

A FRAMEWORK FOR THE INTEGRATION OF GRADUATE EMPLOYABILITY  
ATTRIBUTES IN THE CURRICULA OF MANAGEMENT SCIENCES AT HIGHER  
EDUCATION INSTITUTIONS IN NAMIBIA

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ROMANUS SHIVUTE SHIVORO

9977686

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MAIN SUPERVISOR: DR. R.K. SHALYEFU

CO-SUPERVISOR: DR. N. KADHILA

## **ABSTRACT**

The industry in Namibia has persistently expressed dissatisfaction about the quality of graduates from institutions of higher learning, alleging that graduates are not adequately prepared for the world of work. They claim that graduates need other attributes apart from discipline specific knowledge and skills. Graduate attributes are the skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study. The aim of the study was therefore to investigate the present state of enhancing graduate attributes in the curricula of management sciences in Namibia, and to suggest a framework for the integration of graduate employability attributes in curricula. The study was carried out using a mixed-methods research approach and applying a sequential explanatory design. The research design consisted of two distinct phases, firstly to collect and analyse quantitative data, and secondly to collect and analyse qualitative data. During the quantitative phase, a survey method with questionnaires was employed to determine perspectives of employers, management sciences graduates and lecturers regarding graduate employability. Survey questionnaires were distributed to graduates who have completed Bachelor degree in management sciences discipline at higher education institutions in Namibia, a similar questionnaire was administered higher education staff in Namibia that is teaching courses in management sciences. Furthermore, a similar questionnaire was administered to the employers of graduates. Data was analysed using descriptive statistics with SPSS statistical software. The qualitative phase employed a strategy of content analysis to assess the integration of graduate employability attributes in management sciences

curricula of two universities in Namibia. Qualitative data – content analysis was done using Atlas ti. Analysis software.

The findings of the quantitative phase indicated that there is mismatch between opinions of employers, higher education institutions, and graduates regarding which attributes are most important for the labour market. However, all three stakeholders have indicated, graduates' preparation for the labour market should include innovation, and professional accountability, in addition to other attributes such as critical thinking, leadership, management, information communication technology, systems thinking, work ethics, and literacy and numeracy. Therefore, a list of ten priority attributes has been generated from this phase. The results of the qualitative phase illustrated a weak position of targeted higher education institutions' provisions for enhancing employability attributes. The study found inadequate emphasis on employability attributes in programme documents in terms of programme outcomes, content, delivery, and assessment of student learning. The study also found lack of provision for work-based learning, which could provide a golden opportunity and exposure for students to develop employability attributes. However, substantial attributes related to graduate employability were found to be inadvertently and implicitly embedded in discipline specific modules. Finally, based on the findings of the two study phases, and literature on best practices for enhancing graduate employability, the study produced four publications. The publications focus on a variety of aspects, namely, perspectives of stakeholders, critical analysis on literature, how others have embedded employability graduate attributes in the management sciences curricula and also a proposed framework for integrating employability attributes in the curricula.

## LIST OF PUBLICATIONS/CONFERENCE PROCEEDINGS

1. Shivoro, R., Shalyefu, R.K., & Kadhila, N. (2017). Embedding employability attributes in management sciences curricula: A case of two Namibian universities. *Journal of Teaching and Learning for Graduate Employability*, 8 (1), 123–136.
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## LIST OF ABBREVIATIONS AND ACRONYMS

ETSIP	Education and Training Sector Improvement Programme
FEMS	Faculty of Economics and Management Sciences
FMS	Faculty of Management Sciences
GEA	Graduate Employability Attributes
HC	Human Capital
HCT	Human Capital Theory
HEI	Higher Education Institutions
ICT	Information Communication Technology
IUM	International University of Management
MMR	Mixed Method Research
NAMCOL	Namibia College of Open Learning
NCHE	National Council for Higher Education
NUST	Namibia University of Science and Technology
PON	Polytechnic of Namibia
QAA	Quality Assurance Agency
QUAL	Qualitative
QUAN	Quantitative
SME	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
UK	United Kingdom
UNAM	University of Namibia
UNESCO	United Nations Education, Science and Culture Organisation

UNISA            University of South Africa  
WIL              Work-Integrated Learning

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## **DEDICATION**

This dissertation is dedicated to two very important people who have set the foundation for my growth and life journey, my dear father John, and beloved mother Sylvia Shivororo.



## **CHAPTER 1: INTRODUCTION**

This chapter provides the background of this study by identifying key events and compelling issues in the development of higher education in Namibia. It locates the agenda of graduate employability attributes in the global arena. In addition, the chapter brings to light the concerns regarding graduate employability in Namibia as they are pronounced by different national stakeholders. Furthermore, the chapter locates the gap that exists in the literature about the issue of graduate employability. Finally, it articulates the problem identified and the questions that the study attempted to answer. This dissertation contains independent chapters in the form of journal articles. Each chapter has a topic, abstract, methodology and findings. However, this introduction also orients the reader to the overall research methodology of the whole study.

### **1.1 Orientation of the study**

In the year 1991, the Government of the Republic of Namibia appointed a Presidential Commission on Higher Education in Namibia to establish a national system for higher education. As a result of the recommendations of the Commission, the University of Namibia (UNAM) was established by Act of Parliament (Act 18 of 1992), and the Polytechnic of Namibia (PoN) was established by Act of Parliament (Act 33 of 1994). These two public institutions have been operational from the time of establishment and are providing higher education programmes at certificate, diploma and degree levels. In the year 2015, the PoN has transitioned from a technical college to become Namibia University of Science and Technology (NUST) as per Act of Parliament (Act 7 of 2015),

making it a fully-fledged university. Apart from research and extension services, the two institutions have a mandate to effectively teach a wide range of disciplines and skills, and prepare students to enter, qualify and progress into their occupations and professions (Coombe, 1993; Republic of Namibia, 1992, 1994, 2015). In addition to the two public universities, a private university, the International University of Management (IUM) also offers a variety of programmes mainly aligned to management sciences discipline.

The presidential Commission on higher education recommended that graduates from Namibia's higher education institutions should be thoughtful, questioning, creative, well-informed, clear-minded, intellectually honest, self-confident, self-critical, and tolerant. Also, the Commission urged that higher education graduates must be well-trained in skills and disciplines which are relevant to Namibia's employment needs (Coombe, 1993).

The trends of the enrolment number of the Higher Education Institutions (HEIs) in Namibia show evidence that there has been a significant growth since their establishment. In 1993, UNAM had an enrolment of 3807 students. The population of students have grown to 21012 in the year 2015. Specifically, the UNAM Faculty of Economic and Management Sciences (FEMS) recorded the largest number of enrolments over the years as compared to other faculties. Particularly, FEMS enrolments increased from 326 in 1993, 1612 in 2005, to 3508 in 2015. Statistics for graduation at UNAM show that during the period 2003 – 2012, as well as 2013 the majority of students have graduated with a Bachelor (Honours) degree in management sciences

discipline (University of Namibia, 2016). Bachelor degree programmes related to management sciences at UNAM are, Bachelor of Economics, Bachelor of Accounting (General), Bachelor of Accounting (Chartered Accounting), Bachelor of Business Administration, and Bachelor of Public Management (University of Namibia, 2016).

Similarly, NUST has grown from a polytechnic of 3181 students in 1996, 3655 in 2002, to a university of 12660 students in 2015. Again, the Faculty of Management Sciences (FMS) has the largest number of enrolments and graduates. Management Sciences degree programmes offered at NUST are: Bachelor of Business Management, Bachelor of Marketing, Bachelor of Accounting (General), Bachelor of Accounting (Chartered Accountancy), Bachelor of Economics, Bachelor of Logistics and Supply Chain, Bachelor of Hospitality Management, Bachelor of Tourism Management, Bachelor of Human Resources, Bachelor of Commerce, and Bachelor of Entrepreneurship. In 2015, the FMS recorded 56% of total NUST enrolments. Additionally, it has produced 61% of total NUST graduates in 2015. These statistics indicate that the FMS is by far larger than any other Faculty at NUST (Namibia University of Science and Technology, 2016; Polytechnic of Namibia, 2015).

In addition to the two public universities, UNAM and NUST, the International University of Management (IUM) a private university offers a number of management sciences programmes at certificate, Diploma, Bachelor degree, and Master degree levels in Strategic Management, Human Resources Management, Business Administration, Finance Management, Tourism and Travel Management. In 2010, 91 students graduated with bachelor degrees in management sciences. IUM's total enrolments for the year

2016 stood at 8000 students (International University of Management, 2016, 2017). In light of the enrolment numbers at the three higher education institutions, it is evident that a large number of graduates of management sciences are expected to enter the labour market.

A report on a graduate tracer study by the National Council for Higher Education (NCHE, 2011), asserts that only about half of graduates from Namibia's higher education institutions get employed, and that only 1% of university graduates are self-employed. Although this figure represents all disciplines offered at these universities, the enrolment and graduation numbers of students in management sciences at HEIs have been dominant. Therefore, it can be concluded that a larger proportion of employed and unemployed graduates in Namibia are management sciences graduates.

Unlike in the past when university education was reserved for the elite and privileged, today more students have access to higher education. Many countries are committed to the fundamental principle of equal access to education for all members of society (UNESCO, 2007). This trend of ever-increasing number of student participating in higher education is referred to as massification of higher education (Kadhila, 2012). Massification in higher education is believed to be a result of a realization that higher education is key to the nation's prosperity in the new knowledge economy, and an essential element in achieving economic competitiveness (Holmes, 2015). Thus, the implication is that society expects HEIs to address the training needs of the knowledge economy.

According to Barrie (2006) and Bridgstock (2009), universities around the world are under pressure to demonstrate that they are effectively and efficiently providing relevant and worthwhile education to produce graduates that are able to function in the knowledge economy and that meet the demands of the 21<sup>st</sup> century labour market. This means that university curricula should be adjusted to meet contemporary and future needs of society. Mason *et al.* (as cited in Quek, 2005) noted that higher education in some countries typically contained curricular materials that were far less attuned to the employment requirements of the labour market and not providing the right skills for prospective employers to solve their employment needs. Universities should therefore be conscious of the ever changing requirements of the labour market in order to meet the current demands. In this way a university serves best the societal demand for university education (Ritzen, 2012). To this end, it is important to note that the immediate recipient of university education is the student, who is expected to apply the knowledge and skills for function in the 21<sup>st</sup> century labour market.

Students choose to participate in higher education for a variety of reasons, but common to all is the expectation that the degree they earn from a higher education institution will enhance their employability in the future (Stewart & Knowles, 2001). In the same vein, it is also considered that students have a vested interest in gaining an insight into the reality of the graduate labour market. Specifically, they are developing an understanding that their degree specific skill is not the sole means of securing employment, but there is a need for them to acquire other attributes to enable them to secure employment (Stewart & Knowles, 2001). This is so because many employers are seeking an employable graduate, who has achieved a reasonable degree and is equipped with, and aware of, the

range of skills and qualities that can be transferred to the workplace. The above observations imply that expectations of labour market towards higher education have changed.

Due to the increasing global economic competitive market, the graduate employment patterns and the recruitment of workers across boundaries, and graduate careers have changed significantly across the world (Rae, 2007; Tran, 2012). These changes in employment patterns may reflect the fact that the world of work is characterized by intense competition and constant change, in which both employers and employees face increasing risk and uncertainty that there is no more a job for life (Reich, 2001). The changes in the labour market are noticeable to an extent that some authors have used phrases like world of complexity, risk society, and age of contingency to describe the workforce scenario of the 21<sup>st</sup> Century (Andrews & Higson, 2008; Tran, 2012). Therefore, in order to retain markets and continue to recruit graduates, producers have to be more responsive to consumer demand through constant innovation and attractive prices. This implies that the old way of doing things may be effective but not efficient (Mitchell, Skinner, & White, 2010). When industry is changing the way of doing things, such change is also expected from the producers of the knowledge and skills.

Many companies around the world are moving towards customer-oriented service which means that work has to be organized in a way that would allow greater spontaneity and flexibility in addressing customer needs (Arthur, Brennan, & Weert de as cited in Pukelis and Pileicikiene, 2012). As a result of these changes, permanence is no longer a significant feature in graduate jobs. When traditional jobs could not absorb the growing

number of graduates, new opportunities open for them in smaller businesses, especially in the growing number of Small and Medium Enterprises (SMEs) (The Association of Graduate Recruiters, as cited in Tran, 2014).

In light of the above, graduates need to be ready to join a new world of adding value, lifelong learning, portfolio careers, self-development and an overwhelming need to stay employable (Tran, 2014). In other words, graduates need to be equipped with skills and abilities to fit in the ever-changing graduate labour market. Higher education has the responsibility to ensure that graduates have requisite skills and qualities to meet the employment needs of the industry. More especially that employment patterns are shifting from traditional employment in large organizations to less traditional graduate vacancies in small businesses (Stewart & Knowles, 2001).

Given the scenario of changing graduate employment patterns and globalized economies, there is a general consensus amongst employers, professional bodies and other stakeholders in higher education that having a university degree is simply not sufficient for a graduate to succeed in today's competitive knowledge-based economy (Andrews & Higson, 2008). Nowadays's graduates require other attributes in addition to subject-specific knowledge to enhance competitive advantage in the contemporary workforce (Weligamage, 2009). Harvey (2000) stated that there is a large number of graduates looking for jobs and employers no longer recruit simply on the basis of degree status. A degree might be necessary or desirable, but employers are looking for a range of other attributes when employing and retaining graduates.

The notion that organizations are recruiting graduates on the basis of attributes that facilitate faster integration into industry and ensure that they can adapt in times of change has become increasingly important (Corominas, Saurina, & Villar, 2010). This is augmented by Yorke (2006), stressing that employers tend to value graduate attributes in addition to disciplinary-based understanding and skills. As a result, McWilliam (as cited in Thompson, (2008) allege that the nature and purpose of teaching in higher education has shifted from content delivery to capacity building, whereby assessment practices are directed towards evaluating the development of a much broader range of competencies more than disciplinary knowledge acquisition. Given the agreement on the importance of graduate attributes, it is pertinent to delineate the meaning of such attributes.

Graduate qualities and skills are described differently in different universities and higher education systems. The commonly used terminologies are transferrable skills, key skills, soft skills, generic attributes, employability skills, and key competencies, core skills, underpinning skills, and the like. In most cases, these terms have been used interchangeably to refer to graduate employability attributes (Curtis & McKenzie, 2001; Tempone et al., 2012a). According to Thompson (2008), graduate employability attributes are the skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study. Different universities have identified graduate attributes that they deem important for their graduates to possess in order to function in the evolving world of work. They suggest that graduates should possess skills such as team-working, networking, problem solving, leadership skills, innovative skills, research skills, interpersonal skills, critical thinking, skills to manage processes rather than functional skills, and other qualities in order for graduates to be

employable (Harvey, Moon, and Geall, as cited in Donleavy, (2012); (Quek, 2005; Tran, 2014).

In addition to the conceptualization above, a study involving academics from different disciplines and higher education institutions provided four levels of graduate attributes conceptualization, as presented by (Barrie, 2006). Firstly, is the Precursory Concept, which are basic precursory abilities that students bring to university and which provide a minimum base which can be added the disciplinary knowledge of university education. Any consideration of such skills at university would be remedial. These are the three R's – reading, writing and arithmetic and some basic technology and library skills.

Secondly, the Complement Concept of attributes that encompasses additional general functional abilities and personal skills that can usefully complement or round out the discipline specific learning outcome of the university education. They are acquired as a result of university education and understood to be outcomes that are part of the university subject content outline but are separate and secondary to the learning of disciplinary knowledge. They are distinct from other university learning outcomes. The personal skills and functional abilities are essentially the same in all disciplines.

Thirdly, is the Translation Concept which represents attributes that are more than useful additional general skills, and are specialized variants of such general skills that are essential in the application of discipline knowledge and the translation of university learning to unfamiliar settings thus usefully transforming the products of university learning. They are learning outcomes which graduates possess in addition to discipline

knowledge. They are closely connected with discipline learning outcomes. In the foreground is the cluster of linked personal attributes, cognitive abilities and skills of application. These clustered abilities are particularly relevant to discipline knowledge and are essential in allowing translation and application of discipline knowledge in the real world. Without these attributes, abstract or context specific discipline knowledge cannot be effectively utilized. Barrie gave an example that “If a student can’t exercise abilities like ethical judgment and creativity, and balance these against scientific method in their research, then they aren’t professional scientists” (Barrie, 2006:17)

Finally, the Enabling Concept which is an understanding of graduate attributes as enabling abilities and aptitudes that lie at the heart of scholarly learning and knowledge, with the potential to transform the knowledge they are part of and to support the creation of new knowledge and transform the individual. They are the abilities that infuse and enable university learning and knowledge. These abilities are seen as integral to disciplinary knowledge rather than being learning outcomes that sit alongside. The embedded attributes provide the building blocks for discipline knowledge and are more important than the discipline knowledge they support. Once developed, graduate attributes are perceived to provide a reusable framework that enables students/graduates to acquire and shape new knowledge as required – even in the context of other disciplines as they provide a holistic world-view and aptitude for learning.

These levels of conceptualization present a divided understanding of graduate attributes as it appear to mean different things to different people. However, this study has conceptualized graduate attributes in the context of employability. That is, graduates

possessing abilities and skills to enable them to get and keep a job, and perform competitively in the ever-changing and competitive graduate labour market (Yorke, 2006). Therefore, Barrie's entire levels of graduate attributes conception falls within the conceptualization of graduate employability attributes of this study. In providing an understanding of the concept of graduate employability, it is important to locate the theoretical context of the relationship between higher education and the labour market.

For example, there has been an ongoing debate about the purpose of higher education. On one hand, there is a dependency model that assumes a correspondence between educational profiles of graduates and the jobs they fill – matching and responding to the demands of the workplace (Corominas et al., 2010). On the other hand, there is a position that advocates for the university's autonomy and academic freedom that universities should not accommodate opportunist employer-driven agendas but offer education based on research and enduring academic values (Kettis et al., 2013). Hildreth (2011) affirm that narrow training for a specific job is a cramped view of education, that it is unfavourable for growth. However, Barrie (2006) and Tran (2016) observe that due to the increasing neoliberal pressure in the labour market, universities are now placed under pressure to produce graduates that meet the demands of the 21st century labour market.

In spite of the difference in opinion on the purpose of higher education, there seems to be consensus among scholars that higher education curricula should take into consideration employers' perspectives on student preparation (Vivas & Hevia, 2009). This is supported by Romenti, Invernizzi, and Biraghi (2012) as they emphasize that

curricula must prepare students for successful transition into the workforce, including teaching them soft skills. In addition, Romenti et al. (2012), notes that the engagement of professionals and employers in the process of standard definition allows universities to refine their ability to deliver value to their stakeholders more effectively. Therefore, universities should offer graduates the attributes required by the labour market (Guilbert, Bernaud, Gouvernet, & Rossier, 2016). To find balance to the differing opinions, students should be prepared for their future working lives in ways that are both vital for students' scholarly growth and also conducive to the growth of the industry.

Although graduate employability attributes have been identified in the literature as key to succeed in today's world of work, there are often claims by industry that graduates do not fully possess the types and range of employability attributes necessary for success in the workplace (De la Harpe, Radloff & Wyber, as cited in Hill, Walkington, & France, 2017). These claims of graduates' lack of graduate employability attributes are a cause for concern in the higher education sector. Part of the problem why the notion of graduate employability attributes are a concern, is because employers often have differing views on what should constitute such attributes. Employers frequently express contradictory demands of graduate employability attributes, often times, inflating their expectation while placing undue hardships on Higher Education Institutions (HEIs) to ensure that graduates are fully equipped with the necessary attributes for workplace (Kwok, 2003). However, employers continue to express considerable dissatisfaction with the general level of preparedness of graduates and of entry-level employees (Mason, Williams, & Cranmer, 2009). Therefore, there is a need to determine what should constitute graduate preparedness for the labour market.

The National Human Resource Plan document, in reference to higher education, established that critical challenges facing human resources development in Namibia include the inadequate attention to graduate employability attributes development, which negatively impacts the preparedness of university graduates for the high-skilled job (National Planning Commission, 2010).

Despite the implementation of the National Policy for Higher Education in Namibia that has clearly articulated 'relevance' and 'quality' as major goals for higher education, the industry claims remains prevalent. The demand for relevance of higher education to the country's human resource needs has been emphasized by the Education and Training Sector Improvement Programme (ETSIP) 2007, a programme established by government as a driving force behind the realization of Vision 2030 (Marope, 2006). ETSIP confirms that Tertiary Education and Training Sector is essential to achieving the goals of national development as it produces high level personnel required for economic growth and competitiveness in the 21st century. In conclusion, these policy documents affirms that higher education institutions should meet the criteria of relevance if they are to effectively address national human resources needs, and to propel Namibia into a knowledge-based economy. Part of addressing human resources needs is to ensure that graduates from HEIs are well prepared for the 21st century workplace, through enhancing graduate employability attributes.

In dealing with the discourse of graduate employability, it is important to make a distinction between employment and employability. While employment is referred to as obtaining any job, employability refers to the capacity of a graduate to function

successfully in required roles in a job (Yorke, 2006). This implies that graduates should have acquired a set of desirable skills, attributes and attitude in order to be competitive and enterprising in employment, or start their own businesses and become employers. Yaqoob (2016) writes that being employable reduces the risk of unemployment and increases competitiveness of an individual and organisations.

## **1.2 Statement of the problem**

In Namibia, like elsewhere, the employers' concerns about graduate employability have become more pronounced (Links, 2010; National Council for Higher Education, 2011; Schade & Amunkete, 2011). There are claims that graduates from HEIs in Namibia do not fully possess the types of graduate employability attributes necessary for employment. Marope (2006) allege a general impression that diverse employers are dissatisfied with the quality of higher education output. This observation is echoed by the National Council for Higher Education (2011) by expressing that graduates are not adequately prepared for work, and the training is not relevant to the demands of the work place, and that more than 60% of graduates received on-the-job training to become employable. Furthermore, although it was a general study on all graduates irrespective of the level of qualification, or programme of study, Kanyenze and Lapeyre (2012) in an International Labour Organization report based on the survey commissioned by Namibia Employers Federation established that Namibian employers indicated that there is a mismatch between skills demanded by employers and those that are supplied by graduates from HEIs. Employers have further bemoaned a lack of synergies between

HEIs and the industry. However, the study did not specify the skills employers expect and those that HEIs are producing.

