

**QUALITY ASSURANCE PRACTICES THAT ENHANCE EMPLOYABILITY OF
STUDENTS FROM PUBLIC UNIVERSITIES IN UGANDA**

ELVAIDA AGNES TAGULWA TWESIGYE

BAE.(MUK), M.ED (MUK), PGDPG (UMI)

16/U/13232/GDED/PE

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DECLARATION

This dissertation is my original work and has never been presented for a degree in any other University

Signature:

Date.....

APPROVAL

We as university supervisors confirm the work done by the candidate under our supervision

Signature: _____ Date: _____

SR DR. MARIA GORETTI KAAHWA

Signature: _____ Date: _____

DR. PHILIP OWINO

DEDICATION

This thesis is dedicated to Associate Professor Charles Twesigye.

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DEFINITION OF OPERATIONAL TERMS

Employability refers to the capability of the graduate to adapt the skills, knowledge and competences that he/she has acquired from higher learning to gain employment.

Quality assurance practices refers to learning experiences in higher education that enable students to develop innovative and creative minds to enable them to work professionally and transfer their learning to different contexts.

Curriculum review refers to an ongoing process in higher education through which gaps within an academic programme are identified and specific actions are determined.

Industrial training refers to a work-related practical setting which provides students with opportunity to connect concepts they learnt at the university with the practical application in the industry to refine their knowledge and skills.

Career services refer to the educational assistance provided to students to enable them to develop social networks and professional identities.

ACRONYMS

DV	Dependent Variable
DVC	Deputy Vice Chancellor
EHEA	European Higher Education Area
ES	Employability of Students
GDP	Gross Domestic Product
HEIs	Higher Education Institutions
ILO	International Labour Organisation
IQA	Internal Quality Assurance
IUCEA	Inter-University Council for East Africa
IV	Independent Variable
KP	Key Participant
KyU	Kyambogo University
KSA	Knowledge Skills Abilities
MoES	Ministry of Education and Sports
MoFED	Ministry of Finance and Economic Development
QA	Quality Assurance
QAPs	Quality Assurance Practices
QAD	Quality Assurance Directorate
SPSS	Statistical Package for Social Scientists
SDG	Sustainable Development Goal
UBOS	Uganda Bureau of Statistics
UNCST	Uganda National Council for Science and Technology
UNESCO	United Nations Educational, Scientific and Cultural Organization

ABSTRACT

An investigation was conducted on Quality Assurance Practices (QAPs) that enhance employability of students from public universities in Uganda. Kyambogo University was a case institution. Employability of students was investigated with emphasis on Curriculum Review, Industrial Training, and Career Services as Quality Assurance Practices that inform quality assurance structures in developing professional and lifelong learning. The objectives of this study were to: evaluate students' and employers' perceptions of employability; determine the relationship between curriculum review and employability of students; examine the relationship between industrial training and employability of students; and to analyse the relationship between career services and employability of students. The study used explanatory mixed methodology. Quantitative data was collected using a self-administered questionnaire. Qualitative data was collected using in-depth interview guides. Quantitative data was analysed using descriptive statistics while qualitative data was analysed using thematic analysis. Quantitatively, the study established that: there was a significant difference in the perception of employability between employers and students; while curriculum review, industrial training and career services had a strong positive statistically significant correlation with employability of students. Qualitatively, the study established that: employers expect students to have theoretical knowledge and competences from their degrees but also require them to demonstrate a range of broader personal and interpersonal skills. The following recommendations that could help to improve employability of students were made: A collaborative curriculum review should be emphasized by engaging key stakeholders of university education to promote relevance and lifelong learning. Universities should collaborate and develop partnerships with industry to resolve the problems of industrial placements for students and career services provision. Also, the Government of Uganda should develop a well-structured legal framework that will enable all key stakeholders of university education to work in collaborative partnerships to deliver high quality education in terms of training and research for sustainable economic and social development.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The target for Sustainable Development Goal (SDG) 4 is that by 2030, countries across the World should have improved the employment prospects of young men and women through the productivity of enterprises by adopting new technologies and as well as entering new markets (International Labour Organisation (ILO), 2018). Education is an essential service to help people to develop socially, intellectually, and economically (African Governance Report, 2019). However, development has slowed down in terms of meeting the education related targets set in SDG 4 due to the quality of education provided and its relevance to the labour market (African Union Agenda, 2063). All over the World, employability of students has raised a great deal of debate (Nilsson, 2017). The shift from a commodity based industrial society to a knowledge based economy, driven by technological innovation as well as increased demands for efficiency and productivity, have transformed the labour market into new ways of organising work to increase international competition.

Significantly, national economies have become more dependent on higher education's development of people with high level skills, knowledge, and research to meet the needs of the industrial and commercial world of the future. However, scholarly evidence indicates gaps between higher education and the labour market (Nilsson, 2017; Bano & Vasantha, 2019). While the need for employability of students has been greatly emphasized, literature on employability of students in Uganda has not been fully investigated. This study investigated employability of students, with emphasis on three quality assurance practices, namely: curriculum review, industrial training, and career

services, in order to assess their compatibility with teaching and learning that is required to develop and produce professional and lifelong learners.

1.1.1 Historical Perspective

Employability became a central concept in discussions of the relationship between higher education and the world of work and acquired increasing prominence in both national and international political debates and academic papers in various disciplines in Europe in the 1990s (Nilsson, 2017). There were shifts in Government policy in the 1970s, 1980s, and 1990s worldwide, which massified and marketised university education. This gave rise to rapid expansion of university enrolment which effectively diminished the traditional elitist nature of the university to a mass system (Jonck, 2014). The massified and marketised university education led to high demand for skilled professionals and graduates, which, later, raised debates regarding employability of students. As a consequence, students in Europe started demanding for educational services of high standards and qualifications that would provide opportunities for Global job markets.

A Ministerial conference was held in Paris in Sorbonne which resulted into the Sorbonne Declaration of 1998. The Sorbonne Declaration emphasised the creation of European Higher Education Area (EHEA) so that a common frame of reference could be created within the intended European Higher Education Area to improve external recognition and to facilitate student mobility, as well as employability. To promote employability of students, cooperation between employers, students and higher education institutions was stressed so that higher education could be directly connected with the job market. It was during this time in the 1970s that Europe began to invest in human capital as a means of increasing the value of labour to contribute to economic development. The aims of the Sorbonne Declaration were confirmed in 1999, through the Bologna Declaration, to enhance employability of students and to expand cross-border collaboration

and competitiveness within the European Higher Education Area (EHEA) and beyond (EHEA, 2015). The main objectives of the Bologna declaration included implementation of the necessary European dimensions of the higher education space, particularly, with regard to curricula content, inter-institutional co-operation, and integrated programmes of study, training, and research. European countries, notably France, Germany, United Kingdom, and Italy, focused on curricula content, inter-institutional cooperation, as well as integrated programmes of study, training and research to meet the demands of the labour market.

Employability of students influenced education all over the World, especially, at university level. Africa and, notably, East Africa's compliance with Global trends on the relevance of higher education and employability of students formed regulatory bodies to ensure quality standards of university education and relevance (IUCEA, 2014). However, a number of factors, which include tremendous enrollment growth, and growing unemployment of graduates, increased pressure on higher education institutions to institute changes that would improve quality. With patterns of work rapidly changing due to globalisation and massification of higher education, employers started expressing a need for graduates who were competent technically, but were also well equipped with relevant generic skills (Pitan, 2015; Nilsson, 2017). Literature identified a range of varied practices which include the curriculum as the most useful component in preparing students for working life (Yoon, et al., 2018), as well as industrial training and institutional career services through which employability can be delivered within higher education. However, (Yoon, et al., 2018) pointed out that these quality assurance practices have been given less attention. More recent research has produced evidence that university education systems where industrial training, and career services have been given priority, the knowledge got from these practices has been integrated in their curricula to enhance employability of

student (Helens-Hart, 2019; UNESCO, 2018). However, these studies are from developed nations and may not reflect employability of students in Uganda. It was against this background that this study examined employability of students at Kyambogo University.

1.1.2 Theoretical Perspective

Human Capital Theory (Becker, 1962) guided the study. The theory explains that the role of higher education is to enable students to acquire and to develop knowledge and skills that are required for specific jobs which are not only taught in specialised educational settings in formal instruction, but also acquired through informal learning experiences which reinforce formal instruction. The assumptions of the theory are:

1. Education and training is important because it involves acquisition of knowledge, skills, and competences for an individual to be a productive member of society.
2. Human capital can be acquired either formally or informally.
3. Human capital is portable (Marginson, 2019).

Formal human capital is acquired through institutionalised and planned specialised curricula for professional training (Marginson, 2019). In this respect, the curriculum is the basis of the teaching and learning process because it involves reviewing programmes of study to provide quality and relevant educational programmes and services to the learners. According to Rajabhat and Humanit, (2017), informal human capital, on the other hand, is acquired out of classroom learning experiences that reinforce formal learning. They further emphasize that informal acquisition of knowledge, skills, abilities, and competences is gained through a variety of experiences that an individual acquires by undergoing regular practice and observing others. In this regard, industrial training and career services are some of the examples of learning experiences that play a significant role in the development of informal human capital.

Portable human capital implies that an individual's skills, knowledge, competences and attitudes increase chances of his/her career mobility opportunities. Accordingly, Human Capital Theory clarifies that human capital is a combination of professional skills and generic skills which are acquired through formal educational settings, and informal learning experiences, respectively. In this study, curriculum represents formal educational settings while industrial training and career services represent informal learning experiences.

In summary, Human Capital Theory assumes that through education and training, an individual acquires knowledge, skills and competences to enable him/her become employable. The theory, further, assumes that knowledge, skills and competences can be acquired formally through institutionalised and planned specialised curricula for professional training; and informally through a variety of experiences that an individual acquires by undergoing regular practice and observing others. In this regard, Human Capital Theory connects higher education with the job market by providing opportunities to institutions of higher learning, employers and students to acquire and strengthen the required skills.

1.1.3 Conceptual Perspective

The main variable in this study is employability (DV) and quality assurance practices (IV) is its explanatory variable. The concept employability has been defined in a number of ways by different people. Hillage and Pollard (1998) describe employability as a person's ability to gain and sustain employment, shift to other functions within the same firm, gain new employment, if needed, and function in a work capacity that brings fulfillment and satisfaction. Yorke and Knight (2006) define employability as a set of achievements, skills, understandings and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupations. Dacre Pool and Sewell (2007,

2010) define employability as having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful. Harvey (2010) defines employability as a process of learning and acquiring new experiences and attributes through higher learning.

Nesaratnam and Gayen (2018) observed that a more sophisticated approach to developing employability, according to Harvey's research, involves three steps: First, Higher Education Institutions (HEIs) should provide a range of opportunities for their students, such as job-seeking knowledge, and employment market information. Second, is the development of a range of higher level attributes, such as evaluation and critical analysis, synthesis, as well as interactive skills, such as team working, communication and inter-personal skills; and personal characteristics, which range from flexibility and adaptability, through self-organisation and time-management to risk-taking and problem solving. Third, is to encourage students to develop a free agent learning attitude. Caudron (1999) defines free agent learners as individuals who are highly motivated, who undertake to be responsible for their own actions and outcomes, and for their own continuous improvement through learning and development. International Labour Organisation (ILO) (2017) refers to employability as the skills, knowledge and competences that enhance a worker's ability to secure and retain a job, progress at work and cope with change, secure another job, if he/she so wishes or has been laid off, and enter more easily into the labour market at different periods of the life cycle.

All these definitions emphasise the individual's capacity to adapt the acquired knowledge, skills and attributes to the employment context. Employability incorporates labour demand and supply concepts. The demand side implies that employers' source for graduate recruits that have a variety of skills, attributes, and experiences. The supply side implies that the university should provide students with the competences, attributes, and

experiences that match with the job market. In this study, employability means the capability of the graduate to adapt the skills, knowledge and competences that he/she has acquired from higher learning. The constructs under which employability was evaluated were: professional skills, personal skills, and interpersonal skills.

Employability echoes the early debate about quality in higher education at the start of the 1990s (Harvey, 2001). In this regard, it is important to define what quality is before we determine how to assure it. Quality has many facets based on the individual's perception of what is good. According to Harvey and Green (1993), quality is grouped into five inter-related categories. Quality can be viewed as exception, as perfection, as fitness for purpose, as value for money and as a transformation. The current study adopted the meaning of quality in higher education as transformative because it is primarily student-driven. Quality as transformative causes a qualitative change in a learner, and higher education is expected to enhance and equip students with knowledge, skills and competences to enable them to become employable. This transformative approach is a holistic approach to learning because it enables the learner to develop a creative and innovative mind. Platis (2014) defines quality assurance as a set of procedures, indicators, criteria and strategic actions that lead the university, or some components of its activity, towards continuous improvement. In this study, quality assurance means systematic procedures whereby higher education institutions (HEIs) focus on continuously improving and maintaining the levels of knowledge, skills, and competences attained by students. This study considered quality assurance practices as learning experiences in higher education that enable students to develop innovative and creative minds to enable them to work professionally and transfer their learning to different contexts.

This study examined three quality assurance practices that enhance employability of students namely: curriculum review, industrial training, and career services. Dyjur and Kalu

(2018) define curriculum review as an academic staff- led critical examination of each undergraduate programme for the purpose of optimising the learning outcomes of that programme. Curriculum review is important because it involves active participation of key stakeholders who provide continuous inputs to ensure quality and relevance of the curricula. In this study, curriculum review refers to an ongoing process in higher education institutions through which gaps within an academic programme are identified and specific actions are determined. Industrial training, on the other hand, refers to placement of students in an actual work setting to gain practical experiences and exposure to the professional world (Hardie et al., 2018). According to Parveen (2012), the aim of industrial training is to enhance and strengthen the students' skills and train them in their chosen profession. In this study, industrial training refers to a work related practical setting which provides students with opportunity to connect concepts they learnt at the university with the practical application in the industry to refine their knowledge and skills. Terzaroli and Oyekunle (2019) explained that career services provide a diverse mixture of educational and matching actions, such as job placements, career education and guidance, as well as professional networking. In this study career services refer to the educational assistance provided to students to enable them develop social networks and professional identities.

1.1.4 Contextual Perspective

Since its establishment in 2003, Kyambogo University (KyU) offers over 43 approved programmes at undergraduate and graduate levels. In lieu of quantity, registered undergraduate students have increased from 6500 students in 2003/2004 to 33000 students in 2017/2018, while registered graduate students have increased from 55 in 2006/2007 to 244 in 2016/2017 (Kyambogo University Graduate School Guidelines). The aim of KyU is to train a critical mass of independent thinkers, researchers, academics and professionals, based on the basic, applied and multidisciplinary approaches, covering courses in Natural

Sciences, Humanities, and Social Sciences (Kyambogo University Graduate School Guidelines). Much as this quantitative vision can define the university's growth, there is need to adequately address qualitative interventions because they strengthen the link between university education and SDG4. It is stated in the Strategic Plan 2012/13-2022/23 of Kyambogo University, that stakeholders are not actively involved. This weakens the adaptation of the university's provisions for the requirements of employability of students. According to Uganda Vision 2040, there is a big challenge of a labour force that is largely unemployed due to a big shortage of appropriately skilled workers. It further explains that it is the education system that has failed to tailor its outputs to the needs of the economy. This study chose Faculty of Science, because, Uganda Vision 2040 bases its economic and social transformation on science and technology to promote creativity and innovation, productivity and positive attitude towards work to facilitate faster development.

University graduates in Uganda are faced with a challenging economic environment with an estimated 8.0% unemployment rate (UBOS, 2018). Industry of the main job for the working population is engaged in agriculture at 64.4% (UBOS, 2020). However, there is a shift to a deeper dependence on knowledge and high level skills to achieve economic goals. According to Kiranda and Mugisha (2017), every percent GDP growth increase in Uganda generates only 400 jobs which are far much below the international standard of 10,000 jobs which should be created with a corresponding 1 per cent GDP growth rate. This shows that there are many graduates seeking employment while employment opportunities have not increased. According to MoFPED (2014), and UBOS (2020), Uganda is experiencing a skills shortage. Retrospectively, the Government of Uganda since 2011, started implementing the Skilling Uganda 2011-2020 programme, whose aim was to engage the youth to enable them to acquire employable skills and competences relevant to the labour market (MoES, 2011). However, the largest proportion of the country's total

enrolment in tertiary education joins universities. For instance, in 2016, tertiary education enrolment was about 259,000 students, of which 72 % was in universities (UBOS, 2020). This implies that universities, Kyambogo University inclusive, have a major role to play in the assimilation of higher education with the world of work.

1.2 Statement of the Problem

Globally, universities are the strongest and most stable organisations in providing higher education. These institutions are supposed to produce employable graduates in order to contribute to economic development of the country (Ngulube, 2020; Heang, et al., 2019; Majid, et al., 2020). As a result, students invest in university education in anticipation that the knowledge and skills they acquire will increase their employment opportunities. However, university education in Uganda went through a major transition from public funding to a greater emphasis on private funding. This transition led to serious problems of massification which affected the ability of universities to satisfy students' employability expectations. Employability is one of the essential aspects of educational output which has raised debates from students, employers, and other stakeholders (Bano and Vasantha (2019), but scholarly evidence indicates gaps between education and the labour market (Bano & Vasantha, 2019).

Previous studies about employability of students have only been more interested in the processes involved in assuring quality than in the actual products produced by those processes (Netshifhefhe, 2016). In Uganda, limited research has been conducted on employability, for example, by Bagonza, et al., (2021), Sembatya, et al., (2019), and Ntale, (2022), but no specific study has sufficiently investigated employability of students at Kyambogo University. This study was carried out to provide empirical evidence to policy makers to enable them to prioritise educational strategies that can enhance employability

of students. Furthermore, employability skills that employers look for from graduates in Uganda are not documented.

1.3 Purpose of the Study

The purpose of the study was to investigate quality assurance practices that enhance employability of students in public universities in Uganda.

1.4 Objectives of the Study

Specific objectives of the study were to:

1. Evaluate students' and employers' perceptions of employability.
2. Determine the relationship between curriculum review and employability of students.
3. Examine the relationship between industrial training and employability of students.
4. Analyse the relationship between career services and employability of students.

1.5 Null Hypotheses:

The study tested the following hypotheses:

1. There is no statistically significant difference between students' and employers' perceptions of employability.
2. Curriculum review is not statistically correlated with employability of students.
3. Industrial training is not statistically correlated with employability of students.
4. Career services are not statistically correlated with employability of students.

1.6 Research Questions

Qualitative data was guided by the following research questions:

1. How do students and employers perceive employability? Which employability skills are required to make students employable?
2. How is curriculum reviewed at Kyambogo University?
3. How is industrial training organised at Kyambogo University?
4. What career services are provided by Kyambogo University?

1.7 Scope of the Study

1.7.1 Content Scope

Content scope included data from employability of students and quality assurance practices. Employability of students was assessed in relation to professional skills, personal skills and interpersonal skills. Each of the quality assurance practices (curriculum review, career services, and industrial training) was also examined in relation to students' development of professional skills, personal skills, and interpersonal skills.

1.7.2 Contextual Scope

Contextual scope of this study was Kyambogo University and organisations from where students of KyU do their industrial training. The programmes selected in this research were all based in the Faculty of Science. The programmes included Bachelor of: Chemical Engineering, Environmental Science Technology and Management, Science Technology, in the Department of Chemistry, Science Technology, in the Department of Biological Sciences, Food Science and Processing Technology, in the Department of Food Processing Technology, Science in Statistics in the Department of Mathematics, Information Systems, and Information Technology in the department of Computer Science. All these programmes have industrial training which is done twice during the period of study and lasts for six weeks for each period. Organisations where students go for their industrial training included research institutions, foods and beverages plants, laboratories for agriculture, medical, environment, forestry, and natural products. Student participants in this study were final year students of the academic year 2017/2018. These students had gone through the education process and had the knowledge and experience which enabled them to generate adequate and sufficient data for analysis.

