AN INVESTIGATION OF THE EXISTENCE OF 21ST CENTURY EMPLOYABILITY SKILLS AMONG HIGHER EDUCATION GRADUATES: A CASE OF BOTHO UNIVERSITY

A dissertation

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DECLARATION

I, Baoleki Makgoeng, declare that the dissertation hereby submitted for Master in Higher Education (Med) represent my own work. I have not previously submitted this for any qualification at any other university.

Baoleki Makgoeng

Signature   ………..   Date………..

DEDICATION

This dissertation is dedicated to my dad Elijah Makgoeng.

God bless you dad for grooming me so well. You taught me to appreciate life and hard work.

ACKNOWLEDGEMENTS

First, I would like to thank my God for giving me life that enabled me to complete this project.
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BU- Botho University

ABSTRACT

Employability has become a vital issue in every profession in the 21st century knowledge economy. The purpose of this study was to investigate the existence of 21st century employability skills among higher education graduates in Botswana, taking Botho university (BU) as a case study. A survey of extant literature was conducted to grasp what different other authorities have written on the issue of graduate employability skills in the 21st century. The study adopted the positivist and interpretivist research paradigms culminating in a mixed method approach in collecting and analysing data. The quantitative method was dominant in this study. The questionnaire was used to gather quantitative data from a large sample, while interviews were conducted to collect qualitative data from a small sample to corroborate quantitative findings. A total of 108 supervisors from a population of 150 were used as the sample size. Gathered data was then analyzed using the statistical package for social science (SPSS). The findings indicated that BU graduates lacked employability skills making it difficult for them to be employed soon after graduation without the need for further training. The respondents believed that BU graduates did not have adequate communication, analytical, collaborative and innovative and entrepreneurial skills which are critical enhancers of graduate employability in the 21st century. The study recommends that graduates should be involved in activities that can enhance their employability skills during the learning process such as role play, effective class participation and collaborative learning as measures that can enhance graduate employability.

CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1. Introduction

This study sought to investigate the extent to which Botho graduates possessed 21st century employability skills and how these skills enhanced graduate employability thus increasing the chances of the graduates in securing employment. The study outlines the background of the study, the statement of the problem and the research objectives that the study sought to accomplish. Furthermore, the chapter elucidates the research questions that the study sought to answer. The chapter also discusses the scope of the study, the significance of the study and its limitations. The definition of key terms and the research ethics that were considered in this study are also outlined.

1.2. Background to the study

The world is changing rapidly that employers are looking for graduates who are ready for immediate employment and convert classroom theory into practice as soon as they join an organisation. Graduates are expected to possess the major employability soft skills such as communication skills, analytical skills, collaborative skills and innovative and entrepreneurial skills to enable them to complete multiple tasks without the need for undergoing further on-the-job training. According to Asonitou (2014), employability skills enhance employees' abilities and capabilities and further make them more versatile to suit the current challenging and diverse working environments. This view is reinforced by Bialik (2015) who concurs that the job market needs a workforce that can adapt to the 21st century work environment and has some brilliant ideas that stimulate business growth and success.

Highlighting further the importance of the 21st century employability skills alluded to above, Simphabe (2003) avers that graduates of training institutions in Botswana complete their studies while they are not yet ready for immediate employment. This has negative implications on the

graduates' future career prospects since the Botswana economy is growing fast and is changing rapidly. Botswana is a developing country that has been experiencing a high rate of unemployment. Maunganidze, Faimau and Tapera (2016) suggest that although there may be some other factors that are contributing to this high unemployment rate, the most plausible reason may be the mismatch between the skills that the graduates possess and those that the industry requires. This scenario is contrary to the expected outcome of tertiary education which is supposed to equip graduates with 21st century skills that facilitate ready employment upon graduation (Education & Training Sector Strategic Plan 2015-2020). This means that the skills that the tertiary education graduates possess should be compatible with the needs of industry.

The 21st century is a knowledge-based economy and the competition is global (Siphambe, 2003; Asonitou, 2014; Pheko & Molefhe, 2017). This requires graduates to be more versatile by having the employability skills that prepare them for immediate employment. It has been discovered that today, the industry needs people with advanced skills who can perform multiple tasks across many job responsibilities and come up with solutions to various organizational problems (Maunnganidze, Tapera & Faimau 2016). This view is supported by Garwe (2013) who reiterates that the graduates need to be equipped with the 21st century employability skills to be able to survive and be relevant to the needs of industry and the country at large. Employers in the 21st century do not look for graduates who have only obtained high academic and professional qualifications but those who are also equipped with the set of 21st employability skills (Simphambe ,2003; Hodge & Lear, 2011; Bialik, 2015).

The lack of readiness for immediate employment among graduates of higher education institutions in Botswana that has already been alluded is confirmed by Rudhumbu, Makambe, Mkali and Ndlovu (2016) who postulate that in the context of Botswana, thousands of graduates exit higher education, but they find it difficult to obtain employment immediately after graduation. The cause of this unfortunate scenario may be that the graduates may not be in possession of employability skills that are essential in the workplace to make them easily absorbable on the highly competitive job market. This finding contradicts the views of Suarta, Suwintana, Sudhana & Hariyanti (2017) who posit that tertiary education providers have the responsibility to produce graduates with knowledge and the 21st century employability skills that

enable them to secure employment soon after leaving college. The production of graduates who are ready for employment can be facilitated by tertiary education providers through the designing of educational programmes that are aligned to the needs of industry thus leading to the production of graduate with employability skills Human resource district council report,2013/14.

Various employability skills that industry requires from graduates of tertiary education institutions have been identified namely communication skills, analytical skills, innovative and entrepreneurial and collaborative skills. The acquisition of such soft skills allows the graduates to practice what they would have learnt in tertiary education institutions as soon as they start working (Bennet, 2006). This means that the acquisition of the 21st century soft skills by graduates brings more value to the employing organizations as they reap immediate benefits from these graduates. The purpose of this study was, therefore, to determine if the graduates from Botho University, Botswana, possess the 21st century soft skills that are needed by industry that make the graduates immediately useful to employers soon after graduation and then establish what could have been the effect on graduate employability. The study focused on four major employability skills that enhance graduate employability namely communication skills, analytical, collaborative, innovative and entrepreneurial skills.

1.3. Theoretical framework

This study is premised on the Human Capital Theory that is concerned with employability of graduates as an investment. According to Sweetland (2016), the theory promotes quality education. From the employer's perspective, human capital is referred to as the process of training, educating and changing graduates' attitudes towards work and to improve their skills, knowledge and abilities. According to Saunders and Zuzel (2010), this is a dimensional theory with a variety of values. Therefore, employability of graduates is being evaluated using the human capital approach. The perspective of this theory is that human capital corresponds to skills and knowledge that the worker contributes towards the productivity of the organisation (Husain, Mokhtar, Ahmad & ~~and~~ Mustapha 2010).

The Human Capital Theory views employability skills as the key elements for the employability of the graduates and that developing human capital is expensive hence employers do not expect additional training after the learner has completed tertiary education. This theory is important as it urges higher education institutions to produce graduates who make positive contribution towards productivity and economic growth. This theory is significant for this study as it seeks to address the importance of employability skills amongst higher education graduates.Therefore, the theoretical framework rests on the fact that graduates should be equipped with employability skills as an investment towards human capital (Gillies, 2015). This would lead to the enhancement of employee productive capacity and economic growth.

1.4 Statement of the problem

Botswana has a high rate of unemployment. Today, industry needs an individual who has skills and competencies to solve problems. The skills and competencies required by the industry have raised the expectations of industry in terms the calibre of the graduates it seeks to engage from tertiary education institutions. Exiting higher education graduates have been found to lack the much needed 21st century soft skills that make them ready for immediate employment. This has resulted in the graduates failing to obtain employment. The workforce in the 21st century does not only require graduates with academic qualifications but with employability skills. Therefore, employability skills are being considered missing during the learning process. Today, industry wants graduates who would immediately fit into the work environment without having to undergo further training. This study therefore sought to establish whether graduates from Botho University in Botswana possessed the 21st century soft skills that are needed by industry and the effects such skills could be having on the employability of the graduates.

1.4. Objectives of the study

The aim of this study was to determine whether the graduates from Botho University possessed the 21st century employability skills and the extent to which these skills may have enhanced graduate employability. The secondary objectives of the study were to:

- Determine the extent to which Botho University graduates exhibited effective

communication skills and the extent to which these may have enhanced graduate employability.

- Establish the perception of employers on the level of analytical skills of Botho graduates and how this may have enhanced graduate employability.
- Examine the extent to which Botho graduates exhibited collaborative skills at the workplace and how this could have enhanced graduate employability.
- Determine the extent to which Botho University graduates possessed innovative and entrepreneurial skills and how this could have enhanced graduate employability.

1.5. Research questions

Based on the research objectives stated above, the study sought to answer the following research questions:

- To what extent did Botho University graduates exhibit effective communication skills and how may this have enhanced graduate employability?
- To what extent did the employers believe that the Botho University graduates possessed analytical skills and how did these skills enhance graduate employability?
- To what extent did Botho University graduates possess collaborative skills and to what degree could this have impacted on the employability of the graduates?
- To what extent did Botho University graduates possess innovative d entrepreneurial skills and how could this have influenced the employability of the graduates?

1.6. Significance of the study

This study provides information on the existence of the 21st century soft skills among Botho University graduates. It sheds light on the four major employability soft skills that graduates need to have to be employable which are communication skills, analytical, collaborative and innovative and entrepreneurial skills. The study will benefit employers by providing them with information and knowledge on the appropriate and relevant skills that tertiary education institutions need to focus on to satisfy industry needs. Furthermore, this study will also benefit other educational stakeholders such as the Botswana Qualifications Authority to have a better

understanding of the country's educational needs. Finally, the study will assist policy makers and other bodies to ensure the establishment and implementation of policies that will influence curriculum changes and pedagogical approaches that will stimulate the production of graduates in tertiary education institutions who possess the relevant 21st century skills that will enhance graduate employability.

The study will also benefit the body of knowledge by expanding the knowledge towards employability skills. The study will also serve as guide and as a reference material by students, lectures and academics who wish to conduct similar studies related to 21st employability skills.

1.7 Scope of the study/delimitations

The study investigates the existence of 21st century employability skills among Botho University graduates that would enable them to secure employment immediately after leaving university. The study is conducted on selected employers in private organisations. The study focuses on the extent to which Botho university graduates possessed 21st century employability skills and whether the skills made the graduates employable. The study targeted mainly the Gaborone private organisations. Gaborone is the capital city of Botswana where mostly the graduates were employed. Moreover, it hosts most of industrial activities.

1.7. Limitations of the study

The study focused on the employers that hired Botho University graduates. Several limitations were encountered during the progression of the study. A Period of six months could not allow the researcher to have a sizeable population then the study was only carried out in Gaborone. Limited budget also was one of the factors that limited the study to just focus locally in Gaborone. The study was further limited to methodological limitation where quantitative method was predominant while may be both methods could have been given an equal chance of application.

The study was delimited by using only one tertiary institution instead of involving other tertiary education institutions for increased population. The study was further delimited by using specific skills instead of involving other skills namely, organisational skills, negotiation skills and

problem-solving skills. The other delimitation that was considered was the sampling technique instead of this could have disadvantaged other techniques

1.8. Definition of key terms

Employability: a set of achievements, skills, personal attributes and understandings that enable graduates to be employable and to succeed in their chosen occupation (Yorke, 2016). It is the competencies and abilities that graduates require to secure employment in the labour market thus contributing to the ~~and~~ economic and social development of the country (Phago & Thwala, 2015 cited by Harry, Chinyamurindi & Mjoli, 2018; Jeswani, 2016).

Skills: refers to the capability and ability to apply the acquired knowledge to complete assigned tasks and responsibilities and solving problems cognitively, logically and creatively to satisfy job requirements (Adriana, 2018).
Bialik (2015) defines a graduate as an individual who can reflect on his knowledge and put his acquired skill into practice.

Graduate: According to Yorke (2016), a graduate is an individual who completed his process of graduate studies with qualification. A graduate is characterized by the ability to make creative decisions, possess good critical mindset and can independently work.

1.9. Structure of the dissertation

Chapter 1: Introduction and background to the study
This chapter introduces the background to the study, the problem statement, the research objectives and research questions as well as the scope/delimitations and limitations of the study and ethical considerations.

Chapter 2: Literature review

This chapter reviews the relevant literature that informs the study with regards to the research objectives.

Chapter 3: Research methodology

This chapter presents an outline of the methods of data collection adopted for the study. The chapter further describes the research design, population of the study, sampling procedures, data collection procedures and data analysis methods, validation of the instruments and reliability of the instruments and ethical consideration.

Chapter 4: Data analysis and interpretation

The chapter constitutes the presentation, discussion and interpretation of the results.

Chapter 5: Final summary, recommendations and conclusion

The chapter presents the final summary, conclusion and recommendations of the study.

1.10.   Chapter summary

This chapter introduced the study and the general background of the study. It also presented the scope of the study, the significance of the study and the limitations of the study. The definitions of key terms and the research ethics that were considered in this study were also outlined.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature that informs the study. It examines extant literature on the 21st century skills required by employers focusing on collaboration, innovative and entrepreneurial, analytical and communication skills and how these skills enhance graduate employability. Finally, the chapter concludes with a summary.

2.2 The 21st century employability skills

Hodge and Lear (2011) define employability skills as transferable skills that are believed to equip graduates with capabilities to carry out their roles to the best ability that is possible at the workplace. Suleman (2016) adds that these skills are attributes that one can develop during the learning process. Suarta, Suwintana, Sudhana and Hariyanti (2017) argue that employability skills are soft skills that employers look for in potential employees. According to Singh and Singh (2008) many graduates leave universities without these skills yet they are greatly needed by the employers.

The 21st century requires graduates to have some employability skills in order to meet the needs of the labor market. Hodge and Lear (2011) argue that today's working environment is different from the 20th century and earlier. In this period, graduates were required to have only high academic qualifications to be useful in the world of work. However, over and above the high academic qualifications, the labor market in the 21st century knowledge economy requires the graduates to possess the 21st century employability skills that have been alluded to earlier. Suarta, Suwintana, Sudhana and Hariyanti (2017) believe that there are certain factors that make possession of the 21st century employability skills by graduate imperative. These factors include global competition and technological development. The view of the labour market is that graduates should be able to apply the acquired knowledge and skills in real work situations without the need for further training on the job. Employers of the 21st century need smart employees who can work with minimum supervision, bringing up new ideas and who have a

comprehensive understanding of their roles and competencies (Shivoro, Shalyefu & Nkadhila 2018). Therefore, this view of the current employer makes him require graduates to come in with the 21st century employability skills. The modern employer's emphasis on the graduates possessing employability skills makes it critical to establish if the education system is aligned with the labour market needs to enable it to produce that kind of graduates. Suarta et al (2017) argue that graduates who are attractive to employers in the 21st century are those who can prove themselves to potential employers through demonstration of effective communication, collaboration, analytical skills and innovative and entrepreneurial skills.