In view of the above, the discourse of enhancing graduate employability attributes has been widely researched in other countries such as the United Kingdom (Saunders & Zuzel, 2010); Malaysia (Omar, Manaf, Mohd, Kassim, & Aziz, 2012); Australia (Nagarajan & Edwards, 2014a); however, there is lack of empirical studies to address this issue in the Namibian context. Specifically, no study has been undertaken to investigate specific graduate employability attributes that are expected from bachelor degree graduates and how these can be integrated into the curriculum to enhance graduate employability and thereby addressing the needs of employers in Namibia. Subsequently, there is no framework developed to guide HEIs in integrating employability attributes in the curricula.

This study was therefore conducted to investigate if and how graduate employability attributes are integrated in the curricula of management sciences in two public HEIs in Namibia. Based on the findings, the study has developed a framework for the integration of graduate employability attributes in the management sciences curricula.

### **1.3 Research questions**

The aim of the study was to develop a framework for integrating graduate employability attributes curricula in Namibia HEIs. Three research questions were generated to that effect. Firstly, there was a need to know the views of university lecturers, employers in

the industry and recent graduates, regarding graduate attributes they consider important for job performance, those that are emphasized in curricula, and those in which graduates are lacking competence. Therefore, the first research question was:

1. What are the lecturers, graduates and employers' perceptions on the integration of graduate employability attributes in management sciences curricula?

Secondly, considering that curriculum is the vehicle through which knowledge and skills are imparted to students, it was deemed important to study current curricula of management sciences of HEIs in Namibia to find out ways in which graduate employability attributes are currently enhanced through curricula. Thus, the research question:

2. How are the graduate employability attributes integrated in the curricula of management sciences at HEIs in Namibia?

Finally, through the review of literature on graduate employability, and in anticipation of the findings of the preceding research questions, it was hoped that a graduate attributes framework would be suggested to address the need of HEIs to produce graduates that are adequately prepared for the world of work. Thus, the third question of the study was:

3. What framework can be developed in order to guide the integration of graduate employability attributes in Namibia's management sciences curricula?

#### **1.4 Significance of the study**

The findings of this study strengthened the need to establish synergy between higher education and the labour market to produce human capital capable of performing in the competitive global economy. Graduate employability attributes are key in producing graduates that can function productively, whether employed or establishing own enterprises.

The study contributes to the body of knowledge about the integration of graduate employability attributes in the curricula of management sciences. In addition, the study highlighted the types of graduate employability attributes necessary for the labour market in this field. Also the findings led to recommendations aimed at developing a graduate employability attributes framework for management sciences in HEIs in Namibia. Furthermore, the study suggested best practices for the integration of graduate employability attributes for other higher education academic programmes. Finally, the research methodology used in this study is novel, and can be replicated elsewhere.

#### **1.5 Delimitations of the study**

Given the fact that the management sciences undergraduate degree programmes are offered by the two public HEIs in Namibia, that is, the University of Namibia (UNAM) and the Namibia University for Science and Technology (NUST), the study focused on management sciences departments in these two HEIs. The rationale for choosing the management sciences is that, it has the largest number of enrollments and graduation relative to other fields in both UNAM and NUST. In addition, this field is offered in

both public HEIs in Namibia. Within those HEIs only bachelor degrees management sciences graduates, lecturers, and curricula documents formed part of the study as well as the employers of graduates. The geographical focus of the study was the main campuses of the two HEIs in the capital city, Windhoek. These were the most suitable campuses where target programmes are offered, the work station for targeted lecturers and also the appropriate location of most employers' head offices.

### **1.6 Limitations of the study**

Generalizations of the findings are limited to the management sciences discipline, but a constructive replication of this study can be done for other disciplines. In effort to mitigate the limitations, varied industries were selected to participate in the survey, and questionnaires were presented mostly to human resources practitioners in these companies since they possess general human resources needs of employees. Additionally, survey responses from the three target groups were regarded as general to the management sciences discipline, as opposed to specific programmes, employer industry, or graduates specialization within management sciences. Similarly, lecturers were selected to represent varied management sciences programmes. Consequently, qualitative content analysis was done specifically on management sciences programmes.

### **1.7 Definition of terms**

This section aims to provide meaning of key terms as operationalized in the study. The following are key terms and their definitions in the context of this study.

**1.7.1 Employability:** The term employability is used to mean a set of achievements that comprise skills, understanding and personal attributes that make an individual more likely to secure and be successful in his/her chosen occupation to the benefit of him/herself, the workforce, the community and the economy (Yorke & Knight, 2006). Subject skills and transferrable skills are the two aspects of employability. Transferable skills refer to certain personal abilities of an individual, which can be taken from one job role to another, used within any profession and at any stage of his/her career. Subject skills are more relevant to one's career as they are discipline specific knowledge and skills (Wickramasinghe & Perera, 2010).

A more generally accepted definition of employability is – the qualities, skills and understanding a university community agrees its students should develop during their time with the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has traditionally formed the core of most university courses. These are qualities that also prepare graduates as agents of social good in an unknown future (Barrie, 2006). The understanding of employability in this study is similar to the definition offered by Barrie.

**1.7.2 Graduate Employability Attributes:** The skills, knowledge and abilities of university graduates, beyond disciplinary content knowledge, which are applicable to a range of contexts (Barrie, 2006). Bowden *et al.*, (as cited in Herok, Chuck, & Millar, 2013) defines graduate attributes as the qualities, skills and understanding a university community agrees its students would desirably develop during their time at the institution and consequently, shape the contribution they are able to make to their

profession and as citizens. The Higher Education Council of Australia (as cited in Thompson, 2008) defined graduate employability attributes as the skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study.

In Australia, graduate employability attributes have come to be accepted as being the qualities, skills, knowledge and abilities of university graduates, beyond disciplinary content knowledge, which are applicable to a range of contexts and are acquired as a result of completing any undergraduate degree, and they should represent the core achievements of a university education (Barrie, 2006; Yorke & Knight, 2006). The definitions provided above are similar in substance and graduate employability attributes in this study is understood from these definitions.

**1.7.3 Higher education:** According to the Higher Education Act, 2003 (Act No.26 of 2003), higher education in Namibia is defined as all learning programmes leading to qualifications higher than grade 12 or its equivalent, but does not include vocational training provided by vocational training centres or open learning provided by the Namibia College of Open Learning (NAMCOL) (Republic of Namibia, 2003). In this context, the targeted institutions are regarded as HEIs.

**1.7.4 Management sciences:** A discipline that enables students to develop advanced knowledge and skills in a range of business functions while setting them within the wider context of current business practice. Management sciences programmes provide students with a solid foundation in accounting, information management, finance, marketing, organizational behavior, human resource management, and economics

(Business Dictionary, 2016). Therefore, programmes targeted by this study are considered as management sciences programmes.

**1.7.5 Curriculum:** All the learning which is planned and guided by the university, whether it is carried on in groups or individually, inside or outside of school. It contains subjects that will be taught and the knowledge and skills that the university expects successful students to acquire (UNESCO, 1998). In this context, curriculum will include all documents that articulate the content, learning outcomes, strategies for teaching and learning and assessment criteria.

**1.7.6 Graduate:** A person who has successfully completed a course of study and has been awarded an undergraduate or first academic degree. In the context of this study, a graduate is the person who has been awarded a bachelor degree through a recognized higher education institution, public or private. It also includes those graduates who are currently enrolled in higher education courses, including studying towards a Master's degree.

**1.7.7 Framework:** A set of ideas or facts that provides support for something. It is a broad overview or outline of interlinked items which supports a particular approach to a specific objective, and serves as a guide that can be modified as required by adding or deleting items (Business Dictionary, 2016). For this study, a framework provides guidelines or outlines the process of integrating graduate employability attributes in curricula.

**1.7.8 Graduate labour market:** The nominal market in which graduates find paying work, employers find willing workers, and wage rates are determined. Labour markets

may be local or international in their scope and are made up of smaller, interacting labour markets for different academic qualifications, skills, and geographical locations. They depend on exchange of information between employers and job seekers with at least an undergraduate degree about wage rates, conditions of employment, level of competition, and job location (Business Dictionary, 2016). The aforementioned meaning of graduate labour market has been adopted for this study.

### **1.8 Overall methodology of the study**

This study presents independent chapters representing research papers that have been submitted for publication as journal articles. Each chapter has provided a separate methodology for that specific paper. However, there is an overall methodology covering all independent chapters. Therefore, this section provides a detailed explanation of the research methodology for the entire study. Although the independent chapters of the study provide isolated research methods based on the research question, it is important that a delineation of the overall research methodology is provided. The explanation focuses on mixed methods research design particularly on sequential explanatory design and details of the quantitative and qualitative phases of the design. It includes the meaning of mixed-methods research, the historical and philosophical foundations of mixed methods research, the approaches of mixed methods research, and the rationale of using mixed methods research in this study of the development of a framework for the integration of graduate employability attributes in the curricula of management sciences. Furthermore, the explanation on methodology provides detailed procedures on

quantitative data collection and analysis, qualitative data collection and analysis, and the interpretation of both phases.

### **1.8.1 Research design**

The design of this study was an explanatory sequential mixed methods design. This design is a procedure for collecting, analyzing and mixing or integrating both quantitative and qualitative data at some stage in a single study (Creswell, 2014). Johnson, Onwuegbuzie, and Turner (2007) states that the term is used to describe the class of research where the researcher mixes or combines qualitative and quantitative research techniques, methods, approaches, concepts or language into a single study. It is considered that mixed methods is evolving into a dominant design structure for educational research. Mixed methods design offers a practical and outcome-oriented method of inquiry that is based on action and leads to further action and the elimination of doubt; and it offers a method for selecting methodological mixes that can help researchers better answer many of their research questions (Jonson & Onwuegbuzie, as cited in Cameron, 2009). In addition, the rationale for mixing both types of data is that neither quantitative nor qualitative methods are sufficient by themselves to capture details of situations, such as the issue of integrating graduate employability attributes into curricula. A mixture of methods complements each other to provide a more complete picture of the research problem (Ivankova & Stick, 2007). In this study the mixed methods design is used to answer several research questions in a single study. These methods are complementary and inform several of the research questions. In

addition, the form of data collection in this study is sequential which means that one type of data provides a basis for collection of another type of data (Cameron, 2009).

### **1.8.2 Historical and philosophical foundation of mixed methods design**

According to Creswell (as cited in Cameron, 2011) the schools of thought in the research paradigm debate are the Purists, Situationists, and Pragmatists. The purists are absolutely against a combination of research methods in a single study. From 1860 - 1930 the argument was that there are epistemological differences between the qualitative and quantitative paradigms. Symonds and Gorard (2010) referred to this argument for incompatibility of paradigms as 'incommensurability thesis.' The Situationists emphasize that certain methods should only be used in specific situations. The pragmatists' position from 1960s to present is that both qualitative and quantitative research paradigms can be combined efficiently in a single study. Whereas some researchers argue that quantitative (positivist) measurements enable researchers to transcend subjectivity in a way that open-ended data and analyses do not, others state that qualitative (postpositivist) methods are more faithful to the social world than quantitative ones as they allow for data to emerge more freely from context (Cameron, 2009; Symonds & Gorard, 2010)

Another perspective on the philosophical foundation on mixed methods research is Positivism vs. interpretivism. According to West (2011) positivism dominated scientific philosophy in the nineteenth century and believed that the observer was independent of the observable reality and could objectively separate himself/herself from the observed.

He further argued that social phenomena existed independent of the observer's values, and thus generalizations could be made regardless of time and context. West further noted that in the twentieth century, social scientists began to question the exclusive use of scientific method in understanding social issues. Therefore, they advocated for interpretivism in the study of social phenomena whereby research focuses on the process and product of the human mind (West, 2011). Using the above philosophical understanding, the use of both quantitative and qualitative approaches was considered to provide a better understanding of research problems than either approach alone because each has unique strengths and limitations (Creswell, 2007).

Johnson and Onwuegbuzie (as cited in Cameron, 2009:141) provided a summary of the philosophical position of mixed method researchers by writing that:

We agree with others in the mixed methods research movement that consideration and discussion of pragmatism by research methodologists and empirical researchers will be productive because it offers an immediate and useful middle position philosophically and methodologically; it offers a practical and outcome- orientated method of inquiry that is based on action and leads, iteratively, to further action and the elimination of doubt; and it offers a method for selecting methodological mixes that can help researchers better answer many of their research questions.

Pragmatism has been considered to have a strong philosophical foothold in the mixed methods research or methodological pluralism camps (Cameron, 2009). Therefore, the pragmatic paradigm underlies the mixed methods explanatory sequential research design employed in this study.

The current definition of mixed methods is provided by Johnson et al. (2007:118) when they synthesised perspectives from 31 ‘leaders’ in the field. They defined mixed methods research as:

“the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purpose of breadth and depth of understanding and corroboration.”

This synthesis provides a coherent definition of mixed methods research. It is the understanding adopted by this study.

### **1.8.3 Five Ps of mixed methods research (MMR) framework**

The five Ps (paradigms, pragmatism, praxis, proficiency, publishing) framework provides the mixed methods researcher with the essential components of a mixed methods starter kit, inclusive of a contemporary checklist of contentious issues, risks and traps that require consideration (Cameron, 2011).

**Table 1. 1: Five Ps of mixed methods research (MMR) framework**

<b>Five Ps</b>	<b>Issues and Challenges</b>	<b>Bazeley's (2003) Learning Objectives of teaching mixed methods</b>
<b>Paradigms P1</b>	<i>Criticism</i> : From paradigmatic purists and claims of eclecticism <i>Challenge</i> : Need to document and argue paradigmatic and stance in MMR	Have sufficient understanding of the philosophical bases of research to determine if and how apparent paradigmatic differences in approach might influence their work and be solved
<b>Pragmatism P2</b>	<i>Criticism</i> : Epistemological relativism and short-sighted practicalism. <i>Challenge</i> : Become informed about the key debates and source MMR literature in the chosen field. Rigorously defend the stance and choices made at the interface between philosophy and methods.	Be familiar with the key literature and debates in mixed methods, and with exemplars of a variety of mixed methods approaches to research;  Learn to take risks, but also to justify choices made.
<b>Praxis P3</b>	<i>Criticism</i> : Problems related to methodological and data integration. <i>Challenge</i> : Informed choices, utilization and application of MMR designs, methods and data analysis.	Be able to determine the appropriateness of a selected method or methods, based on the question(s) being asked, and be able to determine whether mixed methods provides a cost-effective advantage over use of a single method; Have knowledge of the variety, rules and implications of different sampling methods, and of alternative approaches to dealing with 'error' or deviance from the norm; Be prepared to recognise and admit what is not known, and seek advice; Develop skills in working collaboratively with researchers with using different approaches or methods.
<b>Proficiency P4</b>	<i>Criticism</i> : Superficial claims of utilizing MM and the need to be proficient in both QUAL and QUANT methods. <i>Challenge</i> : Become skilled and competent in both chosen QUAL and QUANT methods and data analysis, as well as skilled and competent in mixing methods and integrated data analysis.	Have well developed skills in carrying out research using at least one major methodological approach, but also comprehensive understanding of a range of approaches and methods, particularly to understand the principles underlying these methods; Have an ability to interpret data meaningfully, and ask questions of the data, rather than to simply follow a formula; Know and understand how software can be used to assist analysis tasks.
<b>Publishing P5</b>	<i>Issues and challenges</i> : Political nature of reporting and publishing MMR in academic and discipline based literature such as: disciplinary traditions; levels of acceptance of MMR in its entirety given word length limitations.	Develop new ways of thinking about the presentation of research results, especially where the methods used and information gained does not neatly fit a conventional format.

(Adopted from Cameron, 2011: 97)

The above overview is significant in the understanding and conducting a mixed methods research. The research has aligned the study to this framework.

### 1.8.4 Designs of mixed methods research

Creswell & Plano Clark, (2007) present a typology of four major mixed methods research design. The design types are categorised by timing, weighting, mix and Notation. The four designs are: triangulation; embedded; explanatory; and exploratory. The table below presents a summary of the four designs.

**Table 1. 2: Designs for mixed methods research**

<b>Design Type</b>	<b>Timing</b>	<b>Weighting</b>	<b>Mix</b>	<b>Notation</b>
<b>Triangulation</b>	Concurrent: quantitative and qualitative at the same time	Usually equal	Merge the data during interpretation or analysis	QUAN + QUAL
<b>Embedded</b>	Concurrent and sequential	Unequal	Embed one type of data within a larger design using the other type of data	QUAN(qual) or QUAL(quan)
<b>Explanatory</b>	Sequential: quantitative followed by qualitative	Usually quantitative	Connect the data between the two phases	QUAN → qual
<b>Exploratory</b>	Sequential: qualitative followed by quantitative	Usually qualitative	Connect the data between the two phases	QUAL → quan

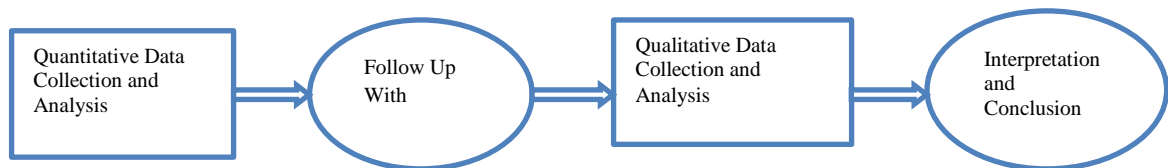
(Adapted from Creswell and Plano Clark, 2007: 85)

### 1.8.5 Sequential explanatory mixed methods design

The sequential explanatory design has two phases. The purpose is that qualitative data helps or builds upon initial quantitative results (Creswell & Plano Clark, 2007). This study used a sequential explanatory mixed methods design. This design has two distinct

phases (Wachira, 2015). In this design, the quantitative, numeric, data is collected and analyzed first, followed by the collection and analysis of qualitative data. The second phase is designed so that it follows from the results of the first phase. The two phases' data are integrated during interpretation. The primary focus is to explain quantitative results by exploring certain results in more detail or helping explain unexpected results. This study is considered to be very straight forward due to clear, distinct stages and easier to describe than concurrent strategies. However, it is time consuming especially when both phases are given equal consideration and priority (Terrell, 2012).

With specific reference to this study, in the first phase, surveys were conducted to obtain quantitative data of graduate employability attributes as perceived by employers, graduates, and lecturers in Namibia; then quantitative data analysed after collection. In the second phase, findings generated from the quantitative study informed the development of document analysis that was used to collect qualitative data from curricula documents of management sciences programmes at HEIs in Namibia. The two phases' data was combined in the interpretation and conclusion stage of the study. Below is a summary of the sequential explanatory design used in this study.



**Figure 1: Sequential explanatory design**

The rationale for this approach is that the quantitative data and the analysis provided a deep understanding of the graduate employability attributes as viewed and prioritized by employers, graduates, and lecturers. In addition, the findings from the quantitative data

allowed the researcher to identify and purposefully select graduate employability attributes to be explored further in curriculum documents.

The qualitative data allowed the researcher to find out how the selected graduate employability attributes are integrated in curricula documents. One of the advantages of this design is that its two-phase structure makes it straightforward to implement, because the researcher conduct the two methods in separate phases and collects only one type of data at a time (Wachira, 2015).

**Research question No. 1:** What are the lecturers, graduates and employers' perceptions on the integration of graduate employability attributes in management sciences curricula?

This research question represented the quantitative phase of the study.

In an attempt to answer the research question, a survey was used to collect quantitative data. A survey is a specific type of field study that involves the collection of data from a sample of elements drawn from a well-defined population through the use of a questionnaire (Visser, Krosnick, & Lavravs, 1998). Specifically, a cross-sectional survey was used. It involved the collection of data at a single point in time from a sample drawn from a specified population. "This design is most often used to document the frequency of particular characteristics in a population." (Visser et al., 1998, p. 225). In addition, Cross-sectional surveys offer an opportunity to assess relations between variables and differences between subgroups in a population."

During the quantitative phase, three questionnaires with structured questions for lecturers, graduates, and employers were used to collect data. It is considered that questionnaires are a cost-effective, simple and quick way to gather employability data

that will come straight from lecturers, employers, and graduates (Phellas, Bloch, & Seale, 2011). The questionnaires for each group contained 51 items categorized into 8 graduate employability attributes, and using a five point Likert Scale (Strongly agree, agree, neutral, disagree, strongly disagree). The employability attributes contained in the questionnaires were: Basic literacy and numeracy, critical thinking, leadership skills, management skills, interpersonal skills, information technology skills, systems thinking, and work ethics.

Through the questionnaires, lecturers, employers, and graduates were requested to assess the integration of the graduate employability attributes in management sciences curricula, and prioritize the attributes in order of importance. Lecturers and employers were further requested to assess graduates' proficiency at these employability attributes. Similarly, graduates were requested to assess their own proficiency of these attributes. For each graduate employability attribute, lectures were asked to indicate how important it is for graduates to possess such an attribute for job performance, the extent to which curricula emphasize the attribute, and the extent to which graduates would require additional training after graduation. Employers were asked to indicate how important it is for recent graduates to possess a specific employability attribute, and if the employer had to provide remedial training to graduates. Graduates were asked to indicate the importance of a specific attribute in their job, and the extent to which they have acquired such attribute in university, and whether they required additional training after graduation. Moreover, the instrument contained an open-ended question aimed at generating additional attributes that respondents perceive to be important but have not been listed in the closed-ended questions.

### **1.8.6 Quantitative population**

The quantitative phase of the study included all management sciences Bachelor degree graduates from UNAM, and NUST, who were not more than a year in employment and that graduated not more than two years from HEIs at the time of data collection. These graduates have completed degree in programmes such as economics, human resources management, accounting, business management and administration, and marketing. Based on graduation statistics from HEIs, the population was estimated at about 180 graduates. The rationale for selecting graduates who are less than a year in employment was to ensure that any graduate employability attributes that these participants may possess could be as a result of their university experience but may not have been gained through experience on the job. This implies that graduates are able to easily relate what they have learned in university to their experiences in the labour market.