1.7.3 Time Scope

Time scope for this study was 2015/2016, 2016/2017-2018/2019. The student participants in this study were final year students. These students had gone through the industrial training exercise; so, they used their experience to generate adequate and sufficient data from which the researcher to draw valid conclusions.

1.8 Justification of the Study

Employability opportunities for students are waning, for instance, the periods of search for jobs are getting longer and graduates move to a number of employers before they secure jobs (ILO, 2017). Even when they are accepted, they provide voluntary service (Primary Data, 2021). Major university education stakeholders, who include the students, parents, academic community, and the industry, have always subjected university education to further scrutiny demanding proof for improved quality (Pitan, 2016). There is limited published research on employability of students in Uganda. Most of the research originates from Europe, America, Asia, and Australia. There is also little published literature on the desired employability skills by employers in Uganda, hence, the current study.

1.9 Significance of the Study

The study proved that human capital investment improves employability of students and it is an important determinant of an individual's earning capacity.

Data that was generated is significant for the university to improve course planning, and curriculum reviews to ensure relevant educational programmes. In addition, the study provided evidence on the expectations of industries from graduates so that policy makers can provide an enabling environment for collaboration among researchers in universities and industry to maintain quality and relevance leading to improvement in employability of students. The study provided empirical evidence to students on labour market demands so that when they are making choices for their study programmes they take into consideration

future employment prospects. This study generated important employability skills; if they were embedded in the curricula as one of the strategies to solve youth unemployment, countries would be able to achieve sustainable development.

1.10 Conceptual Framework

This study presumed that employability of students is the outcome of appropriate quality assurance practices. This perspective provided the conceptual lens through which the conceptual framework for this research study was developed.

Two variables were investigated namely: Quality Assurance Practices (QAPs) and Employability of Student (ES).

IV

Quality Assurance Practices

DV

Employability

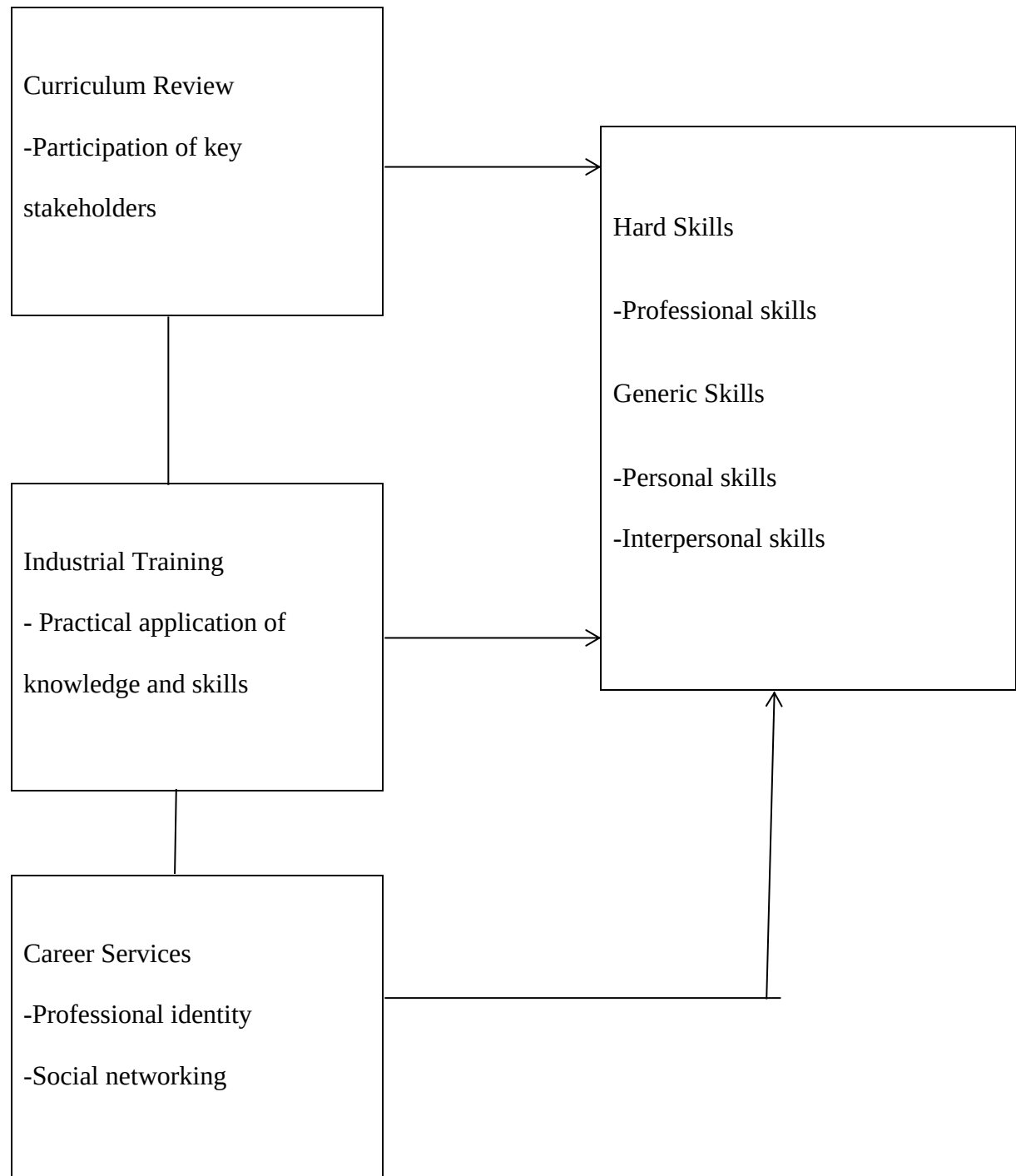


Figure 1: Conceptual Framework

Source: Adopted from Dacre Pool & Sewell, 2007; Holmes, 2013; Clarke, 2017.

It was hypothesized that quality assurance practices, enhance employability of students. The researcher operationalised quality assurance practices into three constructs, namely: curriculum review, industrial training and career services. These formed the three independent variables. The interconnectedness and interactions of these quality assurance practices reinforce formal learning and they stimulate insight learning which promotes transfer of learning. This provides feedback and directly informs curricula reviewers of relevant study programmes to provide students with real connections in building links with the labour market. It was for this interconnectedness that this study considered the three independent variables.

Employability of students is the outcome of the integration of formal and informal learning from which students acquire personal abilities by engaging in industrial training and career services. This strengthens the connection between the independent and dependent variables.

1.11 Summary of Chapter One

Chapter one introduced the study by presenting its historical perspective, the purpose and objectives of conducting the study, and how its findings will be used to benefit stakeholders. The conceptual framework diagrammatically explained the relationship between quality assurance practices that were investigated and, if applied well, how they can improve employability of students.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The review first provides a theoretical review. In light of study objectives, the review then focuses on scholarly works that have analysed employability of students. Next, is the review of prior research that was conducted, as it relates to the concept of employability, particularly, in relation to curriculum review, industrial training, and career services. The study highlights the gaps that were identified through this literature review and how the current study has tried to bridge these gaps.

2.1 Theoretical Review

The current growing importance of employability of students stems from the disappearance of traditional jobs to a demand from industry for graduates to possess both hard and generic skills due to economic and technological advancements. Employability is concerned with the development of students' hard and generic skills in order to be employable. This implies that a student who is able to sell his/her own personal identity, brand, and profile, is the most employable graduate, hence the Human Capital Theory. According to Becker (1962), formal schooling is one of the several important contributors to the development of skills of an individual. The Twenty-First Century has witnessed accelerations in technology which require heavy investment in people to favourably compete in the economy of the future.

There are three distinct types of human capital (Useem & Karabel, 1986), but this study considered only scholastic capital (educational attainment), and social capital (personal contacts and network ties) among others. Scholastic and social capital provides students with educational credentials, including knowledge and skills, and relationships

which constitute elements of human capital that add value to employability of students. According to Fakunle, et al., (2020), these educational attainments and personal contacts, as well as network ties, clearly bring out the value of university education in enhancing employability. This is reflected in the conceptual approaches to examine employability which focus on the importance of education in developing a skilled and productive workforce for economic growth (Fakunle et al., 2021).

Human Capital Theory was vital in this study because it clearly explains how education helps individuals to develop skills and to acquire knowledge that can be used as an investment to engage in professional productivity. In this way, Human Capital Theory directly connects education with industry. The theory explains that human capital is a force multiplier that creates limitless potential because it represents the quality of labour which is the driver of economic growth of a nation, and the foundation for prosperity. In line with this, the Asian Tigers, such as Korea, Japan, and Singapore, have committed their transformational investments in people for economic growth (World Bank group, 2017).

Secondly, the theory enabled the study to support the view that an individual's investment in education is anticipation that the knowledge, and skills acquired will enhance his/her career advancement. This implies that the Human Capital approach to employability of students clearly explains learning in relation to the learner as an individual, and as part of the world society.

2.2 Review of Related Literature

This section reviewed the literature that is related to quality assurance practices that enhance employability of students objective by objective.

2.2.1 Employability

Employability has become a permanent dread for individuals, organisations and policy makers due to the rapid socio-economic and technological changes leading to volatile labour markets and unpredictability of careers (Forrier, et al., 2015). The current labour markets are increasingly relying on higher skill levels and transversal competences to meet the needs of the current industrial world (Ferns, Dawson & Howitt, 2019), and this has affected job security. This means that employability skills are useful, as they are transferable; because one can adapt them to whichever situation one finds himself/herself in. Employability is a question of a variety of stakeholders including government, graduate employers, higher education providers and students and graduates, therefore, it benefits the economy and society.

Previous researches on employability have acknowledged the importance of holistic approaches that take into account a combination of resources beyond a skill-centric focus (Cole & Donald, 2022), including factors such as personal characteristics, academic achievements and graduate skills (Byrne, 2022). This is because an individual may be having a first-class degree and a relevant subject for the career he/she wants, but it is most likely that he/she will be competing against others who have similar academic qualifications. Within such a situation, it is one's unique mix of skills, abilities and personal qualities that will make him/her stand out from the crowd.

Similarly, (ILO, 2013) states that for young women and men to navigate in the labour market, they need capability to adapt to change. This implies that employability skills cut horizontally across all industries and vertically across all jobs. Tomlinson and Holmes (2017), in their study 'Graduate Employability in Context: Theory, Research and Debate' examined the employability agenda as a strategic policy undertaken by governments in Western countries, with a growing emphasis on the economic value of graduates. Their

focus on the employability agenda was driven by political and economic dimensions. On the other hand, Williams et al. (2016) examined discourses around employability at an individual level and found out that literature places emphasis on dimensions of employability which include: capital components, and career management, among others. However, these researches present broad representations of employability in the literature from a Western perspective. There is, however, missing research in these dominant discourses on employability in Uganda.

Empirical studies that clearly document a mismatch between the skill levels of graduates are predominantly focused on Western institutions in developed countries (Lisa, et al., 2019); Chowdhury and Miah, (2019). There is limited research reporting on employability of students in Uganda. The current study was out to fill this gap. It was observed in literature that there are a number of lists by different researchers from different contexts (Singh & Gera 2015, Bano & Vasantha 2018, Lisa, Hennelova & Newman (2019). This study generated a list of employability skills (theoretical knowledge and skills, creativity, innovation and entrepreneurship, positive attitude towards work, and collaboration and team work) for the 21st century. These skills are part and parcel of an individual's career and life because they harmonise competences for the labour market, and narrow the gap between university education and industry.

2.2.2 Curriculum Review and Employability of Students

Curriculum review is a formative component of the overall quality assurance strategies and it is focused on the continuing development of students' learning experiences (Dyjur & Kalu, 2018). Bearing this in mind, technological transformations have changed the world globally, and consequently, the education sector is expected to produce graduates who will be able to compete favourably in the constantly changing labour market. This explains why

many countries are re-designing their curricula to prepare young people for the current trend of digital and technological advancements.

Curriculum involves developing programmes of study, teaching strategies, and assessment of students. According to OECD Learning Framework, 2030, a quality curriculum addresses the needs of individual students and helps every learner to develop as a whole person for personal fulfillment and employability. Unfortunately, it is widely documented in literature (Khan & Law 2015) that curriculum review is disintegrated and the role of industries in developing high quality study programmes is given isolated considerations. Essentially, considering what is to be learned, how it is to be learned, and why it is to be learned are consequential questions in the curriculum review, for understanding the important components of students' employability.

National Council for Higher Education – Uganda, requires that when designing and reviewing programmes, the institution shall consult with all relevant internal and external stakeholders (Uganda Higher Education Qualifications Framework, 2016). In line with UHEQF's requirements, KyU's one of the strategies to achieve quality assurance policy objectives is to involve relevant stakeholders in curricula reviews and design of new programmes (KyU Quality Assurance Policy, 2014). Strategically, collaborating with diverse stakeholders would be an indicator that the university understands, considers, and integrates the evolving needs of the economy and community into its educational programming.

Khan & Law (2015) identified some steps to follow in curriculum review which include:

1. Needs Assessment and Situation Analysis.
2. Key stakeholder consultations are carried out through workshops using focus group discussions.

3. Select the appropriate content for the revised competences.
4. Provide the learning materials, as needed.

This implies that a context-based approach to curriculum review is relevant because it accounts for the level of technological competences, as well as the needs and priorities of the country to succeed in the 21st Century society. Literature reveals that the existing university curriculum is detached from the labour market (Philips Consulting, 2014; Pitan, 2016). This means that the reviewers of the curriculum do not comprehensively engage university education key stakeholders, especially employers and professional bodies. This reduces the university education system to a theoretical curriculum that does not empower students to be job creators and needs further investigation, which was the focus of this study.

According to UNESCO (2016), good learning is greatly enhanced by the quality, relevance and effectiveness of the curriculum. However, Nkamwesiga, Mukimba & Bukirwa (2021) report that the industry- university link in Ugandan public universities is loose, leading to students obtaining insufficient skills and leading to employment failure by the companies or self. Nkamwesiga, *et al.*, (2021) emphasized collaboration between the industry and university during curriculum review because it enhances deep learning among learners while promoting quality in a pedagogical spectrum, in addition to industrial inclusion. Puuka (2015) asserts that this dual system of training features cooperation between universities and employers. In addition questions of what, why, and how students should learn can be answered through labour market information about jobs available on the market and job recruitment trends which are helpful in identifying students' options for future career prospects. .Employer involvement in curriculum review establishes strong linkages that help many study programmes to make continual curriculum adaptations to include the latest trends and developments in the labour market. Furthermore, early links

would be established between students and potential employers which would spill over into wider cooperation between universities and industries in research and development activities. Such activities would lead to university spill-offs, and technology transfer, adding further impetus to local economic development that would, in turn, create more jobs for graduates.

Almost all the literature reviewed in this section was from Europe, Asia, Australia, and United States of America (Khan & Law (2015); Hyttinen and Huang (2018); Andrade (2018); Gouédard, Pont, & Huang (2020); Honkimäki, et al (2021); Šooš & Jones (2015); Philips Consulting, (2014); UNESCO (2016); Puuka (2015); HEFCW, (2011); Ferns, Dawson, & Howitt (2019); Global Coalition, (2013); Twining et al. (2020); Butler et al. (2018). Little literature was from Africa, for example, Nkamwesiga, Mukimba & Bukirwa, (2021); and Pitan, (2016). This implies that there is limited research in Uganda in the area of how curriculum review enhances employability of students, hence, the current study. The next section reviews how industrial training enhances employability of students.

2.2.3 Industrial Training and Employability of Students

Industrial training is a short term workplace practical experience which provides opportunities to students to enter the job market during and after their course programmes. It polishes students' professional growth and experience, and improves their personal skills. However, there is little literature in Uganda about the value of industrial training in enhancing employability of students. In Uganda, the current education system is what was designed to serve European needs, and this partly explains why students find it difficult to apply conceptual knowledge in solving employment difficulties.

Industrial Training is a training programme that focuses on providing supervised training of the working environment in the specific timeframe. This is because supervision enhances social learning processes that trigger changes in a person's identity development

as a professional. Additionally, Anjum (2020) stated that industrial training programmes provide opportunities for educational institutions to prepare the curriculum; while for students, industrial training programmes are an excellent source of practical work experience, learning team work, problem solving, and building personal and professional relationships. In this regard, the principles of lifelong learning and transformative learning are reinforced. On the contrary, Chillias, *et al.* (2015) found out that students do not practise what matches their courses and training at the university. International Labour Organisation (2017) emphasized that quality industrial training should match the skills demanded in the labour market with those acquired in education and training systems. The effectiveness of industrial training stimulates students' insight learning thereby producing a better quality student with high prospects of employability.

Faculty of Science embeds industrial training in its science undergraduate curricula. The university offers semester- industrial training for students. The industrial training policy in the faculty requires every student to accomplish a supervised industrial training programme. The duration of industrial training in the Faculty of Science is six weeks and it is done twice in a study programme. Students are given a document by the faculty which describes how they are to be supervised by site supervisors and lecturers who are called inspectors. Workplace supervisors are given a workplace supervisors' evaluation form to assess the student during the industrial training exercise, and after the exercise, that form is returned to the university. The marks given by the site supervisor and the marks given by the inspector (Lecturer) are computed averagely and the student is awarded the final marks for the exercise. Lecturers from the university are supposed to visit the student twice or three times (Primary Data, 2021). Mutambala, *et al.*, (2020) reported inadequacy of supervision, and placement of students in industrial attachments, and this was the focus of this study. Industrial training programme majorly focus on what the student can do. So, the

applicability of knowledge will depend on how students assimilate what they already know with the world of work. This implies that industrial training at Kyambogo University should be handled efficiently if students are to benefit and remain focused on their future career progress and personal growth. The next section reviews career services and how they enhance employability of students.

2.2.4 Career Services and Employability of Students

Career service is a quality assurance practice that provides students with information about labour market trends and recruitment requirements. According to Donald et al., (2018), employability of students is achieved through personal development, supported by the university's career services initiatives. This implies that services like career fairs, and career talks improve students' understanding of the labour market and their future employment. Thus, learning through a variety of different methods provided by career services, gives an individual a well-rounded education.

Career services at the university assist students to depict what their career goals are, and the steps they need to take to achieve them. In that way career services become lifelong learning strategies for sustainable career growth. Similarly, Boateng, et al., (2015) emphasized career services provision because they help to orient graduate students on job search processes which stimulate and facilitate personal career development. Mason et al., (2009), Ehiyazaryan and Barraclough (2009) found out that students' visits to industries, and students' collaboration with employers, have an important impact on students' enhanced employability because these activities link University education to industry which in turn reduces the mismatch of skills.

Donald et al., (2019) demonstrated students' awareness of the relevance of career services to their employability. However, students highlighted the ineffectiveness of some provisions due to lack of sufficient engagement and specific, personalised advice, thereby,

requiring universities to develop appropriate ways of overcoming these issues. Donald, et al., (2021) confirmed the role of universities in the task of preparing students to embark on the university-to-work transition in the context of a competitive labour market. Following this call, Makerere University set up a career services center. According to Fouad and Kozlowski, (2019), the idea of ‘one-life-one-career’ is changing towards a focus on adapting one's career identity and continuously acquiring new knowledge and skills throughout the life-span (). This implies that career services provide students with opportunities for learning and development of competences, thereby, enhancing their employability. However, in Uganda, little is known about how much has been done to develop career services in higher education sector, hence, the current study.

