?

5. Are there policies in place to promote employability of graduates?

6. If yes, what are those policies in place?
7. List the mechanisms in place that link quality of higher education with graduate employability
8. What is being done in higher education institutions to promote the required skills by the labour market?

APPENDIX G : APPROVAL FROM RESEARCH ETHICS COMMITTEE



MBARARA UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 1410, Mbarara Uganda. Tel: +256 486433796; Fax: +256 4864 20782

RESEARCH ETHICS COMMITTEE

E-mail: sec_rec@must.ac.ug

Ref: MUREC 1/7

Date: April 26, 2021

Mr. Nuwabimpa Milton Rwiita
Postgraduate student

Re: Submitted protocol on "The quality of higher education and employability of graduates from selected Universities in south western Uganda" 12/02-21

Type: ☒ Initial Application
☐ Protocol Amendment
☐ Letter of Amendment (LOA)
☐ Continuing Review
☐ Material Transfer Agreement
☐ Other, specify: _____

Reference is made to the above protocol which was resubmitted to the Research Ethics Committee for reconsideration and approval.

It is noted that you have addressed all the concerns earlier raised by the Committee.

I am pleased to inform you that your study has been approved for a period of one year from **April 26, 2021 up to April 25, 2022**.

As Principal Investigators of the research, you are responsible for fulfilling the following requirements of approval:

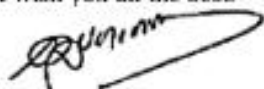
1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for review and approval **prior** to the activation of the changes. The REC application number assigned to the research should be cited in any correspondence.
3. Reports of unanticipated problems involving risks to participants or other must be submitted to the REC. New information that becomes available which could change the risk: benefit ratio must be submitted promptly for REC review.
4. Only approved consent forms are used in enrolment of participants. All consent forms signed by subjects and/or witness should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Regulations require review of an approved study not less than once per 12-month period. **Therefore, a continuing review application must be submitted to REC eight weeks prior to the above expiration date of April 25, 2022 in order to continue the study beyond the approved period.** Failure to submit a continuing review application in timely fashion may result in suspension or termination of the study, at which point new participants may not be enrolled and currently enrolled participants must be taken off the study.

6. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of documents approved in the application:

Document	Language	Version
Proposal	English	2
Data Collection Tool	English, Runyankore/Rukiiga	April 2021
Consent forms	English, Runyankore/Rukiiga	April 2021

I wish you all the best.



Dr. Francis Bajunirwe
CHAIR,
MUST RESEARCH ETHICS COMMITTEE

APPENDIX H; APPROVAL FROM NATIONAL COUNCIL OF SCIENCE AND TECHNOLOGY



Uganda National Council for Science and Technology
(Established by Act of Parliament of the Republic of Uganda)

Our Ref: SS1275ES

3 May 2022

MILTON NUWABIMPA
BISHOP STUART UNIVERSITY
Mbarara

Re: Research Approval: **THE QUALITY OF HIGHER EDUCATION AND EMPLOYABILITY OF GRADUATES FROM SELECTED UNIVERSITIES IN SOUTH WESTERN UGANDA**

I am pleased to inform you that on **03/05/2022**, the Uganda National Council for Science and Technology (UNCST) approved the above referenced research project. The Approval of the research project is for the period of **03/05/2022 to 03/05/2024**.

Your research registration number with the UNCST is **SS1275ES**. Please, cite this number in all your future correspondences with UNCST in respect of the above research project. As the Principal Investigator of the research project, you are responsible for fulfilling the following requirements of approval:

1. Keeping all co-investigators informed of the status of the research.
2. Submitting all changes, amendments, and addenda to the research protocol or the consent form (where applicable) to the designated Research Ethics Committee (REC) or Lead Agency for re-review and approval **prior** to the activation of the changes. UNCST must be notified of the approved changes within five working days.
3. For clinical trials, all serious adverse events must be reported promptly to the designated local REC for review with copies to the National Drug Authority and a notification to the UNCST.
4. Unanticipated problems involving risks to research participants or other must be reported promptly to the UNCST. New information that becomes available which could change the risk/benefit ratio must be submitted promptly for UNCST notification after review by the REC.
5. Only approved study procedures are to be implemented. The UNCST may conduct impromptu audits of all study records.
6. An annual progress report and approval letter of continuation from the REC must be submitted electronically to UNCST. Failure to do so may result in termination of the research project.

Please note that this approval includes all study related tools submitted as part of the application as shown below:

No.	Document Title	Language	Version Number	Version Date
1	Data collection tools	English	1	26 April 2022
2	Data collection tools	Runyankole	1	26 April 2022
3	Informed consent	English	1	29 April 2022
4	COVID 19 Risk management	English	1	30 April 2022
5	Project Proposal	English	1	
6	Approval Letter	English		
7	Administrative Clearance	English		

Yours sincerely,



Hellen Opolot

For: Executive Secretary

UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

APPENDIX I: RESEARCH CLEARANCE FROM BISHOP STUART UNIVERSITY

BISHOP STUART UNIVERSITY	
P.O. BOX 9, MBARARA	
Tel: +256 (0) 707 200 702	
Website: www.bsu.ac.ug	E-mail: info@bsu.ac.ug
	E-mail: us@bsu.ac.ug
OFFICE OF THE UNIVERSITY SECRETARY	

21/4/2022

The Executive Secretary
UNCST

PERMISSION TO CONDUCT RESEARCH IN BISHOP STUART UNIVERSITY

Christian greetings!

This is to inform you that Mr. Nuwabinpa Milton Rwiita 2016/BSU/PHD-DM/012 has been granted permission to conduct research at Bishop Stuart University on his research topic;
"The quality of higher education and employability of graduates from selected Universities in South Western Uganda.

We hope that the research findings will be enriching to his research and further propel him in his academic career.

Any further assistance rendered to him will be highly appreciated.


Assimwe Anifah Tibazindwa
UNIVERSITY SECRETARY



CC: Vice Chancellor
Academic Registrar
Director, Graduate School

To be a University for recreating the African Nation with Academic Excellence, Human Values and Entrepreneurship

Our God Blesses

APPENDIX J: DATA COLLECTION LETTER

BISHOP STUART UNIVERSITY

P.O.BOX 9 MBARARA

Tel: 0701477444

Mob: 0772-320618



pgd@bsu.ac.ug/info@bsu.ac.ug

Website: www.bsu.ac.ug

DIRECTORATE OF GRADUATE STUDIES, RESEARCH & INNOVATIONS

15th May 2021

To Whom It May Concern,

Dear Sir/ Madam,

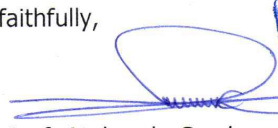
RE: INTRODUCTORY LETTER FOR MR. NUWABIMPA MILTON

This is to introduce to you Mr. **Nuwabimpa Milton** a student of PhD in Development Management under Reg. No; 16/BSU/PhD-DM /012 who is conducting his research study in South Western Uganda.

His research topic is; The quality of higher Education and Employability of Graduates from selected Universities in South Western Uganda.

Any assistance rendered to him is highly appreciated.

Yours faithfully,


Assoc. Prof. Atukunda Gershom
Director, Graduate Studies and Research
BISHOP STUART UNIVERSITY