The importance of the above skills in the 21st century labour market is further emphasized by Essilfien, 2014; Mansour, 2016; Shivoro, Shalyefu & Nkadhila, 2018who concur that the employer's expectation is that the graduate should be able to perform better in his area of specialty while at the same time showing effectiveness in the soft skills already mention which make the graduate readily employable. In order to ensure existence of these soft skills in graduates of tertiary education, Asonitou (2014) suggests that these skills should be emphasized and exercised in the classroom to ensure that graduates leave the education system with these skills so that they are useful to the employer immediately after joining the labour market. This view is reinforced by Suarta et al (2017) who indicate that graduates should be beneficial to organizations without incurring further costs through on-the-job training which takes time before the employer can start benefiting from the graduate's skills. Bui, Nguyen and Cole (2019) assert that although graduate employability has become a hot issue in the 21st century, it is being hindered by impractical curricula that is being imposed on the learners.

Bunshaft et al (2015) state that employability skills are highly valued by employers. The acquisition of employability skills transforms graduates into being competitive hence can be globally employable. Employers are therefore constantly looking for these powerful graduates. Graduates with employability skills are found to multitask while at work and have competitive advantage towards the business success. Husain, Mokhtar, Ahmad and Mustapha (2010) note that employability skills are essential in the workplace as the world is moving into the fourth industrial revolution, so employees need to remain relevant through the possession of the 21st century employability skills. Rasul, Ismali, Ismali and Rauf (2009) indicate that the possession of

the 21st century employability skills by graduates provides them with an opportunity to penetrate the competitive world labour market. This view is supported by Tejan and Sabil (2019) who concur that employability skills are fundamental in developing the student's potential for immediate employment.

Further emphasis on the importance of graduate employability skills in the 21st century labour market, Jason (2015) contends that these soft skills are critical hence they must be identified and be integrated into the tertiary education syllabi. This position is buttressed by Essilfien (2014) who indicates that the acquisition of soft skills affords the graduates the opportunity to thrive in the workplace immediately and smoothly. For this to succeed, Pheko and Molefhe (2016) suggest that there should be frequent training of staff on curriculum design and on various pedagogical approaches that promote the acquisition of graduate employability skills through the effective delivery of the relevant content.

The above view is further emphasized by Simphabe (2003) who believes that Botswana's education system has challenges that if educational institutions do not take the responsibility to ensure that staff is properly qualified, it will result in graduates failing to attain the required knowledge and skills for gainful employment soon after graduating. This position is supported by Hamid, Islam and Manaf (2014) who indicate that, through programme development which involves industry experts, staff would be able to establish the skills that are lacking in students. Bennet (2006) argues that employers' value the employability skills because they are connected to the job performance and career success of the graduate.

Becket and Kemp (2011) emphasizes on the appropriateness of pedagogical strategies as the panacea to the enhancement of employability skills in graduates. These authors believe that employability skills are established through active learner participation in the learning process hence a competence-based assessment may be useful to provide learners with formal feedback on the development of employability skills. In the past traditional school set up, the pedagogical strategy employed was lecturer centred thus Hariyanti (2017) recommends a more effective learning strategy where the learner is given an opportunity to construct his/her learning methods with minimal intervention from the facilitator. This view is reinforced by Makwinja (2017) who

attests that the learner centred approach is the best for learners to be able to engage with the content, other learners and the facilitator. In agreement, Essilfien (2014) confirms that through this approach, learners are able to put their interests first, and ensure that curricular is designed from the learner's perspective by facilitating ownership of the content and how it can be useful for future employment.

Maunnganidze, Tapera, Faimau (2016) argue that effective learning develops employability skills upon graduates through independent responsibility that it is attached to it. Bennet (2006) condemns the traditional learning style whereby the learner was expected to be the passive recipient of information. Therefore, innovative teaching methods will also allow graduates to apply the essential skills both in the classroom and at work. Becket and Kemp (2011) point out that for improved employability skills development to materialize, the industry needs to be included in the curriculum design and development process. According to Hamid, Islam and Manaf (2014), this should be a joint task of empowering learners with the relevant skills that are useful to all the stakeholders. The involvement of all the stakeholders in the curriculum development process will enable the advocacy for procedures, systems and relevant strategies to be included to promote the acquisition of relevant skills by the learners.

Bunshaft et al (2015) contend that higher education institutions should support and emphasize the development of graduate employability skills during the schooling years. Jason (2015) argues that graduates indicates a low level of the key major employability skills when they are at the workplace which implies that there is a skills gap between the skills possessed by higher education graduates and what is expected by employers. However, although the enhancement of employability skills is recommended, they develop over time. According to Pheko and Molefhe (2016), unemployment has remained high since 2010 which proves that there is an issue in terms of employability that needs to be addressed. The authors confirm that the mismatch between the supply and the demand for labour in Botswana is believed to have contributed to the employability related challenges that have been discussed. The 21st century employability skills that are required by industry include communication skills, analytical skills, collaborative skills and innovative and entrepreneurial skills. These are further discussed below.

2.2.1 Communication skills

The ability to communicate effectively at the workplace allows employees to operate productively and efficiently. Oppong and Birikorang (2014) describe communication as a process of transmitting information and understanding between two or more people. Lunenburg (2010) reports that effective communication at the workplace builds strong work relationships amongst employees. Employees who excel at the workplace are believed to be people who can express themselves well to their subordinates and superiors and are articulate on substantive issues (Ferrin 2016).

Effective communication is the key to success because every administrative function and responsibility involves some sort of communication since there will be a need for some common understanding among employees   Agarwal and Garg (2012) believe that communication improves graduate's self-advocacy, confidence and credibility which add value to the employee's professional standing. The view is reinforced by Mahajan (2015) who concurs that the ability to speak effectively creates a conducive environment where ideas and opinions can be shared and implemented at the workplace. Therefore, people need to know that at the workplace, they need to communicate clearly and effectively. However, graduates have been found to lack the ability to make reasonable arguments at the workplaces, yet possession of effective communications skills improves workplace productivity and increases the overall effectiveness of work teams.

In further support for the importance of communication skills in enhancing graduate employability, Weligamage (2014) postulates that the use of communication in higher education is key as it promotes the workflow of every organisation. The graduates can be taught how to communicate and become responsible citizens who can really benefit organisations and society at large hence the need for learning institutions to effectively teach and inculcate communication skills. Different faculties, however, use a multiple model to enhance communication skills in the classrooms. Faculties are better being encouraged to teach and evaluate communication skill. According to Ferrin (2016), to enable more effective teaching of communication skills, appropriate assessment tools need to be put in place to monitor the progress of communication

skills development in learners using a Likert scale where 1=poor, 2=fair, 3=good, 4=very good and 5= excellent. The assumption is that learners should be able to build their competence and employability skills during the learning period.

A study by Oppong and Birikorang (2014) indicate that communication skills can be influenced by implementing other modes of delivery such as drama, presentation and role plays. Institutions still need to review the curriculum with the relevant bodies to verify if these skills have been integrated well into the curriculum and establish the extent to which these 21st century skills have been infused into practice. Shukla and Singh (2018) indicate that higher education institutions need to take into account the lecturers' competence in determining who delivers these soft skills to students. Increasingly, communication skills within the learning environment can be presented in different ways that require the facilitator to be competent in many of these ways.

Johnson, Veitch and Dewiyanthi (2015) argue that graduates with poor communication skills are found to suffer from uncertainties and anxiety. Howard (2014) adds that such graduates fail to get along with the next person at the workplace which is a major concern for the employer. The deficiency in communication in organisations may affect performance and work output due to communication breakdowns leading to unnecessary internal fights within organisations (Oppong and Birikorang 2014). Therefore, the perspective of employers about communication skills is in the context of graduates being unable to speak, listen, write and read which diminishes their chances of getting employment thus contributing to structural unemployment (Shukla and Singh 2018). Literature informs that today's survival in the workplace depends on the employees' ability to effectively interact with colleagues and share knowledge and organizational interests and who are able to express their feelings and ideas to have a positive influence the employer and potential employer Mahajan, 2015; Johnson, Veitch and Dewiyanthi, 2015 ;Shukla and Singh 2018. Communication varies depending on the media that is used namely memos, electronic mail and reports and so on hence graduates should be able to share information with various stakeholders through these different forms of media to enhance organisational productivity. In addition, Ferrin (2016) indicates that effective communication at the workplace promotes employee satisfaction.

2.2.2 Analytical skills

Employers in the 21st century need versatile employees with a positive influence on the workplace and are ready and competent problem solvers who can make sound judgements and decisions (Hodge and Lear, 2011). According to Prastiwi and Laksono (2016), a manager's capability is dependent on his analytical skill and this becomes crucial given that university graduates are expected to move into managerial positions early in their careers. It is worth noting that an analytical person is a critical thinker and the importance of critical thinking within the workplace is unquestionable since it implies being a thoughtful evaluator, analyzer and skillful problem solver (Temel 2014).

There is need, therefore, for educators to assist graduates to develop analytical skills so that they become beneficial to organisation soon after joining. Graduates need to have the ability to analyse information, solve problems and make wise decisions for the benefit of organisations. According to Temel (2014), possessing analytical skills is a strength that can help employees solve the organisation's problems. This view is supported by Taleb and Chadwick (2016) who indicate that employers are looking for employees who can investigate a problem and find solutions well on time and in an efficient manner. Analytical skills are essential in today's work environment that is bedeviled by huge challenges which require an individual who can acquire and evaluate information before making a sound decision.

Further importance of graduates possessing analytical skills is proffered by Abazov (2016) who insinuate that analytical skills encourage graduates to find some solutions to common problems and make powerful decisions. Therefore, it is necessary for graduates to be able to pay attention to detail and to retain control of any situation in the workplace. Today's managers need the skill to evaluate situations by establishing patterns and facts within the work environments before arriving at a decision with serious and long-term effects. Temel (2014) further elaborates critical thinking (analytical skill) as the skill that allows an individual to make an independent evaluation. This skill is vitally important because it allows the employee to show his capacity in handling and resolving issues. Donald (2017) believes that analytical thinkers are highly wanted during the recruitment period and they are the most cherished personnel as they are considered

assets for the organization. However, the author suggests that employers believe that graduates lack the analytical skill and this skill takes time to develop and needs more active learning.

Given the importance of critical/analytical skills in facilitating graduate employment, tertiary education institutions like Botho University need to put in place academic programmes and pedagogical strategies that engage and actively involve learners to enable them to pay attention to detail, make wise decisions and acquire research skills. Integration of analytical skills into learning programmes equips learners with analytical skills thus preparing the graduates for immediate employment. Given that employers still perceive graduates of tertiary institutions in Botswana as lacking in analytical skills Temel, 2014; Abazov, 2016; Taleb and Chadwick,2016. it is imperative that lecturers introspect their delivery strategies to establish their capability to inculcate critical thinking skills in learners. The belief is that the lecturer has an impact on influencing the graduate by nurturing useful traits such as self-confidence, truth seeking, analyticity and maturity which are all useful in producing a critical thinker.

Highlighting the importance of pedagogical strategies in inculcating analytical skills in learners, Abazov (2016) suggests that appropriate pedagogical strategies need to be adopted and integrated into the learning process such as use of debate, question-answer sessions, simulation and case method learning. This view is supported by Lamb, Maire and Doecke (2017) who contend that the learning process should be shifted from a teacher centered approach to a learner centered one.

Botho University has infused techniques and activities that have been integrated into the students learning to develop and enhance the analytical skill through individual presentations, challenge driven learning and case studies (Donald 2017). However, it is essential that learners are given feedback after such activities to help them understand their level of understanding and performance.

2.2.3   Collaborative skills

Scott (2017) argues that the collaborative skill refers to the ability to work and effectively communicate with teams towards a common goal and that it is a real-life skill that employers are

always looking forward to for business productivity and prosperity. At the workplace, employees are expected to establish working teams in the form of committees, clubs, groups, agencies and boards and the employer's expectation is that such teams work collectively for the achievement of organisational goals.

Lee and Bonk (2014) indicate that employers are highly interested in employees who can collectively work together. The assumption is that when employees work together in teams, they achieve more than what they could do when working as individuals within the same time frame. This view is buttressed by Kanste, Halme and Perala (2016) who postulate that the success of a business is more often dependent on the ability of employees to work as a team that achieves together the organisation's common goal. Therefore, graduates who are able work as team in partaking all the responsibilities in the organisation add value to the workplace environment hence are attractive to the employer meaning high employability. Scott (2017) adds reinforces this view adding that organisations promote teams at workplaces because they enhance growth and development of the organisations. According to Kanste, Halme &Perala (2016), the collaborative skill is the best approach in solving multifaceted problems. Previous research indicates that if this skill is executed well sound decisions can be made (Lai, Dicerbo and Foltz, 2017; Child and Shaw (2016).

Lee and Bonk (2014) further elucidate the importance of collaboration at the workplace arguing that people who can collaborate also relate well which is critical because today's work environment is composed of diverse nationalities and requires tolerance of each other. Moreover, in the workplace, teams achieve more collectively than as individuals as collaborative teams share ideas and opinions thus enhancing performance. The implementation of collaborative learning has been discovered to assist learners to develop an interactive and supportive rapport hence collaborative skills that enhance the chances of the graduates in obtaining employment. Collaborative skills add value to the learners' capability to reflect on what they have learned. However, Scager et al (2016) highlight that the graduate's level of collaborative skill still needs to be encouraged and emphasized because in today's work environment, employees need to interact either face to face or digitally. Moreover, creativity is being discovered also in working teams and good teams maximize knowledge creation and sharing. In addition, Lai, Dicerbo and

Foltz (2017) allege that collaborative skills are attached to other attributes such as high performance, professional growth and team morale. Therefore, graduates may be examined in these attributes to establish the extent to which they possess collaborative skills hence employability.

Laal & Ghosi, (2011) note that although collaborative skills are critical in enhancing graduate employability, graduates are at times reluctant to engage in collaborative work although previous research has established this way of working leads to intrinsic motivation. Nevertheless, failure of learners to effectively engage with their peers while still learning results in those individuals failing at the workplace when they eventually become employees. According to Child and Shaw (2016), learners should be encouraged to participate in collaborative activities during their school time through pedagogical activities such as drama, role plays, presentations and group discussions. This position is strengthened by Alghamdi and Bach (2018) who point out that facilitators though should take the responsibility of encouraging and promoting collaborative learning among learners to develop the collaborative culture within the classroom.

The importance of collaborative learning is further emphasized by Tinuke (2013) who believes that collaborative learning has an impact on the graduate learning path as it is useful in enhancing graduate employability. However, the author notes that graduates of tertiary institutions in Botswana and other developing countries still lack collaborative skills as they fail to interact well with colleagues while some show unwillingness to work with others. This contrasts sharply with the needs of employers as they seek employees who can effectively and productively achieve organisational goals collectively (Laal & Ghosi, 2011).