The focus of most universities is solely on students’ grades and performance on standardized tests. Some students are admitted to study programmes which do not reflect their interests and values, and this negatively affects their attitude towards such courses. Further still, students receive socialisation information about work and career from parents, peers, media, and teachers. Some of this information is regarded as common myths, because it engages students in wrong assumptions about career and work environment. It is important for public universities to establish career service centers and to facilitate them financially to have them function effectively.

2.2.5 Summary of the Literature that was reviewed

Literature revealed that, contextually; there is scanty published research on quality assurance practices that enhance employability of students in Uganda. There is also little published literature on the desired skills of University graduates and the current gaps that employers have identified.

However, theoretically, some studies that investigated employability of students used different theories. Donald, et al., (2018) used Career Ecosystems Theory, Inceoglu et al.,

(2019) used Transition Theory, Anjum, (2020) used Social Learning Theory and these theories do not explain employability of students. This study employed Human Capital Theory because it explains how education increases opportunities for students to become employable.

Methodologically, some studies were qualitative, for example, Donald, et al., (2018); others were quantitative, for example, Chowdhury and Miah (2019); and some reviewed literature, for example, Inceoglu, et al., (2019); and Honkimäki, et al., (2021) used the survey method. This study used a mixed methodology which facilitated the in-depth analysis of curriculum review process, industrial training, career services and their contribution to employability of students.

The review showed that there is need to obtain more empirical evidence on employability of students in Uganda. Chapter Two reviewed literature related to curriculum review, industrial training and careers services as practices through which students' employability can be enhanced within university education. These practices are student centred and provide students with innovative and creative minds that will enable them work professionally and in different sectors.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the philosophical orientation; the research design; the study population; the sample size and sampling techniques. It also describes data collection methods and research instruments, as well as data quality control. Research procedures, data management and analysis, ethical considerations, as well as the anticipated limitations of the study are discussed.

3.1 Philosophical Orientation

A research philosophy is the conceptual lens through which the researcher examines the methodological aspects of the research project to determine the research methods that will be used and how the data will be analysed (Kivunja & Kuyini, 2017). The basic fundamental approaches that drive the choice of content and methods of research are epistemology, ontology, and axiology and they are explained here below.

Epistemology describes various methods of acquiring knowledge, for instance, knowledge is constructed through past experience and previous literature. In this regard, the researcher adopted the pragmatic approach because of its pluralistic elements of positivism and constructivism to develop knowledge about quality assurance practices that enhance employability of students..

The pragmatic approach draws its tenets from the elements of quantitative-qualitative continuum where the construction of knowledge is informed by the context which is examined in its real world setting and enriched by the interpretation of the environment lived by the participants (Yin, 2014; Stake, 2006; Harrison, et al., 2017). This implies that construction of knowledge is a process, as well as validation, of experiential and theoretical

knowledge. Therefore, for knowledge validation, a variety of methods were used in this study.

Ontology concerns the choices we make and how they influence the outcomes or, as individuals, whether our nature is best viewed as being part of the social system. This implies that reality is relative according to how individuals experience it at any given time, and place.

Axiology refers to the values, beliefs, and ethical positions that guide the research practices and interpretations of findings (Alele & Malau-Aduli 2023). In this study, the accounts rendered by each participant were considered as unique and important in constructing the overall picture of quality assurance practices and employability of students. The researcher operated within the ethic of respect for every participant that was involved in this study. All participants were treated fairly regardless of any significant difference, such as age, gender, ethnicity, religion or political affiliation.

The philosophical underpinnings in this study gave the researcher greater scope of research methods to investigate issues of influence and hegemony on employability of students and to ask questions, such as why particular events took certain directions, and how the findings would align with reality, as constructed by the researcher and the research participants.

3.2 Research Design

A case study design (Creswell, 2014; Stewart, 2014; Yin, 2014) anchored in quantitative-qualitative approach guided this research. This design provided a detailed analysis in the individual case which made the internal validity high. Use of Case Study Design enabled the researcher to describe, interpret, and construct meaning developed socially and experientially by the people who lived the situation under investigation. For this study Kyambogo University was selected as a case institution because it is known for its hands

on skills development in Uganda. The study used Explanatory Sequential Approach which allowed quantitative data to provide a basis for the collection of qualitative data (Creswell, 2009).

3.3 Study Population

The population of the study comprised of 3rd and 4th Year students, lecturers from Faculty of Science and employers in organisations from where students do their industrial training. Students and lecturers came from the departments of Chemistry, Biological Sciences, Food Processing Technology, Computer Science, Mathematics, Physics as well as organisations where students do their Industrial Training from, and these included: research institutions, foods and beverages plants, and medical laboratories. The students were final-year university students. These students were chosen because they were preparing for transition from education and, therefore, had the right information about their employability prospects as they prepared to join the world of work. Academics were chosen because they are the ones who review the curriculum and implement it. The dean, heads of departments, and coordinators are part of the institutional leadership that drives the vision and mission of the entire university. From employer organisations, human resource and chief executive officers were selected because they are part of the organisations' leadership and they design recruitment procedures of employer organisations.

3.4 Sample Size

The total population of academic and administrative staff, students, and human resource and chief executive officers of employer organisations was ascertained. This was subjected to Krejcie & Morgan (1970) to determine the sample size which was a representative of the population of the study, as shown in Table 3.1.

Table 3.1: Sample Size Determination

Category	Total Population	Sample Size
Academic Staff	80	66
Students	524	226
HODs	6	6
Deans	1	1
Employers	20	19
Total	625	318

Source: Faculty of Science Records, KyU, and Employer Organisations' Records.

3.5 Sampling Techniques

Quantitatively, simple random sampling was used. The participants included final year students from the following departments: Food Processing Technology, Chemistry, Physics, Biological Sciences, Mathematics, and Computer Science. The degree programmes were Bachelor of: Food Science and Processing Technology, Science Technology- Chemistry, Science in Chemical Engineering, Environmental Science Technology and Management, Science Technology-Physics, Science Technology-Biology, Science in Statistics, Information Technology, and Information Systems. The study used simple random sampling because it creates a manageable and balanced subset of individuals that are representative of a larger group (Hayes, 2021). It is a simple and completely unbiased approach to garner responses from a large group.

Qualitatively, the main sampling technique was purposive sampling. In determining the sample size, the researcher followed the non-mathematical assumption of Mariwilda (2015) for determining sample size in qualitative research in which a maximum of fifteen

respondents is considered sufficient to make sound generalisations about the problem being studied. Deans, and heads of department, faculty coordinators, human resource officers of employer organisations were purposively selected, because they are key policy or decision makers as well as strategic individuals who were able to answer the what, why, and how questions in the implementation of the vision and mission of the entire organisation.

3.6 Data Collection Methods

This study used quantitative and qualitative methods of data collection (Mckim, 2017). Quantitative methods used a research questionnaire. The research questionnaire was administered to lecturers, students, and chief executive officers of organisations from where students do their industrial training. This method helped the researcher to gather a lot of data in less time.

Qualitative methods included interviews and documentary review. An interview is a data gathering technique which is conducted to increase knowledge on a given topic which involves verbal communication between the researcher and the interviewee. The interviewees included heads of department, dean, faculty coordinator, student coordinators, and human resource officers to get a more realistic consistency of the situation that could not have been captured in quantitative research.

Documentary review involved review of the available documents, such as the strategic plan and quality assurance policy, to discover the apparent strengths and weaknesses in terms of students' employability. The analysis of questionnaires, interviews, and the review of relevant documents, contributed to an understanding of the issue of students' employability from different perspectives and ways of knowing.

3.7 Data Collection Instruments

3.7.1 Questionnaires

Questionnaires based on the even numbered Likert Scale of four points ranging from 4-1 were administered. (Appendix 3, Appendix 4, and (Appendix 2). This was because the researcher wanted to get specific responses about employability of students in the job market. The scale was used for importance, frequency and agreement, respectively (Appendices, 2, 3, 4).

A questionnaire for students (Appendix 3) had three sections: A, B, and C. Section A measured the concept of employability. Section B measured variables for Objective 1; Section C measured variables for Objectives 3 and 4 and had a total number of 31 statements. Section D had an open ended question.

A questionnaire for employers (Appendix 4) had two sections: A, and B. Section A measured variables for employability skills (Objective One) and had a total number of 19 statements.

A questionnaire for academic staff (Appendix 2) had three sections: A, B & C. Section A measured the concept of employability. Section B measured Objectives 2, 3, and 4 with a total number of 18 items measured on a four point Likert Scale ranging from 4-1. Section C had an open ended question. Although the questionnaires were standardised, the researcher included open ended questions in the questionnaire because these are epistemological and more philosophical questions that allow the freedom of a wide range of knowledge to conform to the study objectives. However, a questionnaire is criticized for not being susceptible to individual experiences. In this regard, interviews were also used to probe the effect of quality assurance practices on employability of students (Mugenda and Mugenda, 2014).

3.7.2 Interview Guide

An in-depth open ended interview guide for data collection was used to provide opportunity for probing (Yin, 2014). Using Qualitative data collection instruments enabled the researcher to obtain a more realistic consistency of the situation that could not have been captured in quantitative research.

3.8 Data Quality Control

Data quality control included validity and reliability of instruments.

3.8.1 Validity for Quantitative Data

To establish content validity of the questionnaires, a representative sample of the indicators of the constructs of employability skills, curriculum review, industrial training, and Career services, were calculated using SPSS. The questionnaire for employability skills, the CVI was 0.794, and the questionnaire for quality assurance practices, the CVI was 0.825. The questionnaire having a CVI above 0.70 meant that it would give valid data (Creswell, 2013).

3.8.2 Validity for Qualitative Data

To attain trustworthiness, the research used interviews and documentary review. The interview guide questions were constantly checked by supervisors and some senior researchers to provide insights for corrections.

3.8.3 Reliability of the Research Instruments

Research instruments on quality assurance practices were adapted from Mwebai and Kyuli (2016), and Dacre Pool and Sewell (2007). The research instrument on employability skills was adapted from Dhanawade and Bhola, (2017); Ngulube, (2020); Ornellas, et al., (2018). However, some few items were researcher made to conform to the conceptual framework; so, reliability of the whole instrument on quality assurance practices and employability of

students was determined using SPSS. The results of the overall multiple item scales had high Cronbach Alpha reliability of 0.94.

3.9 Data Collection Procedure

The researcher obtained an Introduction Letter from Graduate School of Kyambogo University, and Ethical Clearance from Gulu University Research Ethics Committee (GUREC-011-21). An approval letter from UNCST (SS868ES) was obtained to conduct the research. Before administering the questionnaire, the researcher and the research assistants requested the respondents to sign the informed consent to avoid coercion and bias.

3.10 Data Analysis

Data was cleaned and edited to ensure consistency, completeness, and accuracy. Then after, data was categorized, tabulated, and it was described and interpreted based on the research objectives.

3.10.1 Quantitative Data Analysis

The study included multiple variables for analysis and so, data was analysed using descriptive statistics. As for the objectives for this study, different data analysis methods were used.

Objective One, a t-test was run. For objectives: two, three and four. a correlation matrix was run and fitted, and the test was done at a hypothesis of 5% level of significance. A variable was taken to be statistically and significantly correlated with the dependent variable if the p-value was less than 0.05. Pearson Product Moment Correlation Coefficient was used to measure the correlation between the study variables, and the coefficient of determination was calculated to determine the nature and strength of the relationship. Regression analysis was done to identify those variables that appropriately predicted employability of students.

3.10.2 Qualitative Data Analysis

Qualitatively, responses from the oral interviews were transcribed in a narrative form where participants' commentaries were quoted to complement numeric data obtained from quantitative analysis. In this regard, data from interviews was analysed first by identifying the main ideas that emerged from the oral interviews. Key ideas were condensed into themes which were presented and discussed concurrently with the statistics obtained to explain the quantitative results.

3.11 Ethical Considerations

All participants were treated fairly regardless of any significant difference, such as age, gender, ethnicity, religion or political affiliation. An informed consent form Version 2.0; 19.04.2021 was provided to the participants for signing. This entailed informing the individual participants why they had to participate in the research study so as to decide whether or not to participate. Participants were also informed that they were free to participate or withdraw at any time without penalty. Precaution was taken to keep the participants' participation private and confidential during and after the research. Also, the researcher acknowledged all the resources that were cited in the thesis.

3.12 Limitations of the Study

Not all the quality assurance practices were investigated in this study. The research focused on quality assurance in relation to employability of students. Data collection instruments were standardised.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

4.0 Introduction

The study findings are presented in this chapter. The first section presents the profile of the participants. The second section presents the findings, analysis and interpretation. Quantitative data collected for the study was statistically analysed and presented according to the study variables, while qualitative data was thematically analysed. The chapter includes descriptive, inferential and regression analyses.

4.1 Demographic Characteristics of the Participants:

Tables 4.1-4.4 present demographic characteristics of respondents.

Table 4.1: Demographic characteristics of employers: (n=19)

Name of Organisation	Frequency	Percentage (%)
Bio Core – Uganda	2	10.5
MTN- Uganda	2	10.5
Green Environment Organisation	1	5.3
Wild Life Education Centre	1	5.3
Genetic Resource Centre	1	5.3
Soroti University	1	5.3
NARO	1	5.3
Crown Beverages	2	10.5
Bringa Fresh	1	5.3
UIRI	1	5.3
UNBS	1	5.3
Government Analytical Laboratory	4	21.1
Agri Tech Business	1	5.3
Total	19	100

Source: Primary Data 2022

Table 4.2 Demographic characteristics of academic staff. (n=66)

Lecturers	Faculty	Frequency	Percentage (%)
Science			
Gender			
Male		36	54.5
Female		30	45.5
Total		66	100
Employment Status			
Full Time		66	100
Total		66	100

Source: Primary Data, 2022

Table 4.3: Demographic characteristics of students: (n=226)

Students	Frequency	Percentage (%)
Year of study		
Year Three	186	82.3
Year Four	40	17.7
Total	226	100
Students by degree programme		
Bachelor of Science Technology- Biology	20	8.84
Bachelor of Science in Statistics	25	11.08
Bachelor of Science Technology- Physics	17	7.52
Bachelor of Information Systems	33	14.6
Bachelor of Information Technology	40	17.7
Bachelor of Chemical Engineering	25	11.08
Bachelor of Science Technology-Chemistry	20	8.84
Bachelor of Environmental Science Technology and Management	31	13.71
Bachelor of Food Science and Processing Technology	15	6.63
Total	226	100

Source: Primary Data, 2022

Table 4.4: Departments: (n=6)

Departments		
Food Processing Technology	15	6.6
Chemistry	76	33.6
Physics	17	7.5
Biological Sciences	20	8.8
Mathematics	25	11.1
Computer Science	73	32.3
Total	226	100

Source: Primary Data, 2022

Three categories of respondents participated in the study: employers (Table 4.1), lecturers (Table 4.2), students (Table 4.3), and departments (Table 4.4). Employers were 19, lecturers were 66, students were 226, and departments were 6. So, the study covered a total of 318 participants. Of the total participants, 292 (91.8%) were from Faculty of Science, Kyambogo University, while 19 (6.0%) participants were from employer organisations. Of the 292 participants from the university, 226 respondents were final year students: Third year students were 186 (82.3%), while Fourth Year students were 40 (17.7%), and 66 (22.6 %) participants were full- time academic staff.

Employability is defined by Dacre Pool and Sewell, (2007), and Dacre Pool, (2020) as having a set of skills, knowledge, understanding, and personal attributes that make a person to secure occupations in which they can be satisfied and successful. It is a key concept in research on students' experiences of transition from university to work. In this regard, employability concerns not only students, but higher education institutions,

employers, and government. This explains why the researcher investigated employability from multiple perspectives. These multiple perspectives provided a holistic approach to employability which enabled the researcher to generate thorough and comprehensive reliable data. Also, it permitted the researcher to compare and evaluate data to draw conclusions towards the best solutions to employability of students. In the following presentation of data, findings are described and interpreted, objective by objective.

4.2 Employability

This section contains descriptive results on employability which is the dependent variable. Employability categorises students into two groups: those who are employable and those who are unemployable based on the skills the individual possesses. The labour market has changed due to technological advancements, and employers are looking for who are competent technically but are also well equipped with generic skills. In this regard, while evaluating employability, the study focused on professional skills, personal skills and interpersonal skills. Table 4.5 presents the results for professional skills.

4.2.1 Professional Skills

Professional skills were the first measure of employability of students. The measure was studied using eight question items. Table 4.5 presents the findings.

Table 4.5: Professional skills as they were rated by students: n=226

Indicators	MI	I	LI	NI	Mn	SD	95%CI
Professional Skills							
Understanding, interpreting, and evaluating information	84 (37.2%)	122 (53.9%)	19 (8.4%)	1 (0.4%)	3.41	0.62	3.32-3.49
Practical skills	71 (31.4%)	119 (52.7%)	23 (10.2%)	13 (5.7%)	3.17	0.68	3.08-3.27
Planning and organisational skills	53 (23.5%)	80 (35.4%)	36 (15.9%)	57 (25.2%)	3.15	0.77	3.03-3.28
Identifying problems and developing creative and practical solutions	35 (15.5%)	91 (40.3%)	71 (31.4%)	29 (12.8%)	3.02	0.67	2.91-3.13
Ability to summarise key issues	54 (23.9%)	99 (43.8%)	27 (11.9%)	46 (20.4%)	3.01	0.73	2.92- 3.11
Theoretical Knowledge and skills	56 (24.8%)	134 (59.3%)	20 (8.8%)	16 (7.1%)	2.84	0.83	2.72-2.95
Inquiry and research skills	37 (16.4 %)	105 (46.5%)	70 (31.0%)	14 (6.1%)	2.77	0.73	2.67-2.87
Writing and presenting reports and projects	32 (14.2%)	100 (44.2%)	58 (25.7%)	36 (160%)	2.51	0.80	2.41-2.62
Overall Average					2.98	0.72	2.91- 3.11

Source: Primary Data 2022

Table 4.5 presents percentages, means, standard deviations and interpretation of important professional skills, as they were rated by students. Considering the average mean scores = 2.98, and the SD=0.72, majority of the students scored professional skills moderately.

Focusing on 95% confidence interval of 2.91- 3.11, it means that, if a respondent was randomly chosen and measured on the same variables, he/she could give an average mean of 2.98. This implies that we are 95% confident that respondents could give scores, with the least not giving below 2.91 and the highest not giving above 3.11. The interpretation of these results is that students do not get sufficient professional skills during their study at the university. This was explained by qualitative data where it was reported that students do not have enough practical work because laboratories are few and not well equipped with modern equipment. Consequently, lecturers do not organise sufficient practical work.

Table 4.6: Professional skills as they were rated by employers: (n=19)

Indicator							
Variables	MI	I	LI	NI	Mn	SD	95%CI
Professional Skills							
Practical skills	16 (84.2 %)	3 (15.83%)	0 (0.0%)	0 (0.0%)	3.84	0.37	3.66-4.02
Inquiry and research skills	11 (57.9%)	8 (42.1%)	0 (0.0%)	0 (0.0%)	3.57	0.50	3.33-3.82
Planning and organisational skills	11 (57.9%)	6 (31.6%)	1 (5.3%)	1 (5.3%)	3.50	0.70	3.14-3.85
Identifying problems, developing creative and practical solutions	9 (47.4%)	7 (36.8%)	2 (10.5%)	1 (5.3%)	3.26	0.87	2.84-3.68
Understanding, interpreting and evaluating information	4 (21.1%)	15 (78.9%)	0 (0.0%)	0 (0.0%)	3.21	0.41	3.00-3.41
Writing and presenting reports and projects	3 (15.8%)	13 (68.4%)	3 (15.8%)	0 (0.0%)	3.00	0.57	2.72-3.27
Theoretical knowledge and skills	1 (5.3%)	16 (84.2%)	2 (10.5%)	0 (0.0%)	2.94	0.40	2.75-3.14
Ability to summarise key issues	11 (57.9%)	0 (0.0%)	8 (42.1%)	0 (0.0%)	2.57	0.50	2.33-2.82
Average				3.23	0.54		2.97-3.50

Source: Primary Data 2022

Table 4.6 presents percentages, means, standard deviations and interpretation of professional skills, as they were rated by employers. The overall average mean score was 3.23, and SD = 0.54. The results indicate that the general perception of professional skills was moderate. Focusing on overall 95% confidence interval for the measurement which is 2.97-3.50, it means that, if a respondent was randomly chosen and measured on the same variables, he/she could give an average mean of 3.23. This implies that we are 95% confident that respondents could score professional skills, with the least not giving below 2.97 and the highest not giving above 3.50. The interpretation of these results is that employers consider certain skills relatively important while others are highly important. As shown in the results employers highly considered practical skills (mean= 3.84), inquiry and research skills (mean=3.57), as well as planning and organisational skills (mean=3.50).