The study also included all lecturers who teach management sciences subjects at HEIs in Namibia. According to information obtained from HEIs, the population of lecturers was estimated to be about 40. The rationale for including management sciences lecturers in the study is because they are responsible for delivering knowledge and skills and guiding students during the student's time at university.

Employers of graduates also formed part of the study. Initially the researcher compiled a list of 50 companies from a Trade Directory of enterprises that are operating in Windhoek. However, due to snowball sampling, the researcher discovered other companies that have recruited graduates, but were not part of the list. The companies that were targeted by the study include the banking sector, financial services and

insurance companies, tourism, manufacturing, advertising and media, mining and energy, Information communication technology, telecommunications, business consultants, property development, transport and logistics, water utilities, retailers, stock exchange, and accounting and auditing firms.

The reason for targeting human resources managers and work supervisors of the recent graduates is that they are knowledgeable about the type of graduate employability attributes that these graduates possessed or lacking at entry level of employment.

#### **1.8.7 Sample and sampling procedures**

The quantitative phase employed four sampling techniques, namely, stratified sampling, random sampling, purposeful sampling and snowball sampling. In stratified sampling, the researcher divides the sample into strata or categories and distributes a target number of participants to each stratum (Robinson, 2014).

The stratified sampling technique was used to select lecturers that teach the final year subjects of the selected academic programmes at the two HEIs. Random sampling and snowball sampling were used to select similar management sciences graduates and lecturers. Stratified sampling was appropriate to group participants into two strata, namely UNAM and NUST management sciences graduates. The sample size of the employers was determined by the number of graduates who participated in the study as the researcher requested graduates to share the company in which they are working, or because most questionnaires were delivered at graduate's work places, which made it convenient for the researcher to reach out to Human Resources Departments of

employers. Employers were thus sampled using a snow ball purposeful sampling technique. The initial inventory list done by the researcher in the targeted HEIs indicated that there is a population totaling about 40 lecturers and about 180 bachelor degree in management sciences graduates per annum in the targeted HEIs. Therefore, the sample size for each strata was determined using a sampling table calculated with the Krejcie and Morgan formula  $s = \frac{X^2 NP(1-P)}{d^2 (N-1) + X^2 P(1-P)}$ , where

s = required sample size;

$X^2$  = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841);

N = the population size;

P = the population proportion (assumed to be .50 since this would provide the maximum sample size); and

d = the degree of accuracy expressed as a proportion (.05).

The formula was found to be the most appropriate as it has 95% confidence level, and 5% margin of error (Krejcie & Morgan, 1970b). Using the formula, the researcher distributed survey questionnaires to 135 graduates, and 35 lecturers, and 50 employers. Out of these, 80 completed questionnaires were received from graduates, 23 from lecturers, and 39 from employers.

### **1.8.8 Quantitative data collection**

The researcher employed two postgraduate students to assist with data collection. The students shared the responsibility of administering questionnaires to graduates and

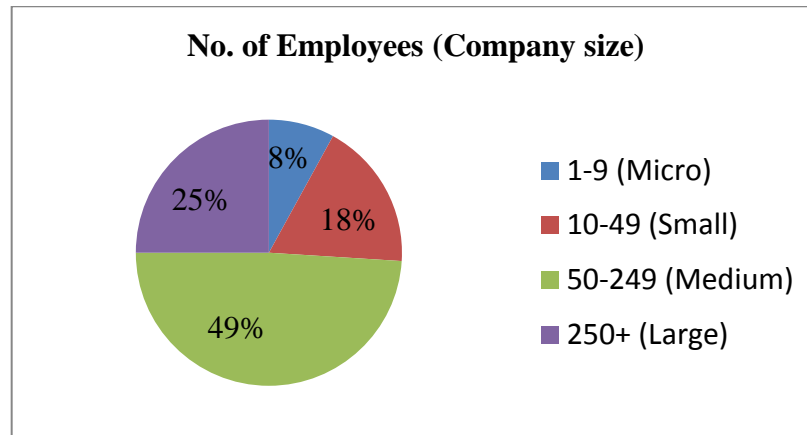
employers, with the researcher. Questionnaires for lecturers were administered solely by the researcher by making appointments with academic staff taking into consideration of timetables. Monetary reward was given to students as a form of motivation to carry out their duties. The purpose of the incentive was to motivate them. The data collection experience was also beneficial to the students as they gained exposure and experience of conducting a survey. Before data collection, the students were coached on procedures and manner in which they will approach respondents. All questionnaires were submitted as hard copies. Sometimes questionnaires were completed while the researchers wait, some collected at an agreed time and date.

### **1.8.9 Quantitative data analysis**

Collected data were processed by means of quantitative research methods. Prior to data analysis, pre-analysis data screening was performed to ensure the accuracy of the data and to deal with missing and incomplete data. Data were analyzed using Statistical Package for Social Sciences (SPSS) version 14.0 for Windows, a product of SPSS, Inc. The analysis was done in the form of descriptive statistics to summarize and describe data in the form of frequency distribution tables. Categorical variables were also generated to find out the difference in responses from one group of participants to another, that is, lecturers, graduates and employers. In all groups of respondents, demographic data was analysed followed by the eight dimensions of graduate employability attributes, and data from the open ended question, generated attributes that have not been listed in the questionnaire.

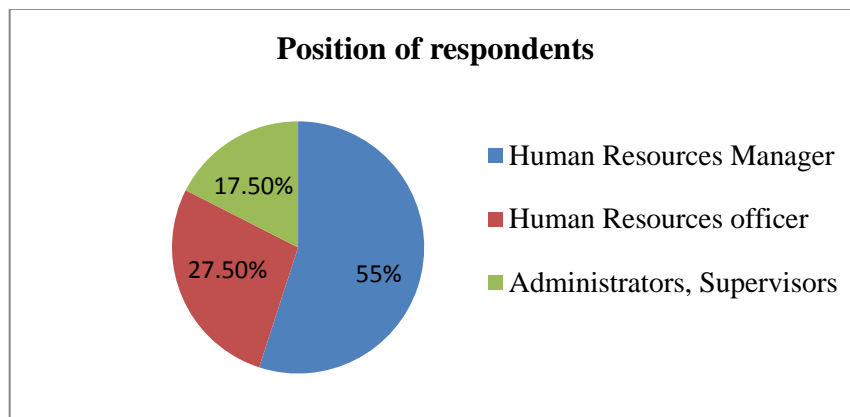
### 1.8.9.1 Demographic information

#### A. Employers of management sciences graduates



**Figure 2: Company size**

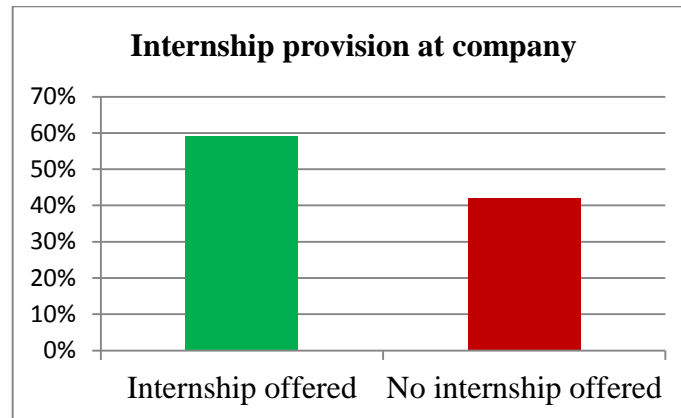
Figure 2 above shows companies that participated in the survey, 75% are medium to large companies, about 25% are micro and small companies. This indicates that more university graduates are employed by big companies instead of micro and small.



**Figure 3: Distribution of respondents by position in company**

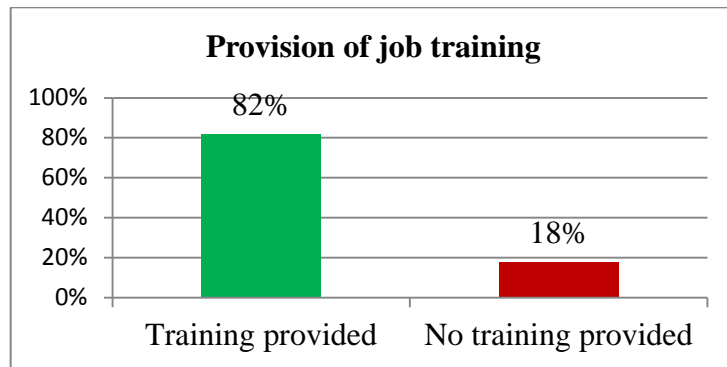
Figure 3 presents the percentage of respondents who completed the questionnaires. More than half of the respondents were HR managers, about 28% were human resources

practitioners or officer, and others such as, supervisors of graduates, and administrators formed about 18% of respondents.



**Figure 4: Internship provision**

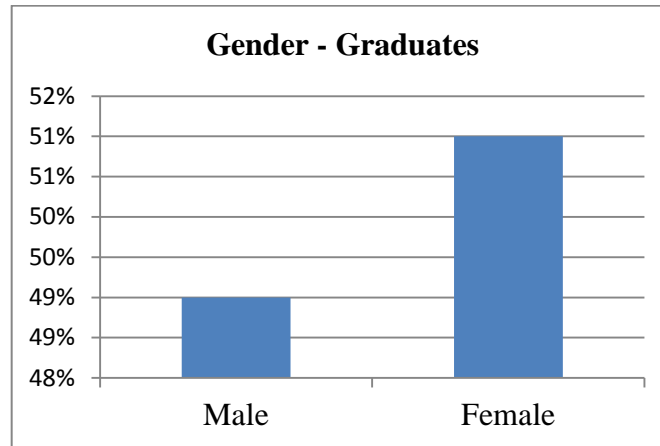
Figure 4 of histogram shows that 60% of the companies that employ graduates offer internship opportunities while the remaining 40% indicated that they do not provide internship to students.



**Figure 5: On-job-training provision**

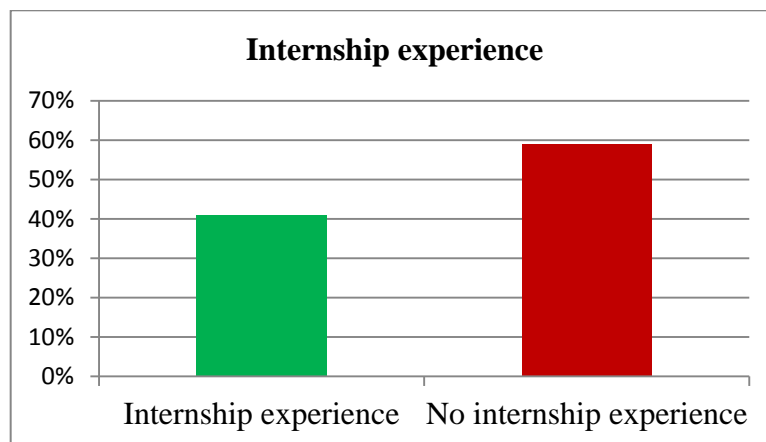
Figure 5 shows that the majority (82%) of graduate employers provide on-the job training to graduates, as opposed to 18% of those that do not offer job training to graduates.

## B. Management sciences graduates



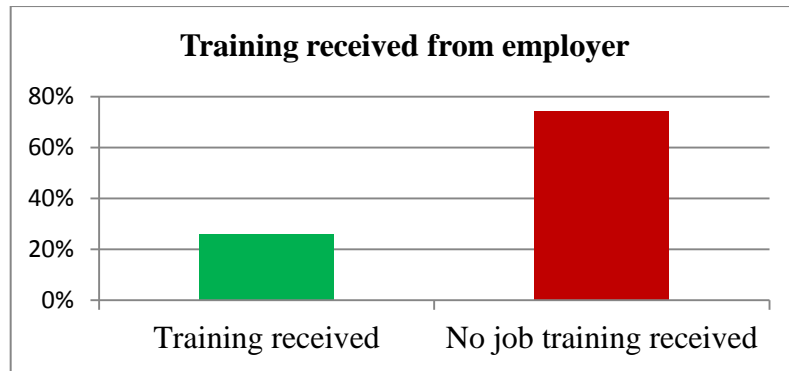
**Figure 6: Gender of graduate respondents**

Figure 6 presents the gender distribution of graduates that responded to the questionnaire that was almost equal. There was a 51% representation of female and 49% representation of male graduates.



**Figure 7: Internship experience**

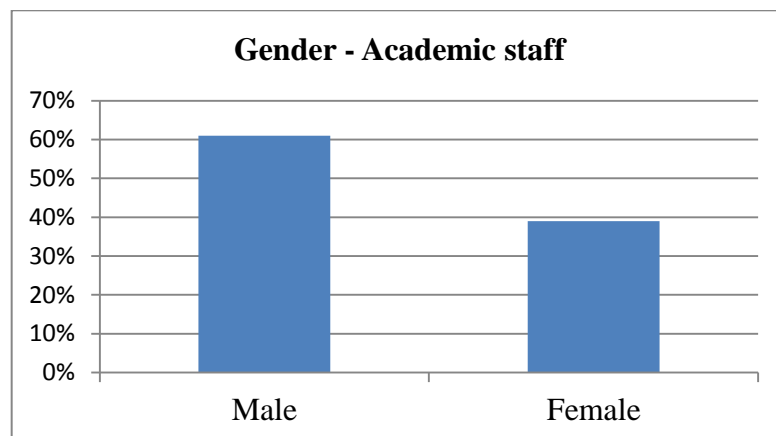
Figure 7 presents that the majority of the management sciences graduates did not have any internship experience while at university. Only slightly above 40% graduates undertook internship while at university as opposed to about 60%.



**Figure 8: Employer training**

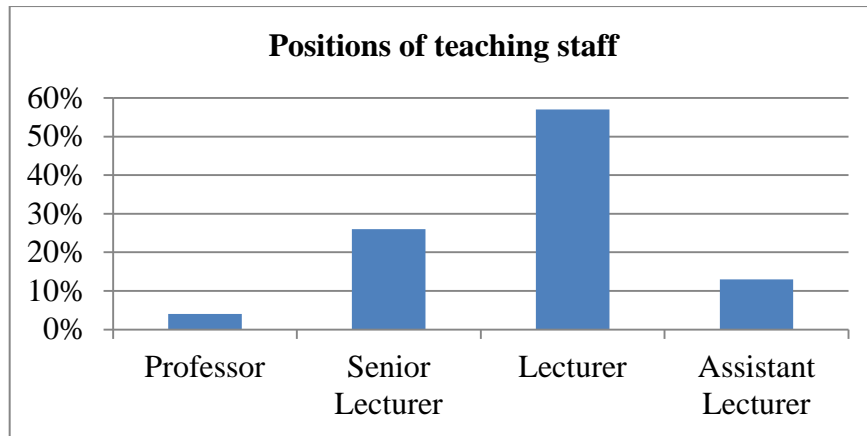
Figure 8 shows that less than 30% of graduates have received training from their employers, while more than 70% did not receive on-the-job training after joining employment.

### C. Management sciences lecturers/ teaching staff



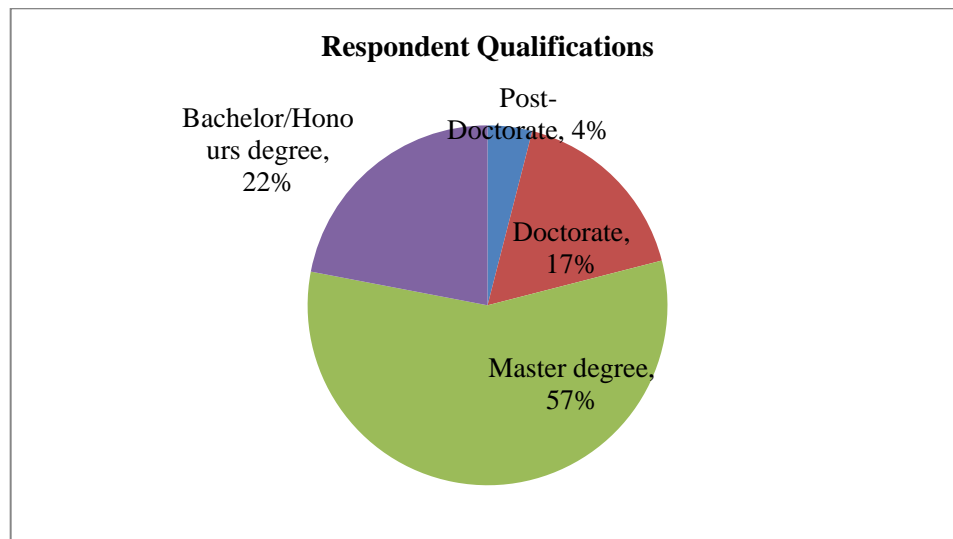
**Figure 9: Respondents by gender**

Figure 9 shows that out of the total number of lecturers from the two higher education institutions, who completed the questionnaire, more than 60% are male, while less than 40% are female.



**Figure 10: Respondents by academic position in university**

Figure 10 presents that the majority (i.e. 60%) of the respondents were lecturers followed by about 30% of senior lecturers, 13 % of assistant lectures while 3% were Professors. These are respondents that deal with management sciences student during their time at university.



**Figure 11: Distribution of respondents by qualification**

Qualification of respondents in this target group included 4% Post-Doctoral, 17% PhD holders, 57% possess Master degree, which form majority of respondents, and 22% of respondents possess honours degrees.

In summary, in the demographic statistics presented, it is evident that there are highly inadequate internship opportunities for students to gain workplace experience. Furthermore, although majority of companies have indicated that they provide further training to employees, the majority of graduates employed have indicated that they have not been provided with training.

Statistics on the eight dimensions of employability attributes as viewed by the three groups of respondents are presented as part of a research paper, Chapter 3 of this dissertation, which also contains analysis and discussion of results. In addition, more data on graduate employability attributes are presented in Appendix E of the dissertation.

**Research Question No. 2:** How are the graduate employability attributes integrated in the curricula of management sciences at HEIs in Namibia?

This question represented the qualitative phase of the study. During the qualitative phase, a content analysis method was used to assess management sciences curricula documents, by finding out the approaches and topics used to integrate graduate employability into management sciences curricula in Namibia. The rationale for using content analysis is that it was easier to deal with large volume of data obtained from curricula materials guided by content topics obtained from the survey results (Zhang & Wildemuth, 2009).

#### **1.8.10 Qualitative population**

The population for content analysis was comprised of all undergraduate degree programmes in management sciences at UNAM and NUST. In total 10 programmes

were identified, from NUST, namely, Bachelor of Accounting (Chartered Accountancy), Bachelor of Accounting (General), Bachelor of Business Management, Bachelor of Human Resources, Bachelor of Marketing, Bachelor of Economics. From UNAM, there are Bachelor of Economics, Bachelor of Business Administration, Bachelor of Accounting (General), and Bachelor of Accounting (Chartered Accountancy). Curricula documents were developed in the years 2014 and 2015, and contained the following components:

- a. The University in which the qualification is offered or the awarding institution
- b. Faculty and Department
- c. Title of qualification
- d. Level of qualification according to the Namibia Qualifications Framework
- e. Total credits required for completion
- f. Description of the qualification, including:
  - i. Programme aims or purpose
  - ii. General outcomes for the whole qualification or exit programme outcomes
- g. Criteria for admission
- h. Regulations for the qualification regarding award
- i. Outcome of Learning for each module, field and subfield of learning, prerequisites, level and credits allocated to the module, or course specifications.
- j. Credit recognition and transfer or articulation arrangements.
- k. Programme delivery requirements specifying that programme is offered fulltime using face to face mode, teaching and learning will take place through lectures, tutorials, field trips, and case studies.

- l. Assessment strategies detailing examination entry requirements and continuous assessment.
- m. Quality assurance requirements indicating internal and external moderation and period of qualification review.
- n. Detailed learning outcomes of each course.

All these bachelor degrees are Four Year programmes at an Honours level. They are all offered at fulltime and part-time basis at both institutions, at the main campuses located in Windhoek, the capital city of Namibia.

#### **1.8.11 Qualitative sample**

Stratified purposeful sampling was used to select six programmes from the population of 10 programmes. The sample was comprised of three programmes from each university, to make a total of six programmes. These are, Bachelors of Economics, Bachelors of Accounting (General), and Bachelors of Business Management and Administration. The rationale is that these programmes are the ones that were common to both universities, and this selection was suitable for comparability of results.

#### **1.8.12 Qualitative data collection**

The researcher obtained descriptions of management sciences courses from the Prospectuses of the two institutions, and compiled a list of management sciences courses. This was followed by a request to obtain access to complete documents of the targeted programmes. Both institutions responded favourably and provided the requested

curricula documents. All curricula documents were reviewed to ensure completeness in terms of content and pages. The selected documents were inserted into the Hermeneutic Unit of Atlas Ti. analysis software. Using the functions of the software, the researcher created family codes generated from the identified graduate employability attributes in the quantitative phase.

The researcher generated a list of words that are related to or associated with each code. This was followed by generating content that is associated with each code using deductive coding function of the software for each programme, focusing on programme aims and expected outcomes, delivery methods, and assessment. In addition, the researcher analysed which graduate employability attributes have been incorporated in programmes, focusing on objectives of specific courses in the programme. Furthermore, quotations were generated for each code created in the analysis to showcase content and context in which the code appears. Quotations show the content in curricula that is associated with the code in a given programme. This was crucial in determining whether a given code is associated with an expected learning outcome or not, which enabled the researcher to determine how employability attributes have been incorporated into the programmes. All codes created were clustered into family codes that represented the graduate employability attributes determined in the Quantitative Phase of the study. Using family codes, it became possible to determine which attributes are presented as Additional Data in Appendix F of the dissertation.