2.2.4 Innovative and entrepreneurial skills

Lunenburg (2010) highlights that being innovative begins with creativity therefore innovation needs graduates who can be strategic to initiate innovative ideas. According to Sousa (2018), innovative and entrepreneurial is the ability to take a measured risk to establish new and improved ideas and processes that add value to a business organisation. Howaldt et al (2016) point out that an employee should add value to an organization hence the belief that an

entrepreneur is a problem solver, seeker and innovator. Sinkovec (2013) indicates that being innovative and entrepreneurial means not being rigid, so employers are looking for graduates with this skill who view challenges as an opportunity and possess the appetite to take those challenges head on. Scott and Lancrin (2014) support the importance by which employers crave for graduates who possess innovative and entrepreneurial skills believing that employers want employees who are not hesitant to take risk. However, Tejan and Sabil (2019) alluded that it takes time though for the skill to develop and to attain the competence.

Riaz, Xu and Hussain (2018) argue that the intense competition experienced by organisations requires employers to hire graduates who are strong in innovative and entrepreneurial skills. These skills are essential as they are known to develop an individual's personal skills and capabilities through being creative hence coming up with new ideas and new products much more easily (Capiene and Ragauskaite 2017). More often the term innovation has been used in education as well as in the work environment, a new trend that means a development towards something new/different (Mihalache 2012). Previous researches indicate that business today needs graduates who will bring an entrepreneurial spirit to their jobs through an innovative and entrepreneurial mindset and the ability to respond positively to everyday challenges (Howaldt et al, 2016; Capiene & Ragauskaite, 2017). This view is buttressed by Capiene and Ragauskaite (2017) who notes that in a world where job losses are at their peak, the labour market needs employees who can creatively deal with challenges.

The possession of the innovative and entrepreneurial skill by graduates of tertiary education institutions equips the graduates with the confidence to take risk hence starting their own businesses rather than looking for paid employment hence making these graduates productive and useful to the society and the nation at large.

Given the well-documented importance of the innovative and entrepreneurial skill in enhancing graduate employability, Mihalache (2012) suggests that tertiary education institutions should ensure that they put in place academic programmes that include innovative and entrepreneurial modules that will expose graduates to concepts and mindset of generating new ideas and coming up with new concepts that include starting new businesses.

Institutions still have lot of work to challenge students to have an entrepreneurial and innovative mindset. The world is moving to an era of automated processes that require the humankind to strengthen its abilities and means of making a living. Capiene and Ragauskaite (2017) argue that graduates who possess innovative and entrepreneurial skills can survive the challenges of work by implementing some innovative ideas to make a living. However emerging technology may hinder the humankind potential and capability if graduates do not develop and sharpen their innovative and entrepreneurial skills (Scott and Lancrin 2014). However, it has been noted that the graduates of tertiary education institutions in Botswana lack innovative and entrepreneurial skills hence their chances of obtaining first time employment are slim which implies that the graduates are not employable (Lekoko, Rankhumise & Ras, 2012; Maunnganidze, Tapera, Faimau 2016)

A report by the Ministry of Finance and Economic Development, in a review of the performance of all sectors of the Botswana economy, indicated that a lack of the innovative and entrepreneurial skill among employees was a common challenge in almost all sectors of the country's economy (National Development Plan 11, 2019). The issue of the lack of the innovative and entrepreneurial mindset and its impact on graduate employability is a hot issue in many third world economies. According to Lekoko, Rankhumise and Ras (2012), in order to inculcate this critical skill in learners, the curriculum needs to be sounder and stimulate an innovative and entrepreneurial culture. These authors suggest that in the classroom, over and above the curriculum, appropriate pedagogical strategies need to be adopted that facilitate the transformation of learners into graduates who possess an innovative and entrepreneurial mindset. Such graduates will find it easier to obtain employment, or become self-employed, since they will have been equipped with employability skills at college.

According to Scott and Lancrin (2014), skills are an individual capability, so the university has the responsibility to assess the development of skills amongst learners while they are still at college. Howaldt et al (2016) posit that lecturers should have the appropriate assessment instrument to observe the acquisition and growth of skills in the learners. Moreover, according to Siphambe (2003), graduates must be equipped with student engagement techniques to build up

innovative and entrepreneurial skills which will be useful in enhancing graduate employability. Maunnganidze, Tapera, Faimau (2016) concur that learner engagement activities enhance the graduates learning as they simplify the learning process and in the process equip the learners with the skills that will be useful to them in their work life after leaving school including innovative and entrepreneurial skills.

Due to the unquestionable importance of innovative and entrepreneurial skills in enhancing graduate employability, a report by the Local Enterprise Authority revealed that the innovative and entrepreneurial skill should be introduced to learners while they are still at primary school and then proceed with the skill to secondary school and tertiary level. Doing so will mean that graduates will emerge from college with much stronger innovative and entrepreneurial skills hence will become even more attractive to employers (Lekoko, Rankhumise & Ras, 2012). Such graduates will be able to create opportunities and solutions to challenges. However, Capiene and Ragauskaite (2017) believe that industry is not satisfied with the graduates' level of competence in terms of innovativeness and entrepreneurship. These authors suggest that having an entrepreneurial and innovative spirit results in eagerness to achieve desired goals which assists graduates in their search for employment.

Botho University, which is the subject of this study, has instituted measures that stimulate the inculcation of innovative and entrepreneurial skills in its graduates through the establishment of an entrepreneurial laboratory that is specifically meant for learners to learn and experiment with entrepreneurial concepts turning ideas into live product concepts (idea incubation). In the laboratory, students work in groups generating new ideas, opinions and suggestions and work in teams to develop product concepts.

2.3 How communication, collaborative, analytical and innovative and entrepreneurial skills enhance graduate employability

There is a general belief that graduates who have acquired employability skills have the potential to contribute successfully to an organization's strategic direction (Bennet, 2006; Bunshaft et al, 2015; Maunnganidze, Tapera and Faimau, 2016). Previous research indicates that most graduates who have acquired employability skills are found to be more balanced and flexible, are

independent and have the desire to learn and advance and have better leadership skills, self-management and integrity (Singh & Singh, 2008; Sharma & Sharma, 2015; Vanitha & Jaganathan (2018).

Furthermore, Singh and Singh (2008) believe that graduates with employability skills could gain employment by having most of the qualities that employers might be looking for but the long and short of it is that these graduates are found to be capable and able to deliver. Sharma and Sharma (2015) claim that graduates who have enhanced skills have a competitive advantage in terms of employability. Good academic qualification alone is not enough for graduates to secure a job so through enhanced employability skills, the graduate can be employable.

Vanitha and Jaganathan (2018) indicate that the most effective way to enhance graduate employability skills is to establish what makes graduates employable and ensure that graduates are trained according to the employers' needs. This will result in graduates obtaining their first entry level jobs within six months of graduation. In response to the increasing pressure to enhance graduate employability, universities are now embedding internships and work placements within the curriculum which is believed to enhance graduate employability skills through exposure to real life work environment while also providing the much-needed work experience. Due to competition on the labour market, employers are looking for readily employable graduates who can adapt to change. Singh and Singh (2008) report that what constitutes graduate employability is the ability for the graduate to actively navigate the environment of work confidently and perform productively without further training because of the possession of the employability skills.

2.4 Chapter summary

This chapter identified and discussed the 21st century employability skills that facilitate graduate employment. It reviewed literature on four employability skills which are relevant to this study namely communication skills, collaborative skills, analytical skills and innovative and entrepreneurial skills and how these enhance graduate employability.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter focuses on the research design and methodology that were used to determine the existence or otherwise of 21st century employability skills among Botho University graduates employed in different organisations in Gaborone, Botswana. The chapter looks at the research paradigms, the research design and the methodologies that were used in this study to gather and analyse data namely mixed methods. The chapter scrutinises the data collection techniques that were adopted in the study which are the questionnaire and interviews and the data analysis and presentation tools used for quantitative and qualitative data. The validity and reliability of the study as well as the research ethics observed in the study are also explained.

3.2 Research paradigms

This study adopted both the positivist and interpretivist research paradigms because the nature of the study suited these two philosophical assumptions. A paradigm is a way of looking at the world which is based on certain philosophical assumptions that determine how people think and behave (Cameron, 2011; Newman, 2011). Newman (2011) further observes that a paradigm is a general organising framework adopted in a study which includes basic assumptions, key issues, models of research and methods of inquiry that enable the researcher to address the research objectives and answer the research questions. Ngulube (2015) posits that the main philosophical assumptions are positivism and interpretivism. These are discussed below.

3.2.1 Positivism

According to Molina Azorin and Cameron (2010), the positivist philosophy is premised on the belief that an objective reality exists which waits to be discovered and this can be done with

identifiable degrees of certainty using appropriate scientific methods. The result of this is that certain information and notions such as validity, reliability and statistical significance can be used carefully with the purpose of describing some part of reality with certainty hence the positivist paradigm is more closely related to quantitative methods (Howe, 2008; Ngulube, 2015b). This view is supported by Cecez-Kecmanovic and Kennan (2013) who concur that positivist researchers generally intend to react to enquiries that involve associations among properly defined concepts that are articulated as quantifiable variables, with the resolve of elucidating, forecasting and controlling phenomena.

3.2.2   Interpretivism

The interpretivist paradigm is more closely related to qualitative methods because of its emphasis on individual understanding of particular viewpoints (Howe, 2008; Ngulube, 2015a). Ngulube (2015a) argues that knowledge emanating from the interpretivist paradigm is subjective, while that which is generated in the positivist paradigm is objective.

Cecez-Kecmanovic and Kennan (2013) posit that the interpretive research aims to develop interpretive understanding of complex social phenomena as well as their meanings, nature, role and effects in the social lives of people. It mostly seeks to describe and understand phenomena from the participants' points of view and always involves interpretation by both researchers and actors. This includes analysis and understanding of participants' values and feelings in relation to the phenomena under study hence techniques such as face to face interviews, focus groups and observations are often used to collect data under this paradigm. This study used face to face interviews over and above the questionnaire to collect data.

3.3 Research design and methodology

This study assumed a survey design because the quantitative methodology dominated the qualitative. According to Yin (2009), a survey design is one that is used to respond to questions which have been brought forward, to address problems that have been advocated or realised, to evaluate needs and set goals, to determine if particular objectives have been achieved and, in general, to describe what subsists, in what amount, and in what context. All in all, a survey

research is used to outline specific elements of an identified population in quantitative terms. Such elements usually involve exploring relationships among study variables (Yin, 2009). In this study, the relationships that were explored were between the existence of 21st century skills among BU graduates in Botswana and graduate employability. The survey design was used in this study due to its ability to collect data from a large sample of the targeted population and is also suitable for the collection of biographic data that effectively describes the nature of the respondents (Dawson, 2005).

The research methodology that was adopted for this study was mixed methods although the quantitative method dominated the qualitative method. The quantitative methodology was employed through the identification of specific study variables which established hypotheses that were tested as follows:

H1: Communication skill is relevantly and significantly related to graduate employability.

H2: Analytical skill is significant and positively related to graduate employability.

H3: Collaborative skill is significant and positively related to graduate employability

H4: Innovative and Entrepreneurial skill is significant and positively related to graduate employability.

Data was collected at identified research sites using 85 research participants in the form of supervisors of employees who graduated from BU. The data that was collected was then analysed using both descriptive and inferential statistics as shown in Chapter 4. The qualitative methodology was also adopted in this study though the quantitative methodology was dominant. The qualitative method was employed through an extensive literature search to review what other authorities have written on the 21st century employability skills and how they enhance graduate employability. This was followed by an empirical investigation of the existence, or otherwise, of 21st century employability skills among BU graduates and how they enhanced the employability of these graduates. The empirical investigation was done through face-to-face interviews using an interview guide with open-ended questions (see Appendix 2). A total of 108 supervisors selected from organisations that employed BU graduates and had been directly supervising these graduates were interviewed. The qualitative data that was gathered using recorded statements from the interviewees was scrutinised through thematic analysis. Qualitative

findings were meant to corroborate the quantitative data resulting in the triangulation of research results thus enhancing the validity of the study.

The mixed methods were employed in this study by collecting quantitative data from a larger sample first followed by qualitative data in order to further explain quantitative results by examining specific results in greater detail and assisting in explaining unexpected patterns in the research results as shown in Figure 3.1 below.
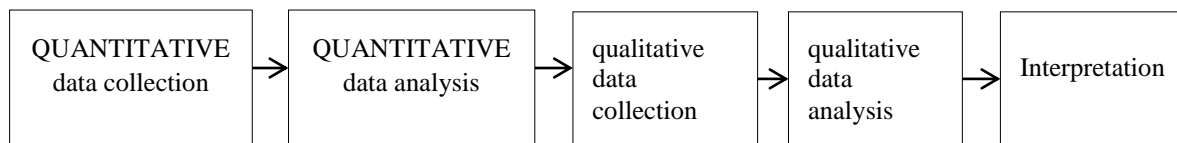
Figure 3.1: The mixed method approach used in this study (Adapted from Terrell, 2012: 261)

Figure 3.1 above shows that 'quantitative' is in capital letters while 'qualitative' is in small letters to indicate that the latter dominated the former hence this was a quantitative-driven study followed by a qualitative one in the second phase of the study.

3.4 Population and sampling frame

Kothari (2011) suggests that all items in a field of study constitute a population or universe and total account of all the items in the population is described as a census. Kothari (2011) further notes that an investigation whereby all items are included implies that no element is left to chance thus leading to the highest accuracy possible. This is preferable to any researcher but is not possible due to cost and time constraints. This leads to the idea of sampling. Kothari (2011) views sampling frame as a drawn list where a sample will be obtained.

The target population for this study was all supervisors of organisations employing BU graduates in Botswana at the time the study was conducted. This information was obtained from the BU database. The sample frame thus comprised, firstly, the list of ten organisations that employed BU graduates and secondly, the list of all the supervisors of those graduates which numbered 150 at the time of the study. Therefore, the population of this study was 150 and the sample size was

108. This was determined using the Research Advisors (2006) sample size table (See Appendix 1).

The 108 respondents were selected through probability sampling in the form of simple random sampling. In this type of sampling, every element in the population has an identical likelihood of being incorporated in the sample therefore it is blind chance only which decides if an element will be included or excluded (Kothari, 2011). The author further notes that the findings acquired from simple random sampling are reliable since all the elements of the sample are guaranteed of the prospect of being picked through the measure of errors of estimation or significance. This elucidates the preeminence of the chance sampling strategy against non-probability sampling.

Because the population of the study did not comprise of a homogenous group, the stratified simple random sampling technique was adopted to obtain a representative sample from each category (stratum) (Kothari, 2011). This sampling technique was applied in this study through subdividing the study population into several segments (strata) which had similar characteristics within the stratum. The different population strata from which the sampling units were selected are shown in Table 3.1 below.