4.2.2 Personal Skills

Personal skills were the second measure of employability of students. The measure was studied using eight question items. Table 4.7 presents results for personal skills, as they were rated by students.

Table 4.7: Personal skills as rated by students: n=226

Indicators	MI	I	LI	NI	Mn	SD	95%CI
Ability to work independently	75 (33.2%)	97 (42.9%)	26 (11.5%)	28 (2.4%)	3.37	0.66	3.26-3.48
Willingness to learn	66 (29.2%)	106 (47.8%)	31 (13.7%)	16 (7.1%)	3.33	0.76	3.20-3.46
Positive attitude towards work	84 (37.2%)	60 (26.5%)	62 (27.4%)	20 (9.8%)	3.27	0.81	3.15-3.40
Self-presentation skills	87 (38.7%)	21 (9.3%)	101 (44.7%)	17 (7.5%)	3.26	0.72	3.16-3.35
Adapting skills learnt to new situations at work	82 (36.3%)	111 (49.1%)	19 (8.4%)	14 (6.1%)	3.26	0.69	3.17-3.35
Critical and analytical thinking	65 (28.8%)	127 (56.2%)	22 (9.7%)	12 (5.4%)	3.14	0.68	3.08-3.27
Resourcefulness	48 (21.2%)	127 (56.2%)	31 (13.7%)	20 (8.9%)	3.07	0.85	2.92-3.21
Creativity, Innovation and Entrepreneurship	63 (27.9%)	109 (48.2%)	36 (15.9%)	8 (8.0%)	2.62	0.94	2.49-2.75
Overall Average					3.16	0.77	3.03-3.27

Source: Primary Data, 2022

Table 4.7 presents percentages, means, standard deviations and interpretation of personal skills, as they were rated by students. Considering the average mean score = 3.16, and SD=0.77, majority of the students scored personal skills moderately. Focusing on the

overall 95% confidence interval for our measurement, which is 3.03-3.27, it means that if a respondent was randomly chosen and measured on the same variables, he/she could give an average mean of 3.16. This implies that we are 95% confident that respondents could give scores, with the least not giving below 3.03 and the highest not giving above 3.27. The moderate score simply means that students are not so much exposed to learning experiences that develop their personal skills and, therefore, they are not able to ascertain their personal identity.

Table 4.8: Personal skills as they were rated by employers: (n=19)

Indicator Variables	MI	I	LI	NI	Mn	SD	95%CI
Personal Skills							
Positive attitude towards work	15 (78.9%)	4 (21.1%)	0 (0.0%)	0 (0.0%)	3.78	0.41	3.58-3.99
Resourcefulness	15 (78.9%)	4 (21.1%)	0 (0.0%)	0 (0.0%)	3.78	0.41	3.58-3.99
Critical and Analytical thinking skills	14 (73.7%)	5 (26.3%)	0 (0.0%)	0 (0.0%)	3.73	0.45	3.51-3.95
Adapting skills learnt to new situations at work	13 (68.4%)	6 (31.6)	0 (0.0%)	0 (0.0%)	3.68	0.47	3.45-3.91
Ability to learn	13 (68.4%)	5 (26.3%)	0 (0.0%)	1 (5.3%)	3.57	0.76	3.20-3.94
Ability to work independently	11 (57.9%)	7 (36.8%)	1 (5.3%)	0 (0.0%)	3.52	0.61	3.23-3.82
Creativity, innovation and entrepreneurship	7 (36.8%)	9 (47.4%)	1 (5.3%)	0 (0.0%)	3.35	0.60	3.04-3.66
Self-presentation skills	8 (42.1%)	11 (57.9%)	0 (0.0%)	0 (0.0%)	3.15	0.37	2.97-3.33
Overall Average					3.57	0.51	3.32-3.82

Source: Primary Data, 2022

Table 4.8 presents percentages, means, standard deviations and interpretation of personal skills, as they were rated by employers. Overall average mean was 3.57, and SD=0.51. The general employers' perception of personal skills was high. Focusing on overall 95% confidence interval for our measurement, which is 3.32-3.82, means that, if a respondent was randomly chosen and measured on the same variables, he/she could give an average

mean of 3.57. This implies that we are 95% confident that respondents could give scores, with the least not giving below 3.32 and the highest not giving above 3.82. The results imply that employers highly consider personal skills. It was established that the following personal skills are the most important for employers: positive attitude towards work (mean= 3.78), resourcefulness (mean=3.78), critical and analytical thinking (mean= 3.73), adapting skills learnt to new situations (mean=3.68), ability to learn (mean=3.57), and ability to work independently (mean=3.52).

4.2.3 Interpersonal Skills

Interpersonal skills were the third measure of employability of students. The measure was studied using three question items. Table 4.9 presents results from students.

Table 4.9 Interpersonal skills as they were rated by students: n=226

Indicators	MI	I	LI	NI	Mn	SD	95%CI
Interpersonal Skills							
Communication skills	82 (36.3%)	79 (35.0%)	50 (22.1%)	15 (6.9%)	3.39	0.68	3.28-3.50
Ability to engage with others	86 (38.1%)	58 (25.7%)	66 (29.2%)	16 (7.0%)	3.28	0.84	3.15-3.41
Collaboration and team work	82 (36.3%)	60 (26.5%)	46 (20.4%)	38 (16.8)	2.98	1.05	2.84-3.12
Overall Average					3.21	0.85	3.09-3.34

Source: Primary Data, 2022

Table 4.9 presents percentages, means, standard deviations and interpretation of interpersonal skills, as they were rated by students. The average mean score was 3.21, and SD = 0.85. The findings indicate that majority of the students rated interpersonal skills moderately. Focusing on overall 95% confidence interval for our measurement which is 3.09-3.34, it means that, if a respondent was randomly chosen and measured on the same

variables, he/she could give us an average mean of 3.21. This implies that we are 95% confident that respondents could give scores, with the least not giving below 3.09 and the highest not giving above 3.34. The general perception of interpersonal skills by students was moderate. The interpretation of these results is that students are not sufficiently exposed to learning experiences that develop their interpersonal skills.

The next Table 4.10 presents descriptive results for professional skills, as they were rated by employers.

Table 4.10: Interpersonal skills as they were rated by employers: (n=19)

Indicator								
Variables	MI	I	LI	NI	Mn	SD	95%CI	
Interpersonal Skills								
Collaboration and Team Work	15	4	0	0				
	(78.9%)	(21.1%)	(0.0%)	(0.0%)	3.78	0.4	3.58-3.99	
Ability to engage with Others	8	9	1	1				
	(42.1%)	(47.4%)	(5.3%)	(5.3%)	3.38	0.60	3.08-3.69	
Communication Skills	9	9	1	0				
	(47.4%)	(47.4%)	(5.3%)	(0.0%)	3.42	0.60	3.12-3.71	
Overall Average					3.52	0.61	3.26-3.79	

Source: Primary Data, 2022

Table 4.10 presents percentages, means, standard deviations and interpretation of interpersonal skills, as they were rated by employers. Considering the overall average mean of 3.52, and SD=0.61, the general employers' perception of interpersonal skills was high. Focusing on overall 95% confidence interval of 3.26-3.79, it means that if a respondent was randomly chosen and measured on the same variables, he/she could give an average mean

of 3.52. This implies that we are 95% confident that respondents could rate interpersonal skills, with the least not giving below 3.26 and the highest not giving above 3.79. The results imply that employers highly consider interpersonal skills. The results indicate that collaboration and team work (mean= 3.78), and ability to engage with others (mean=3.78) are highly important interpersonal skills that make students employable. The data above, that measured employability as a dependent variable, revealed that professional skills had the lowest mean (students = 2.98; employers =3.23) compared to personal skills (students = 3.16; employers =3.57), and interpersonal skills (students =3.21; employers = 3.52). This implies that all the three types of skills are important but at different levels. Professional skills provide for the technical part, but personal and interpersonal skills provide for the social part which is required by all citizens for a successful life and for a well-functioning society, and this qualifies them to be highly important. This means that integration of professional, personal, and interpersonal skills produce quality students.

4.2.4 Null Hypothesis

To establish whether there was a statistically significant difference between students' and employers' perceptions of employability, a t-test was done. Table 4.11 presents the findings.

Table 4.11: Perceptions of employability between students and employers (Level of Significance=0.05)

Indicator					
Variables	Participants	Mean	SD	T	P-value
Professional Skills	Students				
	(Theoretical Knowledge and Skills)	2.84	0.23	49.76	
	Employers				0.00
	(Theoretical Knowledge and Skills)	2.94	0.39	31.74	
Personal Skills	Students				
	(Creativity, Innovation and Entrepreneurship)	2.62	0.26	40.77	
	Employers				0.00
	(Positive Attitude towards Work)	3.78	0.41	39.43	
Interpersonal Skills	Students				
	(Collaboration and Team Work)	2.98	0.28	41.84	
	Employers				0.00
	(Collaboration and Team Work)	3.78	0.4	39.43	

Source: Primary Source, 2022

4.2.5 Perceptions of Professional Skills between Students and Employers

The study found out that there was a statistically significant difference in the perception of professional skills between students and employers. The p-values from the paired t tests on independent samples showed the p-values of 0.00, which was less than the test value of 0.05 (p-values, $P=0.00 < 0.05$). However, students perceived and ranked professional skills slightly lower than the way the employers perceived and ranked professional skills. The employers were on the higher side of the ranking, as compared to the students $\mu \text{ students} = 2.84 < \mu \text{ employers} = 2.94$.

4.2.6 Perceptions of Personal Skills between Students and Employers

The study found out that there was a statistically significant difference in the way students and employers perceived and ranked personal skills, since the p-values were 0.00, which was less than the hypothesized value of 0.05 (p-values, $P=0.00 < 0.05$). However, students perceived and ranked personal skills, on a lower side, as compared to the employers who were on the higher side $\mu (\text{students}) = 2.62 < \mu (\text{employers}) = 3.78$.

4.2.7 Perceptions of Interpersonal Skills between Students and Employers

The results showed that there was a statistically significant difference in the way students and employers perceived and ranked interpersonal skills. This is because the p-values for the t sample tests were 0.00, which was less than the hypothesized value of 0.05 (p-values, $P=0.00 < 0.05$). However, students perceived and ranked interpersonal skills low as compared to the employers ($\mu \text{ students} = 2.98 < \mu \text{ employers} = 3.78$). Overall, the findings indicate that perceptions of employability between students and employers differed significantly, thus, rejecting the null hypothesis: there is no statistically significant difference between students' and employers' perceptions of employability.

4.2.8 Qualitative Data

This section answered the research questions:

1. How do students and employers perceive employability?
2. Which employability skills are required to make students employable?

Question one sought to evaluate students' and employers' perceptions of employability.

For students, when they were asked about their understanding of employability, they gave different views. Some said that employability is not having a problem with getting a job, others said that it means moving from one job to another easily, while others said employability is the same as employment. For employers, they understood employability as having skills and knowledge that make an individual perform at work. The second question sought to determine skills that are required to make students employable. Key informants included human resource officers. These were engaged in an interview about employability skills that are required to make students employable. The following skills were identified: subject knowledge, practicals, inquiry and research, collecting, analysing and organizing information, resourcefulness, critical and analytical thinking, adapting skills learnt to new situations, ability to work independently, willingness to learn, positive attitude towards work, collaboration and team work, and ability to engage with others, as important employability skills in determining students' employment outcomes. However, regardless of their significance in enhancing employability of students, employers reported that the quality of practical training and time given for practicals need further attention. These findings required the researcher to further find out how employability of students can be improved from the side of employers and lecturers.

Employers and lecturers suggested the following strategies:

1. Lecturers should carry out job market analysis before review of the curricula so that they develop relevant study programmes.
2. The University should develop collaboration and partnerships with employer organisations.
3. Career days should be created on the university calendar where various employers can engage students and share their experiences and expectations.
4. The University should provide career services to students and conduct tracer studies.

4.2.9 Interpretation of Findings on Employability

The interpretation of findings aimed at essential explanation of data to develop overall understanding of employability. Quantitative findings revealed that there was a significant difference in the way students and employers perceived and ranked employability skills. This created a gap in the understanding of employability between the two respondents. This explains why graduates experience negative employment outcomes due to the mismatch between skills demand and supply.

Fakunle et al., (2021) categorised employability into three categories namely: outcomes approach, process approach, and conceptual approach. According to Clarke (2018), outcomes approach dominates the other two because it is competence-centered and employment -centered. Outcomes approach focuses on the development of individual characteristics, and work related factors including skills and attitudes to obtain, retain, and move through employment (Cole & Tibby, 2013). This implies that employability of students needs combined effort from key university education stakeholders to identify relevant skills so that they are integrated in curricula to enable students to adapt in a diversity of changing work place dynamics.

Qualitative findings revealed that employers expect students to have theoretical knowledge and competences from their degrees, but also require them to demonstrate a

range of broader personal and interpersonal skills. This is because employability is a changing process to continually be enhanced due to changing working conditions in the labour market that increase insecure employment conditions for students. The labour market of the 21st century requires a relevant chain of supply and demand of skills in order to be relevant in the labour market. Additionally, employers' perceptions of significant employability skills provided insight into the need for the university to collaborate and develop partnerships with employers so that universities can make significant contributions to education that would develop high quality human capital. This is because university-industry collaborations provide opportunities for experiential learning while monitoring labour market trends in order to develop programmes that match the needed employability skills.

4.3 Quality Assurance Practices and Employability of Students

This section contains descriptive results for quality assurance practices. In addition, it includes test results for the relationship and influence of quality assurance practices on employability of students. The study focused on curriculum review, industrial training and career services as quality assurance practices that enhance employability of students.

4.3.1 Curriculum Review and Employability of Students

Objective two was to determine the relationship between curriculum review and employability. Table 4.12 presents the findings.

Table 4.12: Curriculum Review as it was rated by Lecturers: (n=66)

Indicators	SA	A	DA	SDA	MN	SD	95%CI
Programmes are reviewed periodically	27 (40%)	38 (57.6%)	1 (1.59%)	0 (0.0%)	3.34	.512	3.21-3.47
Representatives from industries are involved in curriculum review	7 (10.6%)	10 (15.2%)	18 (27.3%)	31 (47%)	2.53	.880	2.31-2.74
Key stakeholder consultations and workshops are organised to revise and develop content	5 (7.6%)	8 (12.1%)	23 (35%)	30 (46%)	2.04	1.058	1.78-2.30
Subject experts are given ample time to attend to the integration of subject competences with subject content	4 (6.1%)	6 (9.1%)	23 (39.4%)	30 (46%)	2.93	1.050	2.68-3.19
Overall Average					2.71	0.875	2.49-2.93

Source: Primary Data 2022

Table 4.12 presents findings from indicators that measured curriculum review. Looking at the overall statistics of Table 4.12, the average mean of 2.71 and the SD of 0.875 indicate that majority of the participants reported that curriculum review is moderate. Focusing on the 95% confidence interval of 2.49-2.93, this simply means, that if a respondent was randomly chosen from the population of lecturers where this sample came from, and was measured on the same variables, he or she could give us an average of 2.71, which is a relative disagreement of how curriculum is reviewed. The findings of this study are

explained by 74.3% of the lecturers who reported that representatives from industry are not involved in curriculum review, 81% reported that stakeholder consultations and workshops are not organised to revise and develop content, and 85.4% reported that subject experts are not given ample time to attend to the integration of subject competences with subject content. It was established that representation of industry in curriculum review was highly correlated with employability of students.

4.3.2. Qualitative Data for Curriculum Review

This section answered the research question: How is the curriculum reviewed?

Key Informants included: Heads of Department, Senior Lecturers and Professors. There were 6 Heads of Department, 6 Senior Lecturers, and 3 Professors. For purposes of clear analysis, all were referred to as Lecturers and they were numbered from 1 to 15, for example Lecturer₁ up to ₁₅. These were engaged in an interview about how curricula reviews are conducted. This aimed at finding out how curricula are reviewed to assess how effective they are in remaining relevant with the changing labour market expectations in terms of key skills and specific competences. It was established that stakeholders are not invited to give in their input during the curricula review process. Out of the fifteen participants that were interviewed, one participant reported that, at times, they involve the alumni to identify course units that are relevant, locate gaps and redundancies, and examine strengths and current trends. Ten participants reported that curriculum review workshops are not organised and stakeholders are not involved.

Lecturer 1 asserted that:

Stakeholders are not invited, so, no external people give in their input during the process. The head of department sends an email to each staff member to suggest some improvements. Review is done from our places on-line. Somebody could be teaching a course for which he is not an expert. So he

may not be competent in knowledge to review the unit. But if there is a workshop there is sharing of knowledge and expertise which improves the quality of the curriculum.

Lecturer 5 stated that:

The standard practice during curriculum review would be to organise review workshops so that the academic staff members come together, work in groups, and review the curriculum. However, because of poor facilitation, the practice for the last 10 years, each Lecturer is asked to review what he teaches which is not appropriate. Science is a dynamic discipline which requires the involvement of employers and professional bodies to continuously review the curriculum in order to keep relevant with the changing labour market expectations in terms of key skills and specific competences.

The implication of this finding is that there is no sharing of knowledge and expertise during the curriculum review process, and this undermines the quality and relevance of the curriculum. This necessitated the researcher to go further and find out if there were challenges lecturers faced during curricula reviews. All participants reported that curricula reviews in the Faculty of Science involve all Full- Time and Part- Time Lecturers. However, they indicated that time given to curricula reviews is too short to do satisfactory work. They, further, explained that, due to limited time, review of content is not done properly and, sometimes, course units where people do not have the expertise, they just hand in the old curriculum.

Lecturer 4 reported that:

The review is given two days, so, no satisfactory work is done. The time given is too short for somebody to really review content properly. People do not pay

maximum attention during the process. In fact, some of those courses where people do not have the expertise they just leave the old curriculum and forward it as if it has been reviewed.

The other challenge raised by the participants was financial facilitation. Participants were not happy with the University for taking it for granted that curriculum review is part of their job tasks and so, facilitation is overlooked. Participants impressed upon the university managers that to get the best results out of staff, they need to be motivated.

Lecturer 9 reported that:

The university is not willing to facilitate the curriculum review process because the assumption is that curricula reviews are part of the lecturers' job. Most lecturers are part time and they are not willing to offer to put in transport and time when they know they are not going to be compensated.

Qualitative findings revealed that the whole process of curricula review lacks financial facilitation and this negatively affects the morale of lecturers. Financial facilitation as a motivation factor was echoed by all the key informants. This extrinsic factor of motivation should not be overlooked in any institution, because in professional management, motivation is a key issue if managers want to get the best out of their staff. From qualitative findings, the following themes were developed to aid in the discussion of qualitative data.