### **1.8.13 Qualitative data analysis**

Qualitative data was analyzed using the content analysis technique, with qualitative analysis software, Atlas ti. Version 7.1.4. Feeding into this analytic application, family codes were derived from quantitative results. In total ten attributes from the quantitative phase were used as family codes during deductive and inductive coding of content related to graduate employability skills. Assessment was made to find out strategies of embedding graduate employability in curricula. The levels used were, firstly, employability related modules in the whole curriculum by assessing programmed aims; secondly, Employability in the core curriculum; thirdly, work-based or work related learning; fourthly, other modules in curriculum that are enhancing employability attributes specific to the discipline. Lastly, analysis was conducted to identify implicit employability attributes in curricula. All codes were created using both deductive and inductive coding.

**Research Question no. 3:** What graduate employability framework can be developed for management sciences curricula in Namibia?

Based on the outcomes of the first two research questions, and the literature on employability models, an attempt was made to consolidate results by way of recommending an employability framework for Namibia.

## **1.9 Ethical considerations**

The researcher employed ethical procedures and standards for conducting research. The respondents were informed of the nature and purpose of the study, that participation is voluntary, and that they are free to decide to terminate their participation or to withdraw at any point during the research process. Data from the two phases were treated with confidentiality. The letter for permission to access the research site and the informed consent letter are attached as: Appendix B and Appendix C.

## **1.10 Reliability and validity**

There is much debate on the validity, trustworthiness and rigour of qualitative research since there seems to be no agreement on the standard measures (Venkatesh, Brown, & Bala, 2013), however, the principle of trustworthiness was used by subjecting the findings, interpretations and conclusions to input and peer review of stakeholders in this study. Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are while reliability is related to the internal consistency and quality of measurement (Golafshani, 2003). Venkatesh, Brown, and Bala (2013) suggests that quantitative and qualitative strands in a mixed methods design are subject to the traditional validation principles from each of these strands respectively. Validation consists of validity and reliability of measures. For the quantitative phase, the instrument was first piloted on a small group of each of the target population, after the results of the pilot, questionnaires were revised and some questions were removed and some rephrased. The sample of employers for the pilot was selected

from the compiled list of prospective employers, while graduates and lecturers were selected using snowball sampling technique. To determine validity, a peer review technique was used by giving the instrument to a senior researcher for external auditing. In addition, reliability of instrument was tested using Cronbach's Alpha, with a score of .925 which indicates that the internal consistency of the items of the instrument that measure reliability is excellent.

## **CHAPTER 2: LITERATURE REVIEW**

This chapter provides a comprehensive review of previous scholarly work related to the notion of graduate employability attributes. Specifically, the chapter entails conceptual and theoretical frameworks of graduate employability. In addition, it synthesizes the importance of graduate employability attributes. Furthermore, it assesses strategies and levels through which graduate employability attributes can be incorporated into curriculum.

### **2.1 Graduate employability conceptual framework**

The Higher Education Council of Australia (as cited in Thompson, 2008) defined graduate employability attributes as the skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study. Although this definition is somewhat recent, Thijssen et al (as cited in Melink and Pavlin, 2012) gave a historical overview of the concept starting from the beginning of the 20<sup>th</sup> century. They describe how the concept has been used historically, that in the 1970s it was used predominantly for resolving problems with school leavers and underprivileged people with political ambitions to attain full employment and cut public losses through unemployment, in the 1980s for restructuring companies with ambitions to attain efficient human resource management, and in the 1990s for individuals as motives for developing successful career opportunities in segmented and even more flexible labour markets. This evolution indicates an increasingly changing labour market and employment patterns, which in turn brings about changes in human resources

management practices. Thus the concept of employability should be seen as an evolving concept with different constructs.

Yorke (2006) presents different constructs of graduate employability. The first one is graduate employability as demonstrated by the graduate actually obtaining a job. This construct implies employability to be the same as employment. It means that a graduate is employable when a graduate obtains graduate job. However, employability implies something about the capacity of the graduate to function in a job, and is not to be confused with the acquisition of a job, whether a 'graduate job' or otherwise.

The second construct is graduate employability as the student being developed by his or her experience of higher education through curricula and extra-curricular provisions. This view assumes that the students' learning experience in a higher education institution is a sufficient condition for enhanced employability. This experience does not necessarily ensure that the student develops the various prerequisites such as cognitive, social, and practical experience for success in employment. The curriculum process may facilitate the development of prerequisites appropriate to employment, but does not guarantee it. Therefore it is a mistake to assume that students are highly employable on the basis of curricula provision alone. Employability derives from the ways in which the student learns from his or her experiences (Yorke, 2006). This implies that a graduate should be a reflective practitioner and a lifelong learner.

The third construct looks at graduate employability in terms of the possession of relevant achievements. It implies that a student exhibits employability in respect of a job if he or she can demonstrate a set of achievements relevant to that job. For example, a Business

Studies graduate who has inadequate training of quantitative techniques would not be appropriate for a market research job that requires strong statistical analysis. He or she might, however, make a valuable contribution in human relations. This shows that employability is dependent on a given context of employment. A range of attributes and achievements may have a general value, but may well prove insufficient for some specific situations.

From the constructs presented, it may be deduced that employability represents the multi-faceted characteristics of the graduate. However, these characteristics or attributes should be honed by higher education to enable a graduate to function successfully in a labour market.

In addition to graduate employability constructs, Precision-Consultancy (2007) identified four major conceptual elements of graduate employability attributes. Firstly, they are multi-functional to meet a range of different and important demands of daily life. They are needed to achieve different goals and to solve multiple problems in different contexts. Secondly, they are relevant across many fields and are therefore relevant for participation in university, the labour market, political processes, social networks, and interpersonal relationships, including family life and for developing a sense of social well-being. Thirdly, they refer to a high order of mental complexity and assume a mental autonomy which involves an active and reflective approach to life. Fourthly, they are multi-dimensional as they are composed of know-how, analytical, cultural and communication skills, and common sense. The above description of graduate employability attributes seems to be abstract than concrete, and they are all-

encompassing than specific. Thus, it might be cumbersome to assess the impact or outcomes of graduate employability attributes.

Some studies on the development of graduate employability attributes have been criticized for their lack of impact. Such studies are said to have failed to identify positive outcomes in the graduate labour market. Rospigliosi, Greener, Bourner, and Sheehan (2014) claim that a study by Mason *et al.* (2006) could find no impact of teaching employability attributes on either the ability of graduates to find employment within six months of graduating or to secure 'graduate-level' jobs. Another criticism comes from Cranmer (2007) with an argument that the belief that employability attributes are learned better in the classroom than in the workplace does not stand up to review. Furthermore, another criticism is rooted in the different selection of essential graduate employability attributes as generated by various researchers (Rosenberg, Heimler, & Morote, 2012). This study observed that different organizations have different prioritization of graduate employability attributes.

## **2.2 Empirical studies on graduate employability**

Jonck (2014) conducted a study in South Africa to evaluate management science graduates' employability skills as perceived by employers. The study found out that employers were least satisfied with the critical cross field outcomes, which are generic attributes that are applicable to all disciplines, and are embedded in higher education curriculum in South Africa. In addition, employers were least satisfied with graduates' macro vision skills, which refer to an understanding of the world as a set of related

systems. Furthermore, the industry was not satisfied with graduates' research and problem-solving skills, technological skills, academic skills, and work ethics. However, they were satisfied with the graduates' ability to work effectively with colleagues. In general, analysis indicated that employers were less than satisfied by graduates' generic attributes. Employers expressed the need for inclusion of generic business administration skills with specific emphasis on customer service, Excel training, and financial management. This study indicates the importance of industry in assessing the outcome of curricula provisions on graduate employability, and to ensure that graduate attributes that the university develops are desirable to employers.

One more relevant study in determining generic competencies that are important for successful work performance is presented by Quek (2005) through a survey for Malaysian graduate employees. The study highlighted interpersonal skills, knowledge-acquiring skills and flexibility as being highly important in contributing towards success in work performance. In addition, graduates expressed value-improving skills, practical orientation abilities and cognitive skills as being important for successful job performance. Particularly, these attributes were considered important for graduates to transfer learning from classroom to the workplace for success in work performance. These employability attributes are regarded as beyond the discipline specific knowledge, but essential for graduates' performance in the world of work.

Based on evidence of high graduate unemployment in Malaysia, and expression from employers that many graduates are lacking attributes needed to acquire and maintain their jobs, Omar, Manaf, Mohd, Kassim, and Aziz 2012) conducted an analysis of

graduate employability attributes required by the labour market in Malaysia. The analysis consisted of four major criteria, namely: qualification, academic score, experience, and specific soft skills. The study found that graduates with bachelor degrees are more likely to be employable. In addition, the study found out that academic excellence based on examination score was not the utmost factor for graduate employability. Furthermore, it was revealed that graduates without work experience had a little chance to be recruited. The study concluded that there was high demand for soft skills by employers. Lack of these attributes hindered graduate employability. Employers seek graduates with high quality of communication and interpersonal skills, information communication technology skills, high spirit of team work, and other specific personal attributes. This study supported the idea that graduates need soft skills, which are a part of graduate employability attributes, in addition to subject-specific knowledge and skills. It further stressed that without soft skills, the graduate remains unemployable, even when they have secured high score in discipline knowledge.

Ogbeide (2006) carried out a student assessment of self-perceived level of competence at performing some basic skills needed for careers in the hospitality industry in the United States of America. The study found that out of 67 employability attributes listed, the most highly rated attributes were, ability to work independently, giving direction and guidance to others, gaining new knowledge from everyday experiences, maintaining positive attitude, coordinating the work of peers, relating well with supervisors, working well with others, and setting priorities. The lowest skills ranked were, integrating strategic considerations in the plans, making impromptu presentation, writing internal and external business communications, keeping up-to-date on developments in the field,

and gaining new knowledge in areas outside the immediate job. Students indicated that the skills were acquired mostly through coursework in college, internships, field trips, and guest speakers. This study provides evidence that indeed higher education has avenues that allows students develop employability attributes. What is not coming out of this study is how exactly was the acquisition of these attributes embedded in the students' learning experiences such as internships, field trips and coursework.

In a similar way, Saunders and Zuzel (2010) conducted a survey to determine the relative importance of different employability attributes, and preparedness of students and graduates for employment. The survey targeted sandwich students, that is, students who were on full year industry placement during their third year of study, graduates and employers. Another goal of the survey was to compile an attributes inventory, based on the needs of employers, and incorporate into an employability attributes profile to distribute to students. The study found a strong correlation between employer and sandwich student/graduate perceptions of the relative priorities amongst employability skills. Skills such as enthusiasm, dependability and team-working scored higher than subject knowledge skills, whilst commercial awareness, negotiation and networking were given lowest priority. Furthermore, the lowest ranked skills were those that sandwich students/graduates were assessed to be least proficient. Overall, skills of new graduate employees were rated less highly by their employers than by the graduates themselves. In the second part of the study an employability skills profile was compiled and distributed to students at levels 1, 2 and 3, as part of personal development planning. Level 3 students rated themselves more highly than level 1 and level 2 students in subject knowledge, most core skills and personal qualities, except tolerance to stress.

What clearly came out of this study is the importance of determining perception of students/graduates to those of the employers. The highlight of this study is the importance of work placements in developing graduate employability attributes to the level of proficiency expected by employers.

Martin, Villeneuve-Smith, Marshall, and Mckenzie (2008) presents a study conducted in the United Kingdom to gain an insight into the skills and qualities that employers look for when recruiting graduates into the workforce. The study revealed a lack of literacy, numeracy, communication skills, motivation and work ethics, in recent graduates. It affirmed that candidates who recently left university should have developed time keeping skills, literacy skills, numeracy skills, enthusiasm and commitment, communication skills, and personal presentation skills. In addition, the study states that employers are not prepared to fund training for graduates to develop the skills perceived as basic requirement to employment. However, employers are prepared to fund training for graduates to develop more sophisticated job-related skills. These findings place the responsibility on the university to assist students in developing specific graduate employability attributes needed in the world of work. It is also helpful to note that some employers are clear about which specific attributes are lacking in graduates when they exit university.

Given the situation that employer's perception on employability attributes are well documented in the UK yet there is less exploration on the side of graduates and students, Jackson (2013) conducted a study to examine student perceptions of employability attributes development in business undergraduate programmes. The study found out that

assurance of student buy-in is important to ensure learners engage with skill acquisition to enable them to articulate their capabilities to potential employers and to facilitate the transfer of acquired employability attributes. In addition, findings indicate that undergraduate students consider skills development as valuable, most particularly communication and team-working. The study had some significant variations in terms of skills that were perceived to be important. This study, further, emphasises on the importance of including and examining students/graduates perceptions on graduate employability attributes to encourage better participation of students in employability attribute development efforts of the university. However, it is also important to engage other stakeholders in the similar context to ensure that employability skills development efforts are endorsed by employers.

In a study to determine employability skills as perceived by employers, Higher Education Institutions (HEIs), and graduates, Rosenberg et al. (2012) examined the basic employability skills needed for job performance, the reception of these skills in college, and the need for additional training in these skills after graduation. The study focused on eight dimensions of basic employability attributes, namely: basic literacy and numeracy, critical thinking, management, leadership, interpersonal, information technology, systems thinking, and work ethics. The study revealed that among the eight dimensions, graduates scored leadership and work ethics as the most important skills needed for job performance, this finding is different from those of HEIs and employers who scored lower on this dimension. HEIs indicated that interpersonal skills are most needed for job performance. Employers perceive literacy and numeracy as most needed for job performance. Employers felt that more training is needed in management skills. It is

evident from the results that there are disparities regarding what HEIs are providing, and what employers want. Therefore, there is a need to bridge that gap by finding out specific expectations of the three stakeholders. This would generate an agreed graduate employability attributes framework, and draw synergy in developing these attributes while students are at university.

Several other studies conducted to determine desirable employability attributes have generated different results. For example in Australia, a study by Tempone et al. (2012) suggest that communication, team work and self-management are most critical for graduates in the three areas of recruitment, training and ongoing employment. In addition, they noted that demands on universities to deliver work-ready graduates are not homogenous. Employers in different sectors construe the meaning of graduate employability attributes in line with their specific needs. The notion of construing employability attributes differently among sectors have been augmented by Wickramasinghe and Perera (2010) who argue that there are differences in the priorities given for employability attributes by male graduates, female graduates, employers, and university lecturers. Griesel and Parker (2009) concludes that graduate employability attributes developed by higher education in South Africa are, in varying degree, out of sync with the needs and expectations of employers and at the same time, with the demands of a rapidly changing world of work. The notion of “skills” may need to be redefined in order to align the responsibilities of higher education with the possibilities of new and changing forms of labour and the application of knowledge. Given the difference in desired graduate employability attributes across countries, it is appropriate to conclude that the labour market needs for attributes are contextual. Therefore, the

employability attribute needs identified elsewhere might not necessarily be the same in all countries or regions of the world.

Various universities, government agencies, and related organization have created lists of graduate employability attributes that they require their students to possess upon their graduation. Although skills preference differs from institutions, to some extent, there are similarities. Table 2.1 provides example of employability skills, from different institutions and sectors, adopted from Marques (2006).

**Table 2. 1: Employability attributes in the literature – (Markes, 2006)**

Middlesex University (2003)	AgCAS (2005)	Heitmann (2003)	Markes <i>et al.</i> (2004)	DfEE (2000)	HEA Engineering Subject Centre (2005a)
<ul style="list-style-type: none"> <li>• Personal and career development,</li> <li>• effective learning,</li> <li>• communication,</li> <li>• teamwork,</li> <li>• IT and</li> <li>• Numeracy.</li> </ul> <p>Further surveys have shown that at the top of this list (which usually emphasizes</p> <ul style="list-style-type: none"> <li>• teamwork and</li> <li>• written and oral communication),</li> </ul> <p>is</p> <ul style="list-style-type: none"> <li>• imagination and Creativity</li> </ul>	<p>The ability to analyze information critically and produce creative solutions to problems;</p> <ul style="list-style-type: none"> <li>• communication and customer-facing skills;</li> <li>• initiative-taking;</li> <li>• ability to work on your own and in a team;</li> <li>• computing skills and technical skills (CAD), visual and spatial awareness (added to these are:</li> <li>foreign language and international mobility,</li> <li>knowledge of industrial processes and techniques, 3D conceptual ability, commercial awareness, coping with pressure and deadlines as well as project management, time management and effective negotiating skills).</li> </ul>	<p>Personal and professional skills and attributes:</p> <ul style="list-style-type: none"> <li>◦ engineering reasoning and problem-solving (with 5 sub-skills);</li> <li>◦ experimentation and knowledge discovery (4 sub-skills);</li> <li>◦ system thinking (4 sub-skills);</li> <li>◦ personal skills and attitudes (7 sub-skills and attitudes);</li> <li>◦ professional skills and attitudes (4 sub-skills and attitudes)</li> </ul> <p>2. Interpersonal skills:</p> <ul style="list-style-type: none"> <li>◦ Team working skills (5 sub-skills);</li> <li>◦ Communication skills (6 sub-skills).</li> </ul> <p>Plus 32 conceive, design, implement and operate sub-skills under 6 headings. (66- skills under three headings in total).</p>	<ul style="list-style-type: none"> <li>• Key skills (communication, IT, working with others, application of number, improving own learning and performance, problem solving),</li> <li>• Personal and professional development skills (self-management, organizational management, interacting with others, professional conduct/awareness, intellectual skills) and</li> <li>• Technical skills (core skills: tendering, managing costs, project management, technical reports, technical drawings);</li> <li>• Personal attributes (Adaptability, assertiveness, creativity, initiative-taking, motivation and resilience). Software RAPID— developed by Loughborough University: 62 skills in total.</li> </ul>	<ul style="list-style-type: none"> <li>• Oral communication,</li> <li>• teamwork,</li> <li>• self-confidence (although, in fact this a personal attribute),</li> <li>• Self-motivation and presentation.</li> </ul> <p>Essential skills:</p> <ul style="list-style-type: none"> <li>• networking,</li> <li>• taking initiative,</li> <li>• creativity,</li> <li>• the ability to establish collaborations,</li> <li>• negotiating and research skills</li> </ul> <p>Important skills: strategic planning skills, time management and IT skills.</p> <p>Most important skills (with highest scores) for course development:</p> <ul style="list-style-type: none"> <li>• communication,</li> <li>• initiative and</li> <li>• Self-confidence.</li> </ul> <p>Skills of lower importance (with lowest scores):</p> <ul style="list-style-type: none"> <li>• oral communication,</li> <li>• self-promotion,</li> <li>• time management and IT</li> </ul>	<ol style="list-style-type: none"> <li>1. Effective communication (77%)</li> <li>2. Teamwork (42%)</li> <li>3. Ability to solve problems (62%)</li> <li>4. Analytical skills (59%)</li> <li>5. Flexibility (58%)</li> <li>6. Numeracy (42%)</li> <li>7. Use of IT (20%)</li> </ol> <p>A later survey (1994) ranks personal skills/attributes as</p> <ol style="list-style-type: none"> <li>1) willingness to learn,</li> <li>2) commitment,</li> <li>3) reliability,</li> <li>4) self-motivation,</li> <li>5) teamwork</li> </ol> <p>6) Communication.</p> <p>Employers' skills for employability are then presented separately as:</p> <ul style="list-style-type: none"> <li>• team working,</li> <li>networking</li> <li>• self-reliance; the ability to manage own learning and recognize professional development needs;</li> <li>action planning</li> <li>• Management processes (such as problem-solving and decision-making, negotiating).</li> </ul>

Graduate employability attributes presented in Table 2. 1 shows that different agencies and universities have different prioritization of attributes. Although within one country, there is a considerable variation as to which attributes are considered important. This might present a challenge for the higher education system to develop an agreed

framework. While some providers consider communication as priority, some leans toward critical thinking and team work. The table also shows that some attributes might be the same but worded differently. For example, 'self-motivation' could be the same as 'ability to work on your own', or 'self-management.' It is important to consider that the wording of attributes might vary but the meaning might be the same. That being said, there is no substantial difference in the attributes presented in the table, but the prioritization and the choice of terms representing the attributes do differ.

In the same light, Andrews and Higson (2008) identified similar key graduate employability attributes and competencies that are integral to graduate employability. These attributes include basic literacy and numeracy skills, critical thinking skills, leadership skills, management skills, interpersonal skills, information technology skills, systems thinking skills, and work ethics. These attributes are adapted in this current study as a benchmark to investigate graduate employability attributes in Namibia. These employability attributes are defined as follows:

- Basic literacy and numeracy as the ability to read, write, speak, listen, and perform basic mathematical procedures. Reading includes the ability to interpret written information. Writing includes the ability to communicate thoughts in letters and reports. Mathematical skills include the ability to solve practical problems through the use of a variety of mathematical techniques (Rosenberg et al., 2012).
- Critical thinking skills are defined by Halpern ( as cited in Kennedy, 2010) as the use of cognitive skills or strategies that increase the probability of a desirable

outcome. Critical thinking is used to describe thinking that is purposeful, reasoned, and goal directed – the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task.

- Leadership skills are the ability to take control of a situation and to empower peers; and motivate and positively influence others to achieve organizational goals (Schermerhorn, 2008). Graduates should be encouraged to make plans for own or group activities, identify and mitigate risks, deal with change and uncertainty.
- Interpersonal skills include the ability to work in teams, help others to learn, provide customer service, negotiate agreements, resolve differences, and work in a multicultural organization (Rosenberg et al., 2012); also the ability to relate to and feel comfortable with people at all levels, and to maintain relationships as circumstances change.
- Information Technology refers to the use of technology that contribute to effective execution of tasks. This includes the ability to select procedures, equipment, and tools to acquire and evaluate data.
- Systems thinking skills include the ability to understand and operate within social, organizational, and technological systems. Designing and suggesting modifications to systems and explaining the interaction of systems in the context of the global economy.

- Work ethic refers to the individual's disposition towards work and it includes attendance, punctuality, motivation, the ability to meet deadlines, patience, attitude, dependability, professionalism, and realistic expectations of job requirements and career advancement (Rosenberg et al., 2012).