Table 3.1: Population and sample strata

Study organisations	Population strata	Sample from strata
Choppies headquarters	10	7
Regent Hill School	5	3
GrandPalm Hotels	13	13
Botswana Power Corporation	20	14
New Era College	25	18
Botswana Accountancy College	30	22
Ministry of Central Transport Organisation	24	17
Ministry of Health and Social Service	23	14
Total	**150**	**108**

Sample of strata calculation

$$\underline{\text{Population of stratum}} \quad \text{x sample size}$$
$$\text{Total population}$$

Table 3.1 above shows the different strata that comprised the numbers of supervisors of organisations that employed BU graduates from which the respondents were chosen through proportional allocation. The table above quantifies the total sample size (108) from the population of 150.

The respondents for the interviews were selected using non-probability sampling in the form of convenience sampling which is the most preferred technique for qualitative studies (Merriam, 2009). In this technique, items to be included in the sample were selected deliberately (purposefully) by the researcher utilising her own judgment (discretion) hence the reference to this design as purposive or judgment sampling (Merriam, 2009; Kothari, 2011). Thus, convenience sampling was adopted to determine the interviewees from the 150 supervisors across ten organisation. Eight information-rich respondents were hence chosen from which the researcher was confident of learning a lot on the variables under study which would corroborate and further explain the quantitative findings.

3.5 Data collection

Data for this study was collected on the existence of 21st century employability skills among BU graduates who were under the employ of ten organisations based in Gaborone, Botswana to establish whether these graduates were readily employable upon graduation. This was accomplished using a structured questionnaire and in-depth interviews. These instruments are described below.

3.5.1 Questionnaire

This research instrument is regarded as one of the most used and most effective tool for collecting survey data (Dawson, 2002) due to its several advantages. These include the ability to administer it in the researcher's absence, its being straight-forward to use and analyze the data, its cost-effectiveness and its ability to collect data from a large population in a short time. However, its major shortcoming is the perception of the respondents that it is an intrusion into the individual lives and privacies of the respondents since it takes their time to complete and due to the sensitivity of some of the questions. In the end, some respondents may not give honest responses which may distort research findings.

The questionnaire had closed-ended questions since they were going to be followed up with interviews. The questions were derived from the literature reviewed in Chapter 2 and the questionnaire was divided into 6 sections as follows (see Appendix3):

Part 1: Biographic data

This section sought to collect biographic data that was relevant to the study such as age, gender, educational qualifications and work experience.

Part 2: 21st Century employability (soft) skills (Primary research objective)

This section sought to establish the existence of the 21st century employability skills among BU graduates.

Part 3: Existence of communication skills amongst Botho graduates (secondary research objective 1)

This study sought to determine the extent to which BU graduates possessed communication skills.

Part 4: Existence of analytical skill amongst BU graduates (secondary research objective 2)

This section was meant to collect data on the extent to which the respondents believed that BU graduates possessed analytical skills.

Part 5: Existence of collaborative skills amongst BU graduates (secondary research objective 3)

This section sought to collect data on the extent to which the respondents believed that BU graduates possessed collaborative skills.

Part 6: Existence of innovative and entrepreneurial skill amongst BU graduates (secondary research objective 4)

This section sought to collect data on the extent to which the respondents believed that BU graduates possessed innovative and entrepreneurial skills.

3.5.1. Interview

In-depth face to face interviews were used to collect data from eight respondents chosen from the sample in an attempt to establish whether BU graduates possessed the 21st century employability skills and the extent to which these skills made the graduates employable.

Cohen, Manion and Morrison (2011) define the interview as an interchange of opinions between two or more people on an issue of convergent interest. The authors further contend that an interview is a conversation of two people that is initiated by an interviewer for the purpose of collecting information which is pertinent to a specific and seeking to address research objectives and answering research questions. The strength of the interview as a data collection tool lies in its flexibility and its enabling the use of multi-sensory channels which involve verbal, non-verbal, spoken and hearing, its allowing the interviewer to influence the order and flow of the process and allowing the interviewer to probe for more complete answers and seek clarification on complex and deep issues (Cohen, Manion and Morrison, 2011; Kothari, 2011). However, the same authors suggest that the interview as a research tool has challenges that the interviewer has to deal with which include higher transport and accommodation cost, time and recording equipment, susceptibility to interviewer bias, inconvenience to the respondents in terms of time, negative influence of the interviewee fatigue and lack of anonymity which may influence respondents resulting in them giving inaccurate responses due to fear of imaginable reprisals. The interviewer compiled relevant questions emanating from the quantitative findings as a starting point as shown in Appendix 2.

To successfully carry out the interview, the purpose and conduct of the interview were clearly spelt out, permission of the respondent was sought, and researcher biases and values were not revealed as well as not being judgmental. Confidentiality of the respondents was guaranteed, and it was clearly explained that the interview was to the benefit of the respondents through possible policy changes that would enhance the employability of graduates coming from higher education institutions in Botswana.

3.6 Data analysis and presentation

The data that was collected using the questionnaires was analysed using through the Statistical Package for Social Sciences (SPSS) by assigning some codes to the responses before entering those codes into the software for analysis. The SPSS was utilized to run descriptive and inferential statistics together with cross tabulations to create frequency tables for simpler and effective analysis. The data was analysed through the Analysis of Variance (ANOVA) test, Pearson correlation and regression to determine the association between the variables and the strength of it.

The data that was acquired through interviews with information-rich respondents was judiciously synthesized through thematic analysis and presented in the form of descriptive narratives to capture the views of the respondents that addressed the research objectives. This was done through the identification of themes and patterns of meaning across the data set from extant literature to empirical findings. Thematic coding was then applied wherein the specific data were transformed into groupings and themes and conclusions were drawn based on the observations from the transformed data. The quantitative and qualitative results were compared and contrasted to establish whether there was convergence or not.

Yin (2009) argues that data analysis entails what is done to information that arises from a research process which enables readers to derive sense out of that information. The author further contends that in a survey research, the determination of how data will be analysed well before commencement of the collection process is critical leading to the need to put in place effective data analysis approaches before data collection begins. This process should begin with a thorough review of existing literature which focuses on the identified research objectives. This

means that data which must be gathered will be determined by the theoretical propositions advocated in the study.

3.7 Research ethics

Researchers have an obligation to study participants to consider the impact of the investigation on the participants and hence behave in a way that conserves the dignity of the research participants as humans. This is regarded as ethical behavior. According to Cavan (2007), ethics refer to a matter of moral compassion to the civil liberties of other people with the notion that while the truth is good, respect for human dignity is even better. The implication of this position is that a research activity must not search for the truth at the cost of the self-esteem of the research participant.

Ethical issues are also paramount when it comes to the ownership of collected data, and as the data moves from the participants to the researcher and issues that become topical are the constraints, the requirements, the conditions and the powers over how the data is disseminated and (Howe & Moses, 2006). These authors believe that, from the onset, the researcher and the research participants are supposed to get into a stringent agreement over the ownership and control of research information when it has been offered, and how this information will be utilized, and any harm that might ensue to the participants due to their involvement in the study, if any, should be identified and addressed. In this study, all these issues were undoubtedly indicated to the participants who were assured that the data was going to be treated in strict confidentiality and would be used exclusively for academic purposes. Participants were also advised that the raw data was their property, but after the analysis and interpretation of the data, it would become the property of the researcher. The consent and cooperation of the research participants (subjects) were therefore obtained by the researcher before the commencement of the study.

According to Frankfort-Nachmias and Nachmias (2002), informed consent is principally crucial as long as research participants may be exposed to stress, pain or invasion of privacy, or if the goings-on are beyond their control. In this study, the researcher ensured the participants that they

were to participate in the study and that if they were to be exposed to any risk through their participation in the study, they would be doing so knowingly and voluntarily. They were also advised that they were free to opt out of the study anytime they felt they needed to do so with no consequences to them.

As further adherence to issues of research ethics, the study was undertaken in full compliance with BU policies that govern research ethics in terms of how data involving human objects should be collected, interpreted, processed, disseminated and the results reported. The researcher, therefore, had to obtain a clearance letter (Appendix 4) from the BU research ethics committee, or anyone designated, before collecting data. Again, permission to collect data was obtained from the Ministry of tertiary education, research, science and technology (Appendix 5).

3.8 Validity of the study

Before the adoption of the questionnaire as a research instrument, it went through pre-testing and pilot-testing to establish if it would lead to the desired outcome. Pre-testing was conducted by distributing the questionnaire to ten respondents from the population being investigated in this study who were not going to constitute the actual sample of the study. These completed the questionnaire which was then checked to identify any ambiguities resulting in the further refinement of the questionnaire thereafter. The refined questionnaire was then distributed to another ten respondents who were part of the actual sample to pilot-test with complete awareness that they were pilot testing the questionnaire to solicit views and comments from them which were again used to polish up the questionnaire. The number used to pre-test and pilot test the questionnaire is supported by Powell and Connaway (2004) who believe that pre-testing a questionnaire should be done using 10-12 respondents who are a true representative of the study population.

Further validity of the study was established through whose suitability was determined by the use of the Kaiser Meyer Olkin (KMO) which tested the adequacy of the sample size. Other statistical measures used together with the KMO to test the strength of the variables covered in the study were the Bartlett's test of sphericity (BTS) and the Average Variance Extracted (AVE). Pallant (2013) argues that the AVE establishes the intensity of variance represented by a construct

against the extent that is due to measurement error. For factor analysis to be applicable in research, it is believed that the minimum sample size should be 100 (Mundfrom & Ke, 2005) and for this study, the sample size was 108 hence adequate for factor analysis.

Onwuegbuzie and Leech (2006) argue that it is vital to facilitate validity for a study - both quantitative and a qualitative. These authors define validity in a research study as the capability of a research instrument to evaluate what it is designed to evaluate and not the other way round. This refers to the degree to which the researcher has evaluated what he has intended to evaluate as determined by the research objectives. In this study, the researcher made sure that the study fulfilled all forms of validity.

3.9 Reliability of the study

Kumar (2011) argues that reliability of the study also means dependability of the study, consistency, honesty and predictability of the study. It also refers to the replicability of the study over time, instruments and groups of respondents. This means that attempting to determine the reliability of the study means one is checking if the obtained research results are constant over time and whether they accurately represent the total population being studied.

For this study, reliability was tested using the Cronbach's Alpha coefficient as shown in Chapter 4. The test was conducted to determine the reliability of all the scale items measuring the existence of 21st century employability skills among BU graduates (the primary research objective) and all the independent variables that constituted the secondary research objectives.

3.10   Chapter summary

The chapter presented the research design of the study as well as the methodology. It discussed the research paradigms that were adopted namely the positivist and interpretivist paradigms in which the study is immersed. The research methodology which is mixed method (a blending of the quantitative and qualitative approaches) was also discussed. The chapter also outlined the population of the study and sampling procedures, data analysis techniques, research ethics that

were observed in this study as well as how the reliability and validity of the study were ensured. The next chapter focuses on the analysis of data, presentation and discussion of findings.

CHAPTER 4

PRESENTATION, DISCUSSION AND INTERPRETATION OF RESULTS

4.1 Introduction

The previous chapter described the research design and methodology. This chapter presents and discusses key findings from the quantitative and qualitative data that was collected from the supervisors of BU graduates working in different organisations. Data was collected through the questionnaire and interviews to establish whether BU graduates possessed 21st century employability skills which would have made them readily employable upon graduation. The chapter provides evidence on the way the research questions were answered. A total of 108 questionnaires were distributed and 80 were returned culminating in a response rate of 74%. This is a good response rate. This view is supported by Sivo, Saunders, Chang and Jiang (2006) who concur that a response rate that is considered good is 60% and that from 70% is very good. This position is buttressed by Dillman, Smyth and Christian (2009) who postulate that the rule of thumb stipulates that any response rate below 70% is a warning that something went wrong while that which is 70% and above is required to warrant the representativeness of the study findings making it sensible to generalise those findings. Out of the 80 questionnaires that were returned, five were not useable resulting in 75 valid questionnaires.

The primary objective of this study was to determine whether the graduates of BU possessed the 21st century employability skills that made them readily employable in the industry without the need for further training and how these skills enhanced graduate employability. The secondary objectives of the study are restated below:

- To determine whether BU graduates exhibited effective communication skills and how this enhanced graduate employability.
- To establish the perception of employers on the level of analytical skills of BU graduates

and how these skills enhanced graduate employability.

- To examine the extent to which BU graduates exhibited collaborative skills at their
workplaces and how these skills enhanced graduate employability.

- To determine whether BU graduates possessed innovative and entrepreneurial skills and
how these skills enhanced graduate employability.

4.2 Demographic characteristics of the respondents

This section presents data on the demographic characteristics of the respondents. The data is
shown in Table 4.1below.

Table 4.1: Respondents' demographic characteristics

Variable	Subcategory	Frequency	Percentages
	Male	44	58.7
Gender	Female	31	41.3
	22 to 30 years	7	9.3
	31 to 40 years	11	14.7
	41 to 50 years	17	22.7
Age	51 to 55 years	18	24.0
	56 to 60 years	11	14.7
	61 to 65 years	10	13.3
	Above 65 years	1	1.3
	1 to 5 years	1	1.3
	6 to 10 years	22	29.3
Experience	11 to 15 years	32	42.7
	16 to 20 years	13	17.3
	21 to 25 years	7	9.3
Education	Diploma	10	13.3
	Bachelor's degree	19	25.3
	Master's degree	28	37.3
	Doctoral degree	18	24.0
Employment type	Contract	11	14.7
	Permanent	64	85.3

Table 4.1 above shows that almost 59% of the respondents were male while nearly 41% were
female. These shows that the larger number of the respondents were men which reveals gender
imbalance in the allocation of supervisor responsibilities in the selected organisations.

The results in Table 4.1 reveal that 76% of the respondents were at above 40 years old, while 26% were below the age of 40. This is not analysis. This finding indicate that these respondents were mature to be able to objectively assess the capabilities of the graduates thus making the findings more reliable.

In terms of work experience, virtually all the respondents had work experience of over five years. These findings indicate that the supervisors had adequate work experience to effectively supervise and evaluate the performance of the graduates thus enhancing the reliability and validity of this findings.

On the educational qualifications of the respondents, the findings in Table 4.1 indicate that nearly 87% of the respondents had attained at least a bachelor's degree. It is important to note that slightly over 37% held master's degrees, while 24% held doctoral degrees. These figures indicate that the respondents were generally well educated putting them in good stead to effectively and objectively evaluate the employability skills of the graduates.

4.3 Reliability tests

The research instrument was divided into five (5) sections and all the variables and scale items were tested for internal consistency reliability using Cronbach's Alpha as shown in Table 4.2 below.