1. Stakeholder Involvement in Curricula Reviews. 2. Motivation of Academic Staff

4.3.3 Null Hypothesis

To test the null hypothesis: curriculum review is not statistically correlated with employability of students; a correlation analysis was carried out. Findings are presented in Table 4.13.

Table 4.13: Curriculum Review and Employability of Students: Level of significance = 0.05

		Curriculum Review	Professional Skills
Curriculum			
Review	Pearson Correlation	1	0.766
	Sig. (2 tailed)		0.001
	N		66
Professional	Pearson correlation	0.766	1
Skills	Sig. (2tailed)	0.001	
	N	66	
		Personal Skills	
Curriculum			
Review	Pearson Correlation	1	0.596
	Sig. (2tailed)		0.356
	N		66
Personal	Pearson Correlation	0.596	1
Skills	Sig. (2 tailed)	0.356	
	N	66	
		Interpersonal Skills	
Curriculum	Pearson Correlation	1	0.349
Review	Sig. (2 tailed)		0.497
	N		66
Interpersonal	Pearson correlation	0.349	1
Skills	Sig. (2 tailed)	0.496	
	N	66	

Source: Primary Data, 2022

4.3.4 Curriculum Review and Professional Skills

Results presented in Table 4.12 show that curriculum review had a statistically significant relationship with professional skills ($r=0.766$, $P=0.001$). R^2 revealed that curriculum review contributes 58.7% to the development of professional skills. Basing on the p-values, ($p\text{-value} < 0.05$), it is statistically evident that curriculum review has a statistically significant correlation with employability of students. This implies that during curricula review, much emphasis is put on the development of professional skills.

4.3.5 Curriculum Review and Personal Skills

Results presented in Table 4.12 show that the relationship between curriculum review and personal skills had a positive, but statistically insignificant, correlation ($r=0.596$, $P=0.356$). R^2 revealed that curriculum review contributes 35.5% to the development of personal skills, giving a weak correlation. Basing on the p-values, ($p\text{-value} > 0.05$), it is statistically evident that curriculum review has a positive, but statistically insignificant, correlation with personal skills. This implies that the development of personal skills is not so much paid attention to during curricula review.

4.3.6 Curriculum Review and Interpersonal Skills

Results presented in Table 4.13 show that the relationship between curriculum review and interpersonal skills had a positive, but statistically insignificant, correlation ($r= -0.349$). R^2 revealed that, curriculum review contributes 12.2% to the development of interpersonal skills giving a weak correlation. Basing on the p-values, ($p\text{-value} > 0.05$) ($P=0.497$), curriculum review has a positive, but statistically insignificant, correlation with interpersonal skills. Overall findings of the study established that there is a correlation between curriculum review and employability of students; hence the null hypothesis was rejected.

Table 4.14 shows that during curricula review, professional skills are given more attention than personal and interpersonal (generic) skills. This implies that the programmes that are developed are not balanced which affects the quality and relevance of curricula to fit in the knowledge and information of the 21st century. Consequently, the target for sustainable development goal (SDG 4) which stresses employment prospects of young women and men is missed out.

4.3.7 Regression of Employability of Students on Curriculum Review

To establish whether curriculum review influenced employability of students, a regression analysis was carried out. Table 4.13 presents the results.

Table 4.14 Regression for employability of students and curriculum review: Level of Significance=0.05

Employability of Students	Unstandardised	Standardised	Significance
	Coefficients	Coefficients (β)	P
Curriculum Review	20.108	0.75	0.00
$R^2 = 0.1156$			
Adjusted $R^2 = 0.84$			
$F = 4.6$			

Source: Primary Data, 2022

Findings in Table 4.14 revealed that curriculum review ($R^2 = 0.84$, $F = 4.6$), contributed 84% of the variation in employability of students. Further still the value of ($\beta = 0.75$, $P = 0.00$) < 0.05) showed that curriculum review is a strong predictor of employability of students.

4.3.8 Interpretation of Findings on Curriculum Review and Employability of Students

Curriculum review was acknowledged by participants as a vital strategy for quality assurance at the programme level. However, quantitative findings revealed that participants disagreed with the way curricula are reviewed. It was established that there is lack of industrial input into undergraduate study programmes, and this weakens the quality and relevance of the programmes developed. Consequently, this broadens employability skill gaps between students and employers. There was explicit demand from participants for workshops and stakeholder consultations during curricula review. The aim is to share the knowledge and expertise so that appropriate content is selected. Also, participants emphasised the involvement of employers and professional bodies to continuously participate in the review of curricula to keep relevant with the changing labour market demands of key skills and specific competences.

Qualitative findings revealed that participants were not contented with the curriculum review process because it was not stimulating or rewarding. This discontent demotivated staff and negatively affected their commitment to work to improve quality during curricula review. Participants emphasised that financial facilitation was a key factor in motivating staff to perform to their best. Basing on scientific management by Taylor (1856–1917), provision of monetary incentives increases productivity from individual workers which leads to higher levels of output. The section which follows presents the results on industrial training and employability of students.

4.4 Industrial Training and Employability of Students

Objective three was to determine the relationship between industrial training and employability of students. Both lecturers and students participated in this study so as to control the bias.

4.4.1 Quantitative Data from Lecturers

For lecturers, the measure was studied using seven question items. Table 4.15 presents the findings.

Table 4.15: Industrial Training as by Lecturers: (n=66)

Indicators	SA	A	DA	SD	MN	SD	95%CI
IT is embedded in the course	40 (60.6%)	26 (39.4%)	0	0	3.60	.49	3.48- 3.72
The University has links with specific employers	8 (12.1%)	28 (42.4%)	30 (46%)	0	2.69	.67	2.53- 2.86
The University identifies IT placements for students	5 (7.6%)	4 (6.1%)	29 (44%)	28 (42.4%)	2.53	.72	2.35- 2.70
Students get appropriate places for their IT activity	14 (21.2%)	48 (73%)	4 (6.1%)	0	3.15	.503	3.02- 3.27
Students are placed in work places related to the field of their study	8 (12.1%)	45 (68.2%)	10 (15.2%)	3 (5%)	2.93	.587	2.79- 3.08
Duration of Industrial training is adequate	15 (22.7%)	10 (15.2%)	19 (29%)	22 (33.3%)	2.59	1.00	2.34- 2.83
Supervision of Industrial training activity is appropriate	12 (18.2%)	7 (11%)	24 (36.4%)	23 (35%)	2.62	.90	2.39- 2.84
Overall Average					2.87	0.70	2.70- 3.04

Source: Primary data 2022

Table 4.15 presents means, standard deviations and interpretation of Industrial training, as it was rated by lecturers of Kyambogo University. The overall mean of 2.87 and the SD of 0.70 indicate that majority of the lecturers rated industrial training activity as moderate. The ranges of 2.70-3.04 indicate that industrial training is not handled efficiently. This finding was explained by 86.4% who reported that the university does not identify industrial placements for students, 71.4% reported that supervision of industrial training is not sufficient, and 62.3% reported that duration of industrial training is not adequate. All the participants (100%) reported that it is mandatory for all undergraduate students to undergo industrial training to comply with the requirements for producing competent and quality graduates.

4.4.2 Quantitative Data from Students

For students, the measure was studied using six question items. Table 4.16 presents the findings.

Table 4.16: Industrial Training as it was rated by students: (n=226)

Indicator							
Variables	SA	A	DA	SD	Mn	SD	95%CI
<u>During my industrial training</u>							
I was in the workplace linked to the field of my study	156 (69.0%)	7 (3.1%)	56 (24.8%)	7 (3.1%)	3.62	0.646	3.53-3.71
IT helped me to identify the skills needed to get a job	113 (50.0%)	89 (39.4%)	15 (6.6%)	9 (4.0%)	3.39	0.710	3.30-3.48
I applied my theoretical background in the workplace	102 (45.1%)	87 (38.5%)	20 (8.8%)	17 (7.5%)	3.29	0.794	3.18-3.40
The given duration of industrial training is enough	50 (22.1%)	12 (5.4%)	82 (36.3%)	82 (36.3%)	3.10	0.829	2.99-3.21
Supervision of Industrial training is sufficient	18 (7.9%)	52 (23.0%)	70 (31.0%)	86 (38.1%)	2.83	0.827	2.72-2.94
The University identifies placements for students	18 (8.0%)	46 (20.4%)	68 (30.1%)	92 (41%)	1.99	0.988	1.86-2.12
Overall Average					3.04	0.799	2.93-3.14

Source: Primary Data, 2022

Table 4.16 presents percentages, means, standard deviations and interpretation on the organisation of Industrial training, as it was rated by students of Kyambogo University. The overall mean of 3.04 and the SD of 0.799 indicate that majority of the students rated the organisation of Industrial Training as moderate. The ranges 2.93-3.14 imply that industrial training is not handled efficiently. This finding was explained by 72.6% who reported that duration of industrial training is not enough, 69.1% reported that supervision of industrial training is not sufficient, and 71.1% who reported that the university does not identify industrial placements for students. These students' findings are consistent with the lecturers' findings about the organization of Industrial Training at Kyambogo University (Pg 66).

4.4.3 Qualitative Data

The following research question guided the study: How is industrial training organized?

Key Informants included 6 Senior Lecturers, 3 Professors and 1 Industrial Training Coordinator for the faculty. For purposes of clear analysis, all were referred to as lecturers and they were numbered from 1 to 10 for example, Lecturer₁ up to ₁₀. These were engaged in an interview about how industrial training is organised to find out whether industrial training was being handled efficiently. All participants reported that industrial training is organised centrally at faculty level in the Faculty of Science. However, they reported that students identify industrial training placements by themselves.

Lecturer 3 reported that:

Some time back, lecturers would be identified to go to identify places for placement, but of late, students identify industrial training placements by themselves. Although they try their best to get themselves industrial training placements, they, at times, fail to get the desired places.

Lecturer 9 reported that:

Students are asked to go and identify where they can place themselves and they end up failing to place themselves in organizations in line with their disciplines they are pursuing. The students are not properly matched and coordinated which means that, to get supervisors to be mapped on to where these students are so that they can be supervised becomes a challenge. The university plays a little role, if no role at all, in identifying industrial placements for students.

Such comments revealed that, in some cases students find themselves in poor placements and end up by not getting quality experiences of skill development and refinement during industrial training. This finding necessitated the researcher to further find out whether there were some challenges during industrial training. Key informants included 3 professors, 1 industrial training coordinator for the faculty and 9 student coordinators. For purposes of clear analysis lecturers were numbered from 1 to 4, for example, lecturer₁ up to 4, and students were numbered from 1 up to 9, for example student 1 up to 9. These were engaged in an interview and for lecturers, they all reported that funds to enable supervisors to go for supervision are not enough to do quality supervision and they are released late. This implies that supervision is given less time and it is delayed.

Lecturer₂ reported that:

The university reduced the period for industrial training from ten weeks which were approved in the programme to six weeks without reviewing the programme. They are just doing it without following policy and it is affecting the quality of industrial training. Lecturer 2 further reported that supervision is sometimes done on phone because supervisors are not paid enough to do quality supervision. Lecturer 2 further explained that students

do not have enough practical work because laboratories are few and not well equipped with modern equipment. Consequently, lecturers do not organise sufficient practical work. Besides, programmes are overloaded with too much theory, yet the time given is not enough to cover everything in the given duration of the course.

Regarding students, Participant (S₁) reported:

I was trained as a water plant analyst, but based on the job I am doing currently, the skills I acquired from the University are 50% while the other 50% I have gained from the field. This is because I find some of the course units I studied are out of the game, while some other course units were not relevant for my training.

Consistent with Student₁, Student₃ reported:

I trained as a government analyst, but out of the practical skills required for the job, I got only 10% from campus. The 90% of the skills required, I have gained them from the field.

Student 4 reported:

I am a laboratory technologist. The course I am doing is not recognised in my field of interest (medical laboratory) and it is not registered by Allied Health. This affects employability of students so much.

Student 5 reported:

We find places by ourselves and, at times, our applications are rejected, but because it is a requirement we have to satisfy, we end up in poor placements. There is competition for Industrial training placements because of large numbers of students from different institutions of higher education.

Student 6 reported:

I am a chemical engineering student, but the industries from where I did my Industrial training, there were only electrical and mechanical engineers. As chemical engineers, we have always been taken to the laboratory instead of the equipment design. Secondly, chemicals and materials for use in the university laboratory are not enough, hence, we are not getting very quality practical training.

Student 7 reported:

I lacked knowledge of some equipment, as some of our labs do not have this equipment. Equipment for practicals is inadequate and some of the equipment in the field is complicated. Therefore, application of theory into practice somehow becomes a problem.

Student 9 reported:

Supervisors tend not to come, and if they do appear, they come late almost towards the end of the industrial training activity. In most times, the assigned supervisors from the University do not have enough knowledge about the course and assessment is not done technically.

The findings revealed that students identify industrial training placements by themselves but in most cases, they find difficulties in getting the desired places. This implies that students are not technically matched during industrial training. Consequently, students miss opportunities to apply and refine the skills and knowledge acquired from the university. Aligned with skill refinement, industrial training provides students with an opportunity of real world experiential learning to reinforce concepts, as well as to provide for transfer of learning and application of knowledge and skills. Industrial training is an informal

dimension of learning which enables students to attain learning outcomes in a permanent change of knowledge and attitude. The findings, further, revealed that supervision of industrial training is not sufficiently handled, and students do not get quality practical training at the university because laboratories are few, and the few that are there are not equipped with modern equipment. So, when students go to the field for industrial training, they find equipment they are not conversant with and translation of theory into practice becomes a problem. From qualitative findings, the following themes were developed to aid in the discussion of qualitative data.

1. Industrial Training Placements

2. Practical Training

4.4.4 Null Hypothesis

To test the null hypothesis: industrial training is not statistically correlated with employability of students; a correlation analysis was carried out. Findings are presented in Table 4.17.

Table 4.17: Industrial Training and Employability of Students: Level of significance = 0.05

		Industrial Training	Professional Skills
Industrial Training	Pearson Correlation	1	0.91
	Sig. (2 tailed)		0.004
	N		226
Professional Skills	Pearson correlation	0.91	1
	Sig. (2tailed)	0.004	
	N	226	
		Personal Skills	
Industrial Training	Pearson Correlation	1	0.806
	Sig. (2tailed)		0.017
	N		226
Personal Skills	Pearson Correlation	0.806	1
	Sig. (2 tailed)	0.017	
	N	226	
		Interpersonal Skills	
Industrial Training	Pearson Correlation	1	-0.054
	Sig. (2 tailed)		0.437
	N		226
Interpersonal Skills	Pearson correlation	-0.054	1
	Sig. (2 tailed)	0.437	
	N	226	

Source: Primary Data, 2022

4.4.5 Industrial Training and Professional Skills

Table 4.17 shows that industrial training is significantly correlated with professional skills ($r=0.91$ $P= 0.004$). R^2 revealed that industrial training contributes 82.81% to the development of professional skills. Hence, industrial training has a strong relationship with professional skills. The p-values < 0.05 , indicate that Industrial training has a statistically significant correlation with employability of students.

4.4.6 Industrial Training and Personal Skills

Table 4.17 shows that there is a statistically significant relationship between industrial training and personal skills ($r=0.806$ $P= 0.017$). R^2 revealed that industrial training contributes 65% to the development of personal skills. Hence, industrial training has a strong relationship with personal skills. The p-values < 0.05 imply that Industrial training has a statistically significant correlation with employability of students.

4.4.7 Industrial Training and Interpersonal Skills

Table 4.17 shows that industrial training has a statistically insignificant correlation with interpersonal skills ($r= -0.054$ $P = 0.437$). R^2 revealed that industrial training contributes 0.29% to the development of interpersonal skills giving a weak correlation. This could be partly because during industrial training, students are dealing with machines and equipment in laboratories and factories. They are mainly dealing with practical work and have minimal time to interact with people. Overall, the findings of this study revealed that industrial training and employability of students are statistically significantly correlated. Thus, the null hypothesis was rejected

4.4.8 Regression Analysis

. Table 4.18 presents the results of regression of employability on industrial training.

Table 4.18: Regression of Employability of Students and Industrial Training: Level of Significance=0.05

Employability of Students	Unstandardised Coefficients	Standardised Coefficients (β)	Significance P
Industrial Training	6.81	0.756	0.00
$R^2 = 0.5069$			
Adjusted $R^2 = 0.74$			
$F = 3.8$			

Source: Primary Data, 2022

The findings in Table 4.18 indicate that industrial training explained 74% of the variation in employability of students (Adjusted $R^2 = 0.74$, $F = 3.8$). The ($\beta = 0.756$, $P = 0.00$) < 0.05) further indicate that industrial training is a strong predictor of employability of students.

4.4.9 Interpretation of Findings on Industrial Training and Employability of Students

Industrial training is the practical part of curricula and it provides the learners with a form of experiential learning that integrates knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Quantitative findings revealed that there is a positive statistically significant relationship between industrial training and employability of students. However, participants reported that industrial training is not handled efficiently.

Qualitative findings revealed that the university does not identify industrial placements for students. Students explained that, because of large numbers of students from different institutions of higher education, competition for industrial training placements is

high and, in most cases their applications are rejected, but because industrial training is a requirement they have to satisfy, they end up in poor placements. Similarly, the lecturers reported that students try their best to get themselves industrial training placements, but they, at times fail, to get the desired places. This implies that, in some cases, students end up by not getting quality experience of skill development during industrial training. Such reflections suggest that it is important for the university to identify industrial training placements for students so that they are placed in work places linked to the field of their study to refine their knowledge and skills.

Inceoglu et al., (2019), in support of this idea, explained that university-supported industrial training placements constitute a unique hybrid experience of education and work, as it improves students' individual skills and also refine their professional growth and experience. This is reflected in the outcomes approach to employability where the focus is on the development of individual characteristics and work related factors. These factors are enriched through industrial training which integrates knowledge and theory acquired from the classroom with practical application and skill development in a professional setting (National Association of College and Employers (NACE), 2018).

4.5 Career Services and Employability of Students

Objective four was to determine the relationship between career services and employability of students. Lecturers and students participated in this study to control the bias.

4.5.1 Quantitative Data from Lecturers

For lecturers, the measure was studied using six question items. Table 4.19 presents the findings.

Table 4.19: Provision of career services at KyU as they were rated by lecturers:
(n=66)

Indicator							
Variable	HP	FP	NS	NP	Mn	SD	95%CI
Jobs and Career fairs	1	6	23	34			
	(1.5%)	(9.1%)	(37.9%)	(51.5%)	1.90	.97	1.66-2.15
Information on developing networks	2	8	18	38			
	(3.0%)	(12.1%)	(27.3%)	(57.6%)	1.63	.82	1.42-1.84
Information on sources of of job vacancies	17	2	14	33			
	(25.8%)	(3.0%)	(21.2%)	(50.0%)	3.23	.89	3.00-3.45
Job related workshops	1	3	2	60			
	(1.5%)	(4.5%)	(3.0%)	(90.9%)	1.52	.61	1.37-1.67
Careers services center	0	1	4	61			
	(0.0%)	(1.5%)	(6.1%)	(92.4%)	1.47	.68	1.30-1.64
Speakers come from industries to discuss with students about labour market trends	1	0	5	60			
	(1.5%)	(0.0%)	(7.6%)	(90.9%)	1.84	.98	1.60-2.08
Average					1.93	0.82	1.72-2.13

Source: Primary data 2022

Table 4.19 presents descriptive results for indicators that measured the provision of career services at Kyambogo University, as they were rated by lecturers. The average mean of 1.93, and the SD of 0.82 indicate that majority of the lecturers reported that the provision of career services at Kyambogo University is low. The ranges of 1.72-2.13 indicate that

career services are not provided, and this hinders students from accessing current industry trends in the labour market. These findings were explained 51.5% who reported that jobs and career fairs are not provided, 57.6% reported that information on developing networks is not provided, 90.9% reported that speakers from industry to come and share with students about labour market trends are not provided for, and 92.4% reported that there is no career services center at Kyambogo University.