The studies above appear to have narrowed the host of attributes from different places into coherent graduate employability attributes. These employability attributes seem to be congruent, less complex, easy to explain, and more agreed to by the various authors. Therefore, this study's quest of incorporating graduate employability attributes into management sciences curriculum in Namibia has been aligned to these above congruent employability attributes.

The University of South Africa (UNISA) as presented by Archer and Chetty (2013) presented what is considered 'Graduateness' at UNISA. This model states that UNISA graduates:

- are independent, resilient, responsible and caring citizens who are able to fulfil and serve in multiple roles in their immediate and future local, national and global communities;
- have a critical understanding of their location on the African continent with its histories, challenges and potential in relation to globally diverse contexts;
- are able to critically analyse and evaluate the credibility and usefulness of information and data from multiple sources in a globalised world with its ever-increasing information and data flows and competing worldviews; and

- know how to apply their discipline-specific knowledge competently, ethically and creatively to solve real-life problems and are critically aware of their own learning and developmental needs and future potential (Archer & Chetty, 2013).

They concluded that ‘Graduateness’ is seen as a suite of attributes that should be embedded in curriculum and acquired during studies at a HEI and these includes employability. This study places an emphasis on the development of the curriculum to facilitate acquisition of graduate employability attributes that are essential to that institution. Therefore, the approach of intentionally embedding graduate employability attributes in the curriculum is proposed.

### **2.3 Approaches for developing graduate employability attributes**

Graduate employability attributes teaching is particularly aimed at enhancing graduates’ skill sets in ways that should increase their competitiveness in the job market (Mason et al., 2009). According to Nunan (1999), measures of institutional commitment to graduate employability attributes can be determined by curriculum intention and assessment and reporting. This will provide a signal to the labour market about the extent to which a university is prepared to assure employers and other institutional stakeholders of its commitment to delivering graduates that have the particular qualities or attributes that the institution claims.

Mason et al. (2009) elaborates that to provide assurances of university’s commitment to deliver quality graduates, universities may take a variety of positions, from ‘strong

position' to 'weak position'. A strong position is where the course of study is specifically designed to develop graduate qualities, and, as a part of the delivery of the course, students are encouraged to compile a portfolio of experiences or work completed. The portfolio would provide evidence of their experience and achievements in either the complete set of qualities expected in a graduate or in those areas/qualities thought to be employment related. Institutions might further support this activity by providing a statement of their intentions that their courses develop a set of graduate qualities and supply course outlines that demonstrate those intentions. A weak position is where courses are not consciously designed to develop particular qualities and it is assumed that employment-related skills are by-products of studying for a degree. Students should have the full responsibility to maximise their development of employability attributes by influencing their course experience in ways that demonstrate their successes in these attributes. However, it should be noted that the likelihood for students to carry out this influence are may be constrained by the curriculum and are likely to be limited in scope. Individual institutional practices towards enhancing of graduate employability attributes can involve varying commitment. Therefore, the current trend of placing emphasis on graduate employability attributes recommends that higher education curricula should incorporate opportunities to develop such skills in alongside with subject-specific knowledge and skills (Saunders & Zuzel, 2010).

Mason et al. (2009) writes that some universities have adopted various strategies of integrating graduate employability attributes in programmes of study. These include offering work experience, work-related learning and employability skills modules, and 'ready for work' events, as well as involving employers in course design and delivery. In

cases where generic attributes are already embedded in the curriculum, universities employ a range of initiatives to make them more explicit to students. Gardner (1998) suggested that in efforts for creating opportunities for enhancing students' workplace readiness, academic staff should:

- highlight opportunities to develop leadership, teamwork and communication skills in their courses, rather than skill classes being viewed as single, one-off experiences;
- be more involved in experiential programmes such as student reflection on experiences, and setting rigorous standards and evaluation criteria for work-based placements;
- seek to engage students in contextual situations for example, community projects; and
- introduce student portfolios which encourage reflection on their experiences, skills acquisition and application of education or academic training to future work and life situations.

Furthermore, Gardner (1998) notes that universities should find ways to incorporate strategies into curriculum in incremental stages.

#### **2.4 Embedding graduate employability attributes in the curriculum**

The inclusion of explicit employability attributes in undergraduate degree programmes continue to multiply due to the need for increased employer involvement in higher education curriculum development (Wilton, 2014b). Recent works on embedding

employability attributes in the curriculum have been strengthened by Yorke and Knight (2006) as they suggested a range of levels of curriculum by which employability can be fostered explicitly or implicitly. Institutions should determine the levels that are suitable for their situations. This is because there are four variables that influence the embedding of employability in curricula, namely: the context, student recruitment patterns, envisaged labour markets, and traditions (Yorke & Knight, 2006). Therefore, employability attributes can be enhanced through the following levels of the curriculum.

- Employability through the whole curriculum: at this level, each student is required to demonstrate eight broad abilities at progressively more complex levels in both general education and the specialist subject (s) that the student has chosen. The abilities are: Communication (reading, writing, speaking, listening, visual, quantitative, and technological skills), analysis, problem solving, valuing in decision making, social interaction, global perspectives, effective leadership, and aesthetic responsiveness. At this level, subject understanding is blended with skillful operational practices. The academic curriculum is the primary focus of development, with a clear understanding of the need for preparation for employability to be central to all programmes and courses, which is coupled with the development of career aspirations (Quality Assurance Agency for Higher Education, 2009).
  
- Employability in the core curriculum: a university may opt to designate a module or two as vehicles for the development of employability attributes. Kemp (2009) studied a case of a module to enhance employability. The case study demonstrated the viability of developing an employability profile, with a focus

on relevant practical experience through a single module, whilst also enhancing core employability attributes. An example to this is the use of stand-alone elective modules to support employability whereby 'Active Learning in the Community' modules were introduced. This was a bottom-up initiative arising from collaboration between the Careers Development Centre and the Academic Development Centre of the university. The initiative involves three modules, each of which seeks to enable students to acquire a variety of employability attributes through practical volunteering experience and reflection.

- Work-based or work-related learning interspersed within the curriculum: this spectrum has been considered as a contributor to employability. This includes placements of varied period ranging from one year to lesser periods of placements. Students are required to complete a period of work experience, and produce a report for both the workplace and the academic tutor. Many universities credit work-based learning as part of their curricula. According to Yorke and Knight (2006), research has shown evidence of greater self-confidence and awareness of the challenges faced in the world of work.

On work-based learning, Pillai, Khan, Syahirah, and Raphael (2012) discusses the industrial training programme at the University of Malaya in Malaysia, focusing on issues that need to be considered order to enhance the employability attributes of graduates. Findings from the feedback obtained from trainees and organizations in a given academic session were examined in terms of the extent to which trainees felt they were prepared for their training, and the extent to

which the tasks given to them during their training were appropriate. Further, trainees' self-rating of particular skills and industry's rating of the trainees were also examined. The findings indicate that most of the students were prepared to face the world of work. However, there were several issues which needed attention. These included the need to address the possible mismatch between the tasks assigned to trainees and their areas of study, and the need to enhance English language competency and particular soft skills throughout their degree programme. Continuous input from industry is considered necessary to ensure that the training benefits all parties and contributes to the employability attributes of trainees. This study places an emphasis on the importance of effective collaboration between the academic staff and practitioners supervising students at work place to ensure that students are exposed to relevant learning experiences.

Furthermore, Kettis, Ring, Gustavsson, and Wallman (2013) suggest that higher education institutions' interactions with employers through placements enriches both parties, that is academic staff at university and supervisors of students at placements. Academic staff gains insight into practice which may inspire teaching on campus, for example, by generating real life examples that trigger students' motivation and by informing curriculum design. Practitioners supervising students on placements are often excellent educational development partners. Developing a reflective, deliberate approach to learning in the workplace may be as useful for the employees as for the students. Also, students carry out projects of value to the employer. However, poor placement

experiences may result in students losing their degree subject or abandon educational and career goals (Kettis et al., 2013).

- Employability-related modules within the curriculum: these modules develop the students' skills at the beginning of their program of study, centering on freestanding skills. They are based on an assumption that if students can develop their personal autonomy in studying at the beginning of their studies, this will pay off later. The Quality Assurance Agency for Higher Education (2009) describe the development of a set of modules designed to engage first year students with a learning experience aimed at equipping them with the skills needed to meet the challenges of creativity and innovation. These modules are linked to the discipline in which the students have enrolled.
  
- Work-based or work-related learning in parallel with the curriculum: this is when students are employed part-time in parallel with their studies. Part-time employment could provide an experiential base for the academic study of employment-related disciplines. Muldoon (2009) present a case study of the outcomes of an institutional award for development of graduate employability attributes. In this study students engage in part-time work as a professional development and extra-curricula activity. Students engage in paid and voluntary work during their studies. The study concluded that part-time work is a useful avenue for the development of graduate employability attributes.

In conclusion to the range of levels of embedding graduate employability into curriculum, Nagarajan and Edwards (2014) caution that there is a challenge that higher education institutions might incur in their efforts to integrate graduate employability attributes into the curriculum. The challenge is presented by the conceptualization of graduate employability attributes at different institutional levels such as university, faculty, school, departments, programme of study and particular subjects. One approach to managing the varying levels is the use of overarching generic attributes that are then broken down to specifics that can be implemented at lower levels. Subsequently, these attributes are transformed by the faculty into a set of more specific learning goals relevant to the degrees. The successful development of graduate employability attributes may then be facilitated by aligning learning design, learning outcomes, teaching and learning activities, and assessment criteria and tasks with the generic attributes. Therefore, there is a need to determine employability learning activities at faculty, schools, and department level.

## **2.5 Case studies of employability initiatives for undergraduate students**

Following an investigation on graduate employability in the UK, a report Enterprise for all emphasized the importance of enterprise education its relevance to higher education, as such it stated that all university students should have access to enterprise and entrepreneurship education. This should be provided in all faculties, and that each university is expected to develop an enterprise module to all students Enterprise for all (as cited in Owens & Tibby, 2014). In line with the report on Enterprise for All, the

following are three examples of modules to promote enterprise, innovation, and entrepreneurship in the UK, as highlighted by (Owens & Tibby, 2014).

### **2.5.1 Biotechnology and Business module: School of Bioscience at Cardiff University**

The School of Bioscience at Cardiff University developed a 10 - credit module entitled 'Biotechnology and Business'. The module was delivered to a cohort of 13 and 19 students in 2013 and 2014 respectively. The module is offered during year two of the Four - year Biotechnology degree and aims to develop commercial awareness prior to students' third year placement in industry. The aims of the course are to introduce and develop core enterprise skills and enhance employability attributes such as; professional development, enterprise, knowledge transfer, self-management, communication, interpersonal and team work. Formative and summative assessment was conducted through group work and presentations, and individual work such as reflective journals and portfolios. Feedback on this module provides that it contributed to student employability by enabling students to develop an understanding of their own potential professional identities and key enterprise/employability skills.

### **2.5.2 'Think it. Try It. Do It'. university-wide approach at University of Exeter**

The University of Exeter developed a 'Think it. Try it. Do it' module that is delivered in conjunction with the university's Student Entrepreneurship Support Group (SESG). The aim is to raise students' awareness of (i) enterprise and entrepreneurship; (ii) entrepreneurship and self-employment as alternative career paths; and (iii) the universality of enterprise skill requirements across all career paths. The approach of 'Think it. Try it. Do it' begins with helping students to develop their initial idea ('Think it'); providing opportunities for testing their idea's viability ('Try it'); and helping them to grow their idea once they are confident that it will work ('Do it'). Each phase of the approach is accompanied by support activities such as workshops, opportunity to meet with successful entrepreneurs and access to mentors and professional network and incubation facilities. This initiative leaves students well-prepared for self-employment or freelancing, and starting up their own business.

### **2.5.3 Staffordshire Graduate Employability Project (SGEP): University-wide (undergraduates) at Staffordshire University**

This is an on-campus initiative for undergraduate students aimed to delivering a 3Es agenda – Enterprise, Entrepreneurialism and Employability. The 3Es are embedded in the curriculum and assessed as Staffordshire Graduate. Graduate attributes that all Staffordshire graduates should possess are: Discipline

Expertise, Professionalism and Professional Integrity, Global Citizenship & Sustainability, Communications and Teamwork; Reflective and Critical Learner; and Life Long Learning. Through this initiative all university modules were mapped against the graduate attributes and adjusted to contribute to the 3Es agenda. This initiative contributed to graduate employability as a large number of students began active engagement in volunteering activities; student clubs and societies were initiated, an increase in the number of students engaging in work experiences.

These examples provide different approaches for enhancing graduate employability in curriculum. While the first example used a stand-alone module, the second example was primarily on developing entrepreneurship, and the third initiative did not use a stand-alone module but graduate attributes identified were spread across all university modules. All examples are success stories, and it can therefore be derived that there are many ways through which graduate employability attributes can be embedded in the curriculum.

## **2.6 Developing an employability framework**

When discussing work on graduate employability framework, it is necessary to note that the SCANS report in the USA laid the groundwork for current frameworks when it defined three foundational skills (basic skills, thinking skills, personal qualities) underpinning five competencies (use of resources, interpersonal skills, information, systems and technology) needed for solid job performance (Collet, Hine, & Du Plessis, 2015). Similarly, in the United Kingdom (UK), Lord Dearing echoed the same

requirements in a report that is considered to have changed the landscape of higher education in the UK, NCIHE (as cited in Kennedy, 2010). From early skills frameworks that focused primarily on technical knowledge and skills, critical thinking and communication, the SCANS and NCIHE reports initiated a global shift towards including skills in knowledge management, information literacy, teamwork, career management and citizenship as essential for graduate employability.

Over the years, several frameworks have been developed especially in Europe and United States of America. The following table depicts employability frameworks arranged into cognitive, interpersonal, and intrapersonal competency clusters.

**Table 2. 2: Employability attributes frameworks**

OECD key competencies OECD (2005)	UKCES employability skills UKCES (2009)	21st Century Skills AT21CS Binkley et al. (2010)	Transferable 21st Century Skills (Pellegrino and Hilton, 2012)
<b>Cognitive competency cluster</b>			
<p>Use tools interactively Use language, symbols and text interactively Use knowledge and information interactively Use technology interactively</p>	<p>Thinking and solving problems Creativity, reflecting on and learning from own actions, prioritizing, analyzing situations, developing solutions. Using numbers effectively Measuring, recording measurements, calculating, estimating quantities, relating numbers to the job. Using language effectively Writing clearly and in a way appropriate to the context, ordering facts and concepts logically. Using IT effectively Operating a computer using basic systems and learning other applications as necessary, using telephones and other technology to communicate Understanding the business Understanding how the individual job fits into the organization as a whole, Recognizing the needs of stakeholders, judging risks.</p>	<p>Ways of thinking Creativity and innovation Critical thinking, problem solving, decision making Learning to learn, metacognition Tools for working Information literacy ICT literacy</p>	<p>Cognitive Cognitive processes and strategies Critical thinking Problem solving Analysis, interpretation Reason, argumentation Decision making Adaptive learning Executive function Knowledge Information literacy ICT literacy Communication – oral, aural, written Creativity Innovation</p>
<b>Interpersonal competency cluster</b>			
<p>Interact in heterogeneous groups. Relate well to others Cooperate, work in teams Manage and resolve conflicts</p>	<p>Working together and communicating. Cooperating, being assertive, persuading, being responsible to others, speaking clearly to individuals and groups and listening for a response.</p>	<p>Ways of working Communication Collaboration (teamwork)</p>	<p>Interpersonal Teamwork and collaboration Communication Collaboration Teamwork, Trust Cooperation, coordination Interpersonal skills Empathy/perspective Service orientation Conflict resolution, Negotiation Leadership, Responsibility Assertive communication Self-presentation Social influence with others</p>
<b>Intrapersonal competency cluster</b>			
<p>Act autonomously Act within the big picture Form and conduct life plans and personal projects Defend and assert rights, interests, limits and needs.</p>	<p>Positive approach Ready to participate make suggestions, accept new ideas and constructive criticism, take responsibility for outcomes Self-management Punctuality and time management, fitting dress and behaviour to context, overcoming challenges and asking for help when necessary.</p>	<p>Living in the world Citizenship – local and global Life and career Personal and social responsibility – including cultural awareness and competence</p>	<p>Intrapersonal Intellectual openness Flexibility, adaptability Artistic and cultural appreciation Personal and social responsibility Appreciation for diversity Continuous learning Intellectual interest and curiosity Work ethic/conscientiousness Initiative, self-direction Responsibility, perseverance, productivity Self-regulation: forethought, performance, self-reflection Professionalism, ethics, Integrity Citizenship Career orientation Self- monitoring, evaluation, reinforcement Physical and psychological health</p>
<p>Notes: The OECD (2005), UKCES (2009), and AT21CS (Binkley et al., 2010) frameworks are mapped to the three clusters of key competencies defined by Pellegrino and Hilton (2012) as: cognitive, interpersonal and intrapersonal.</p>			

(Adapted from Collet, Hine, and Du Plessis, 2015)

This table depicts how frameworks are classified into different competency clusters. The first cluster deals with competencies related to knowledge and skills, critical thinking and innovative capabilities of the graduate. The second cluster focuses on how the graduate relates and work with others, solving conflicts and cooperating. The third cluster draws interest in the inner qualities of the graduate, such as motivation, self-management, positive attitude and integrity. Although the frameworks shown in the table are from different timelines and authors, there seems to be similarity and agreement in the classification of the competencies.

### **2.6.1 University-specific employability framework**

Cole Tibby (2013) writes that the goal of employability framework is to develop a defined, cohesive and a more comprehensive approach to employability. They suggested comprehensive guidelines on developing a graduate employability attributes framework for a university, faculty, or department. The guidelines are divided into four stages, firstly, 'Discussion and Reflection' which involves creating and defining a shared point of reference. Secondly, 'Reviewing and Mapping' what is being done and what ought to be done. Thirdly, 'Action' related to sharing and enhancing existing practice, and finding ways to address gaps in the provision. Finally, 'Evaluating' what does success look like and how is it measured, and determining how practice can be enhanced further. Below are abridged guidelines.

**Table 2. 3: Guidelines for developing university employability framework**

**Stage 1: Discussion and reflection**

Creating and defining a shared point of reference with academic and administrative staff of the university, and stakeholders. A number of issues should be considered:

- a. The need to agree on a working definition of graduate employability that should be operationalized at faculty, department, and course level. This should be accompanied by clear expectations from all stakeholders (lecturers, students, administrative staff, and employers).
- b. Addressing employability responsibilities and activity: employability can be enhanced through the curriculum, co-curricular activity, extra-curricular activities or a combination of the three. Consideration should be made on the models of enhancing graduate employability; the university should be flexible in determining and developing suitable models or approaches.
- c. Discussing Work-based learning, work-integrated learning, and business education as activities that can enhance graduate employability attributes. This should be accompanied by effective employer engagement; and a process for students to reflect on their experiences.

**Stage 2: Review and mapping**

Using agreed points of reference identified at Stage 1, the stage involves the following.

- a. Using the definition/model adopted or created at Stage 1, reflect on the specific attributes of employability that are currently being developed at the university, such as generic skills, subject specific skills, personal development, emotional development. Determine whether these are based on best practices, and if the timing for these activities in curricula is right.
- b. Reflect on how employability activities can be audited. There is a need for an agreed list of graduate employability attributes. These should be made clear to staff and students. Furthermore, enhancing graduate employability should appear in programme learning outcomes, indicating how it will be assessed, and how the impact of employability activities will be measured. Consider formative and summative assessment.
- c. Students should understand how their employability is being enhanced. Therefore, they should be aware of how they are enhancing employability. They should also be encouraged to take ownership of employability process, and should understand that employability learning is transferrable to a range of environments in a workplace.

**Stage 3: Action**

This stage is for translating Stage 2 into activities, actions and outputs. The stage involves addressing gaps identified in stages 1 and 2 discussions. The following should be considered.

- a. The university must determine how these will be addressed, prioritized, and embedded in the programme. In addition determine timescales for addressing the gaps, who will be involved, what are the proposed outcomes, how progress will be monitored.
- b. Furthermore, determine who can provide support externally and internally, how staff can be capacitated through training, benchmarking on best practices, gathering the needed resources, and involving alumni and employers in the process.
- c. This stage also involves sharing the best practices and publicizing the university's work on enhancing graduate employability.

**Stage 4: Evaluate**

This stage is for measuring impact, sharing and research outputs.

- a. It involves reflection on the extent to which the institution has established a defined, cohesive and comprehensive approach to employability. Evidence should be presented.
- b. In addition reflect on whether all members of the institution or faculty have been involved and are fully engaged, and whether the students and employers are aware of the employability approach. Obtain feedback from students, employers and other stakeholders.
- c. Furthermore, impact should be assessed by use of surveys, focus groups, and other suitable methods. Based on the feedback from stakeholders, continue to build on the practices and share best practice with other practitioners, including professional bodies.

(Adapted from Cole and Tibby (2013))

The employability framework guidelines in Table 2.3 can be used at a range of levels from senior university academic management to faculties, schools, and academic departments. However, in terms of translating this process and discussions into practice, subsequent plans should be applied at course level with mapping conducted across the duration of the course (Cole & Tibby, 2013). Although the above guidelines can be further adjusted to fit to a given university, faculty, department or course context, the overall employability approach for each university would differ depending on the outcomes of the above process. The Quality Assurance Agency for Higher Education (2009) advises that approaches to employability and personal development planning should allow for diversity in subject-based approaches while maintaining a coordinated institutional approach. In addition, the approach should ensure an even rate of progress in its implementation across faculties, schools, and departments, to bring about consistency in student experiences, and to enable a more effective monitoring of progress made by students.

### **2.6.2 Developing practical mechanisms of integrating graduate employability attributes into a unit or course**

From the above literature, it has become clear that there is no single method of embedding employability attributes into a unit or course of study. However, for the university to ensure that every student is fully equipped with employability attributes necessary for the workplace, such university should make decisions regarding the attributes that should be highlighted; how the university recognize a meaningful skills progression from Year 1 through to Year 4, how the university ensure that each student

is fully exposed to each attribute, should attributes be assessed separately from the general curriculum, and how the attributes should be assessed (Fallows & Steven, 2000). These questions should lead to the development of tabulated descriptions of the desired outcomes for each of the undergraduate levels. Those involved in the teaching process must consider the best means by which attributes can be learned and demonstrated by students. Not all methods will be applicable to all units in all disciplines. However, regardless of the course content, there should be multiple opportunities at unit and course levels, to provide students with the chance to develop and demonstrate their employability attributes.