Table 4.2: Reliability statistics

Study variables	Cronbach's Alpha	Cronbach's Alpha Based on standardized items	No of items
21st century employability skills	.715	.700	11
Communication skills	.790	.773	14
Analytical skills	.703	.681	10
Collaborative skills	.725	.676	12
Innovative and entrepreneurial skills	.684	.601	8

The results in Table 4.2 above show that there is good internal consistency reliability for all the five variables. The values for Cronbach Alpha are at higher levels than the threshold of 0.60 although values higher than 0.80 are desirable (Pallant 2013). Low values of alpha are expected where items are less than 10. Thus, findings based on this study are useful and can be replicated elsewhere. These results are dependable.

4.4 Presentation and analysis of findings addressing the primary and secondary research objectives.

This section presents the findings on the perception of supervisors on the existence of 21st century employability skills that BU graduates possessed. The section is divided into five sub-sections namely possession of 21st Century employability (soft) skills, existence of communication skills amongst Botho graduates, existence of analytical skill amongst Botho graduates, existence of collaborative skills amongst Botho graduates and existence of innovative and entrepreneurial skills amongst Botho graduates in line with the research objectives. The first four present views of participants as explained by frequencies for each questionnaire item. The study then employed factor analysis which is a data reduction technique. This was useful in identifying the variables which were key in explaining each skill. These formed parts of the variables that were employed to create indexes that were useful in correlation and regression analysis. The latter shows the main variable(s) explaining employability of graduates.

4.4.1 Possession of 21st Century employability skills by BU graduates (Primary research objective)

This section provides evidence on the overall primary objective of the study. The study sought to determine whether the graduates from BU possessed 21st century skills that would make them readily employable in industry without the need for further training. The findings are presented in Table 4.3 below.

Table 4.3: Existence of 21st employability skills among BU graduates

Variable	SD	D	N	A	SA	Mean	Std. Deviation
BU graduates possess 21st century employability skills	36.0	40.0	16.0	6.0	0	1.96	0.922
Employer are happy with graduate's communication skills.	13.3	53.3	28.0	5.3	0	2.25	0.755
Employers are happy with graduates' collaborative skills	24.0	41.3	28.0	6.7	0	2.17	0.876
Employers are happy with graduates' analytical skills	38.7	41.3	17.3	2.7	0	1.84	0.806
Employers are happy with graduates innovative and entrepreneurial skills	40.0	37.3	13.3	9.3	0	1.92	0.955
Graduates are ready for employment.	33.3	38.7	21.3	5.3	1.3	2.03	0.944
Employability skills are useful.	1.3	0	8.0	38.7	52.0	4.4	0.753
Organisation provides adequate exposure to the business world.	1.3	0	10.7	48.0	40.0	4.3	0.656
Graduates can implement acquired knowledge.	49.3	45.3	4.0	1.3	0	1.8	2.319
Graduates match needs of business.	42.7	37.3	20.0	0	0	1.77	0.764
Organisation knows importance of employability skills.	0	0	13.3	40.0	46.7	4.33	0.704

Strongly Agree SA=5, Agree A=2, Neutral N=3, Disagree D=2, Strongly Disagree SD=1, s.dev = standard deviation

The results in Table 4.3 above show that BU graduates did not possess the 21st century skills that would make them readily employable (mean=1.96, n=75). This is supported by 76% of the respondents who did not agree with the statement that BU graduates possessed 21st century employability skills. The low variability shows that values are not far away from the mean. The findings show that BU graduates were still to develop the much-needed skills to enhance their chances of being employed. The findings are consistent with Singh and Singh (2008) which explain that graduates complete their studies without these skills that are needed by the employers.

The study shows that employers were not happy with graduates' communication skills (mean=2.25, n=75). This is supported by 95% of the respondents who did not indicate that they were happy with BU graduates' communication skills. This shows that graduates could have

been failing to interact with others in the workplace which might have hindered the flow of information. This has implications on efficiency levels as well. These findings are confirmed by Howard (2014) who suggest that graduates of tertiary institutions are still deficient in communication skills that may result in poor performance of the organisation.

The results provide evidence that collaborative skills were low among graduates (mean=2.17, n=75). This is supported by about 93% of the respondents who did not indicate agreement with the statement that "Employers are happy with graduates' collaborative skills". This meant that BU graduates may not have been employable because of the absence of the collaborative skill.

The results in Table 4.3 provide evidence that employers were not satisfied with BU graduates' innovative and entrepreneurial skills (mean=1.92, n=75). This is reinforced by a combined total of 77.3% of the respondents who disagreed that BU graduates' innovative and entrepreneurial skills are unsatisfying the employers. The findings confirm the lack of creativity among the graduates which is critical for employability. Graduates were not showing the capacity to come up with new ideas that could have impacted on workplace activities. Moreover, the graduates appeared to be risk averse, that is, they were not willing to take risk when they got challenged.

The results show that employability skills were useful in the workplace (mean=4.4, n=75). Furthermore, provision of adequate exposure to the business world was rated as important (mean=4.3, n=75). This shows that employers were more inclined to having graduates with practical experience. This would have implications on training costs and productivity.

According to Table 4.3, BU graduates were failing to make use of acquired knowledge (mean=1.8, n=75). This is supported by about 95 % of the respondents who did not agree with the statement that BU graduates could implement acquired knowledge This shows that employers may have to face the need to further train graduates from BU which is costly. Thus, they may opt for graduates from other institutions.

The results show that BU graduates did not match the needs and requirements of the business world (mean=1.77, n=75). This is supported by 80% of the respondents who did not agree with the statement that BU graduates could match the needs and requirements of the business. This

shows that they might be skills mismatch and the curriculum, thus may be what the students were being taught and what the industry expected is different. This has implications for review of the curriculum and pedagogical strategies.

In order to determine whether the BU graduates possessed the 21st century employability skills and the extent to which these skills may have enhanced graduate employability. Factor analysis were employed, and results pass the validity tests. The seven variables were identified and used in correlation and regression analysis. Table 4.4 below shows Psychometric properties of the graduate employability skills.

Table 4.4: Psychometric properties of graduate employability

Variable	Factor	Alpha	KMO	Bartlett's Test of Sphericity
Possessing 21st century skills	0.634	.715	0.615	39.43**
Knows importance of employability skills	0.558			
Implementation of acquired knowledge	0.503			
Happy with innovative and entrepreneurial skills	0.484			
Provision of adequate exposure to the business world	0.476			
Matching needs and requirements	0.463			
Graduates ready for employment	0.434			

*significant at 1%, **significant at 5%, ***significant at 10%

The findings in Table 4.4 above show that factor loadings are statistically significant at 1% and they exceed the 0.3 level (Pallant, 2013). Items with factor loadings below 0.3 are not reported and do not form part of the analysis. Thus, the measures demonstrate adequate convergent validity.

The results show the measure of sampling adequacy, Keiser Meyer Olkin (KMO), of 0.615 and the Bartlett's test for Sphericity value of 39.43 (p<0.05).

To establish the relationship between the independent variables (collaborative, communication, analytical and innovative and entrepreneurial) and the dependent variable (graduate employability) a regression analysis was employed. The results are shown in Table 4.5 below.

Table 4.5 Regression Analysis: independent variables (collaborative, communication, analytical and innovative and entrepreneurial) and the dependent variable (graduate employability).

Coefficients

Model		Unstandized. Coefficients		Standized. Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.641	.718		2.284	.026	.207	3.075					
	ANA	.152	.152	.118	1.008	.323	.454	.15	.117	.116	.1180	.957	1.045
	COL	.252	.154	.194	1.679	.045	.047	.552	.187	.194	.194	.958	1.044
	COM	.107	.152	.084	.708	.481	-.409	.197	-.084	-.083	-.084	.979	1.021
	INENT	.334	.161	.237	2.068	.004	.012	.656	.23	.237	.237	.976	1.025

a. Dependent Variable: EMP

The Table 4.5 above shows that the major determinants of employability are innovative and entrepreneurial skills ((β= 0.334, t=2.068, p< 0.01) and collaborative skills (β= 0.252, t=1.679, p< 0.05). They both have a positive and significant effect on employability. The coefficient of entrepreneurial skills is higher than that of collaborative skills which shows the importance attached by employers to this skill. Thus, a graduate with entrepreneurial skills increases the chances of employability. The other variables (communication and analytical skills) have the correct signs but remain insignificant. They do not contribute to employability of graduates. Furthermore, the tolerance levels are less than 1 and variance inflation factors (VIF) are greater than 1 for all the variables. Therefore, multicollinearity assumptions are not violated, and results are reliable.

4.4.2 Existence of communication skills amongst Botho graduates

This section presents the research findings on the extent to which the respondents believed that BU graduates' possessed communication skills and their effect on graduates' employability. The results are shown in Table 4.6 below followed by the results from the interviews.

Table 4.6 Existence of communication skills among BU graduates

Statement	SD	D	N	A	SA	Mean	Sdev
Graduates ability to effectively communicate at the workplace.	22.6	44.7	16.7	16	0	3.38	1.00
Graduates ability to effectively communicate using electronic mail.	31.3	41.3	24.7	2.7	0	3.19	.800
Graduates ability to effectively communicate using reports.	45.3	34.7	20	0	0	2.75	.77
Graduates ability to communicate well with others at workplace.	14.7		13.3	38.7	33.3	3.76	1.32
Graduates ability to exhibit good listening skills	5.3	5.3	6.7	46.7	36.0	4.03	1.07
Graduates ability to interpret message.	37.3	28.0	17.3	16.0	1.3	3.16	1.14
Botho graduates can speak clearly.	20.0	50.7	12.0	17.3	0	2.51	.88
Graduates should undergo training in communication skills to be competent in all communication elements (good listening skills, ability to interpret message, ability to speak clearly.	0	0	9.3	42.7	48.0	1.67	.64
Employers believe that Graduates can attain communication skills to communicate freely in the business environment.	0	1.3	17.3	44.0	37.3	4.17	.76
Graduates ability as good communicators at the workplace	24.0	40.0	13.3	20.0	2.7	2.37	1.14
Graduates ability to communicate well in the English language.	24.7	45.3	15.3	14.7	0	3.40	.92
Graduates ability to share information with various stakeholders at the workplace.	16.0	36.0	20.0	25.3	2.3	3.59	1.08
Graduates ability to share ideas and opinions to create a conducive environment.	16.0	45.3	21.3	10.7	6.7	2.47	1.10
Graduates ability to engage/involve other colleagues during conversations at the workplace	37.3	28.0	26.7	8.0	0	3.05	.99

Total						3.11	0.97

Strongly Agree SA=5, Agree A=2, Neutral N=3, Disagree D=2, Strongly Disagree SD=1, s.dev = standard deviation

Table 4.6 above indicates that the highest mean value is 4.17 (n=75, s.dev= .76) and lowest mean value is 1.67 (n=75, s.dev=.64). The results show that communication skills had a moderate effect on graduate employability (mean=3.34, n=75). The average level of variability is 0.97 which is low. The items are rated on a scale: strongly agree (SA), agree (A), neutral (N), disagree (D) and strongly disagree (SD). The results show that BU graduates were failing to communicate effectively in the workplace. This is supported by about 67 % of the respondents who did not agree with the statement that BU graduates could effectively communicate at the workplace. Furthermore, the importance of this variable is indicated by a high value of the mean of 3.38 (n=75, sdev=1.00). This shows that BU graduates were still to add value in the workplace by knowing what, when and how to communicate.

Table 4.6 shows that the graduates were failing to communicate as expected using electronic mail (mean=3.19, n=75). The level of variability is 0.80. This is supported by about 73% of the respondents who did not agree with the statement that BU graduates could effectively communicate using electronic mail.   This shows that graduates were lagging in terms of use of technology which may have reduced their employability.

In terms of graduates' ability to use reports in communication, the results showed that BU graduates could not communicate well using reports with others at workplace (mean=2.75, n=75). The level of variability is 0.75. The lowest value of the mean shows the marginal effect of this variable on the skills set of graduates. This is supported by about 80% of the respondents who did not agree with the statement that BU graduates could effectively communicate using reports.

Table 4.6 shows that graduates exhibited good listening skills (mean=4.03, n=75). The level of variability is 1.07. This result is supported by 46.7% (A) and 36% (SA) while 6.7% remained neutral. This shows that graduates could take instructions which may have increased their chances of executing assigned tasks.

Opinions were sought on the ability of BU graduates to interpret tasks as assigned. The results show that the graduates lacked skills to interpret messages they received (mean=3.16, n=75). This is supported by 37.3% (SA) and 28% (D). The effect is moderate which may indicate that graduates took time to learn what would be happening in the workplace.

The results show that BU graduates were not able to speak clearly (mean=2.51, n=75). The low mean shows that the variable may not be important in explaining employability. The result is and it shows that graduates were failing to be understood by their peers which reduces effectiveness. This is supported by about 71 % of the respondents who did not agree with the statement that BU graduates who did not agree with the statement that BU graduates can speak clearly. This is further supported by the result that graduates were failing to communicate well in English (mean=3.40, n=75). This shows that their failure to communicate was a sign of lack of confidence on the medium of instruction used.

The study sought to determine if graduates should undergo training in communication skills to be competent in all communication elements. The results showed that further training was needed (mean=1.67, n=75) although this variable is not important in explaining employability (low mean).

Participants felt that the acquisition of communication skills enables graduates to communicate more freely in the business environment (mean=4.17, n=75). This variable is considered key in explaining employability with a high mean value. This shows the importance of communication to employers. This is supported by about 81% of the respondents that agree with the statement that BU graduates can attain communication skills to communicate freely in the business environment.

The ability of graduates to share information with various stakeholders at the workplace was examined. The results in Table 4.6 show that there was no consensus on the matter (mean=3.59, n=75). This is indicated by a cumulative total of 52% who disagreed while those who agreed had

a cumulative total of 27.6%. This leaves us with no conclusion on this issue. Similarly, there was no conclusion on the ability of BU graduates to share ideas and opinions to create a conducive environment (mean=2.47, n=75).

The results in Table 4.6 indicate that the level of engaging/involving other colleagues during conversations at the workplace is moderate (mean=3.05, n=75). This is supported by about 92% of the respondents who did not agree with the statement that BU graduates can engage /involve with other colleagues during conversations at the workplace. This shows that the graduates were not able to collaborate and get the best from others in the workplace.

The above quantitative findings were corroborated with qualitative findings that emanated from face to face interviews. A total of 6 out of 8 interviewees strongly agreed that the BU graduates did not have the expected communication skills to qualify them for employment without further on the job training although the regression analysis indicates that employers seem not to value communication skills as important for graduate's employability. This contrasts with Mahajan (2015) who asserts that effective communication generates a conducive environment that enables employees to convey ideas, thoughts and opinions to be shared and implemented in the workplace.

In order to determine the existence of communication skills amongst Bu graduates. Factor analysis were employed which is a data reduction technique. This was useful in identifying the key variables explaining communication skills. The results are shown in Table 4.7 below.