4.5.2 Quantitative Data from Students

For students, the measure was studied using six question items. Table 4.20 presents the findings.

Table 4.20: Provision of Career services at KyU as Rated by Students: (n=226)

Indicators Variables	HP	FP	NS	NP	Mn	SD	95%CI
Jobs and Career Fairs	18 (8.0%)	23 (10.2%)	45 (19.9%)	140 (66.9%)	2.32	0.93	2.19-2.45
Information on developing networks	23 (10.2%)	12 (5.3%)	57 (25.2%)	134 (59.2%)	2.26	0.97	2.13-3.39
Information on source of job vacancies	24 (10.6%)	18 (8.0%)	54 (23.9%)	130 (57.6%)	2.17	1.00	2.03-2.31
Job related workshops	21 (9.3%)	15 (6.6%)	49 (21.7%)	141 (62.3%)	2.04	1.00	1.90-2.17
Career Service centre	0 (0.0%)	24 (19.5%)	13 (5.8%)	189 (83.6%)	1.92	0.95	1.79-2.05
Speakers come from industries to discuss with students about careers	9 (4.0)	24 (5.8%)	22 (9.7)	182 (80.5%)	2.02	1.02	1.88-2.16
Overall Average					2.12	0.97	1.98-2.42

Source: Primary Data, 2022

On the scale of 4-1 (Highly Provided =4, Fairly Provided =3, Not Sure =2, Not Provided =1), Table 4.20 presents results for indicators that measured the provision of career services at Kyambogo University, as they were rated by students. The overall average mean of 2.12 and the SD of 0.97 indicate that majority of the students reported that the provision of career services at Kyambogo University is low. This finding is consistent with quantitative data analysis of lecturers' responses about the provision of career services at Kyambogo University (Pg. 76). The results indicate that students and lecturers value the provision of career services although the university has not given it priority.

4.5.3 Qualitative Data

This section answered the research question: What career services are provided by Kyambogo University? This question of the study sought to establish whether career services are provided at Kyambogo University. Key Informants included 6 Senior Lecturers, and 3 professors. For purposes of clear analysis all were referred to as lecturers and they were numbered from 1 to 9, for example, Lecturer₁ up to 9. These were engaged in an interview about the career services that are provided by Kyambogo University. All participants reported that there was no formal organisation of career services provision at Kyambogo University. These findings are justified by some of the participants' views:

Lecturer 2 reported:

There is no career guidance. Lecturers come, teach their content, give coursework, examinations, and go. Some students do courses which they end up not using.

Lecturer 4 reported:

At departmental level, finalists are given one afternoon and they are taken through career challenges and expectations. Lecturers give their personal experiences. Career service is not formally organised.

Lecturer 3 reported:

Students come when they have already been admitted for specific programmes. However, career service is necessary because, sometimes, students get excited by their colleagues during high school and come to campus without being told the prospects of the programme they have come to do at campus, and, eventually after finishing they are not fulfilled. They need to be guided to remain focused, work hard and to get 1st Class right from Year One for better employment prospects.

Lecturer 6 reported:

Career services are not there. This depends on individual lecturers. Career services are necessary for students because they are still young and narrow-minded. They are not yet exposed. If career fairs are organised and stakeholders from industries and alumni are invited, they can talk about potential employment opportunities, what students are expected to do during industrial training, as well as provide advice to students on the jobs available and job requirements.

Lecturer 9 reported:

Students come for career issues, but they are not guided appropriately because we lack information on the choice of programmes made by students and the programmes offered by the university. We sometimes walk with them to the Academic Registrar or DVC Academic Affairs for guidance.

The findings of this study revealed that there is no formal provision of career services at Kyambogo University. Lecturers give their personal experiences to finalists at a given one afternoon. This implies that students are not provided with lifelong learning opportunities

for sustainable career growth. From qualitative findings, the following themes were developed to aid in the discussion of qualitative data.

1. Focus and Satisfaction

2. Employment Opportunities

4.5.4 Null Hypothesis

To test the null hypothesis: career services are not statistically correlated with employability of students; a correlation analysis was done. Table 4.21 presents the findings.

Table 4.21: Career Services and Employability of Students: Level of significance=0.05

		Career Services	Professional Skills
Career Services			
Services	Pearson Correlation	1	0.96
	Sig. (2 tailed)		0.01
	N		226
Professional Skills	Pearson Correlation	0.96	1
	Sig. (2tailed)	0.01	
	N	226	
Personal Skills			
Career Services			
Services	Pearson Correlation	1	0.98
	Sig. (2tailed)		0.03
	N		226
Personal Skills	Pearson Correlation	0.98	1
	Sig. (2 tailed)	0.03	
	N	226	
Interpersonal Skills			
Career Services			
Services	Pearson Correlation	1	0.53
	Sig. (2 tailed)		0.00
	N		226
Interpersonal Skills	Pearson Correlation	0.53	1
	Sig. (2 tailed)	0.00	
	N	226	

Source: Primary Data, 2022

4.5.5 Career Services and Professional Skills

Table 4.21 shows that career services have a statistically significant relationship with the development of professional skills ($r=0.96$ $P=0.00$). R^2 revealed that career services contribute 92% to the development of professional skills. Hence, career services have a strong relationship with professional skills. The p -values < 0.05 imply that career services have a statistically significant correlation with employability of students.

4.5.6 Career Services and Personal Skills

Table 4.21 shows that career services have a statistically significant relationship with the development of personal skills ($r=0.98$ $P= 0.03$). R^2 revealed that career services contribute 96% to the development of personal skills. Hence, career services have a strong relationship with personal skills. The p -values < 0.05 imply that career services have a statistically significant correlation with employability of students.

4.5.7 Career Service and Interpersonal Skills

Table 4.21 shows that career services and interpersonal skills are moderately correlated ($r=0.53$, $P =0.00$). R^2 revealed that career services contribute 28% to the development of interpersonal skills. Hence, career services have a weak statistically significant relationship with interpersonal skills. The p -values < 0.05 imply that career services have a positive statistically significant correlation with employability of students, hence, the H_0 was rejected.

4.5.8 Regression Analysis

Results of regression of employability of students on career services are presented in Table 4.22.

Table 4.22: Regression of Employability and Career Services: Level of significance=0.05

Employability of Students	Unstandardized Coefficients	Standardized Coefficients (β)	Significance P
Career Services	2.025	0.029	0.00
R ² = 0.3481			
Adjusted R ² = 0.95			
F = 5.2			

Source: Primary Data, 2022

The results in Table 4.22 show that career services explained 95% of the variation in employability of students (Adjusted R² = 0.95, F= 5.2). The findings indicate that career services ($\beta = 0.029$, $P = 0.00$) < 0.05) is a strong predictor of employability.

4.5.9 Interpretation of findings on Career Services and Employability of Students

Quantitative findings of this study established that career services have a positive statistically significant correlation with employability of students. However, participants reported that the provision of career services is low. Participants indicated that career services are of value to students although the university has not given it priority. Participants, further, explained that career services work as a platform for sharing experiences arising from students and stakeholders, which act as a mechanism for the university to get feedback on what worked well and what to modify. This is reflected in the process approach to employability which encompasses initiatives that are provided for within an institution. According to Fakunle et al., (2021), these initiatives through career services are implicitly or explicitly embedded in study programmes. Such reflections play

an important role during curriculum review because they enhance proper planning and align labour market trends within study programmes in support of quality assurance.

Muyako & Seedwell, (2015); Naveed et al., (2014); Philips Consulting, (2014); Messum et al., (2017) explained that the difference between employers' and students' perceptions of employability skills is attributed to lack of career services in universities in developing countries. Hennelova and Newman (2019) call for career services to be provided to students by higher education institutions to bridge this skills gap between students and employers.

Qualitative findings revealed that there is no formal organisation for the provision of career services at Kyambogo University. Participants gave the benefits of providing career services to students which included provision of knowledge of the prospects of programmes they have chosen to enable students to remain focused and satisfied. Also, career services provide a free flow of information and highly interactive learning experiences to students. Such learning experiences link the employers and the university who may work in partnership to prepare students for the transition from education into the labour market. This implies that career services act as a springboard for individual students to attain social mobility. In this regard, Donald, et al., (2019) emphasised career services as an important component of employability of students, because they provide current industrial knowledge that is aligned with current industrial trends most relevant for students and can provide definite answers for changing ideas that reflect what employers look for in a job candidate.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This study was motivated by the fact that employability of students is one of the essential aspects of educational outputs which have raised concern from key stakeholders in university education. Graduate employment opportunities are waning, for instance, the periods of search for jobs are too long to imagine, and graduates move to a number of employers before they can secure jobs. This situation is stressful when you consider the current high cost of university education. The purpose of this study was to investigate quality assurance practices that enhance employability of students from public universities in Uganda. Quality assurance of university education is to prepare students to be lifelong learners. Conversely, universities can produce employable graduates through practices that enable students to build their careers so that they can live a comprehensive life. This study investigated the relationship between curriculum review, industrial training and career services and employability of students from public universities in Uganda. Kyambogo University was a case institution.

5.1 Discussion of the Findings

The discussion is structured according to the objectives of the study. The objectives of the study were to: evaluate students' and employers' perceptions of employability. The study focused on professional skills, personal skills, and interpersonal skills. Objective two was to determine the relationship between curriculum review and employability of students. Objective three was to examine the relationship between industrial training and employability of students; and objective four was to analyse the relationship between career services and employability of students.

5.1.1 Students' and Employers' Perceptions of Employability

Quantitative findings established a significant difference in the perceptions of employability between students and employers. This widens the gap in human capital development. These findings are consistent with Uganda Vision 2040 which points out that failure to match the skills needed in the economy creates a gap in the human capital which is critical for economic and social transformation. According to Global Ranking of Universities, employability is the second factor that is considered in evaluating universities, and, it is measured relative to the university's size at 25%. This explains why the respondents in objective one emphasized that Kyambogo University should conduct tracer studies.

Qualitative findings revealed that employers expect students to have theoretical knowledge and competences from their degrees, as well as a range of broader personal and interpersonal skills. This finding is consistent with the European Commission (2011) which described employability skills as the combination of factors which enable individuals to progress towards getting into employment. These findings are further in agreement with World Bank (2021) which emphasised that a comprehensive set of skills is needed so that employability of students increases to create a better future. Qualitative findings established that subject knowledge and skills, creativity, innovation and entrepreneurship, positive attitude towards work, and collaboration and team work are significant employability skills.

Subject knowledge and skills were identified from the set of professional skills. Professional skills are ways of thinking of an individual, therefore, it is expected that the theoretical knowledge and skills a student acquires from the university, he/she should be able to apply it to his/her practical experiences using those theoretical concepts. Further still, different employment transitions require technical competences in a specific subject, and competences in practical and application in a professional setting. Consistent with this

finding are the findings of Dacre Pool (2020) who showed that subject knowledge remains an essential element of employability development.

Creativity, innovation and entrepreneurship were identified from the set of personal skills. Personal skills are ways of living in the world which are required by all citizens to succeed in life. In this respect, creativity, innovation, and entrepreneurship play a pivotal role in addressing the complex demands of the technological and societal changes we are facing. Creativity looks for solutions. Innovation is result oriented, and also takes initiatives which expedite holistic views of problem solving. This implies that creativity is a precursor of innovative behaviour and a central dimension of enterprising potential in individuals. According to Virtanen and Tynjälä, (2018), creativity, innovation, and entrepreneurship incorporate two generic skill groups, which include resourcefulness, and the ability to adapt to new situations. These generic skill groups consist of traditional higher-order thinking skill groups, which include critical thinking, and analytical skills. Critical thinking enables students to identify, define and assess complex issues and ideas. In so doing, an individual exercises critical judgment in evaluating sources of information and constructing meaning in work situations. This experience stimulates self-directed learning and ability to work independently which enhances personal career development and lifelong learning.

According to Pereira, et al., (2019), creativity, innovation and entrepreneurship are skills of the 21st Century which constitute the foundation to better impart the adequate mix of skills that graduates need to be more competitive professionally. Currently, employers want an innovative, flexible, adaptable, and enterprising workforce that is imaginative, creative, adaptable and willing to learn. Such young employees can enable their companies to generate novel business ideas in a diversity of shifting workplace dynamics.

Positive attitude towards work was identified from the set of personal skills. A positive attitude is about looking ahead, and wanting to work with a hopeful outlook.

Consistent with this finding, Chowdhury & Miah (2019) argued that a positive attitude towards work was seen as important to employers because it develops positive thoughts which boost an individual's confidence and increases his/her productivity in work environments, because each time, he/she is trying his/her best.

Collaboration and team work were identified from the set of interpersonal skills. These skills are the social skills people use to interact with others in the workplace (Cheng et al., 2021). Accordingly, collaboration and teamwork skills enable employees to talk and work effectively with all types of people, such as, customers, coworkers and managers, which increase productivity. Individuals, who work successfully in a team, develop a reasonable degree of competence in communication skills, decision making, evaluating team performances, and using reflective practice as well as exhibiting positive attitudes. It was established that creativity, innovation, and entrepreneurship, positive attitude towards work, and collaboration and teamwork, are important employability skills. This implies that the combination of professional skills, personal skills, and interpersonal skills provides a developed and more holistic perspective of employability of students, rather than a narrow subject knowledge approach. Hence, employers' perceptions of significant employability skills provided insight into the need for collaboration between the university and employers, and developing partnerships so that higher education contributes significantly in developing high quality human capital.

Similarly, (Heang et al., 2019; Majid et al., 2020; Rowe & Zegwaard, 2017; Shivor et al., 2018; Ngulube, 2020) emphasised collaboration and partnerships between industries and universities so as to produce graduates who are highly skilled, employable and who remain employed. Additionally, Guerrero et al., (2012) emphasised stakeholders' collaboration because it improves educational innovation, university technology, and knowledge transfer to industries and society, and consequently enhance employability of

students. In the same vein, Thirunavukarasu et al., (2020) further emphasised industrial and academic collaboration and partnership in research and development plans because the university gains support from the industry in form of new technology, while the industry obtains latest innovations created by the university. This means that once the industry becomes a stakeholder in university education, it will progressively take university education in the realm of the market.

5.1.2 Curriculum Review and Employability of Students

Quantitative findings revealed that curricula review has a statistically significant relationship with employability of students. Similar studies (Harry et al., 2018; Ahmed et al., 2019; Misni et al., 2017) examined university curriculum and found out that it had a relationship with employability of students. However, it was established that there is lack of industrial input into undergraduate study programmes. Lecturers emphasised the involvement of employers and professional bodies to continuously participate in the review of curricula to remain relevant with the changing demands of the labour market for key skills and specific competences. These findings are consistent with previous researches (Andrade, 2018; Hyttinen & Huang 2018; Khan & Law 2015) who emphasized the student-centered approach in curricula review to ensure quality and relevance.

From qualitative findings, stakeholder involvement in curricula reviews and motivation of staff were explanatory factors in support of quantitative findings. Stakeholder involvement in curricula reviews was established as vital in ensuring the quality and relevance of curricula. Strategically involving key stakeholders enriches and improves the quality of curriculum review and programmes. This is because this kind of approach promotes sharing of knowledge and expertise and keeps the university and industry well-informed of the current needs of society. Consequently, relevant study programmes would be determined which would further determine the number of students to be admitted to

individual study programmes. In turn, employability of students is enhanced and lecturers' productivity is increased in terms of relevant research for economic growth. Similarly, Thirunavukarasu et al., (2020) found out that when industry and academics collaborate and pattern in research and development plan, the university gains support from the industry in form of new technology, while industry obtains new innovations from the university. This means that once the industry becomes a stakeholder in university education, it will progressively take university education in the realm of the market.

The current knowledge- based society requires university education to change from a knowledge transmitting paradigm to a constructivist mode of teaching and learning. To fulfill this new strategy, the university has to modify what it teaches, which concerns the curricula, and where the knowledge acquired leads, which is the labour market. This promotes lifelong learning and provides for the promotion of an integrated and labour market- driven university education and training to help students to identify clear progression routes after graduation. This implies that the involvement of key stakeholders in curricular review is vital if higher education institutions are to remain competitive in the 21st century. Thus, universities need to collaborate with industry to ensure demand-driven curricula.

Adopting a participatory approach is important because it is an interactive and dynamic process by which what to teach is selected and what to exclude concerning the new curriculum to increase quality, and relevance of curricular goals and values is eliminated. This type of collaborative structures helps to develop a degree of ownership of the curriculum innovation and can further support its implementation. Similarly, (Pegg, 2013) recognised the importance of considering the influence of internal and external quality assurance processes in any discussion of curricula review. This implies that embracing curriculum review as a shared responsibility among university education

stakeholders provides a strong foundation for a comprehensive process for the delivery of a quality student.

Motivation was echoed by all key participants as a key factor if managers want to get the best out of their staff. These findings were consistent with previous researches, such as, Honkimäki et al (2021) and Kohtamäki (2019), which pointed out discontent in the academia because higher education institutions are managed in a way that has negatively affected the academic staff's commitment to curricula review. Similarly, Ferns et al., (2019) argued that policies, procedures and priorities of an institution inhibit innovative teaching approaches and engagement with industrial partners. This implies that performance of employees does not depend on only their qualifications and abilities but also on extrinsic factors that keep human resources satisfied and committed to work.

According to scientific management by Taylor (1856-1917), obtaining increased productivity from individual workers depends on technical structure of the work and provision of monetary incentives as the motivator to higher levels of output. Similarly, OECD (2020) emphasised that curriculum review is an important and necessary measure that requires human resources to produce quality study programmes to thrive in the 21st century society. The 21st century is a knowledge and information century that requires learners to be problem-solvers and creative thinkers. This explains why there is need to shift from content- centered curricula to competence-centered curricula positioning the learner at the center of curriculum. Overall, the results imply that a holistic approach to curricula review is vital so that demand-driven programmes are developed to increase opportunities for employability of students.

5.1.3 Industrial Training and Employability of Students

The study revealed that there is a strong relationship between industrial training and employability of students. This finding is consistent with Galbraith and Mondal, (2018), who found out that there was a positive relationship between industry-related experience gained from industrial training and employability of students. Industrial training is one of the quality assurance practices that link higher education with industry. During industrial training, students gain practical experiences through which the knowledge and skills acquired from the classroom are refined and new knowledge is developed. In so doing, students think independently as they develop confidence in problem solving. Similarly, BiIslandi, et al., (2014) stated that industrial training enables students to enrich their practical skills and to gain knowledge in their technical and interest field which boost up students' confidence, self-efficacy and professionalism.

Similarly, Peng and Deng (2022); Sun, (2018); Huang, (2019); Shi, (2020) established that industrial training skills improve employability of students because it is through industrial training that students' ability to meet employers' demands can be improved, their anxiety about employment can be reduced, their sense of self-efficacy can be enhanced, and the overall employment rate can be improved. However, participants reported that industrial training is not handled effectively.

Qualitative findings revealed that industrial training placements and practical training were explanatory factors in support of quantitative findings. It was established that the university does not identify industrial placements for students. Participants explained that, sometimes, students fail to get the desired places and end up in poor placements. The dominant accounts of participants were that, due to poor industrial training placements, students are not properly coordinated and matched in terms of technical capacity. This causes a problem to locate students to be supervised. In reality, it makes little sense to a

student if industrial training placement is not aligned with his or her aspirations and learning needs. This is because industrial training is a form of experiential learning that assimilates knowledge and theory learned in the classroom through practical application and skills development in a specialised setting. Consistent with these findings, Alexander et al., (2012) established that inappropriate placement of students and poor supervision during industrial training have contributed to the ineffectiveness of industrial training. This vividly showed, that in some cases, students end up by not getting quality experiences of skill development during industrial training. According to International Labour Organisation (ILO) (2017), quality industrial training exercises match the skills acquired from education and training systems with the skills demanded in the labour market. Industrial training is an informal dimension of learning which enables students to achieve learning outcomes in a permanent change of knowledge and attitude. This implies that it is better for the university to support industrial training placements so that students are placed in work places linked to fields of their study programmes to improve individual skills and also refine their professional growth and experience.