According to the Edith Cowan University (2013), while all employability attributes are important, there are likely to be some that are more appropriately developed within the context of a given unit. To embed these attributes in the unit, the lecturer should:

- a. Check that they are captured in the learning outcomes. There might be a need to write a new outcome or revise an existing outcome to incorporate the attribute;
- b. Identify the content areas that would most readily lend themselves to development or use of your targeted attributes;
- c. Consider incorporating some aspect of Work Integrated Learning to enhance the real-world relevance of the attributes;
- d. Develop assessment tasks that will give students opportunities to demonstrate these attributes. Consider what will count as evidence that students' have a particular attribute;

- e. Design teaching and learning activities that will support students to learn and practice these attributes. Encourage reflection and self-awareness of attribute development; and
- f. Meet with tutors to ensure everyone is comfortable with how to teach and support development of the attributes. For example:

*“An Engineering lecturer is reviewing a unit and, while she is pleased with most aspects of her students’ performance, she recognizes that many students are passing the unit without demonstrating good communication skills. The lecturer appreciates that to work as a successful member within this industry, students need to be able to communicate more effectively than they do. She decides to embed communication skills into the design of her unit.” (Edith Cowan University, 2013, p. 5).*

### **2.6.3 Writing a learning outcome for an employability attribute**

Edith Cowan University (2013) urges that when writing a learning outcome, the focus should be on what students will be able to demonstrate. What will they do or show, or create, or say? Such a learning outcome should include a verb that concisely captures what students need to do and some parameters for success. Furthermore, the lecturer should think carefully about the verb that they use, as it should be something that can be assessed. It needs to be quantifiable and observable, with parameters set for success. For example: “the student will be able to effectively engage with new technology by writing and producing a five minute podcast,” is much more specific and therefore more easily measurable than: “the student will understand how to create a podcast.” In the second example, the lecturer needs to give some kind of indication as to how he/she will know

that students understand. It is important to be able to measure a student's progress in a unit and provide clear justification for any grade they receive.

For example:

*The Engineering lecturer has decided that she wants to support her students in developing their communication skills. As there are many aspects to this broad outcome, she thinks more specifically about what aspect of communication she wants them to develop. Given how frequently those in the industry are required to make presentations and speeches, she decides the focus will be on speaking clearly to an audience. Armed with this idea she develops the following outcome: at the end of the unit students will demonstrate sound communication skills by giving an oral presentation using appropriate language, body language and tone (Edith Cowan University, 2013, p. 7).*

#### **2.6.4 Assessment of graduate employability attributes**

At the end of the unit or course, the lecturer should be able to justify the grade assigned to a student. This is easier when sound assessments have been developed to allow the lecturer to determine how well a student has demonstrated a skill or knowledge. Assessing employability skills does not differ from this. The lecturer needs to develop assessment points that allow students the opportunity to best demonstrate their skill development. While a learning outcome states what students should be able to demonstrate, and the assessment task is vehicle through which students will demonstrate the skill.

Often the most useful and engaging assessments are those that require the student to apply skills or knowledge to solve a problem or complete a task that they may come across in the workplace. For example:

*“In the example used earlier, the Engineering lecturer has decided that she will redevelop an assessment point to meet the learning outcome she has designed. The lecturer considers the minor assignment, which traditionally has been a written report about a computer program the student has designed. She now redevelops the assessment piece to include an oral presentation of the program that the student has designed in response to a company directive. She invites an industry contact to attend the formal presentation session and provide feedback to the students”* (Edith Cowan University, 2013:8).

Some universities have developed an assessment rubric for graduate employability.

Below is an example developed by the University of Kent, in the United Kingdom. The rubric measures student competency in the employability attributes that the university considered important for their employability.

**Table 2.4: Example of graduate employability assessment rubric**

Skills Level descriptors	Communication Skills	Research Skills & Critical Thinking	Team work	Planning	Enterprise Skills
Examples	Writing: academic essays & reports, producing publicity Delivering oral presentations: pitching new ideas, public speaking Communication At different levels: canvassing for elections, being a member of the staff/student committee, Communicating in other languages	Completing a Dissertation Conducting Market research Planning an Event Comparing And analysing information	Being a member of student committees And teams Participating In team sports, orchestra, or choir Sharing a flat successfully Staging an event Participating in Various voluntary Community and Enterprise activities	Organising an event Or a placement Meeting deadlines For academic, paid Or voluntary work Balancing study with other responsibilities such as childcare, employment, social and community activities	Creative thinking: Participating in creative Campus events, initiating innovative ideas, willingness to take risks Good communication skills: networking and Making contacts Financial literacy: budgeting, banking
Outstanding 70+	Excellent use of language and communication tool. Clear purpose and structure. Excellent Understanding of audience. Very confident delivery and response to feedback	Excellent ability to find and use appropriate and accurate information. To apply theories, ideas and approaches in creative and scholarly way.	Exceptional motivation & outstanding effectiveness in team role. Substantial evidence of listening to working With & developing others.	Excellent aptitude for working independently, setting goals, schedules and plans, Managing tasks effectively, fulfilling Project aims and Evaluating results	Distinctive work that shows imagination & creativity. Demonstrates substantial initiative, flexibility of approach & willingness to undertake New ventures
Above average 60--69	Good use of language and communication tool. Clear purpose and structure. Good understanding of audience. Confident delivery and response to feedback	Good ability to find and use appropriate and accurate information. To apply theories, ideas and approaches in a scholarly way.	Good motivation & effectiveness in Team role. Good evidence of Listening to working with & developing others.	Good aptitude for working independently, setting goals, schedules and plans, Managing tasks effectively, fulfilling project aims and evaluating results	Good work that shows imagination & creativity. Demonstrates good initiative, flexibility of Approach & willingness to undertake new ventures
Average 50--59	Mostly good use of language and communication tool. Some purpose and structure. Mostly good understanding of audience. Mostly confident delivery and response to feedback	Ability to find and use appropriate and accurate information. To apply theories, ideas and approaches.	Motivation & effectiveness in team role. Evidence of listening to working with & developing others.	Some aptitude for Working independently, setting goals, schedules and plans, Managing tasks, fulfilling project aims and evaluating	Work that shows imagination & creativity. Demonstrates initiative, flexibility of approach & willingness to undertake new ventures
Below average 40--49	Basic use of language and communication tool. Some purpose and structure. Some understanding of audience. unconfident Delivery and response to feedback	Ability to find and use information. To apply theories, ideas and approaches.	Unreliable motivation & effectiveness in team role. Occasional listening to working with others.	Unreliable at working independently, setting goals, schedules and plans, Managing tasks, fulfilling project aims and evaluating	Work that lacks imagination & creativity. Demonstrates limited initiative, flexibility of approach & reluctance to undertake new ventures
Fail 0--39	Poor use of language & communication tool. Muddled purpose & structure. Lack of understanding of audience. Unconfident delivery & response to feedback	Inability to find and use information. No application of theories, ideas and approaches.	No motivation or effectiveness in team role. No evidence of listening to working with others.	No aptitude for working independently, setting goals, schedules and plans, managing tasks, fulfilling project aims and evaluating	Work that lacks imagination & creativity. Demonstrates no initiative or flexibility

(Adapted from University of Kent, 2016)

The rubric presented provides different levels by which employability competencies of students can be measured. However, it is not clear at what stage of university education this assessment is used. Therefore, it is important that the university develops the assessment framework in consideration of the level of students. In addition, the university should provide an allowing environment for all students to effectively acquire the competencies to be assessed. A large component of graduate employability is enhanced through an effectively planned and coordinated work experience. This may be done through work-integrated learning whereby a student learns at the workplace on arranged placement or internship.

### **2.7 Work-Integrated Learning (WIL) as a vehicle for enhancing graduate employability attributes**

Amongst other approaches of enhancing graduate employability, Yorke and Knight (2006) proposed work-based or work-related learning interspersed within the curriculum as key to equip students with attributes necessary for the world of work. This approach includes placements and internships. This approach is most popular and has been advocated for by many universities as they refer it to as Work-Integrated Learning, (Jackson, 2014a).

The concept of WIL has become popular in higher education sector across the globe. Scientific contributions have described WIL as “the practice of combining traditional academic study, or formal learning, with student exposure to the world-of-work in their chosen profession, has a core aim of better preparing undergraduates for entry into the

workforce” (Jackson, 2014a, p. 3). Literature has described WIL as a curriculum design in which students spend time in professional work, or other practice settings relevant to their degrees of study, and to their occupational futures (Smith, 2012). The curriculum is central to the purpose of WIL. This might not be the case with placements or internship where there is no focus on practicing what has been learned into the real world of work (Smith, 2012). The practice of WIL enables students to experience authentic work practices and learn and practice applying skills and knowledge in a real-world context. Forms of WIL include work placements, internships, field work, sandwich year degrees, job shadowing, cooperative education, and service learning (Von Treuer et al.; Clinton and Thomas, (as cited in Jackson, 2014).

Literature has established that WIL, as a vehicle for enhancing graduate employability, has benefits for students, university, and employers. It is suggested that WIL builds student confidence in their workplace capabilities; it provides students with a better understanding of the nature and standard of industry-required skills, and a better appreciation of the world-of-work; graduates that have completed WIL during undergraduate education are better skilled at team working, problem-solving, communication, information literacy and professionalism (Coll et al.; Freudenberg, Brimble & Cameron, (as cited in Jackson, 2014). Other benefits of WIL are that students participating in WIL are encouraged by activities such as reflective journaling, product development, research activities, in a real world of work; WIL promotes certain elements of career self-management; it provides education that responds to present and future needs; it provides learning that is useful to society and not just an addition to students’ disciplinary knowledge base; university enhances its engagement with

community through partnerships with the different industries and community organisations; and university produce more employable and work-ready graduates (Jackson & Wilton, 2016; Smith, 2012).

In addition to the aforementioned benefits, Blackwell, Bowes, and Harvey (2001) notes that WIL brings about a change in teachers' attitudes towards recognizing the importance of work experience arrangements as crucial in developing students' employability attributes; a more relevant curriculum because WIL becomes part of the programme activities leading to improvement of curriculum to address skills and qualities that employers seek in new employees; informed employers, about higher education and the circumstances under which it operates; an employability signal, that graduates who have participated in WIL during university education have advantage during recruitment because of the on-the-job learning experience; and motivating students to achieve higher grades, as they become more aware of career direction, and an appreciation of the benefits of learning. However, Wilton (2014) cautions that there is a need to better understand how students can obtain a good quality work placements that can best contribute to the employability of the student, and to determine how higher education institutions can best help students to obtain such placements. In addition, the Scottish Funding Council (2016) advises that work placement should be mutually beneficial for the student and the employer, challenging them to invest time and knowledge transfer in the future workforce. Placements within any industry should offer the employer reason to engage and to devote time to supporting a student; and while on placement, the student should be supported by university staff. This requires that university staff should establish and maintain strong links with employers. Needless to

say, high quality placements should be developed through partnership between the university and enterprises. In summary, Blackwell et al., (2001) suggest that an effective WIL experiences should have the following characteristics.

**Table 2.5: Characteristics of effective WIL.**

<b>Characteristics of Effective Work-Integrated Learning experience</b>
<p><b>i. Purposefulness</b> - For work experience to be a valuable learning process purposeful, and all stakeholders, that is students, employers, academic staff should appreciate the underlying intentions.</p> <p><b>ii. Quality monitoring</b> -The quality of the work experience is intrinsically relevance, structure, organisation and intentionality. All stakeholders to the process. The quality of work experience is greatly enhanced by: and briefing for all concerned; facilitation of ongoing reflection; reflection and identification of outcomes.</p> <p><b>iii. Accreditation</b> - It can be strongly suggested that for work experience to be taken seriously it needs to be accredited, either towards the programme award or as a separate award of the institution or of an external body.</p> <p><b>iv. Assessment</b> - Summative or high stakes assessment needs to be recognised as fair and trustworthy, which can cause technical difficulties and be costly. Low stakes or formative assessment does not have to meet these standards since it does not yield grades or marks. Consequently, it can be a better basis for a dialogue that can shape the process of learning from work experience and be a means by which ongoing reflection can be supported.</p> <p><b>v. Work experience portfolio</b> - Students should be encouraged to build up a work experience portfolio through which they can substantiate learning claims that they may wish to make. Where they have had a variety of work experiences, then the portfolio can be a means to develop links so the experiences are not seen as isolated pockets of learning. Rather, the learning from one experience may input into the next experience.</p> <p><b>vi. Reflection and articulation</b> - Although students can readily describe their experiences, it is the articulation of what has been learned that is key. That, in turn, depends upon initial purposefulness and then upon regular reflection that involves others. It is enhanced where students are used to thinking metacognitively and have learned routines that help guide their reflection so that it is something more than simply thinking about what has happened.</p>

Adopted from Blackwell et al (2001)

In light of the literature on WIL, it has become evident that the WIL concept has developed into a popular approach to ensure graduate employability. The concept strengthens higher education provision to respond to the needs of the labour market. It

assumes synergy between higher education and the industry. Furthermore, it exposes to the world of work, and fosters them to be lifelong learners so that they can function effectively in a knowledge based economy. Therefore, using WIL as vehicle for enhancing graduate employability will enable higher education to supply employable graduates to the labour market.

## **2.9 Theoretical framework of graduate employability**

The discussion on graduate employability attributes centres around Signaling theory or Screening theory, and Human Capital theory (HCT). The job market Signaling theory is based on the premise that hiring is an investment decision for employers. Employers have to make hiring decisions in conditions of uncertainty by taking into account signals from a graduate (Cai, 2013a). This theory does not provide a link between employers and education providers, and the learning process (Jonck, 2014). Human Capital Theory deals with the relationship between educational attainment and labour market outcomes (Jonck, 2014; Schultz, 1961). It emphasizes that education is the primary economic enabler and essential for participation in the global economy; and it refers to the quality of labour, thus, skills and knowledge of employees, and the value of expected returns in terms of the output it can generate.

Signaling theory (Stiglitz, 1975) deals with principal-agent relationships where asymmetries of information exist and are not easily resolved. Based on this theory, job seekers send signals about their ability level to employers by acquiring certain educational credentials, while employers screen the job applications according to the

signals that the educational credentials transmit. Therefore, educational credentials become a kind of surrogate measure of quality or ability. In this light, education only serves as a tool for job-seekers to signal their inherent ability to employers. In addition, the importance of higher education in labour market outcomes is that it either increases the students' productivity-enhancement skills or signals the graduates' innate abilities to employers. Rospigliosi et al. (2014) write that employers use educational attainment to identify individuals with certain valuable inborn traits that cannot be observed directly. It is argued that education per se does not enhance productivity; rather it is used by employers as a signal about an applicant's potential productivity, including their ability to learn on the job. From this perspective, it is argued that wages rise with education, because more capable individuals experience more utility from education and thus obtain more of it. The attainment of a university degree would send a strong signal to employers that the graduate applicant was highly capable and thus that their initial and subsequent productivity, enhanced by on-the-job training, would be utilised efficiently, due to the employees' assumed high capability (Rospigliosi et al., 2014).

Bailly (2008) explains that the validity of Signalling theory is based on the employer's belief system. This means that individuals use schemas, frames, cognitive frameworks or belief systems to select and process information. Therefore, Bailly described the development of employers' belief systems in three sequential stages. Firstly, an employer has no experience of hiring job applicants with certain types of education credentials. The employer makes recruitment decisions based on his/her initial beliefs about the applicants. Specifically, the employer tends to attribute an anticipated level of productivity to these people depending on the information transmitted by job-applicants'

educational credentials, and then makes recruitment decisions based on that. The information conveyed by the educational credentials can be understood as initial signals. Secondly, after graduates have been recruited, the employer has obtained experience of hiring certain educational credential holders, and then the initial signal effects tend to become less influential. By observing the quality of these recruited graduates, the employer's initial beliefs are adjusted. If the graduates' performance is the same as assumed by the employer before the recruitment, the employer's beliefs will be self-confirmed. Otherwise, the employer will correct his or her beliefs. The process of adjusting employer beliefs will depend on the productivity of graduates. Thirdly, the employer would have found a balanced belief system after successive graduate recruitment experiences. This means that the employer has accumulated enough experience to discover the graduates' 'true' value (Bailly, 2008).

Research on Human Capital theory (HCT) has established that higher education is an investment for productivity in the labour market. The HCT theory explores the concept of investing in people to enhance their value and usefulness (Fincher, 2007). It assumes that individuals invest in themselves to increase future earnings (Weber, 2014). McGuirk, Lenihan, and Hart (2015) suggests that investment in education and training produces innovative human capital, and that firms with innovative human capital are more likely to increase productivity and outputs. Through investment in people, the quality of work improves; individuals acquire returns in the form of additional income, higher wages, greater economic security, and increased employment prospects; and the organization realizes economic benefits (Kaplan & Norton, 2004). Similarly, Cai (2013) argues that education increases individuals' productivity, which consequently enhances

job performance. Moreover, Weber (2014) notes that persons having more education are likely to be in a position to adjust more easily than those with less education. In other words, higher education provides marketable skills and abilities relevant to job performance, and thus the more highly educated people are, the more successful they will be in labour markets in terms of both incomes and job offers.

Melink and Pavlin (2012) state that according to the theory of Human Capital education and training is treated as an investment process which generates a future flow of income. The Ben-Porath Model of human capital assumes that persons with more schooling tend to invest more on job training; those that are significantly engaged in training in one period are likely to do so in the future; those with greater ability or better schooling tend to engage in job training more than others with the same level of schooling; and with an increase in demand for human capital, there is an increase in the rate of return on education and on-the-job training. The evolution of labour market conditions have 'raised the bar' in terms of accessing the job market. Thus the quality of university training is increasingly important for individual future careers (Autor, Levy, & Murnane, 2003).

Several studies have been conducted to establish a relationship between human capital theory and education. An investigation on the effect of education on economic growth in Iran, found out that education had a positive and significant effect on growth. According to this study, 1 per cent increase in higher education leads to 0.55 per cent growth in real output and 1 per cent increase in physical capital has 0.35 per cent growth in real output (Khorasgani, 2008). Rospigliosi et al. (2014) established that log-linear earnings

equations on cross-sectional data from the US Census and found that an additional year of schooling is associated with a net increase of 11.5 per cent in annual earnings, and that a recent study in the UK reported a 6 per cent increase in earnings associated with each additional year of full-time education. In addition, Lin (2003) surveyed the effects of higher education on labour and economic growth in Taiwan from 1965 to 2000; and found that one per cent increase in higher education lead to 0.19 per cent growth in real output. Similarly, Gyimah-Brempong *et al.*, (as cited in Khorasgani, 2008) investigated the relationship between higher education and economic growth in Africa from 1960 to 2000. The results show that in all African countries Human Capital (HC) has a significant effect on economic growth.

It is imperative to note that HC investment was not universally accepted as a justification for the support of higher education. Fincher (2007) states that, some authors theorized that the skills of employees did not matter and the key to better performance was a job competition where the person who was performing the better designed job would always have the most success. Some researchers concluded that a signalling effect exists where employers hire people with advanced education and training because they perceive that those who have achieved a higher level of education are skilled at accomplishing tasks (Fincher, 2007). Both of these theories generally discount the value of education in improving productivity and gained a significant number of proponents.

Although significant studies dismissed these theories, they continued to prompt debate. To this end, Rospigliosi *et al.* (2014) articulates that the debate between human capital and signalling explanations was never really resolved. It proved impossible to devise

empirical tests that could convincingly discriminate between them. This is not to suggest that there is, in reality, little difference between them. It is quite easy to envisage situations where they make contradictory predictions: a young person who is undecided about whether to apply for university or whether to seek a job hears government forecasts of a significant rise in applications to university next year. Will this news make them more or less likely to apply to university? Signalling theory predicts that the young person will conclude that more graduates will push them further down the jobs hierarchy and so will increase the incentive and likelihood of applying for university. Human capital theory predicts that the rise in the number of graduates will depress the “graduate premium,” thereby reducing the incentive and likelihood of applying for university. Rospigliosi et al. (2014) conceded that it has proved difficult to test these theories empirically.

In an attempt to distinguish between the two theories, Roberts (2006) argues that two pieces of evidence are particularly relevant. First, most graduate vacancies are open to graduates of any subject. This suggests that whatever it is that most employers want from graduates, it is not subject-specific knowledge per se. Second, many employers also take A-level results into account in selecting graduates. At first glance, it would seem that these facts shift the balance of evidence away from the HC explanation and towards the signalling explanation. However, this is a misconception based on only part of the story. When other elements are considered, interlink is observed between the two theories. This study proves again that it is difficult to distinguish between the two theories.

Furthermore, Roberts (2006) points out that in order to avoid ‘taken-for-granted assumptions’, at the most basic level, there is an observation that graduate employers do advertise vacancies that specify that applicants must be graduates. It is also observed that in most years most graduate job vacancies are open to graduates of any subject. And it is observed that, on average, employers are prepared to pay a premium to recruit graduates. This raises the question, what do graduate employers get from graduates that they do not get from non-graduates? What is the difference about graduates that makes the difference? The defining difference between graduates and non-graduates is that the former have acquired the knowledge, skills and attitudes of a university education and a proven ability and willingness to learn.

Despite on-going debate about these two theories, Human capital theory has informed this study by way of affirming that students who are better prepared for the world of work, have high employability and are likely to perform and be productive in multiple contexts of the job market. The 21<sup>st</sup> century job market requires graduates with employability attributes that should be acquired during their time at university. Employers demand that graduates are equipped with certain attributes in order for them to be productive. University ensures that the curriculum is responsive to the needs of society, including the labour market. Graduates expect to acquire education that will benefit them beyond university to lead a meaningful and productive life (Roberts, 2006). With these assertions, it is clear that graduate employability attributes fit within the premises of HCT.