Table 4.7: Psychometric properties: effect of communication skills on employability

	Factor	Alpha	KMO	Bartlett's Test of Sphericity
Graduates being good communicators	.613	.715	0.622	107.10**
Communication in English	.608			
Effective communication	.577			
Communication with others	.547			
Acquisition of communication skills	.498			
Need for further training in communication elements	.391			
Share ideas and opinions to create good environment	.343			

*significant at 1%, **significant at 5%, ***significant at 10%

Table 4.7 above shows that factor loadings are statistically significant at 1% and they exceed the 0.3 level as defined by Pallant (2013). Items with factor loadings below 0.3 are not reported and do not form part of the analysis. These measures thus demonstrate adequate convergent validity. The results show that the measure of sampling adequacy, KMO, is above the minimum threshold of 0.6 and the Bartlett's test of sphericity value is significant at 5% as expected. This shows that factor analysis is useful, and results pass the validity test. The seven variables were identified and used in correlation and regression analysis.

In order to show a 2 tailed test, correlation and the association between communication skills (independent variable) and employability (dependent variable) were employed. The results are shown in Table 4.8 below.

Table 4.8: Correlations: Employability and communication

		EMP	ANA	COL	COM	INENT
EMP	Pearson Correlation	1	0.418	0.194*	0.484	.237*
	Sig. (2-tailed)		0.319	0.097	0.481	0.042
	N	75	75	75	75	75
COM	Pearson Correlation	0.484	0.348	0.236	1	0.173
	Sig. (2-tailed)	0.481	0.685	0.249		0.538
	N	75	75	75	75	75
*. Correlation is significant at the 0.05 level (2-tailed).						

The results in Table 4.8 above show that there is a positive correlation between the two variables, employability and communication skills. The value of the coefficient of 0.484 shows that there is a weak correlation between the variables. Though the variables seem to move in the same direction, the expectation is that communication skills have an insignificant effect on employability. This is further examined using regression analysis.

The study employed regression analysis to examine the effects of communication skills on employability. The results are shown below (Table 4.9).

Table 4.9: Regression Analysis between independent variables (communication skills) and the dependent variable (graduate employability)

Model		Unstandardized. Coefficients		Stand. Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Cons)	2.881	.421		6.85	.000	2.042	3.719					
	COM	.107	.152	.084	.708	.481	-.409	.195	-.084	-.084	-.084	0.612	1.607

a. Dependent Variable: EMP

The interpretations are based on values of unstandardized beta coefficients (B) together with the level of significance (Sig). Table 4.9 above shows that communication skills have a positive and insignificant effect on employability. This is indicated by the positive coefficient and a p-value that is higher than 5%. Thus, employers do not place value on communication skills in determining whether a graduate can be employed or not. Furthermore, the tolerance level is less than 1 and VIF is greater than 1. Therefore, multicollinearity assumptions are not violated, and results are reliable.

4.4.3   Existence of analytical skills amongst Botho graduates (secondary research objective 2)

This section sought to determine the extent to which the respondents believed that BU graduates possessed analytical skills and their effect on graduates' employability. The results are shown in Table 4.10 below followed by the results from the interviews.

Table 4.10: Analytical skills

Statement	SD	D	N	A	SA
Graduates' level of analytical skills	49.3%	44	6.7%		
Graduates' ability to articulate critical issues	45.3%	34.7%	20.0%		
Graduates' ability to solve critical	45.3%	50.7%	4.0%		

issues/scenarios at the workplace					
Graduates' ability to make critical decisions in the absence of the supervisor	45.3%	50.7%	4.0%		
Graduates' ability to effectively produce written reports(feedback) on issues at the workplace	53.3%	44.0%	2.7%		
Graduates' ability to make independent and wise decisions at the workplace	54.7%	41.3%	4.0%		
Graduates' ability to solve problems	45.3%	36.0%	18.7%		
Graduates' ability to participate in activities that require the use of analytical skills during sports games	49.3%	48.0%	2.7%		
Graduate's ability to follow instructions correctly at the workplace	50.7%	32.0%	5.3%	12.0%	
graduates' ability to evaluate sources such as facts, data and research findings before taking positions	45.9%	43.2%	10.8%		

The results in Table 4.10 above show that BU graduates did not have the expected level of analytical skill. This is supported by about 93% of the respondents who did not agree with the statement that BU graduates have the expected level of analytical skill This might mean that graduates were failing to apply logical reasoning as expected.

The respondents were asked to give their views on the ability to articulate critical issues. The results show that BU graduates lacked this critical skill. This is supported by about 80% of the respondents who did not agree with the statement that BU graduates could articulate critical issues. These results indicate that graduates might have been failing to speak fluently and coherently with the employers.

On the graduates' ability to make independent decisions at the workplace, the results in Table 4.10 show that the graduates were not effectively able to do so. This is supported by about 96%

of the respondents who did not agree with the statement that BU graduates could independently make wise decisions at the workplace. These results might mean that BU graduates cannot be given responsibility to work alone, thus may result in close supervision which could also be costly for the organisation

Evidence in Table 4.10 shows that BU graduates could not solve problems at their workplaces. This is supported by about 81% of the respondents who did not agree with the statement that BU graduates can solve problems at the workplace alone. These results may mean that BU graduates need to go further training in preparation for employment.

The respondents were asked to give opinions on the statement that graduates were participating in activities that required the use of analytical skills during sports games. The results in Table 4.10 show that the graduates shied away from participating in issues that required application of analytical skills.

The results in Table 4.10 show that the respondents believed that BU graduates were failing to follow instructions in the workplace. This is supported by about 83% of the respondents who did not agree with the statement that BU graduates could follow the instructions correctly at the workplace. This clearly shows that the graduates lacked the ability to carry out tasks assigned in an effective manner which has implications on the output. Taleb and Chadwick (2016) affirmed that employers are willing to hire employees that could be able to investigate a problem accordingly.

Table 4.10 shows that BU graduates could not evaluate aspects such as facts, data and research findings before taking positions. This is supported by about 89% of the respondents who did not agree with the statement that BU graduates could not evaluate aspects such as facts, data and research findings before taking positions. This clearly shows the inability of the graduates to extract useful information for decision making. The implications of these results reveal that BU graduates still need further training prior employment.

The above quantitative findings were corroborated with qualitative findings that emanated from face to face interviews. A total of 7 out of 8 interviewees strongly agreed that BU graduates did not have adequate analytical skills to qualify them for employment. However, the regression analysis indicates that employers seem not to place much value on analytical skills as a requirement of graduate employability. These results confirm the views of Hodge and Lear (2011) who concur that employers are now seeking to hire independent employees who thoughtful and are problem solvers who add value to the business leading to its success. Therefore, these results show that analytical skills add value to graduate employment.

In order to determine the existence of analytical skills amongst Bu graduates. Factor analysis were employed to identify the key variables explaining analytical skills. The results are shown in Table 4.11 below.

Table 4.11: Psychometric properties: effect of analytical skills on employability

	Factor	Alpha	KMO	Bartlett's Test of Sphericity
Participation of activities requiring analytical skills	0.719	.703	0.602	67.79**
Effective production of reports	0.623			
Evaluation of information	0.521			
Following instructions in the workplace	0.469			
Solving critical issues	0.466			
Making independent decisions	0.457			

*significant at 1%, **significant at 5%, ***significant at 10%

The results in Table 4.11 above show that factor loadings are statistically significant at 1% and they exceed the 0.3 level as defined by Pallant (2013). Items with factor loading below 0.3 are not reported and do not form part of the analysis. These measures demonstrate adequate convergent validity. The results show that the KMO measure of sampling adequacy is above the minimum threshold of 0.6 and the Bartlett's test for sphericity value is significant at 5% as

expected. This shows that factor analysis is useful, and results pass the validity test. The six variables were identified and used in correlation and regression analysis.

In order to show a 2 tailed test, correlation and the association between analytical skills (independent variable) and employability (dependent variable) were employed. The results are shown in Table 4.12 below.

Table 4.12 Correlations: analytical skills and Employability

<table>
<tr><th colspan="7">Correlations</th></tr>
<tr><th></th><th></th><th>EMP</th><th>ANA</th><th>COL</th><th>COM</th><th>INENT</th></tr>
<tr><td rowspan="3">EMP</td><td>Pearson Correlation</td><td>1</td><td>0.418</td><td>0.194*</td><td>0.484</td><td>.237[*]</td></tr>
<tr><td>Sig. (2-tailed)</td><td></td><td>0.319</td><td>0.097</td><td>0.481</td><td>0.042</td></tr>
<tr><td>N</td><td>75</td><td>75</td><td>75</td><td>75</td><td>75</td></tr>
<tr><td rowspan="3">ANA</td><td>Pearson Correlation</td><td>0.418</td><td>1</td><td>0.236</td><td>0.348</td><td>0.418</td></tr>
<tr><td>Sig. (2-tailed)</td><td>0.319</td><td></td><td>0.15</td><td>0.685</td><td>0.344</td></tr>
<tr><td>N</td><td>75</td><td>75</td><td>75</td><td>75</td><td>75</td></tr>
<tr><td colspan="7">*. Correlation is significant at the 0.05 level (2-tailed).</td></tr>
</table>

The results in Table 4.9 above show that there is positive correlation between the two variables, analytical skills and employability. The value of the coefficient of 0.418 shows that there is a weak correlation between the variables. Though the variables seem to move in the same direction, the expectation is that analytical skills have a significant effect on employability. This is further examined using regression analysis. The results of the regression analysis are shown in Table 4.13 below.

Table 4.13: Regression Analysis between independent variables (analytical skills) and the dependent variable (employability).

<table>
<tr><th colspan="9">Coefficients</th></tr>
<tr><td>Model</td><td>Unstandized. Coefficients</td><td>Stand. Coefficients</td><td>t</td><td>Sig.</td><td>95.0% Confidence Interval for B</td><td>Correlations</td><td>Collinearity Statistics</td></tr>
</table>

		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Cons)	2.84	0.253		11.237	0.000	2.336	3.344					
	ANA	0.152	0.151	0.118	1.004	0.319	0.453	0.15	0.118	0.118	0.118	0.711	1.406
a. Dependent Variable: EMP													

The results in Table 4.10 above show that analytical skills have a positive and significant effect on employability. This is indicated by the positive coefficient and a p-value that is higher than 5%. Thus, employers do not place value on analytical skills in determining whether a graduate can be employed. Furthermore, the tolerance level is less than 1 and the VIF is greater than 1. Therefore, multicollinearity assumptions are not violated, and results are reliable.

4.4.4 Existence of collaborative skills amongst Botho graduates

This section sought to determine the extent to which the respondents believed that Botho graduates possessed collaborative skills and their effect on graduates' employability. The results are shown in Table 4.14 below followed by the results from the interviews.

Table 4.14 Collaborative skills

Collaborative skills	SD	D	N	A	SA
Graduates ability to collaborate well with other employees at the workplace	22.7	37.3	16	24.0	
Graduates ability to share their perspective and opinions with teams at the workplace	16.0	42.7	21.3	17.3	2.7
Graduates ability to participate well in teams at the workplace	24	44	22.7	9.3	-
Graduates can effectively share their strengths and talents with others at the workplace.	38.7	49.3	12.0	-	-
Graduates can effectively undertake their roles and responsibilities at workplace while working with others.	16.0	22.7	38.7	22.6	-
Graduates can effectively participate in team building activities held in the organisation.	1.3	9.3	8.0	46.7	33.3
Graduates ability to be motivated by working with others at the workplace.	-	-	8.0	46.7	45.3
Graduates ability to share their goals with	32	21.3	29.3	14.7	2.7

other employees.					
Graduates ability to tolerate others at the workplace	1.3	5.3	12.0	41.3	41.0
Graduates ability to participate well in group decision making at the workplace.	33.3	37.3	28.0	1.3	-
Graduates ability to plan with others at the workplace	1.3	6.7	18.7	49.3	24.0
Graduates ability to have a strong influence towards organisation's productivity	40.0	42.7	13.3	4.0	-

The results in Table 4.14 above show that BU graduates could not effectively collaborate with other employees at the workplace. This is supported by at least 60% of the respondents who did not agree with the statement that BU graduates could collaborate well with other employees at the workplace. This finding has implications on the ability of employees to share ideas and bring effectiveness in the workplace. Lee and Bonk (2014) indicate that at workplace, missions and objectives of organisation are being achieved by working collaboratively.

The study sought the respondents' opinions on the ability of BU graduates to work in a team. The results in Table 4.14 show that the graduates were failing to fit within teams. This is supported by at least 68% who did not agree with the statement that BU graduates could participate in teams. This shows that graduates were failing to take advantage of synergy in the workplace to be more productive, thus means that BU graduates might be disadvantage themselves from being employable

The results in Table 4.14 reveal that BU graduates were failing to take advantage of their talents and strengths. This is confirmed by 88% of the respondents who disagreed with the statement that BU graduates effectively share their strengths and talents with others at the workplace. These results reveal that BU graduates were failing to show their potential to their employers; thus, they may feel that BU graduates are not ready for employment.

The results in Table 4.14 sought views on the graduates' ability to effectively undertake roles and responsibilities. This is supported by at least 77% who did not agree with the statement that BU graduates could effectively undertake their roles and responsibilities at workplace with

others. This shows that BU graduates fails to carry out assignments given in the workplace which has implications on the level of their independence.

The results in Table 4.14 sought to get opinions on the level of participation in team building activities. This is supported by 88% of the respondents who disagreed with the statement that BU graduates, participate in team building activities. This has implications on the nature of relationships created in the workplace. These results have implication on the poor level of participation with others. According to Kanste, Halme and Perala (2016) indicate that employees achieve more when they are working together with others.

The results in Table 4.14 shows that graduates were highly motivated to work with colleagues. This is supported by 92% of the respondents who disagreed with the statement that BU graduates are being motivated to work with others. This result has implications that BU graduates can be motivated to work with others, thus enhancing their collaborative skills.

The results in Table 4.14 sought views on whether BU graduates could tolerate others at the workplace. This is supported by 82% of the respondents who agreed with the statement that BU graduates have high tolerance, thus may increases their ability to work well with people from different backgrounds. Lai, Dicerbo and Foltz (2017) said work environment are constituted with diverse cultures so being able to tolerate others increase the graduate chance of being employed.

The results in Table 4.14 sought the views of the respondents on BU graduates' ability to participate in group decision making. This is supported by at least 71% of the respondents who disagreed with the statement that BU graduates could participate well in group decision making at the workplace, thus reflecting the poor level of group effort which adversely affect the scope of solutions generated by taking advantage of group dynamics. According to Child and Shaw (2016) opinions and ideas are shared during group decision making at the meetings, workshops and conferences therefore this may be an opportunity for graduates to sell out themselves to potential employers.