Additionally, it was established that students do not have enough practical work. Participants reported that laboratories are few and they are not equipped with modern equipment. Lecturers, therefore, find difficulty in organising sufficient practical work for students. This implies that students do not get quality practical training and it explains why some of the students' submissions (Page 70) indicated that they lack knowledge about some of the equipment they find in the field and regard them to be complicated. It also reflects on the concerns that were raised by employers about the quality of practical training. The findings of this study are consistent with Boateng (2015) who reported that the available educational and training institutions often lack the necessary tools and adequate equipment to undertake effective teaching and training towards building productive human capital

base. However, partnerships with collaborating organisations would provide universities with opportunities to access training facilities that are not available at the university. This would improve and strengthen educational innovation because the university would gain support from industries in form of new technology, and also develop potential for quality research that is relevant to employability of students.

Overall findings of this study revealed that, while the university provides industrial training to link theory and practice in students' technical and interest fields, students are poorly placed and they are not satisfied with the quality of supervision provided by their supervisors during industrial training experience. This undermines efforts to prepare students for optimum utilisation of industrial training opportunities for conceptual understanding and skill refinement.

5.1.4 Career Services and Employability of Students

The study established a relationship between career services and employability of students. Similarly, Donald et al., (2019) found out that career services are positively correlated with students' employability. Furthermore, Ferns et al., (2019) explained that career services connect industry and education and this increases opportunities for students to connect with professional networks. This in turn improves job prospects and course satisfaction. Additionally, Inceoglu, et, al., (2018) stated that career services enhance human capital by learning new knowledge, skills and abilities which students can apply to maximize their employment potential for best economic and social outcomes. Although participants showed that career services are of value to students, the university has not given it priority. This implies that the university should prioritise career services because they assist students to evaluate the labour market demands as they develop the knowledge and skills that are necessary for their desired careers.

Qualitative results revealed that there was no formal organisation for the provision of career services at Kyambogo University. Through formal provision of careers to students, the university would be encouraging students to build links with the labour market. From qualitative findings, focus and satisfaction, and employment opportunities were explanatory factors to support quantitative findings. The study revealed that the provision of career services enables students to appreciate the programmes they have chosen and this helps them to remain focused and satisfied. Similarly, Donald, et al., (2019) indicated that career services are an important component of students' employability because they provide current industrial knowledge that is aligned with current industrial trends most relevant for students and can provide definitive answers for changing ideas that reflect what employers look for in a job candidate. Previous studies (McIlveen, et al., 2011; Makela, et al., 2014; Usher, Kwong and Mentanko, 2014) also indicated the benefits of career services to individual students, which include networking and interpersonal skills.

Also, the findings revealed that career services provide students with potential employment opportunities. It was established that this can be achieved through organising jobs and career fairs. Jobs and career fairs bring university alumni and stakeholders from industries who share their labour market experiences and requirements with students. Also, it was found out that career services enable students to broaden their professional networks throughout their lifelong career journey. Consistent with this finding is Donald et al., (2017), who reported that jobs and career fairs raise awareness among students about career opportunities that promote employability of students. In this regard, Kyambogo University needs to institutionalise career services so that students are equipped with effective long-term transferrable skills to enable them to link personal skills with their career choices.

5.2 Conclusions

The foregoing discussion presented study findings on quality assurance practices that enhance employability of students. This section presents the study conclusions.

5.2.1. Employability

It was established that the integration of professional, personal, and interpersonal skills enhance employability of students.

5.2.2. Curriculum Review

Curriculum review was a strong predictor of employability of students because its aggregate effect alone contributed 84% of all variations that contribute to employability of students.

5.2.3. Industrial Training

Industrial training was a strong predictor of employability of students because its aggregate effect alone contributed 74% of all variations that contribute to employability of students

5.2.4. Career Services

Careers services were a strong predictor of employability of students because its aggregate effect alone contributed 95% of all variations that contribute to employability of students.

Finally, the study established that employability of students is influenced by hard skills and generic skills. Also, curriculum review, industrial training, and career services are interrelated, so the integration of these three quality assurance practices promotes a holistic competence-based approach to employability of students at the individual level. Therefore, an improvement in any of the predicting variables would significantly and positively increase students' chances of employability after graduation.

5.3 Recommendations

The study has the following recommendations that need to be implemented by different stakeholders in university education in order to increase opportunities for employability of students.

1. A collaborative curriculum review should be emphasised by engaging key stakeholders in university education to develop integrated and relevant study programmes.
2. The University should collaborate and develop partnerships with industry to resolve the problems of industrial placements for students and career services provision.
3. Also, the Government of Uganda should develop a well-structured legal framework that will enable industries and key stakeholders of university education to work in collaborative partnerships to deliver high quality education in terms of training and research for sustainable economic and social development.

5.4 Suggestions for Further Research

1. This research left out students in the curriculum review process. It can be extended to include students.
2. This research was done in the Faculty of Science; it can be replicated in other faculties at Kyambogo University.
3. The research was limited to only Kyambogo University; it can be done in other public universities in Uganda.
4. A comparative study can be done on quality assurance practices between public universities and private universities in Uganda.
5. A research on supervision of students is also required.

5.5 Contribution of the Study to the Existing of Knowledge

In light of change as an everyday reality, this study brings two streams of literature that combine insights from academic staff and students representing the university, as well as employers, representing the industry. This study shows that both contexts: the university and industry provide learning experiences to students. That is, university education is perceived as preparation for work place learning which enhances transfer of knowledge from the university to the workplace. On the other hand, this study focused on the integration of quality assurance practices that promote competence-based approach to employability of students. This study provides relevant evidence for policy and practical decisions that could support higher education reform in Uganda.

REFERENCES

- African governance report (2019). Agenda 2030, 2063.
- Ahmed, Y. Taha, M. H. Alneel, S. and Gaffar, A. M. (2018). Evaluation of the learning environment and the perceived weakness of the curriculum: student perspective. *International Journal of Research in Medical Sciences*, 7(1), 165.
- Anjum, S. (2020). Impact of internship programmes on professional and personal development of business students: A case study from Pakistan. *Future Business Journal* 6 (1):2 <https://doi.org/10.1186/s43093-019-0007-3>
- Bano, Y. and Vasantha, S. (2019). Categories of employability skills in higher education: *American International Journal of Research in Humanities, Arts and Social Sciences*, 26 (1): 44-47
- Becker, G. (1962). Investment in human capital: A theoretical analysis, *Journal of Political Economy*, 70 (5): 9-49.
- Boateng, J. K. Akosua, E. and Osafo, A. M, (2015). Quality assurance and employability of graduates in a Ghanaian University. *Journal of education and e-Learning Research* 2 (3): 42-51.
- Branine, M. and Avramenko, A. (2015). A Comparative analysis of graduate employment prospects in European labour markets: A study of graduate recruitment in four countries. *Higher Education Quarterly*, 69 (4), 342-365.
- Bridgstock, R. Grant-Imaru, M., and McAlpine, A. (2019). Integrating career development learning into the curriculum: Collaboration with the careers service for employability. *Journal of Teaching and Learning for Graduate Employability*, 10 (1), 56–72.

- Butler, D. Leahy, M. Twining, P. Akoh, B. Chtouki, Y. Farshadnia, S. (2018). Education systems in the digital age: The need for alignment: *Technology, Knowledge and Learning*, 23 (3), 473–494.
- Byrne, C. (2022). What determines perceived graduate employability? Exploring the effects of personal characteristics, academic achievements and graduate skills in a survey experiment. *Studies in Higher Education*, 47(1), 159–176. <https://doi.org/10.1080/03075079.2020.1735329>
- Cai, Y. (2013). International graduates from Finland: Do they satisfy the needs of Finnish employers abroad? *Journal of Research in International Education*, 11 (1), 19–31.
- Cheng, M. Adekola, O. Albia, J. and Cai, S. (2021). Employability in higher education: A review of key stakeholders’ perspectives. *Higher Education Evaluation and Development*, 16 (1), 16–31. <https://doi.org/10.1108/HEED-03-2021-0025>
- Chillas, S., Marks, A. and Galloway, L. (2015). “Learning to labour: An evaluation of internships and employability in the ICT sector”, *New Technology, Work and Employment*, 30 1-15.
- Chowdhury, T. A. and Miah, M. K. (2019). Perceptions of students and employers regarding employability skills for entry-level positions in marketing and sales, *Australian Journal of Career Development* 28 (1), 3-13
- Clarke, M. (2017). Rethinking graduate employability: The role of human capital, individual attributes and context <https://doi.org/10.1080/03075079.2017.1294152>
- Cole, D. and Tibby, M. (2013). Defining and developing your approach to employability: A framework for higher education institutions. York: Higher Education Academy.
- Creswell, J.W. (2014). Research design: Qualitative, quantitative and mixed methods approach, University of Nebraska- Lincoln: SAGE Publications.

- Creswell, J.W. (2013). *Qualitative inquiry and research design. Choosing among five Approaches*. 3rd Ed. London: Sage Publications.
- Creswell ,J.W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.) Thousand Oaks, CA: Sage.
- Dacre Pool, L. (2020). Revisiting the CareerEDGE model of graduate employability. *Journal of the National Institute for Career Education and Counseling* 44 (1) 51-56
- Dacre Pool, L. and Sewell, P. (2007). The key to employability: Developing a practical model for graduate employability. *Education & Training* 49 (4): 277–289. DOI:10.1108/00400910710754435.
- Donald, W. E. Ashleigh, M. J. Baruch, Y, (2018). "Students' perceptions of education and employability: Facilitating career transition from higher education into the labor market", *Career development international*, <https://doi.org/10.1108/CDI-09-2017-0171>
- Donald, W. E. Ashleigh, M. J. and Baruch, Y. (2019). The Undergraduate self-perception of employability: human capital, careers advice, and career ownership. *Studies in Higher Education* · DOI: 10.1080/03075079.2017.1387107
- Dyjur, P. and Kalu, F. (2018). *Introduction to curriculum review*. Taylor institute for teaching and learning. Calgary: university of Calgary
- Ehiyazaryan, E. and Barraclough, N. (2009), “Enhancing employability: integrating real-world experience in the curriculum”, *Education+Training* , 51 (4), 292-308.
- European Commission/EACEA/Eurydice, (2014). *Modernisation of higher education in Europe: Access, retention and employability*. Eurydice report. Luxembourg: publications office of the European union

- European Commission. (2011). Commission staff working paper on the development of bench-marks on education and training for employability and on learning mobility. SEC, 670 Final. Brussels: European Commission.
- European Higher Education Area, (2015). Borogna process implementation report: Education, audiovisual and culture executive agency.
- Ferns, S. Dawson, V. and Howitt, C. (2019). A collaborative frame work for enhancing graduate employability. *International Journal of Work Integrated Learning, Special Issue*, 20 (2): 99-111
- Forrier, A. M. Verbruggen, and N. De Cuyper. (2015). “Integrating different notions of employability in a dynamic chain: The relationship between job transitions, movement capital and perceived employability.” *Journal of Vocational Behavior* 89: 56–64.
- Galbraith, D. and Mondal, S. (2018). The potential power of internships and the impact on career preparation: *Research in Higher Education Journal*, 38, 1-6
- Harry, T. Chinyamurindi, W. T. and Mjoli, T. (2018). Perceptions of factors that affect employability amongst a sample of final-year students at a rural South African university. *SA Journal of Industrial Psychology*, 44, 1–10.
- Hardie, G. Almeida, S. Ross, P.J (2018). Value of industry mentoring and resource commitment to the success of an undergraduate internship program: A case study from an Australian university. *International Journal of Work-Integrated Learning*, 19 (2), 155-168.
- Harvey, L. and Green, D. (1993). Defining quality, assessment and evaluation in higher education, 18 (1): 9-34
- Heang, T. Ching, L. C. Mee, L. Y. and Huei, C. T. (2019). University education and employment challenges: An evaluation of fresh accounting graduates in Malaysia.

- International Journal of Academic Research in Business and Social Sciences*, 9 (9), 1061-1076. <https://doi.org/10.6007/IJARBSS/v9-i9/6396>
- Hennelová, L. and Newman. (2019). Employers' and students' expectations of graduate employability skills *International Journal of Work-Integrated Learning*, 20 (1), 71-82
- Holmes, L. (2015). "Competing perspectives on graduate employability: possession, position or process? *Studies in Higher Education*. 38 (4), 538-554.
- Honkimäki, s. Jääskelä, P. Kratochvil, J. Tynjälä, P. (2021). University-wide, top-down curriculum reform at a Finnish university: perceptions of the academic staff, *European Journal of Higher Education* 1-18
<https://doi.org/10.1080/21568235.2021.1906727>
- ILO (2017). Global employment trends for youth: Paths for a better working future international labour office • Geneva
- Inceoglu, I. Selenko, E. McDowall, A. and Schlachter, S. (2019). How do work placements work? Scrutinizing the quantitative evidence for a theory-driven future research agenda: *Journal of Vocational Behavior* 110 (2019) 317–337
- Initiative for social economic rights (ISER) (2019).
- Inter-University Council for East Africa, (2014). Principles and guidelines for quality assurance in higher education in east Africa.
- Jonck, P. (2014). 'A human capital evaluation of graduates from the faculty of management sciences employability skills in south Africa' *Academic Journal of Interdisciplinary Studies* 3 (6): 265-274.
- Khan, M. A. and Law, L. S. (2015). "An integrative approach to curriculum development in higher education in the USA: A theoretical framework." *International Education Studies*, 8 (3): 66–76.

- Kiranda Y, Walter, M. and Mugisha, M. (2017). Employment, entrepreneurship and education in Uganda konrad-adenauer-stiftung, Uganda
- Knight, P. and M. Yorke. (2003). Assessment, learning and employability. maidenhead: society for research into higher education & open university press.
- Kohtamäki, V. (2019). “Academic leadership and university reform-guided management changes in Finland.” *Journal of Higher Education Policy and Management*, 41 (1): 70–85.
- Krejcie, R.V. & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement* 30, 607-610.
- Kyambogo University graduate school guidelines
- Kyambogo University strategic plan, (2012/2013-2022/2023).
- Majid, M. Z. A. Hussin, M. Norman, M. H. Kasavan, S. (2020). The employability skills among students of public higher education institution in Malaysia. *Malaysian Journal of Society and Space*, 16 (1), 36-45. <https://doi.org/10.17576/geo-2020-1601-04>
- Marginson, S. (2019). Limitations of human capital theory. *Studies in Higher Education*, 44 (2): 287–301. DOI: 10.1080/03075079.2017.1359823.
- Mason, G. Williams, G. and Cramner, S. (2009). Employability skills initiatives in higher education: What effects do they have on graduate labour market outcomes? *Education Economics*, 17 (1): 1-30.
- McKim, C. A (2017). The value of mixed methods research: A mixed methods study *Journal of Mixed Methods Research*, 11 (2): 202–222
- McIlveen, P. Brooks, S., Lichtenberg, A. Smith, M. Torjul, P. & Tyler, J. (2011). Career development learning frameworks for work-integrated learning. In S. Billett & A.

- Henderson (Eds.), *Developing learning professionals: Integrating experiences in University and practice settings* (149-165). Dordrecht: Springer.
- Messum, D., Wilkes, L., Peters, C., & Jackson, D. (2017). Senior managers' and recent graduates' perceptions of employability skills for health services management. *Asia-Pacific Journal of Cooperative Education, Special Issue*, 18(2), 115-128.
- Miles, M. B., Huberman, A. M. & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook*. Thousand Oaks, CA: Sage.
- Ministry of Finance, Planning, and Economic Development (MoFPED), (2014). *Uganda's employment challenge: An evaluation of government's strategy*. Economic development policy and research department
- Muyako, S. and Seedwell, T. (2015). Quality in accounting graduates: Employer expectations of the graduate skills in the bachelor of accounting degree. *European Scientific Journal*, 11(22), 165-180.
- Mwebai, L. and Kyuli, K.C. (2016). Influence of university curriculum design on employability of Kenyan graduates: Public universities perspective, Accessed on May 3rd 2023.
- National association of colleges and employers (NACE) (2018).
- Nesaratnam, S. Gayne, S. (2018). A review of literature on graduate employability. *International Journal of business management*, 6 (6): 6-9
- Ngulube, B. (2020). Undergraduate economics curriculum and employability skills in South Africa. *Problems of Education in the 21st Century*, 78 (6), 1000-1013. <https://doi.org/10.33225/pec/20.78.1013>
- Nilsson, F. (2017). Employability, employment and the establishment of higher education graduates in the labour market. Doi:10.1057/978-1-137-57168-7 3 in book: *graduate employability in context*.

- Nkamwesiga, L. Mukimba, F. Bukirwa, J. R. (2021). Industry-university linkage to impart appropriate skills on learners in Ugandan public universities: Analysis of BIS and BIT graduates of Muni university Arua, Uganda.
- OECD. (2019). Education at a glance: OECD indicators. Paris: OECD Publishing.<https://doi.org/10.1787/f8d7880d-en>. Accessed 21 Apr 2022.
- Okoye, K. R. E., and Nkanu, S. M. (2020). Employers' identification of skills needed by technical and vocational education graduates for industrial work effectiveness. *Journal of Education, Society and Behavioural Science*, 33 (2), 32-41.
- Parveen, S. (2012). Internship program in education: Effectiveness, problems and prospects. *International Journal of Learning & Development* 2 (1)
- Peng J and Deng C (2022). Research on the relationship between college students' employability and IT skills training based on mixed research methods. *Front. Psychol.* 13:1054134. *Journal of Education and Practice* 4 (4), 2013
- Pereira, E. T, Vilas-Boas, M. Rebelo, F.C. (2019). University curricula and employability: The stakeholders' views for a future agenda.
<https://doi.org/10.1177/0950422220901676> Accessed on May 15, 2023
- Phillips Consulting (2014). Education and employability survey report. Retrieved on 20th January 2018.
- Pitan, O.S. (2016). Employability development opportunities (EDOs) as measures of students' enhanced employability", *Higher Education, Skills and Work-Based Learning*, 6 (3) 288-304
- Puuka, J. (2015). Policy measures to support higher education graduate employment. Accessed on 1/3/2021
- Römgens, I. Scoupe, R. and Beusaert, S. (2020). Unraveling the concept of employability, bringing together research on employability in higher education and the workplace.

- Studies in Higher Education*, 45 (12), 2588–2603. <https://doi.org/10.1080/03075079.2019.1623770>
- Shi, Y. P. (2020). Management information system teaching reforms are based on the improvement of students' self-efficacy. *Sci. Technol. Wind* 35, 53–55.
- Shivoro, R., Shalyefu, R., & Kadhila, N. (2019). A critical analysis of universal literature on graduate employability
- Singh, H. and Gera, M. (2015). Developing generic skills in higher education. *Indian Journal of Applied Research*, 5 (6): 824-826.
- Simmons, R. (2009). Entry to Employment: Discourses of inclusion and employability in work-based learning for young. *Journal of Education and Work*, 22 (2): 137 – 151.
- Sun, X. Z. (2018). The impact of self-efficacy on mastery of academic scientific research performance. South China University of Technology, Guangdong, China.
- The Uganda Higher Education Qualifications Framework, (2016).
- .Thirunavukarasu, G., Chandrasekaran, S. Betageri, V. S. and Long. J (2020). Assessing learners' perceptions of graduate employability. *Sustainability* 12, (460): 2-17 <https://doi:10.3390/su12020460> www.mdpi.com/journal/sustainability
- Terzaroli, C. Oyekunle, Y. (2019). Career service as a measure to support employability: *Andragoška spoznanja/studies in adult education and learning* 25(1), 89-110 DOI: <http://dx.doi.org/10.4312/as.25.1.89-110>
- Twining, P. Butler, D. Fisser, P. Leahy, M. Shelton, C. Forget-Dubois, N. Lacasse, M (2020). Developing a quality curriculum in a technological era: *Education Tech Research Dev* 69:2285–2308 <https://doi.org/10.1007/s11423-020-09857-3>
- UBOS, (2018). The national labour force survey 2016/17.