To strengthen the alignment of HC theory towards this study, the researcher further concludes that HC theory assumes business and industry as the primary consumer of graduates produced by higher education. It therefore advocates that in order for higher education to remain relevant, there must be an adjustment for the curricula to meet the requirements of an ever-changing labour market (Jonck, 2014). The labour market conditions have evolved from prior decades whereby employees required cognitive skills and routine and non-routine manual abilities; therefore, possessing a high school certificate was a strong display of human capital accumulation to perform a job. At present, individual graduate's success on the job depends more on non-routine analytic and interactive skills (Autor et al., 2003). As such, employers have expressed a need for well-rounded graduates, who are aware of the labour market and business practices. Moreover, graduates should be competent and not just highly specialized in a narrow academic field of study (Mason et al., 2009). Thus, instilling graduate employability attributes at higher education level will ensure graduate preparedness for the labour market. These attributes should be instilled through curriculum design and implementation and through appropriate pedagogical methods.

In conclusion of this chapter, it is pertinent to revisit key points. The working definition of graduate employability attributes is the qualities, skills, knowledge and abilities of university graduates, beyond disciplinary content knowledge, which are applicable to a range of contexts and are acquired as a result of completing any undergraduate degree, and they should represent the core achievements of a university education (Barrie, 2006; Yorke & Knight, 2006). With this understanding, the literature indicates that, firstly, higher education is key in promotion of graduate employability attributes. This is done

through curricula provision applicable in varied approaches and strategies. Secondly, graduate employability benefits the students in terms of acquisition of required attributes in preparation for workplace; it benefits the university by allowing it to develop relevant curriculum enabling graduate employability; it also benefit the employer by receiving graduates that are adequately prepared for the workplace and can contribute more to the development of the industry. Thirdly, some scholars have attempted to develop guidelines which a university can use to develop a graduate employability framework. Fourthly, graduate employability as a practice is dependent on a given context shaped by the labour market. Therefore, findings of research on graduate employability should not be considered universal but as findings for that given context. Many countries and universities have conducted research on enhancing graduate employability for their students. Finally, the notion of graduate employability has gained prominence in the higher education sector. It addresses the need for universities to prepare students to be productive and become competitive in a contemporary world of work. To this end, literature has provided justification for conducting this study on graduate employability in Namibia. There has been a need to investigate the extent to which higher education institutions in Namibia prepares students for the industry, and to determine what strategy can be developed to improve the current situation.

**CHAPTER 3: PERSPECTIVES ON GRADUATE EMPLOYABILITY  
ATTRIBUTES FOR MANAGEMENT SCIENCES GRADUATES**

Romanus Shivoro, R. Kavena Shalyefu and Ngepathimo Kadhila

Faculty of Education,  
University of Namibia

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**Shivoro, R:** (Candidate)

Writing and compilation of manuscript, established methodology, data analysis, preparation of tables and figures

**Shalyefu, R.K:** (Main Supervisor)

Supervised and assisted with editing and co-author of manuscript

**Kadhila, N:** (Co-supervisor)

Supervised and assisted with editing and co-author of manuscript

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## **PERSPECTIVES ON GRADUATE EMPLOYABILITY ATTRIBUTES FOR MANAGEMENT SCIENCES GRADUATES**

### **Abstract**

Universities need to take stock of the current state of graduate employability from both the employers' and the graduates' perspectives if they are to respond effectively to the needs of the industry. Globally, graduate employability is a concept that is becoming increasingly popular in the higher education sector. The underlying assumption is that graduates need attributes other than those skills needed in the subject-specific discipline. This paper provides an assessment of stakeholders' perceptions on graduate employability attributes for management sciences graduates in Namibia. The study applied a survey method, with questionnaires being administered to the three types of stakeholder, namely, employers, lecturers and graduates. The study found a mismatch in responses between these stakeholders regarding the attributes that are important for the job market, those that are emphasised in curricula, and those that graduates need more training on. The argument presented by the paper is that mapping stakeholders' perceptions will enable universities to equip their graduates with employability attributes needed by the industry.

## **Introduction**

Graduate employment patterns seem to have changed worldwide (Tran, 2016). The labour market is inundated with graduates with similar qualifications competing for graduate jobs. In addition, organisations and companies are shrinking their workforce due to unpredictable and inconsistent economies. It is therefore clear that the labour market has become competitive and flexible. These changes have been caused by the expansion of higher education provision, globalisation, and the expansion of the global economy, which are influencing the hiring needs of employers (Al-Harthi, 2011; Cai, 2013; Tran, 2016). For employers, the decision to hire a graduate is based on the graduate's qualities and abilities in addition to discipline-specific knowledge and skills. Brown and Hesketh (as cited in Tomlinson 2008) note that employers are relating the employability discourse to behavioural competence and the wider range of personal, performative and organisational abilities. To this end, universities and students alike have become aware of the changing nature of employment patterns, and are working to incorporate employability attributes in degree programme provision (Cai, 2013). This realisation has led to studies to determine what employability attributes are sought after by employers in a given context.

In Namibia, as elsewhere, employers' concerns about graduate employability attributes have become more pronounced (Links, 2010; National Council for Higher Education, 2011; Schade & Amunkete, 2011). There are claims from various stakeholders, especially employers, that graduates from universities often do not fully possess the types of graduate employability attributes essential for the workplace. Marope (2006)

notes that there is a general impression that diverse employers are dissatisfied with the quality of higher education output. This observation is echoed by the Namibian National Council for Higher Education (2011), which states that university graduates are often not adequately prepared for work, and that the training is not relevant to the needs of the workplace. In reference to higher education, the National Human Resource Plan document has identified a critical challenge facing human resources development in Namibia. This challenge includes the inadequate attention paid to the development of graduate employability attributes, which has a negative impact on the preparedness of university graduates for high-skilled jobs (National Planning Commission, 2010).

Although employers in Namibia have raised concerns about the lack of employability attributes in graduates, no study has investigated the issue of the employability attributes that are important for job performance; those attributes that should be to be included in curricula; and those in which graduates need more training. Therefore, the aim of this article is to analyse the need for graduate attributes in Namibia, as perceived by graduates, employers and lecturers, using the discipline of management sciences as a case. The paper argues that assessing the needs of higher education stakeholders provides an understanding of which graduate attributes should be enhanced by higher education institutions (HEIs) in order to boost employability prospects of graduates.

In exploring the topic of graduate attributes, it is useful to look at the related literature on higher education and the economy, conceptualising graduate employability attributes, stakeholders in graduate employability, and the types of attributes sought after by the labour market elsewhere.

## **University and the economy**

The relationship between university education and the economy, specifically the labour market outcomes, can be well explained using human capital (HC) and signalling theories. Research on HC has established that higher education is an investment for productivity in the labour market (Fincher, 2007; Jonck, 2014). This is supported by Cai (2013:3) who states that “education increases individuals’ productivity, which consequently enhances job performance.” This investment is manifested by an increase in abilities that subsequently increase throughput and growth of organizations. In addition, Weber (2014) notes that persons with more education are likely to be in a position to adjust more easily than those with less education. In other words, higher education avails sought-after capabilities that are relevant for successful execution of tasks. Therefore, individuals who have obtained more knowledge and skills stand a better chance to be more successful in work, and receive better remuneration, and they are more likely to receive more job offers than those with lesser knowledge and skills (Weber 2014). Equipping individuals with more knowledge and skills contributes to the quality of work assigned to them, more rewards in form of income, more employment opportunities, and financial comfort (Kaplan & Norton, 2004). Melink and Pavlin (2012) substantiate that education is an investment process geared towards prospects of better life earnings.

Like HC, signalling theory (Stiglitz 1975 as cited in Cai 2013) assumes a relationship between graduates seeking a job and the employers. Based on this theory, a graduate applying for a job sends a signal of their capabilities to prospective employers, by

showcasing knowledge and skills they have acquired in the university. Prospective employers assess the application to determine graduate's abilities. Therefore, the graduate's portfolio of knowledge and skills is treated as a determinant of quality expected from the applicant. This perspective assumes that higher education is simply an apparatus for graduates to indicate the capabilities they possess, to those that are hiring. Rospigliosi, Greener, Bournier and Sheehan (2014) write that the industry identifies individuals with innate marketable qualities that are hard to observe, by looking at their educational achievements. This view regards education as a window to observe graduates inborn qualities rather than a process of developing knowledge and skills that are needed for productivity in the industry. Therefore, a higher education qualification is a strong indicator of the job-seekers innate abilities and projected labour market outcome.

The two views on the relationship between higher education and the labour market have provided justification for the importance of graduate employability attributes. Graduate attributes are necessary in the 21<sup>st</sup> Century, taking cognisance of the knowledge economy, globalisation and the ever-changing conditions of the labour market (Yorke, 2006). Therefore it is important that universities in general and in Namibia in particular align learning provisions to meet the needs of the labour market by enhancing employability attributes. Conceptualising graduate employability therefore warrants deeper scrutiny.

### **Conceptualising graduate employability attributes**

Graduate qualities and skills are conceptualised differently by different universities and higher education systems. Terminologies commonly used are words such as

transferrable skills, key skills, soft skills, generic attributes, employability skills, key competencies, core skills, and underpinning skills. In most cases, these terms are used interchangeably to refer to graduate employability (Tempone et al., 2012).

The concept of graduate employability encompasses a simplistic and holistic view on the qualities of a graduate in a community. According to Hillage and Pollard (1998:2) “employability is the ability to gain initial employment, maintain employment and obtain employment if required.” Bowden, Hart, King, Trigwell and Watts (2000) as cited in Bridgstock (2009:32) go further to add the contribution of a graduate to the profession and the community: “the qualities, skills and understanding a university community agrees its students would desirably develop during their time at the institution and, consequently, shape the contribution they are able to make to their profession and as a citizen.” Yorke (2006:8) provides a more abstract definition of employability as “a set of achievements that comprise skills, understanding and personal attributes that make an individual more likely to secure and be successful in his/her chosen occupation to the benefit of him/herself, the workforce, the community and the economy.”

Employability is comprised of two main aspects: subject or discipline-specific skills, and transferrable skills. Wickramasinghe and Perera (2010) assert that subject skills are more relevant to one’s career as they are discipline-specific knowledge and skills. They add that transferable skills refer to certain personal abilities of an individual which can be taken from one job role to another and used within any profession at any stage of his/her career. However, Barrie (2006) provides a conceptualisation that has been considered as

a lens for understanding the concept in this paper, as they view graduate attributes as the attributes that graduates have acquired at university in addition to discipline-specific knowledge, which may be applied to varied contexts. Literature has not provided one agreed definition of graduate employability, therefore this paper is written from the perspective of the latter conceptualisation.

### **Key stakeholders in the graduate employability discourse**

In different parts of the world studies have been conducted to ascertain the perceptions of students and/or graduates, lecturers and employers in industry. Some studies have focused on individual stakeholders, some a combination of two, and others a combination of the three types of stakeholder. What follows is a review of the literature related to graduate employability stakeholders.

#### *Students/graduates*

The inclusion of students/graduates in the employability discourse is important as these are the key stakeholders in employability. As (Tymon, 2013) asserts, they are the primary recipients of employability attribute development and their views are therefore vital. It is thus necessary to ascertain whether their views on employability attributes are similar to or different from other employability stakeholders. Research has established that in the crowded and competitive graduate labour market, students and graduates are aware that the role of their academic qualifications in shaping employment outcomes is declining (Tomlinson, 2008). Graduates are becoming increasingly aware that they need to add value by acquiring employability attributes that give them a competitive edge in

the industry. In addition, graduates recognise the importance of graduate attributes developed through the university curriculum. Most students and graduates place particular importance on personal qualities (Crebert, Bates, Bell, Patrick, & Cragolini, 2004; Moreau & Leathwood, 2006). In his study, Brown (2007) indicated that students have expressed confidence that their curriculum enhances a combination of relevant employability attributes necessary for job performance. Given the above, the general position is that students leave university with high hopes that the skills and attributes they have acquired at university are those that are sought by employers. However, it is important to establish whether graduates' views are in line with those of employers.

### *Lecturers*

As stakeholders in the concept of graduate employability, academics in various universities have presented their views on graduate employability. A study by Morrison (2014) indicates that lecturers' views are that employers expect higher education institutions to provide graduates with employability attributes, specifically, critical thinking, ability to articulate, and self-confidence. The lecturers in this study expressed the opinion that graduates have poor standards of written communication than would be expected of university graduates. This is in contrast with Ahmadl, Suhaili and Shariati (2015), whose study found that lecturers perceive that the highest level of employability attributes that graduates leave university with is communication skills, followed by information management, leadership, teamwork and, lastly, professional ethics. Contrasting results are a common occurrence in graduate employability research. In a study by Lowden, Hall, Elliot and Jon (2011) on the perceptions of higher education institutions, a list of graduate employability attributes and characteristics was generated

including communication skills, taking initiative, working independently, creativity and problem solving, time management, networking, presentation skills, systems thinking, leadership skills, self-confidence, enthusiasm, and work ethics.

### *Employers*

Like graduates and lecturers, employers in different countries have offered their perspective on graduate attributes. In scoping interviews with employers, (Wimalasiri, 2015) found that specific roles in a workplace require a combination of different transferable skills. Such qualities and attributes are working in teams; solving problems; managing oneself; good understanding of business; literacy and numeracy skills that are relevant to the graduate's key areas of responsibility; ICT knowledge; good interpersonal and communication skills; taking initiative, being receptive to guidance; and leadership skills. While some employers found graduates to be highly competent in personal qualities and skills (Wye & Lim, 2009), others found a high mismatch in attributes such as critical analysis, planning, problem solving, ability to articulate, decision-making, and negotiation skills (Lowden et al., 2011).

Although prior to this study no study had been conducted in Namibia to determine attributes that are desired by the labour market, employers in other countries have prioritised and ranked employability attributes. For example, employers in Malaysia ranked personal qualities and interpersonal skills as highly important, and systems thinking and technology skills of lower importance (Husein, Mokhtar, Ahmad, & Mustapha, 2010; Omar et al., 2012). In New Zealand, Hodges and Burchell (2003) found that employers' top five preferences are ability and willingness to learn; teamwork and cooperation; interpersonal communication; customer service orientation; and order,

quality and accuracy. The same goes for the United Kingdom as Martin, Villeneuve-Smith, Marshall and Mckenzie (2008) list time-keeping skills, literacy skills, numeracy skills, enthusiasm and commitment, communication skills, and personal presentation skills as attributes most sought after by employers. In Australia, a study by Tempone et al. (2012) suggested that communication, teamwork and self-management are most critical for graduates.

Although there seems to be agreement to a certain extent, the information presented here is isolated as it does not provide a direct comparison of graduates, employers and academic staff in a given profession or country. In an attempt to provide a comparison between stakeholders in one context, Rosenberg, Heimler and Morote (2012) found out that in that specific context, graduates scored leadership and work ethics as the most important skills needed for job performance. This differs from those of HEIs and employers who scored lower on this dimension. HEIs indicated that interpersonal skills are most needed for job performance, while employers perceive literacy and numeracy as most needed for job performance. Thus there is clearly a gap between attributes that are perceived to be important by employers, graduates and HEIs. This is affirmed by Griesel and Parker (2009), who concluded in a study in South Africa that graduate employability competencies enhanced by universities are in many ways incongruent with the requirements of the contemporary labour market. Given the difference in desired graduate employability attributes in other countries, it is appropriate to conclude that the labour market needs for attributes are contextual. Therefore, this study is significant in determining the perspectives of employers, HEIs and graduates so that concerted efforts can be made to synchronise graduate skills with the needs of the labour market.

## **Types of graduate employability attributes**

The literature on graduate employability has generated varying lists of the graduate attributes presumably required by the labour market. Although the lists differ in terms of categorisation and prioritisation of attributes, there does seem to be a certain degree of similarity.

**Table 3. 1 Examples of employability attributes in literature**

Middlesex University (2003)	AgCAS (2005)	Heitmann (2003)	Markes <i>et al.</i> (2004)	DfEE (2000)	HEA Engineering Subject Centre (2005a)
<ul style="list-style-type: none"> <li>• Personal and career development</li> <li>• effective learning</li> <li>• communication</li> <li>• teamwork</li> <li>• IT and</li> <li>• numeracy.</li> </ul> <p>Further surveys have shown that at the top of this list (which usually emphasises</p> <ul style="list-style-type: none"> <li>• teamwork and</li> <li>• written and oral communication) is</li> <li>• imagination and Creativity</li> </ul>	<p>The ability to analyse information critically and produce creative solutions to problems:</p> <ul style="list-style-type: none"> <li>• communication and customer-facing skills</li> <li>• initiative-taking</li> <li>• ability to work on your own and in a team</li> <li>• computing skills and technical skills (CAD), visual and spatial awareness (added to these are: foreign language and international mobility, knowledge of industrial processes and techniques, 3D conceptual ability, commercial awareness, coping with pressure and deadlines as well as project management, time management and effective negotiating skills).</li> </ul>	<p>Personal and professional skills and attributes:</p> <ul style="list-style-type: none"> <li>◦ engineering reasoning and problem-solving (with 5 sub-skills)</li> <li>◦ experimentation and knowledge discovery (4 sub-skills);</li> <li>◦ system thinking (4 sub-skills)</li> <li>◦ personal skills and attitudes (7 sub-skills and attitudes)</li> <li>◦ professional skills and attitudes (4 sub-skills and attitudes)</li> </ul> <p>2. Interpersonal skills:</p> <ul style="list-style-type: none"> <li>◦ Team working skills (5 sub-skills)</li> <li>◦ Communication skills (6 sub-skills).</li> </ul> <p>Plus 32 conceive, design, implement and operate sub-skills under 6 headings. (66 skills under three headings in total).</p>	<ul style="list-style-type: none"> <li>• Key skills (communication, IT, working with others, application of number, improving own learning and performance, problem solving)</li> <li>• Personal and professional development skills (self-management, Organisational management, interacting with others, professional conduct/awareness, intellectual skills)</li> <li>• Technical skills (core skills: tendering, managing costs, project management, technical reports, technical drawings)</li> <li>• Personal attributes (Adaptability, assertiveness, creativity, initiative-taking, motivation and resilience).</li> </ul> <p>Software RAPID – developed by Loughborough University: 62 skills in total.</p>	<ul style="list-style-type: none"> <li>• Oral communication</li> <li>• teamwork,</li> <li>• self-confidence (although, in fact this a personal attribute)</li> <li>• Self-motivation and presentation.</li> </ul> <p>Essential skills:</p> <ul style="list-style-type: none"> <li>• networking,</li> <li>• taking initiative,</li> <li>• creativity</li> <li>• the ability to establish collaborations</li> <li>• negotiating and research</li> </ul> <p>Important skills: strategic planning skills, time management and IT skills.</p> <p>Most important skills (with highest scores) for course development:</p> <ul style="list-style-type: none"> <li>• communication</li> <li>• initiative and</li> <li>• Self-confidence.</li> </ul> <p>Skills of lower importance (with lowest scores):</p> <ul style="list-style-type: none"> <li>• oral communication</li> <li>• self-promotion</li> <li>• time management and IT</li> </ul>	<ol style="list-style-type: none"> <li>1. Effective communication (77%)</li> <li>2. Teamwork (75%)</li> <li>3. Ability to solve problems (62%)</li> <li>4. Analytical skills (59%)</li> <li>5. Flexibility (58%)</li> <li>6. Numeracy (42%)</li> <li>7. Use of IT (20%)</li> </ol> <p>A later survey (1994) ranks personal skills/attributes as</p> <ol style="list-style-type: none"> <li>1) willingness to learn</li> <li>2) commitment</li> <li>3) reliability</li> <li>4) self-motivation</li> <li>5) teamwork</li> <li>6) communication.</li> </ol> <p>Employers' skills for employability are then presented separately as:</p> <ul style="list-style-type: none"> <li>• team working,</li> <li>• self-reliance; the ability to manage own learning and recognise professional development needs</li> <li>• management processes (such as problem-solving and decision-making, negotiating).</li> </ul>

(Adopted from Markes, 2006)

The graduate employability attributes presented in Table 1 show that different agencies and universities prioritise attributes differently. Table 1 shows a considerable variation in the prioritisation of attributes. While some providers consider communication a priority, others lean toward critical thinking and teamwork. Therefore, it could be cumbersome for the higher education system to have an agreed framework. The table also shows that some attributes might be the same but worded differently. For example, ‘self-motivation’ could be the same as ‘ability to work on your own’, or ‘self-management’. It is important to consider that although the wording of attributes might vary the meaning might be the same. That being said, there is no substantial difference in the attributes presented in the table but the prioritisation of the attributes differs.

The varied lists of employability attributes have been amalgamated into eight dimensions, that is, “basic literacy and numeracy skills, critical thinking skills, leadership skills, management skills, interpersonal skills, information technology (IT) skills, systems thinking skills, and work ethics” (Rosenberg et al., 2012:8). The explanation provided below is taken from Kennedy (2010); Rosenberg et al. (2012) and Schermerhorn (as cited in Rosenberg et al. 2012). These are explained as follows:

*Basic literacy and numeracy* – It includes reading, writing, speaking, listening and performing basic mathematical calculations. Graduates are competent to read when they are able to construe and understand written information. Writing refers to the competency to convey one’s views or ideas through written material such as memos and reports. Numeracy skills refer to the competency of using diverse mathematical procedures to provide solutions.

*Critical thinking* – refers to using intellectual or reasoning to bring about a needed change. Is needed in decision-making and addressing challenges and making the best out of challenging situations.

*Management* – include the ability to plan, organise, coordinate, facilitate activities to achieve pre-determined objectives.

*Leadership attributes* – the ability to motivate and positively influence others to achieve organisational goals. Graduates should develop and lead individual or team activities, address challenging situations arising in the course of the implementation of activities.

*Interpersonal attributes* – refers to graduate's competency to relate positively with other members of the group, support other team members' learning, manage conflicts, and perform well in a culturally diverse environment. It also include the ability to work comfortably with members of the team at different levels of an organization.

*Information technology (IT)* – refers to the use of technology that contributes to the effective execution of tasks. This includes the ability to use computer devices and applications to communicate and execute tasks.