The results in Table 4.14 sought to get views on the statement that Botho graduates could plan with others at the workplace. This is supported by at least 92 % of the respondents who agreed with the statement that BU graduates can plan with others at workplace. This shows that there was a scope of for effective delivery through team planning in the workplace. Lee and Bonk (2014) mention that This is a key attribute among graduates which has implications on the hiring decisions by employers.

The results in Table 4.14 sought views on the statement that Botho graduates have strong influence on organisations' productivity. This is supported by at least 82 % of the respondents who disagreed with the statement that BU graduates did not agree have strong influence towards organisation's productivity. This shows that graduates are expected to contribute much to the output per worker. Scott (2017) alluded that employers are looking forward for graduate's influence within the organisation in order to recommend them for employment.

The above quantitative findings were corroborated with qualitative findings from face to face interviews. A total of 6 out of 8 interviewees highlighted on the importance of collaborative skills towards graduates' employability. Regression analysis affirmed the effect of collaborative skills on employability. These results are similar to Kanste, Halme and Perala (2016) who affirmed that business success is dependent on teams working collaboratively because they achieve businesses goals and objectives together.

In order to determine the existence of collaborative skills amongst Bu graduates. Factor analysis were employed to identify the key variables explaining collaborative skills. The results are shown in Table 4.15 below.

Table 4.15: Psychometric properties: effect of collaborative skills on employability

	Factor	Alpha	KMO	Bartlett's Test of Sphericity
Effective undertaking of roles and responsibilities	.693	.725	.627	87.09**
Sharing perspectives & opinions with teams	.661			
Planning with others	-.617			
Team participation	.497			
Sharing of goals with colleagues	-.477			
Motivated to work with colleagues	-.428			

*significant at 1%, **significant at 5%, ***significant at 10%

The results shown in Table 4.15 above indicate that factor loadings are statistically significant at 1% and they exceed the 0.3 level as defined by Pallant (2013). Items with factor loadings below 0.3 are not reported and do not form part of the analysis. These measures demonstrate adequate convergent validity. The study shows that the KMO is above the minimum threshold of 0.6 and the Bartlett's test for sphericity value is significant at 5% as expected. Factor analysis is useful, and results pass the validity tests. The six variables were used in correlation and regression analysis. The study employed a 2-tailed test to check for the association between collaborative skills and employability. The results are shown in Table 4.16 below.

Table 4.16: Correlations: Employability and collaborative skills

Table 4.16: Correlations: Employability and collaborative skills		EMP	ANA	COL	COM	INENT
EMP	Pearson Correlation	1	0.418	0.194*	0.484	.237*
	Sig. (2-tailed)		0.319	0.097	0.481	0.042
	N	75	75	75	75	75
COL	Pearson Correlation	0.194*	0.169	1	0.136	0.008
	Sig. (2-tailed)	0.097	0.15		0.249	0.945
	N	75	75	75	75	75
*. Correlation is significant at the 0.05 level (2-tailed).						

The results in Table 4.16 above indicate that the value of the coefficient is 0.194 which shows that there is a significant correlation between the variables (collaborative and employability) at 5% level of significance. Although the variables seem to move in the same direction, this may not imply causation.

The study employed regression analysis to examine the effect of collaborative skills on employability. The results are shown in Table 4.17 below.

Table 4.17: Regression analysis

Coefficients													
Model		Unstand. Coefficients		Stand. Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Cons)	1.808	0.468		3.864	0.00	0.875	2.74					
	COL	0.252	0.15	0.194	1.679	0.045	0.047	0.552	0.19	0.194	0.194	0.502	1.992
a. Dependent Variable: EMP													

The study shows that collaborative skills have a positive and significant effect on employability. This is indicated by the positive coefficient and a p-value that is lower than 5%. For example, an increase in the stock of collaborative skills by one unit, ceteris paribus, would increase employability by 0.252 units. Thus, employers place value on collaborative skills in determining whether a graduate can be employed. Furthermore, the tolerance level is less than 1 and the VIF is greater than 1. Therefore, multicollinearity assumptions are not violated, and results are reliable.

4.4.5 Existence of innovative and entrepreneurial skills amongst Botho University graduates

This section sought to determine the extent to which the respondents believed that Botho graduates possessed innovative and entrepreneurial skills and their effect on graduates' employability. The results are shown in Table 4.18 below followed by the results from the interviews.

Table 4.18: Extent of the possession of innovative and entrepreneurial skills by BU graduates

Statement	SD	D	N	A	SA	Mean	sdev
Graduates' ability to demonstrate innovative and entrepreneurial ideas at the workplace.	30.7	41.3	21.3	6.7	0	3.04	.892
Graduates' ability to effectively adapt and respond to challenges at the workplace.	37.3	32.0	29.3	1.3	0	4.95	.853
Graduates' ability to effectively utilise digital technologies at the workplace.	44.0	44.0	12.0	0	0	3.68	.681
Graduates' ability to act upon opportunities and ideas that arise the workplace to transform them into value for others.	44.0	34.7	21.3	0	0	3.77	.781
Graduate's ability to possess relevant innovative and entrepreneurial skills.	38.7	46.7	14.7	0	0	4.76	.694
Graduate's ability to apply their innovative and entrepreneurial skills at higher level (strategic level).	45.3	48.0	6.7	0	0	4.61	.613

Graduate's ability to inspire other employees with new ideas in the organisation.	42.7	44.0	10.0	3.3	0	3.71	.693
Graduate's ability to exhibit entrepreneurial (creative) mindset.	36.0	52.0	10.0	2.0	0	4.76	.654

Strongly Agree SA=5, Agree A=2, Neutral N=3, Disagree D=2, Strongly Disagree SD=1, s.dev = standard deviation

The results in Table 4.18 show that BU graduates were not demonstrating effective innovative and entrepreneurial skills at the workplace. This is supported by at least 72 % of the respondents who disagreed with the statement that BU graduates could demonstrate effective innovative and entrepreneurial skills at the workplace. This shows that BU graduates were yet to develop techniques that could make them bring positive change at their workplaces hence enhancing their chances of being employed. Capiene and Ragauskaite (2017) attest that graduate with innovative and entrepreneurial ideas have high chances of being employable because they are believed to have great ideas and thoughts.

The results in Table 4.18 show that the graduates were not to adapt and respond quick to challenges at the workplace. This is supported by at least 70 % of the respondents who disagreed with the statement that BU graduates could adapt and respond quickly to challenges at the workplace. This shows that the graduates may not have been employable as they were failing to respond to challenges at the workplaces. Rasul, Ismali, Ismali and Rauf (2009) confirms that work environments are so demanding so it needs an employee who can adapt quickly to change and challenges, hence bringing solutions.

The results in Table 4.18 show that BU graduates did not utilise digital technologies at the workplace. This is supported by about 88% of the respondents who did not agree with the statement that BU graduates could utilise digital technologies at the workplace. This shows the failure by the graduates to take advantage of technological developments to increase workplace outcomes and enhancing their employability. According to Lunenburg (2010) graduates who are employable are those with some technological advancement.

The results in table 4.18 collected views on the ability of graduates to act on opportunities and ideas that arose at their workplaces to transform themselves into value for others. This is supported by 100% of the respondents who did not agree with the statement that BU graduates

have the ability of graduates to act on opportunities and ideas that arose at their workplaces to transform themselves into value for others. This finding indicates that graduates lacked this skill which might have adversely affected their chances of being employable. The results have implications on the need for further training.

The results in table 4.18. sought to establish whether BU graduates possessed relevant innovative and entrepreneurial skills. This is supported by about 85% of the respondents who did not agree with the statement that BU graduates possessed relevant innovative and entrepreneurial skills. The findings indicate that graduates lacked these employability skills. Lack of these skills could have adversely affected their employability levels, and this has implications on the training budgets of employers.

The results in Table 4.18. sought to establish show that BU graduates could not apply their innovative and entrepreneurial skills at strategic level in the organisations they were employed. This is supported by 93% of the respondents who did not agree with the statement that BU graduates could apply their innovative and entrepreneurial skills at strategic level. This result demonstrates the need for further training before the graduates could become creative and enterprising in their place of work.

The results in Table 4.18. sought the opinions of the respondents on the statement that BU graduates inspired other employees with new ideas in the organisation. This is supported by about 87 of the respondents who did not agree with the statement that BU graduates inspired other employees with new ideas in the organisation. This indicates the failure of the graduates to motivate others through improved ideas. According to Riaz, Xu and Hussain (2018) employers are looking for employees with new ideas because market industry is competitive, thus if graduates have new ideas can be highly employable.

The results in Table 4.18 show that factor loadings are statistically significant at 1% and they exceed the 0.3 level as defined by Pallant (2013). Items with factor loadings below 0.3 are not reported and do not form part of the analysis. Thus, measures demonstrate adequate convergent validity.

The results show that the KMO is above the minimum threshold of 0.6 and the Bartlett's test of sphericity value is significant at 5% as expected.

The above quantitative findings were corroborated with qualitative findings that emanated from face to face interviews. A total of 7 out of 8 interviewees indicate that innovative and entrepreneurial skills adds value towards graduate's employment. Regression analysis affirmed the value of innovative and entrepreneurial skills on employability.

In order to determine the existence of innovative and entrepreneurial skills amongst Bu graduates. Factor analysis were employed to identify the key variables explaining collaborative skills. The results are shown in Table 4.19 below

Table 4.19: Psychometric properties: impact of innovative and entrepreneurial skills on employability

	Factor	Alpha	KMO	Bartlett's Test of Sphericity
Possessing relevant innovative and entrepreneurial skills	.624	.684	0.649	28.47**
Entrepreneurial mind-set	.579			
Demonstration of entrepreneurial and innovative ideas	.504			
Adaption and response to challenges	-.486			
Inspiring other employees	.457			
Acting on opportunities and ideas	.333			
Application of innovative and entrepreneurial skills	.309			

*significant at 1%, **significant at 5%, ***significant at 10%

The results in Table 4.19 above employed a 2-tailed test to determine the association between innovative and entrepreneurial skills (INENT) and employability (EMP).

The study employed positive correlation between the two variables, employability and innovative and entrepreneurial skills. The results are shown in Table 4.20 below.

Table 4.20: Correlation between employability and analytical skills

		EMP	ANA	COL	COM	INENT
EMP	Pearson Correlation	1	0.418	0.194	0.484	.237*
	Sig. (2-tailed)		0.319	0.097	0.481	0.042
	N	75	75	75	75	75
INENT	Pearson Correlation	.237*	0.212	0.218	0.173	1
	Sig. (2-tailed)	0.042	0.344	0.945	0.538	
	N	75	75	75	75	75
*. Correlation is significant at the 0.05 level (2-tailed).						

The results in Table 4.20 show that there is positive correlation between the two variables innovative and entrepreneurial and emplotyability. The value of the coefficient of 0.237 shows that there is a significant correlation between these variables at 5% level. Although the variables seem to move in the same direction, this may not imply causation between them.

The study employed regression analysis to examine the effect of innovative and entrepreneurial skills on employability. The results are shown in Table 4.21 below.

Table 4.21: Effect of innovative and entrepreneurial skills on employability

Coefficients[a]												
Model		Unstand. Coefficients		Stand. Coefficients	T	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.985	0.296		6.711	0	1.396	2.575					
	INENT	0.334	0.161	0.237	2.068	0.04	0.012	0.656	0.24	0.237	0.237	0.611	1.637
a. Dependent Variable: EMP													

The results in Table 4.21 shows that innovative and entrepreneurial skills had a positive and significant effect on the employability of graduates. This is indicated by the positive coefficient and a p-value that is lower than 5%. For example, an increase in the stock of innovative and entrepreneurial skills by one unit, ceteris paribus, would increase employability by 0.334 units. Thus, employers place value on innovative and entrepreneurial skills in determining whether a graduate can be employed. Furthermore, the tolerance level is less than 1 and the VIF is greater than 1. Therefore, multicollinearity assumptions are not violated, and the results are reliable.

The study employed regression analysis to develop the best model explaining employability of graduates. Variables were incorporated in the model one at time and checking the values of R^2. The model summary is shown in Table 4.22 below.

Table 4.22: Model Summary[e]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.584[a]	0.315	0.310	3.036	1.764
2	.612[b]	0.375	0.371	2.712	
3	.698[c]	0.487	0.475	2.609	
4	.751[d]	0.564	0.556	2.307	

a. Predictors: (Constant), Communication skills (COM)	
b. Predictors: (Constant), Communication skills (COM), Analytical Skills (ANA)	
c. Predictors: (Constant), Communication skills (COM), Analytical Skills (ANA), Collaborative Skills (COL)	
d. Predictors: (Constant), Communication skills (COM), Analytical Skills (ANA), Collaborative Skills (COL), Innovative and Entrepreneurial Skills (INENT)	
e. Dependent Variable: Employability of Graduates (EMP)	

Table 4.22 above shows that the overall model can be relied upon as a preliminary analysis in understanding or predicting employability of graduates (R^2 = 0.564, Adj R^2 = 0.556, Durbin Watson = 1.764. The study shows that the model explains 56.4% of the variance in employability. There are other factors outside this model, which are also important, accounting for 43.6% of the variation. However, the value for adjusted R^2 gives a more accurate value useful in predicting the population values.

4.6: Chapter summary

This chapter analysed and discussed the findings of the study. Data was analyzed on the primary research objective and the four secondary research objectives. The chapter was arranged as follows: introduction, presentation and analysis of findings addressing the primary and secondary research objectives. The analysis of the study was then subdivided into demographics presentation, discussion and interpretation of results. The next chapter outlines the final summary of the findings and makes some recommendations based on the summary of the results. Finally, it provides a conclusion to the study.

CHAPTER 5

FINAL SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

The previous chapter presented and discussed the key findings from the quantitative and qualitative data that was collected from the supervisors of BU graduates who were working in different organisations where the graduates were employed. This chapter outlines the final summary of the research findings and makes recommendations based on the findings of the study. The conclusion is based on the researcher's observation.

5.2 Purpose of the study

The purpose of this study was to investigate the existence of the 21st century employability skills among BU graduates. The study adopted a survey design. Questionnaires were administered to the employers (supervisors) who were supervising the students during their time of employment. Interviews were also conducted with the supervisors from the same population sample.

5.3 Final summary

This section presents a summary research of research findings. The section has six parts. The first part displays the study's demographic data. The second part presents the summary of the 21st century employability skills (primary research objective). The third part summaries data of the first secondary research objective; the fourth part summaries data on the second secondary research objective; the fifth part summaries data on the third secondary research objective, while the sixth part summaries data on the fourth secondary research objective.

5.3.1 Biographic data relevant to the study

The findings of the study revealed that most of the respondents had high levels of work experience (11-15 years) and possessed at least a bachelor's degree. Most of the respondents

were over 40 years old. These respondents were also employed on a permanent basis. These findings indicate that these employers (supervisors) had been doing their work for many years and were fully conscious of the requirements and responsibilities for the work hence could effectively assess BU graduates.