- Usher, A. and Kwong, A. (2014). Career services offices: A look at universities and colleges across Canada. Toronto: Higher education strategy associates.
- Virtanen, S. and Tynjälä, O. (2018). Factors explaining the learning of generic skills: A study of university students' experiences. *Teaching in Higher Education* 24(3):1-15 [https://doi: 10.1080/13562517.2018.1515195](https://doi.org/10.1080/13562517.2018.1515195)
- World Bank Group's 2017 annual meeting
- World Bank. (2021). Skills development. <https://www.worldbank.org/en/topic/skillsdevelopment#1>
- Yin, R. K. (2014). Case study research: Design and methods. Los Angeles, CA: Sage.
- Yoon, H. J. Hutchison, B. Maze, M. Pritchard, C. and Reiss, A. (Eds.). (2018). International practices of career services, credentials, and training. Broken Arrow, OK: National Career Development Association.
- Yorke, M. and Knight, P. (2006) Embedding employability into the curriculum. Learning and employability series 1. York: Higher Education Academy.

APPENDICES

APPENDIX 1: Informed Consent for Questionnaires

APPENDICES

APPENDIX 1: Informed consent form for questionnaires: VERSION 2.0 DATED 19.04.2021

Title of the study: Quality Assurance Practices and Students' Employability in Public Universities in Uganda: A case of Kyambogo University

Investigator(s): Elvaida Agnes Tagulwa Twesigye (PhD student),
Institution(s) Kyambogo University.

Introduction

I am a PhD Student at Kyambogo University. I am carrying out a study on “**Quality Assurance Practices and Students' Employability in Public Universities in Uganda: A case of Kyambogo University**”. The maintenance, improvement and the assurance of quality by Universities have become issues of major concern and attention to University education stakeholders. This informed consent explains the study to you. After the study has been explained, any questions you may have are answered, and you have decided to participate in the study, you will be asked to sign a consent, which you will be given a copy to keep. This study has been cleared by the Gulu University Research Ethics Committee (GUREC)

A brief description of the sponsors of the research project: This research project is sponsored by the student herself.

Purpose:

The study seeks to investigate the quality assurance practices that enhance the knowledge, competences and skills of graduating students to meet the expectations of the labour market. The findings of this study will help to provide empirical evidence to students on labour market demands so that when they are making choices for their study programmes they take into consideration future employment prospects. Data generated will also help academic staff to improve course planning, and curriculum review process to ensure that the programmes offered are better matched to the demands of the labour market to prepare students adequately for the world of work.

Procedures: Your participation in this study will involve providing answers to questions that will be presented to you in form of questionnaires.

Who will participate in the study? You have been chosen to participate in this study because you are a stakeholder with knowledge on Quality assurance and Student employability. You will be allowed at least two weeks to complete the questionnaire. The total number of participants in the study are 181 participants.

Risks/discomforts: There could be a discomfort considering that the study may interfere with your duty schedules. We will arrange an appropriate time for your participation in the study. The other risk is the possibility of the spread of covid-19. During the study we will ensure that all participants and the investigating team wear face masks and sanitize to prevent and control the spread of Covid-19.



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Benefits: You get an insight on student employability. You will also get a feedback on findings and progress of the study, and any new information that affects you as a study participants (including incidental findings) will be made available to you.

Confidentiality: Your identity will not be revealed to any one as we shall only use codes to identify participants. Information obtained will only be accessible by the research team. Soft copies of the data will be protected by password and hard copy files will be kept under lock and key. Confidential information will only be accessed by the principal investigator.

Alternatives: You do not have to participate in this study if you are not interested. You will not lose any benefit in case of no participation.

Cost: There will not be any additional cost incurred as a result of participating in this study.

Questions:

If you have any questions related to the study as a research participant, you can contact the principal investigator, Elvaida Agnes Tagulwa Twesigye on telephone number 0705731149 or via email on agnes.elvaida@yahoo.com

Statement of voluntariness:

Participation in the research study is voluntary and you may join on your own free will. You have a right to withdraw from the study at any time without penalty. If you have any issues pertaining to your rights and participation in the study, please contact the Chairperson, Gulu University Research Ethics Committee, Dr. Gerald Obai Tel: No., 0772305621; email: lekobai@yahoo.com/lekobai@gmail.com; or the Uganda National Council for Science and Technology, on plot 6 Kimera road, Ntinda, Kampala on Tel 0414705500.

Statement of consent

..... has described to me what is going to be done, the risks, the benefits involved and my rights as a participant in this study. I understand that my decision to participate in this study will not affect me in any way. In the use of this information, my identity will be concealed. I am aware that I may withdraw at anytime. I understand that by signing this form, I do not waive any of my legal rights but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate. A copy of this form will be provided to me.

Name Signature of participant Date

Name Signature of interviewer Date



APPENDIX 2: Questionnaire for Lecturers

Section A

1. Department _____

2. Academic Position: Professor ☐ Associate Professor ☐ Senior Lecturer ☐
Lecturer ☐ Assistant Lecturer ☐ Tutorial Assistant ☐

3. Are you aware of the quality assurance policy in your institution?

☐ Yes this document exists ☐ No my University doesn't have such a document ☐ I am not sure

Section B

4. Please indicate the activity level in the following main commitments of your institution aimed at enhancing students' employability, by placing a tick (✓) in the box that represents the appropriate measure

Variable	Variable Indicators	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
Curriculum review	Study programmes are reviewed periodically				
	Representatives from industry are				

	involved in curriculum review				
	Key stakeholder consultations and workshops are organised to revise and develop content				
	Subject experts are given ample time to attend to the integration of subject competences with subject content				
Variable	Variable Indicators	Highly provided 4	Fairly provided 3	Not Sure 2	Not provided 1
Careers Services					
	Jobs and career fairs				
	Information on developing networks				
	Information on sources of job vacancies				

	Job related workshops				
	Career service Center				
	Speakers come from industry to discuss with students about labour market trends				

5. To what extent do you agree with the following statements regarding Industrial Training? Place a tick (✓) in the box that represents the appropriate measure

Variable	Variable Indicators	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
Industrial Training					
	Embedded in the course				
	The University has links with specific employers				
	The University Identifies industrial training places for students				

	Students get appropriate places for their industrial training activity				
	Students are placed in work places related to the field of their study				
	Duration of industrial training exercise is adequate				
	Supervision of industrial training exercise is sufficient				

Section C

6. How best can the University improve employability of students?

Thank you for responding to this questionnaire

APPENDIX 3: Questionnaire for Students

Section A

1. Department:

2. Year of study:

3. Degree Programme:

Section B

4. In your experience at this institution, how often do you talk about your career plans with teaching staff or advisors?

Very often ☐ often ☐ sometimes ☐ never

☐

5. Please indicate the activity level in the following main commitments of your institution aimed at enhancing employability of students, by placing a tick (✓) in the box that represents the appropriate measure

Variable	Variable Indicators	Highly provided 4	Fairly provided 3	Moderately provided 2	Not provided 1
Careers Services					
	Jobs and career fairs				

	Information on developing networks				
	Information on sources of job vacancies				
	Job related workshops				
	Careers services center				
	Speakers come from industry to discuss with students about labour market trends				

6. To what extent do you agree with the following statements regarding Industrial training? Place a tick (✓) in the box that represents the appropriate measure

Variable	Variable indicators	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
Industrial Training					
	During Industrial Training exercise I was in the workplace related to the field of my study				
	IT helped me to identify the skills needed to get a job in my field of interest				

	I applied my theoretical knowledge in the workplace				
	The given duration of the Industrial Training exercise is enough				
	Supervision of Industrial Training exercise is sufficient				
	The University identifies placements for industrial training exercise				

7. What challenges have you experienced during Industrial training Exercise? List them here.

Section C

8. Rate the following employability skills according to their level of importance. Place a tick (✓) in the box that represents the appropriate measure

Variable:	Variable Indicators	Most Important 4	Important 3	Less Important 2	Not Important 1
Employability skills					
Professional Skills					
	Theoretical knowledge and skills				
	Understanding, interpreting and evaluating information				
	Practical skills				
	Planning and organisational skills				
	Inquiry and research skills				
	Ability to summarise key issues				
	Writing and presenting reports and projects				
	Identifying problems, and developing creative and practical solutions				
Personal Skills					
	Ability to work independently				
	Critical and analytical thinking				

	Resourcefulness				
	Adapting learnt skills to new situations at work				
	willingness to learn				
	Positive attitude towards work				
	Creativity, innovation and entrepreneurship				
	Self-presentation skills				
Interpersonal skills					
	Ability to engage with others				
	Collaboration and team work				
	Communication skills				

9. Are there other skills you think you need to learn to help you with the transition into the world of work? If yes, indicate which ones in their order of importance.

Thank you for responding to this questionnaire

APPENDIX 4: Questionnaire for Employer

Section A

1. Name of the Organisation: _____

2. Nature of the Organisation ☐ Public ☐ Private

3. What is the type of business of this organisation?

Section B

4. Basing on your experience, rate the level of importance of the following skills when hiring employees. Place a tick (✓) in the box that represents the appropriate level.

Variable:	Variable Indicators	Most Important 4	Important 3	Less Important 2	Not Important 1
Employability skills					
Professional Skills					
	Theoretical knowledge and skills				
	Understanding, interpreting and evaluating information				
	Practical skills				

	Planning and organisational skills				
	Inquiry and research skills				
	Ability to summarise key issues				
	Writing and presenting reports and projects				
	Identifying problems, and developing creative and practical solutions				
Personal Skills					
	Ability to work independently				
	Critical and analytical thinking				
	Resourcefulness				
	Adapting learnt skills to new situations at work				
	Willingness to learn				
	Positive attitude towards work				

	Creativity, innovation and entrepreneurship				
	Self-presentation skills				
Interpersonal skills					
	Ability to engage with others				
	Collaboration and team work				
	Communication skills				

5. If there are other skills that are required of the employee but have been left out, please list them here.

Thank you for responding to this questionnaire

APPENDIX 5: Informed Consent for Key Informant Interviews

APPENDIX II: Informed consent form for Key informant interviews: Version 2.0

Title of the study: Quality Assurance Practices and Students' Employability in Public Universities in Uganda: A case of Kyambogo University

Investigator(s): Elvaida Agnes Tagulwa Twesigye (PhD student),
Institution(s) Kyambogo University.

Introduction

I am a PhD Student at Kyambogo University. I am carrying out a study on “**Quality Assurance Practices and Students' Employability in Public Universities in Uganda: A case of Kyambogo University**”. The maintenance, improvement and the assurance of quality by Universities have become issues of major concern and attention to University education stakeholders. This informed consent explains the study to you. After the study has been explained, any questions you may have are answered, and you have decided to participate in the study, you will be asked to sign a consent, which you will be given a copy to keep. This study has been cleared by the Gulu University Research Ethics Committee (GUREC)

A brief description of the sponsors of the research project: This research project is sponsored by the student herself.

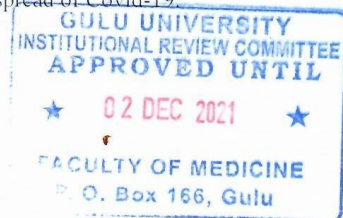
Purpose: The study seeks to investigate the quality assurance practices that enhance the knowledge, competences and skills of graduating students to meet the expectations of the labour market.

The findings of this study will help to provide empirical evidence to students on labour market demands so that when they are making choices for their study programmes they take into consideration future employment prospects. Data generated will also help academic staff to improve course planning, and curriculum review process to ensure that the programmes offered are better matched to the demands of the labour market to prepare students adequately for the world of work.

Procedures: Your participation in this study will involve participating in an interview where you will provide insights to questions presented to you.

Who will participate in the study: You have been chosen to participate in this study because you are a stakeholder with knowledge on Quality assurance and Student employability. The interview will take approximately 45 minutes. The total number of participants in the study are 181 participants.

Risks/discomforts: There could be a discomfort considering that the study may interfere with your duty schedules. We will arrange an appropriate time for your participation in the study. The other risk is the possibility of the spread of covid-19. During the study we will ensure that all participants and the investigating team wear face masks and sanitize to prevent and control the spread of Covid-19.



Benefits: You get an insight on student employability. You will also get a feedback on findings and progress of the study, and any new information that affects you as a study participants (including incidental findings) will be made available to you.

Confidentiality: Your identity will not be revealed to any one as we shall only use codes to identify participants. Information obtained will only be accessible by the research team. Soft copies of the data will be protected by password and hard copy files will be kept under lock and key. Confidential information will only be accessed by the principal investigator.

Alternatives: You do not have to participate in this study if you are not interested. You will not lose any benefit in case of no participation.

Cost: There will not be any additional cost incurred as a result of participating in this study.

Questions:

If you have any questions related to the study as a research participant, you can contact the principal investigator, Elvaide Agnes Tagulwa Twesigye on telephone number 0705731149 or via email on agnes.elvaide@yahoo.com

Statement of voluntariness:

Participation in the research study is voluntary and you may join on your own free will. You have a right to withdraw from the study at any time without penalty. If you have any issues pertaining to your rights and participation in the study, please contact the Chairperson, Gulu University Research Ethics Committee, Dr. Gerald Obai Tel: No., 0772305621; email: lekobai@yahoo.com/lekobai@gmail.com; or the Uganda National Council for Science and Technology, on plot 6 Kimera road, Ntinda, Kampala on Tel 0414705500.

Statement of consent

..... has described to me what is going to be done, the risks, the benefits involved and my rights as a participant in this study. I understand that my decision to participate in this study will not affect me in any way. In the use of this information, my identity will be concealed. I am aware that I may withdraw at any time. I understand that by signing this form, I do not waive any of my legal rights but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate. A copy of this form will be provided to me.

Name Signature of participant.....Date

Name.....Signature of interviewer.....Date.....

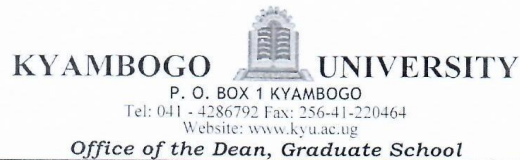


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APPENDIX 6: Interview Guide for Key Informants

1. How do students and employers perceive employability? What employability skills are required to make students employable?
2. How is curriculum reviewed at Kyambogo University?
3. How is industrial training organised at Kyambogo University?
4. What career services are provided by Kyambogo?

APPENDIX 7: Kyambogo University Approval Letter



13th February 2020

To Whom It May Concern

Dear Sir/Madam,

This is to introduce **Ms. Elvaida Agnes Tagulwa** Registration Number **16/U/13232/GDED/PD** who is a student of Kyambogo University pursuing a Degree of Doctor of Philosophy (PHD) in Education.

She intends to carry out research on **"University Quality Assurance Practices and Students' Employability in public Universities in Uganda; A Case of Kyambogo University"** as partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy (PHD) in Education.

We therefore kindly request you to grant her permission to carry out this study in your institution.

Any assistance accorded to her will be highly appreciated.

Yours sincerely,

Assoc. Prof. Muhamud N. Wambede
DEAN, GRADUATE SCHOOL



APPENDIX 8: Gulu University Approval Letter

GULU



UNIVERSITY

P.O. Box 166, Gulu (U)
Website: www.gu.ac.ug
Email: gurec@gu.ac.ug

Tel: +256 471 432 096
Fax: +256 471 432 913
Mob: +256 772 305 621
+256 776 812 147

RESEARCH ETHICS COMMITTEE

April 20, 2021

APPROVAL NOTICE

Ms Elvaida Agnes Tagulwa Twesigye
Kyambogo University
Uganda

Re: Application No. GUREC-011-21

Type of review:

☒ Initial review

☐ Amendment

☐ Continuing review

☐ Termination of study

☐ SAEs

☐ Other, Specify: _____

Title of Proposal: "QUALITY ASSURANCE PRACTICES AND STUDENTS' EMPLOYABILITY IN PUBLIC UNIVERSITIES IN UGANDA: A CASE OF KYAMBOGO UNIVERSITY"

I am pleased to inform you that at the 71st convened meeting on 3rd December 2020, the Gulu University Research Ethics Committee (GUREC) voted to approve the above referenced application.

Approval of the research is for the period of 3rd December 2020 to 2nd December 2021

As Principal Investigator 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 GUREC for re-review and approval prior to the activation of the changes. The GUREC application number assigned to the research should be cited in any correspondence.



3. Any unanticipated problems involving risks to participants must be promptly reported to the **GUREC**. New information that becomes available which could change the risk: benefit ratio must be submitted promptly for the **GUREC** review.
4. Only approved and stamped consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The **GUREC** 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 the **GUREC** eight (8) weeks prior to the above expiration **date of 2nd December 2021** in order to continue the study beyond the approved period. **Failure to submit a continuing review application in a timely manner 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 documents have been approved in this application by the **GUREC**:

	Document	Language	Version	Version Date
1	Protocol	English	Version 2.0	19 th April 2021
2	Data Collection Tools	English	Version 2.0	19 th April 2021
3	Informed consent form	English	Version 2.0	19 th April 2021
4	Covid-19 Risk Management Plan	English	Version 2.0	19 th April 2021

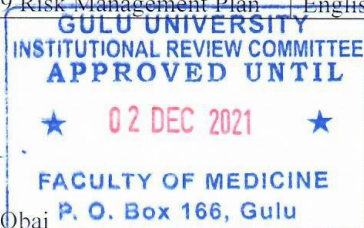
Signed,



Dr. Gerald Obai

Chairperson

Gulu University Research Ethics Committee



APPENDIX 9: UNCST Approval Letter



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

Our Ref: SS868ES

Elvaida Agnes Tagulwa Twesigye

Kyambogo University

Mukono

14 February 2023

Re: Research Approval: \r\nQUALITY ASSURANCE PRACTICES AND STUDENTSâ€™
EMPLOYABILITY IN

PUBLIC UNIVERSITIES IN UGANDA: A CASE OF KYAMBOGO UNIVERSITY \r\n

I am pleased to inform you that on 14/02/2023, 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
14/02/2023 to 14/02/2024.

Your research registration number with the UNCST is SS868ES. 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
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1	Informed consent and Data collection tools	English	2.0			
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2	Project Proposal	English	2.0			
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3	Approval Letter	English				
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4	Administrative Clearance	English				
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4	Covid Risk & Ebola management Plan	English	2.0	15 January 2023		
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5	Informed Consent for Key Informant Interviews	English	3.0	15 January 2023		
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6	Informed Consent for Questionnaires	English	3.0	15 January 2023		
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Yours sincerely,

Hellen Opolot

For: Executive Secretary

UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGYjjhj

Powered by

LOCATION/CORRESPONDENCE

*Plot 6 Kimera Road, Ntinda
P.O. Box 6884
KAMPALA, UGANDA*

COMMUNICATION

**TEL: (256) 414 705500
FAX: (256) 414-234579
EMAIL: info@uncst.go.ug
WEBSITE: <http://www.uncst.go.ug>**