5.3.2 Existence of 21st century employability skills among Botho graduates (Primary research objective)

The study indicated that BU graduates did not possess the 21st century employability skills (soft skills). This was confirmed by the high number of respondents who indicated that the graduates did not possess the 21st century skills that could make them readily employable upon graduation. The implication of the results is that graduates needed to work on their skills to enhance their chance of being employable.

5.3.3 Existence of communication skills amongst Botho graduates (secondary research objective 1)

The study was meant to establish if BU graduates exhibited effective communication skills and how these could enhance their employability. The results depicted that the graduates were failing to communicate effectively while at the workplace. This means that the graduates were lacking communication skills. Some of the attributes which were revealed by the study as lacking included inability to use electronic mail, failure to interpret communication messages, inability to speak fluently and failure to get fully involved in formal conversations. However, there were some communication attributes that graduates were moderately executing well such as listening. The overall findings though for this skill was that graduates still needed to grasp basic communication skills that are critical at the work place to enhance their employability.

5.3.4 Perception of employers on the level of analytical skill amongst Botho graduates (Secondary research objective 2)

The study sought to understand the perception of employers about the graduates of BU's level of analytical skill. The study results revealed that the respondents believed that the graduates did not have analytical skills as expected by the employers. The level of acquisition of this skill amongst the graduates was low as perceived by the supervisors. It was discovered that the

graduates really needed to be equipped with the analytical attributes for them to be effective in their job responsibilities. The study findings further showed that graduates failed to solve problems and make critical decisions during their employment period. The respondents overall view on the graduates' possession of analytical skills was below the expected standards.

5.3.5   Existence of collaborative skill amongst Botho graduates (secondary research objective 3)

The study sought to establish the extent to which BU graduates possessed the skill to collaborate with others at the workplace which happens to be one of the most needed skill in organisations today. However, the study results revealed that graduates did not perform to expectation. They were failing to collaborate well with others at the workplace and could not share their perspective and opinions with teams at the workplace. These results showed that graduates were not competent enough to interact with others at workplace whereas the employer's expectation was that they should be working as teams to be effective.

5.3.6   Existence of innovative and entrepreneurial skills amongst Botho graduates (secondary research objective 4)

The study sought to establish the existence of innovative and entrepreneurial skills amongst graduates. The results indicated that graduates are failing to demonstrate innovative and entrepreneurial ideas at the workplace. The majority of the respondents showed that this is one of the most important 21st employability skills that employers look for in graduates when they recruit. It was evident that graduates needed further training as they failed to make use of arising opportunities at the workplace to be valuable to the organization. This means that if the organization hires such employees, it will need to take the employees through further training which implies a higher budget for that organization which it will not be ready for.

5.4   Recommendations

This study presents the recommended possible solutions to the research problem, that supports the existence of the 21st century skills that could increase the probability of graduates to be employable.

Collaborative skill

- It is recommended that graduates should be introduced to collaborative engagements during their learning process such as teamwork projects, institutional clubs, to share and enhance their ideas and opinions.

- Facilitators are encouraged to integrate collaborative activities in the classroom such as debates and group discussions which increase their learning performance.

- Facilitators need to integrate some role plays for the learners to have some real-life scenarios.

Analytical skill

- It is recommended that learners should be tasked with activities that would require them to assess and analyse scenarios. This would motivate the learners to enjoy learning that involves creating solutions to problems.

- It is recommended that facilitators take the responsibility to develop the learners thinking capacity and confidence through class activities.

Communication skills

- Facilitators should encourage learners to get involved in conversations that will eventually enhance their communication skills.

- Facilitators and industry must work together to identify areas where learners are weak so as to enhance communication skills of the learners.

- Lecturers need to integrate effective communication activities in their lesson plans to improve learner communication skill.

Innovative and entrepreneurial skills

- It is recommended that the educational facilitators take the responsibility of making the learners know how to establish opportunities.

- It is recommended that facilitators empower the learner's on how to anticipate risk to develop new ideas that can create value.

- It is recommended that facilitators infuse the innovative and entrepreneurial mindset onto learners.

5.5 Conclusion

The study investigated the existence of the 21st employability skills amongst Botho university students. The study findings have proven that there was lack of employability skills amongst BU graduates. Evidence showed that the graduates were not competent with their employability skills. The results from the respondent's viewpoint depicted that graduates do not have the expected level of skills acquisition to qualify for employment. The overall implication of this study is to expand the body of knowledge on graduate employability for the benefit of stakeholders (educational bodies, policy makers, employers, society). Through answering research objectives and research questions, the study contributed to current situations for future considerations. The findings will help both parties (educational institutions and employers) to have some joint contributions towards graduates' acquisition of employability skills. Employers though seem not to value the other two skills namely analytical and communication skills although the reviewed literature clearly pronounced the importance of these skills in enhancing graduate employability. The study has implication for further research. The study was carried out in one higher education institution. Future researchers may want to pursue similar studies covering other higher education institutions in Botswana and the region.

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APPENDIX 1: The researcher's advisors sample size table

Required Sample Size[†]

Population Size	Confidence = 95%				Confidence = 99%			
	Margin of Error				Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
300,000,000	384	784	1537	9603	663	1354	2654	16586

Appendix 2

Interview guide

1. Do you think BU graduates are able to communicate effectively?

Please elaborate

Why do you say so?

2. Why do you think BU graduates cannot articulate critical issues?

Please elaborate.

3. Do you think BU graduate have collaborative motives to work with other employees?

Why do you say so?

4. What are the capabilities of BU graduates about analytical skills?

Please elaborate

5. Do you think BU graduates are competent with the innovative and entrepreneurial skills?

Please elaborate.

Appendix 3

Research Questionnaire

Introduction Letter

Dear respondent

My name is Baoleki Makgoeng, a final year Master of Education student at Botho University. I am conducting a study on "Exploring the existence of 21st century employability skills among higher education graduates in Botswana: A case of Botho University" .The questionnaire seeks to establish if graduates possess the employability skills that make them ready for employment without the need for further training.

You are kindly requested to voluntarily complete this questionnaire. The information that is provided will remain confidential. The data that is collected will strictly be used only for the purpose of this study. The questionnaire will not be used for anything besides the fulfilment of the requirements of a Master of Education in Higher Education with Botho University.

Name of student:　　　　　Baoleki Makgoeng

Study Programme:　　　　　Master of Education in Higher education

Name of Supervisor:　　　　 Prof Ushe Makambe

PART 1: BIOGRAPHICAL DATA

Please check by ticking in the appropriate box (✔) in the space provided.

1. Gender

Male	Female	Other

2. Age (in years)

Below 21	25 - 30	35– 40	45-50	36- 40	45-50	55-60	65- above

3. Work Experience (In years)

Below 1 year	1 -5	6 – 10	11 – 15	16 – 20	21 – 25	26 – 30	31 and above

4. Highest level of education

Certificate	Diploma	Bachelor' Degree	Master's Degree	Doctoral Degree	Other (Please specify)

5. Type of employment

1.Temporary	2.Contract	3.Permanent	Other

Part II – 21st Century employability (soft) skills (Primary research objective)

For each of the statements below, tick (✔) the box that indicates the degree to which you agree or disagree as represented below:

Strongly Disagree (SD), Disagree (D), Neutral -Neither Agree nor Disagree (N), Agree (A), Strongly Agree (SA) to respond to the existence of the 21st century soft skills and employability

	Statement	SD	D	N	A	SA
6.	Botho graduates possess 21st century employability					

		SD	D	N	A	SA
	skills (soft skills) namely collaboration, analytical, communication, innovative and entrepreneurial.					
7.	Employers, are happy with Botho graduates' communication skills.					
8.	Employers are happy with Botho graduates' soft skill collaborative skill.					
9.	Employers, are happy with Botho graduates' analytical skill.					
10.	Employers, are happy with Botho graduates', innovative and entrepreneurial skill.					
11.	Graduates are ready for employment.					
12.	Employability skills are useful at workplace.					
13.	Organisation provides adequate exposure to the business world					
14.	Graduate can implement acquired knowledge					
15.	Graduates match the needs of business.					
16.	Organisation knows the importance of employability skills.					

Part III: **Communication skills.**

For each of the statements below, tick (✔) the box that indicates the degree to which you agree or disagree as represented below:

Strongly Disagree (SD), Disagree (D), Neutral -Neither Agree nor Disagree (N), Agree (A), Strongly Agree (SA) to respond to the existence of the 21st century soft skills and employability.

	Statement	**SD**	**D**	**N**	**A**	**SA**
17.	Botho graduates effectively communicates at the workplace.					
18.	Botho graduates effectively communicate using electronic mail.					
19.	Botho graduates effectively communicate using reports.					

		SD	D	N	A	SA
20.	Botho graduates can communicate well with others at workplace.					
22.	Botho graduates exhibit good listening skills					
23.	Botho graduates can interpret message.					
24.	Botho graduates can speak clearly.					
25.	Botho graduates should undergo training in communication skills to be competent in all communication elements (good listening skills, ability to interpret message, ability to speak clearly.					
26.	The acquisition of communication skills makes graduates to communicate freely in the business environment.					
26.	Botho graduates are good communicators at the workplace					
27.	Botho graduates communicate well in the English language.					
28.	Botho graduates can share information with various stakeholders at the workplace.					
29.	Botho graduates can share their ideas and opinions to create a conducive environment.					
30.	Botho graduates can engage/involve other colleagues during conversations at the workplace					

Part IV: Analytical skills

For each of the statements below, tick (✔) the box that indicates the degree to which you agree or disagree as represented below:

Strongly Disagree (SD), Disagree (D), Neutral -Neither Agree nor Disagree (N), Agree (A), Strongly Agree (SA) to respond to the existence of the 21st century soft skills and employability

	Statement	SD	D	N	A	SA

		SD	D	N	A	SA
31.	Botho graduates possess the level of analytical skills expected by the employers.					
32.	Botho graduates can articulate critical issues at the workplace.					
33.	Botho graduates can solve critical issues/scenarios at the workplace.					
34.	Botho graduates can make critical decisions at the workplace in the absence of the supervisor/manager.					
35	Botho graduates can effectively produce written reports (feedback) on issues at the workplace.					
36.	Botho graduates can make independent wise decisions at the workplace.					
37.	Botho graduates can solve problems at the workplaces.					
38.	Botho graduates participate in activities that requires the use of analytical skills, during sports games.					
39.	Botho graduates can follow instruction correctly at the workplace.					
40.	Botho graduates can evaluate sources such as facts, data and research findings before taking positions.					

Part V: **Collaborative skills**

For each of the statements below, tick (✓) the box that indicates the degree to which you agree or disagree as represented below:

Strongly Disagree (SD), Disagree (D), Neutral -Neither Agree nor Disagree (N), Agree (A), Strongly Agree (SA) to respond to the existence of the 21st century soft skills and employability

	Statement	**SD**	**D**	**N**	**A**	**SA**
41.	Botho graduates can collaborate well with other					

	employees at the workplace.					
42.	Botho graduates share their perspectives and opinions with teams at the workplace.					
43.	Botho graduates participate well in teams at the workplace.					
44.	Botho graduates effectively share their strengths and talents with others at the workplace.					
45.	Botho graduates effectively undertake their roles and responsibilities at workplace working with others.					
46.	Botho graduates participate in team building activities held in the organisation.					
47.	Botho graduates are being motivated by working with others at the workplace.					
48.	Botho graduates shares their goals with other employees at the workplace.					
49.	Botho graduates can tolerate others at the workplace.					
50.	Botho graduates participates well in group decision making at the workplace.					
51.	Botho graduates can plan with others at the workplace.					
52.	Botho graduates have strong influence towards organisation's productivity.					

Part VI: **Innovative and entrepreneurial skills**

For each of the statements below, tick (✔) the box that indicates the degree to which you agree or disagree as represented below:

Strongly Disagree (SD), Disagree (D), Neutral -Neither Agree nor Disagree (N), Agree (A), Strongly Agree (SA) to respond to the existence of the 21st century soft skills and employability

53.	Botho graduates demonstrate innovative and					

	entrepreneurial ideas at the workplace.					
54.	Botho graduates effectively adapt and respond to challenges at the workplace.					
55.	Botho graduates effectively utilise digital technologies at the workplace.					
56.	Botho graduates act upon opportunities and ideas that arise at the workplace to transform them into value for others.					
57.	Botho graduates possess relevant innovative and entrepreneurial skills.					
58.	Botho graduates can apply their innovative and entrepreneurial skills at higher level (strategic level).					
59.	Botho graduates inspire other employees with new ideas in the organisation.					
60.	Botho graduates exhibit entrepreneurial (creative) mindset.					

Thank you for participating in this study

End of questionnaire

Appendix 4: Clearance letter from Botho University

Ref: 00211/LTRE/GB/2019

30 October 2019

TO WHOM IT MAY CONCERN

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

This is to confirm that Baoleki Makgoeng, Student ID 1715945, is a student at Botho University, studying for a Masters in Higher Education.

The student would like to conduct research under the topic, "**An investigation of the existence of 21st century employability skills among higher education graduates in Botswana**".

In light of the above, The Faculty of Health and Education at Botho University seeks your permission to allow her to carry out this research and accord her the necessary support as it will help in the completion of her studies.

The information collected will be used solely for this research and will be treated with a high level of confidentiality and anonymity.

Yours sincerely

Signed for

Mr. Tom Atonga
Manager, Library, Teaching and Research Excellence Department (LTRE)
Office of Quality Management (OQM)
Botho University – Gaborone Campus

Telephone : 3655400   3655483
Fax : 3914271
E-mail: botsamote@gov.bw

REPUBLIC OF BOTSWANA

Block 6, Government Enclave, Headquarters
Private Bag 00517 Gaborone

MINISTRY OF TERTIARY EDUCATION, RESEARCH, SCIENCE AND TECHNOLOGY

REF: MOTE 1/18/6 VII (4)

3rd December 2019

Ms Baoleki Makgoeng
P.O. Box 501564
Botho University
GABORONE

Dear Madam

APPLICATION FOR RESEARCH PERMIT:
"An Investigation of the existence of 21st century employability skills among higher education graduates: A case of Both University".

Reference is made to your application on the above captioned matter.

Your application for Research Permit for the proposed research titled: **'An Investigation of the existence of 21st century employability skills among higher education graduates: A case of Both University.'** has been granted. The permit is valid for one (1) year. You are kindly advised to peruse section 4.4 to 5.0 of the 'Guidelines for Application for Research Permit' in Botswana.

Any changes in the proposed research should be communicated, without fail, to the Permanent Secretary, Ministry of Tertiary Education Research Science and Technology citing above reference. You are advised to submit final research report to the Department of Research, Science and Technology.

By copy of this letter, the Director of Research Science and Technology (DRST) is advised to take note of this development and ensure that deliverables to government are timely met. Furthermore, you are requested to deposit completed research report to DRST.

Yours faithfully

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