*Systems thinking* – refers to the ability to comprehend interface of systems such as functions of different departments in an organisation, or linkages between applications within a computerized system, different subsets of society in relation to political and socio-economic setup, including the economics of the world.

*Work ethic* – includes the graduate's attitude and character towards the job. This includes being present, beginning work on time, enthusiasm, completing assigned tasks

on time, trustworthiness, tolerance, reliability, professional conduct, and eagerness to learn and further the career.

These employability attributes seem to be congruent, less complex, easy to explain, and more generally agreed upon by various authors. Therefore, this paper's quest – to determine stakeholders' perspectives on employability attributes in Namibia – has been aligned to the above dimensions.

## **Methodology**

A quantitative approach using a survey method was employed (Creswell, 2003). A questionnaire adapted from Rosenberg et al. (2012), containing 51 items, was administered to management sciences graduates from HEIs in Namibia who had less than two years of employment after graduation, management sciences lecturers, and employers. The questionnaire contained demographic questions as well as those to obtain nominal data using a five-point Likert scale (strongly agree, agree, neutral, disagree, and strongly disagree). The reliability of the questionnaire was tested using Cronbach's alpha (score of .925), indicating that reliability is excellent. The study employed a purposeful sampling technique to select management sciences graduates and lecturers from HEIs in Namibia. The study further employed snowball sampling to select employers of these graduates. The sample size for each group was determined using a sampling table calculated with the Krejcie and Morgan formula  $s = \frac{X^2 NP(1-P)}{d^2 (N-1) + X^2 P(1-P)}$ . The formula was found to be the most appropriate as it has a 95% confidence level, and a 5% margin of error (Krejcie & Morgan, 1970a). Using the

formula, the researcher distributed survey questionnaires to 135 graduates, 35 lecturers, and 50 employers. Of these, 80 completed questionnaires were returned by graduates, 23 by lecturers, and 39 by employers.

Data were analysed with the help of IBM Statistical Package for Social Sciences (SPSS) version 24. Analysis was done in the form of descriptive statistics using frequencies and percentages. Categorical variables were also generated to ascertain the difference in responses between the groups of participants, i.e. lecturers, graduates and employers.

## **Results and discussion**

The results are presented in summaries of percentages for each of the eight categories of graduate employability attributes as follows:

### ***Basic literacy and numeracy attributes***

Results on basic literacy and numeracy attributes indicate that 90% of graduates and employers perceive these attributes to be important for job performance, compared to about 70% of management sciences lecturers. Graduates and employers also strongly agree that these are included in the curriculum. Although less than 50% of the graduates indicated that they need remedial training in this attribute, about 75% of lecturers and employers thought that graduates do indeed need remedial training in this attribute. Graduates think they need less training than do employers.

### ***Critical thinking attributes***

Ninety per cent of graduates and employers share the opinion that critical thinking is needed for graduate job performance, compared to only 63% of lecturers. This shows a

difference in opinion between employers and lecturers. Only 50% of the lecturers are in agreement that critical thinking is emphasised in management sciences curricula in Namibia. This shows uncertainty as to whether critical thinking is indeed emphasised in curricula. Both lecturers and employers (70%) considered that graduates need more training on critical thinking after graduation. This is in contrast to the opinion of less than 50% of graduates.

### ***Interpersonal attributes***

Interpersonal attributes were considered essential for job performance by graduates and employers with 96% and 87% respectively, while more than 30% of lecturers did not consider these as important for job performance. Moreover, only 50% of management sciences lecturers were certain that interpersonal attributes are emphasised in management sciences programme curricula. More than 60% of employers and about half of graduates and lecturers indicated that more training is required in this attribute.

### ***Leadership attributes***

About 43% lecturers did not agree that leadership attributes are needed by graduates to perform in their jobs. By contrast, just less than 10% of the graduates and employers shared this opinion. Half of the lecturers indicated that the curricula do not emphasise leadership attributes. About 70% of employers indicated that more leadership training is required, while just over half of graduates did not think that they need more leadership training.

### ***Management attributes***

Only 4% and 10% of graduates and employers respectively, and more than 40% of lecturers thought that management attributes are not needed for graduate job performance. However, 85%, 60% and 75% of graduates, lecturers and employers,

respectively, indicated that the curriculum does include management aspects. This shows that there are more employers who think that the university can do more to enhance management attributes. About 60% of lecturers and 75% of the employers opined that graduates need more training on management skills.

#### ***Information technology attributes***

Respondents indicated that IT skills are needed for graduate job performance. Specifically, 91% of graduates, 73% of lecturers, and 75% of employers were in agreement. Respondents also agreed that to a certain extent, the curricula place an emphasis on IT. However, about 85% employers indicated that more training is required in this regard, with 61% of lecturers and 55% of graduates being in agreement.

#### ***Systems thinking attributes***

Close to 90% of employers were certain that graduates need systems thinking attributes to excel in their jobs, with 82% of graduates and 60% of the lecturers agreeing. Less than 60% of the lecturers indicated that systems thinking training is included in curricula and more than 80% of the employers thought that more training in this attribute is required when graduates enter the workforce.

#### ***Work ethics***

Only about 60% of the graduates and 66% of the lecturers considered work ethics as important for job performance. Employers seem to consider this attribute more important than lecturers and graduates, with 81% indicating the importance of work ethics. Less than 60% of the lecturers and graduates indicated that work ethics are included in management sciences curriculum. More lecturers (74%) and employers (72%) called for more training on work ethics, with half of graduates being in agreement.

In general, lecturers are not assertive with regard to attributes that are important for job performance and are uncertain whether the curricula does indeed emphasise such attributes. However, they were of the opinion that more training should be provided to graduates. The graduates felt that they needed less remedial training in all attributes and rated themselves very highly as compared to lecturers and employers. They thought that the attributes they possess had been acquired as a result of their participation in the degree programme. On the other hand, employers expressed a strong position in terms of the importance of employability attributes for job performance and asserted that graduates need more remedial training in the graduate attributes.

### **Prioritisation of graduate employability attributes needed by management sciences graduates**

The Table 3.2 shows how respondents prioritised the graduate employability attributes needed in management sciences curricula.

**Table 3. 2: Ranking of attributes by importance for job performance**

<b>Rank</b>	<b>Graduates %</b>	<b>Lecturers %</b>	<b>Employers %</b>
1	Interpersonal 95.8	IT 72.8	Management 90.3
1	Management 95.8		
2	Literacy and Numeracy 94.6	Literacy and numeracy 68.2	Critical thinking 89.0
3	Critical thinking 94.2	Interpersonal 67.1	Systems thinking 88.7
4	Leadership 93.9	Work ethics 66.2	Literacy and numeracy 87.0
5	IT 90.8	Critical thinking 63.5	Interpersonal 86.8
6	Systems thinking 81.6	Systems thinking 59.1	Leadership 85.7
7	Work ethics 59.1	Leadership 56.6	Work ethics 81.1
8	-	Management 55.0	IT 74.6

Both graduates and employers considered management attributes highly important, while lecturers prioritised IT as most important. Graduates further prioritised interpersonal attributes. The least important attributes were rated by graduates as work ethics, lecturers as critical thinking, and employers as IT. This ranking of attributes depicts the mismatch in priorities between stakeholders.

### **Other important employability attributes**

The questionnaire included an open-ended question for respondents to add any other attribute that they perceived to be important for job performance and that should be emphasised in management sciences curricula. Table 3.3 contains the attributes generated by respondents.

**Table 3. 3: Graduate employability attributes generated by employers, lecturers, and graduates**

Employers	Lecturers	Graduates
Availability	Communication	Accountability
Being organised	Ethical standards	Attentiveness
Challenging	Honesty	Availability
Creativity	Innovation	Benevolence
Decisiveness	Personal development	Cash handling
Diligence	Positive attitude	Commitment
Flexibility	Research skills, SPSS	Confidence
Innovation	Respect	Confidentiality
Paying attention to details	Taking responsibility	Cooperation
Self-control		Creativity
Taking responsibility		Decisiveness
Tolerance		Dependability
		Determination
		Diligence
		Endurance
		Energetic
		Flexibility
		Integrity
		Leadership
		Mediating
		Innovation
		Networking
		Obedience
		Open mindedness
		Openness
		Orderliness
		Organising
		Patience
		Personal development
		Planning
		Presentation skills
		Public speaking
		Punctuality
		Record management
		Reliability
		Responsibility
		Self-control
		Self-respect
		Software training
		Stress management

From Table 3.3, there seems to be areas of similarity. Specifically, employers, lecturers, and graduates listed innovation as an important aspect. This implies that the university should teach students how to be innovative. Another attribute held in common is taking responsibility for outcomes. To a large extent, graduates seemed to be more aware of what employers want than the lecturers. The lists generated above are similar to lists generated by studies elsewhere, which provokes the question of whether employability attributes for management sciences are universal.

## **Conclusion**

The aim of the paper was to provide an analysis of the graduate attributes needed in Namibia as perceived by graduates, employers and lecturers, using the discipline of management sciences as a case. The paper focused on graduate employability attributes, which are qualities and skills beyond the subject-specific skills. Employers have expressed concern over the lack of these attributes among the graduates in Namibia. The first step was then to determine the perceptions of the stakeholders using a survey.

The findings have indicated a mismatch between the perceptions of the stakeholders with regard to the graduate attributes that are needed for job performance, those that are emphasised in curricula, and those in which graduates will require more training. A difference was found in the priorities of employers, HEIs and graduates regarding employability attributes. This means that HEIs in Namibia are not responding to the hiring needs of the management sciences labour market because they are not emphasising the development of employability attributes. As a result, apart from disciplinary knowledge, graduates leave university with inadequate training on employability attributes. The role of higher education is to produce graduates that can perform well in a 21st century workplace, which means that employability attributes should be emphasised. Graduates would like to leave university with the attributes needed by the contemporary labour market so that they can become productive members of the workforce, which will eventually lead to a competitive national economy.

This study has brought to light the employability attributes sought after by employers. HEIs should align curricula to enhance these attributes by working together with

employers during curriculum development. Moreover, students should be sensitised as to which attributes are sought after by employers. The paper argued that assessing the needs of higher education stakeholders provides an understanding of the scenario of graduate employability in a given context. Accordingly, the graduate attributes which should be enhanced through curricula were identified. This awareness may promote the need for HEIs and employers to engage and play a complementary role in developing graduate employability. Further research should determine how employability attributes are embedded in curricula and what possible approaches can be developed to enhance the required attributes in the curricula of management sciences. Furthermore, future research should assess whether graduate employability attributes for management sciences are universal across countries.

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**CHAPTER 4: EMBEDDING GRADUATE EMPLOYABILITY ATTRIBUTES  
IN MANAGEMENT SCIENCES CURRICULA: A CASE OF TWO  
NAMIBIAN UNIVERSITIES**

Romanus Shivoro, R. Kavena Shalyefu and Ngepathimo Kadhila

Faculty of Education,  
University of Namibia

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**Statement of contributions of joint authorship**

**Shivoro, R:** (Candidate)

Writing and compilation of manuscript, established methodology, data analysis,  
preparation of tables and figures

**Shalyefu, R.K:** (Main Supervisor)

Supervised and assisted with editing and co-author of manuscript

**Kadhila, N:** (Co-supervisor)

Supervised and assisted with editing and co-author of manuscript

This Chapter is a copy of the journal paper referred to above.

# **EMBEDDING GRADUATE EMPLOYABILITY ATTRIBUTES IN MANAGEMENT SCIENCES CURRICULA: A CASE OF TWO NAMIBIAN UNIVERSITIES**

## **Abstract**

Recognising implicit employability attributes within discipline-specific programme modules must be part of the process of developing new employability modules for curricula in management sciences. The notion of graduate employability has gained popularity in the higher education sector across the world. Higher education and industry appear to have reached consensus on the importance of enhancing graduate attributes through curricula provision at university. This article offers a qualitative analysis of curricula documents to determine strategies that are effective in enhancing graduate employability. Using content analysis to assess six bachelor degree programmes in management sciences from selected universities in Namibia, the study established that in addition to work-integrated learning modules in curricula, there is evidence of graduate employability attributes implicitly embedded in core curricula and discipline-specific modules. The researchers argue that universities should develop a stand-alone core module specifically to cultivate employability attributes. This should be supported by multiple work-integrated learning experiences for students to practice technical or discipline specific skills and generic employability attributes.

Key words: Employability attributes, content analysis, implicit employability, graduate attributes, work-integrated learning

## **Introduction**

The notion of enhancing graduate employability through curriculum provision has become popular in the higher education sector across the world. Higher education institutions (HEIs), employers and graduates are in agreement that graduates need other attributes in addition to subject-specific knowledge and discipline (Andrews & Higson, 2008; Weligamage, 2009). As a result, universities are placed under pressure by the labour market to demonstrate that they are effectively and efficiently equipping students with employability attributes to meet the demands of the 21<sup>st</sup> century (Barrie, 2006). In Namibia, the labour market has expressed concerns about graduates' readiness for the world of work (Links, 2010; Schade & Amunkete, 2011). Specifically, employers claim that graduates from HEIs in Namibia do not all possess the types of graduate employability attributes necessary for employment. In addition, Namibia's National Council for Higher Education (2011) has claimed that graduates are not adequately prepared for work, and that their training is not relevant to the demands of the work place. This sentiment is echoed by Kanyenze (2012), who argues that there is a mismatch between skills demanded and skills provided, and a lack of coordination between producers of knowledge and users of skills in Namibia.

To date, research on graduate employability has produced varied lists of employability attributes required in the contemporary workforce (Markes, 2006). Rosenberg, Heimler and Morote (2012) synthesised these attributes into eight categories; literacy and numeracy, interpersonal attributes, work ethic, leadership attributes, information technology, critical thinking, systems thinking, and management attributes. The task at

hand for higher education is to determine the best strategies for effective and efficient delivery of these attributes to students.

Despite the labour market's expectation that higher education will demonstrate how to enhance graduate employability, there seems to be no agreement as to which approach would provide sufficient opportunities to enhance the required attributes. Yorke and Knight (2006) suggest that employability can be fostered through a range of curriculum levels. They further assert that one size does not fit all institutions and/or disciplines as far as employability is concerned.

The aim of this paper is therefore to analyze how employability attributes have been incorporated into the curricula of management sciences, using two Namibian universities as a case, and to assess which approach might be the best in fostering graduate employability. The argument presented here is that universities should develop a stand-alone core module on graduate employability. This module should be supported by work-integrated learning at different stages of the curriculum.

### **Strategies for enhancing employability attributes in higher education**

The sole purpose of teaching graduate attributes is to enhance graduates' skill sets in order to enhance their work-related skills (Sarkar, Overton, Thompson & Rayner, 2016) and thereby boost their competitiveness in the job market (Jonck, 2014; Mason, Williams & Cranmer, 2009). Several researchers have voiced opinions on strategies that might enhance graduate employability. For example, Saunders and Zuzel (2010)

established that the current trend of enhancing graduate employability is to incorporate opportunities for employability skills alongside subject-specific knowledge and skills. This means that the programme of study is separate from graduate employability intervention. In contrast to this strategy, Mason et al. (2009) and Bhola and Dhanawade (2013) observe that some universities have adopted the strategy of integrating graduate employability into programmes of study. Here, employability is built into the programme, alongside the specific learning outcomes of the degree programme. These strategies include offering work experience, work-related learning and employability skills modules, and 'ready for work' events, as well as involving employers in course design and delivery. This is a rather general view of possible employability enhancing opportunities, without elaborating on the specific details of the benefits to either academics or students who are participating in these experiences.

Authors such as Jackson (2014), Pillai, Khan, Syahirah and Raphael (2012a) and Gardner (1998) have suggested that, in their efforts to create opportunities for enhancing students' workplace readiness, academic staff should highlight opportunities to develop graduate employability attributes in their courses, rather than regarding skills classes as single, one-off experiences. In addition, they should be more involved in experiential programmes such as providing opportunities for student reflection on experiences, and should set rigorous standards and evaluation criteria for internships/work-based placements. Furthermore, academics should seek to engage students in contextual situations (for example, community projects). Such an approach would encourage students to reflect on their experiences, skills acquisition and application of education or academic training to future work and life situations. This suggests that employability

should be built into an existing module or course so that the skills are contextualised. This aspect calls for a rigorous engagement between student and lecturer while students are on internship placements. It also requires that academics follow the students to the workplace. Gardner (1998) argues that the challenge is to incorporate such opportunities in incremental stages in the intellectual, professional and personal development of university students.

### **Levels at which graduate employability could be embedded in the curriculum**

Work on embedding employability attributes in the curriculum was initiated by Yorke and Knight (2006). They suggested five levels at which employability could be fostered in the curriculum, either explicitly or implicitly. The first level is employability throughout the entire curriculum. At this level, each student is required to demonstrate eight broad abilities at progressively more complex levels in both general education and the specialist subject (s) he or she has chosen. The abilities are: communication (reading, writing, speaking, listening, and visual, quantitative, and technological skills), analysis, problem solving, decision-making, social interaction, global perspectives, effective leadership, and aesthetic responsiveness. Here, subject understanding is blended with skillful operational practices. Owens and Tibby (2014) provide the example of the Staffordshire Graduate Employability Project (SGEP), a university-wide undergraduate programme on employability focusing on attributes such as discipline expertise, professionalism and professional integrity, global citizenship, communication and teamwork, reflective and critical learning, and lifelong learning. These attributes are

embedded in the whole curriculum, with a clear acknowledgement of the need for preparation for employability to be central to all programmes and courses.

The second level is employability in the core curriculum: a university may opt to designate a module or two as vehicles for the development of employability attributes. Kemp (2009) studied a case of a module that was designed to enhance employability. The case study provided evidence for the possibility of developing an employability profile that focuses on enhancing specific practical experience using a single module, while at the same time strengthening basic employability attributes. Another case is provided by Jackson (2013), who discusses a learning module dedicated to developing employability skills in a business context. The module has four units that are core to the Bachelor of Business programme. In this example, each of the four units seeks to enable students to acquire a variety of employability skills through practical experience in a business context.

The third level occurs when work-based or work-related learning is interspersed throughout the curriculum. This model is regarded as a contributor to employability. This includes placements of various periods, ranging from shorter periods to one-year placements. Research has provided evidence of greater self-confidence and awareness of the challenges to be faced in the world of work and so on as a result of such placements. Students are required to complete a period of work experience and produce a report for both the workplace and the academic tutor. Many universities credit work-based learning as part of their curricula. An example of this level is provided by Pillai, Khan, Syahirah and Raphael (2012) in their discussion of an industrial training programme at

the University of Malaya in Malaysia. Students receive feedback sessions with lecturers and workplace training providers on skills gaps and mismatches in the workplace, as well as receiving continuous input from the workplace. In such a model, effective collaboration between academic staff and practitioners supervising students at work is essential. Kettis, Ring, Gustavsson and Wallman (2013) suggest that interaction by higher education institutions with employers through placements enriches both parties, that is, academic staff at university and supervisors of students at placements. Academic staff gains insight into practice, which may inspire teaching on campus, for instance by generating real life examples that trigger students' motivation and inform curriculum design.

At the fourth level, employability-related modules are situated within the curriculum. These modules develop the students' skills at the beginning of their programme of study as they focus on freestanding skills. These modules are based on the assumption that if students are able to develop their personal autonomy in studying at the beginning of their studies, this will have long-term benefits. At this level, the university may develop a suite of modules designed to engage first-year students in a learning experience aimed at equipping them with the skills needed to meet the challenges of creativity and innovation (Quality Assurance Agency for Higher Education, 2009).

The final level is work-based or work-related learning in parallel with the curriculum. This occurs when students are employed part-time while they are studying. Part-time employment could provide an experiential base for the academic study of employment-related disciplines. Tran (2016) notes that this is a form of university-enterprise

collaboration or partnership that involves work-based learning degree programmes/sandwich courses. This kind of partnership blurs the barriers between the academic world and the world of work. Muldoon (2009) presents a case study of the outcomes of an institutional award for development of graduate employability attributes. In this study, students engaged in paid and voluntary part-time work as a professional development and extra-curricular activity. The study concluded that part-time work was a useful avenue for the development of graduate employability attributes.

Nagarajan and Edwards (2014) cautions that higher education institutions may face a challenge in efforts to integrate graduate employability attributes in curricula. This challenge is posed by the different conceptualisations of graduate employability at various institutional levels such as university, faculty, school, department, programme of study and particular subjects. One approach to managing the different levels is the use of overarching generic attributes that can then be broken down into specifics that can be implemented at lower levels. Subsequently, these attributes are transformed by the faculty into a set of more specific learning goals relevant to the particular degree. The successful development of graduate employability attributes can then be facilitated by aligning learning design, learning outcomes, teaching and learning activities and assessment criteria and tasks with the generic attributes.

The above information provides this paper with a framework with which to analyze and assess strategies and levels at which employability attributes have been incorporated into the curricula of management sciences in Namibia. The study asked the following question: How is graduate employability embedded in management sciences bachelor

degree curricula in Namibia? Using the results from the first question, the paper then assesses which strategy can be considered most effective in enhancing graduate employability in curricula.

### **Methodological approach**

The study employed a qualitative approach using content analysis as a method to determine which strategy was most effective in integrating graduate employability in management sciences curricula (Creswell, 2003). The sample comprised curriculum documents from six undergraduate degree programmes at two public universities in Namibia. Three degree programmes from each university, namely, Bachelor of Business Management/Administration, Bachelor of Accounting (general), and Bachelor of Economics were studied. These three programmes were four-year degree programmes and were common to both institutions, thus allowing for comparisons of strategies employed in a similar programme at two different institutions operating in the same context. In the interests of confidentiality as a principle of research ethics, the two universities that were the focus of the study are referred to as University A and University B. The researchers used the content analysis to identify explicit and implicit graduate employability attributes throughout the degree programmes. This was done using both deductive and inductive methods of content analysis (Zhang & Wildemuth, 2009). Qualitative analysis software, Atlas ti. Version 7.1.4. was used to code portions of content and categorise these according to strategies and levels presented in the literature.

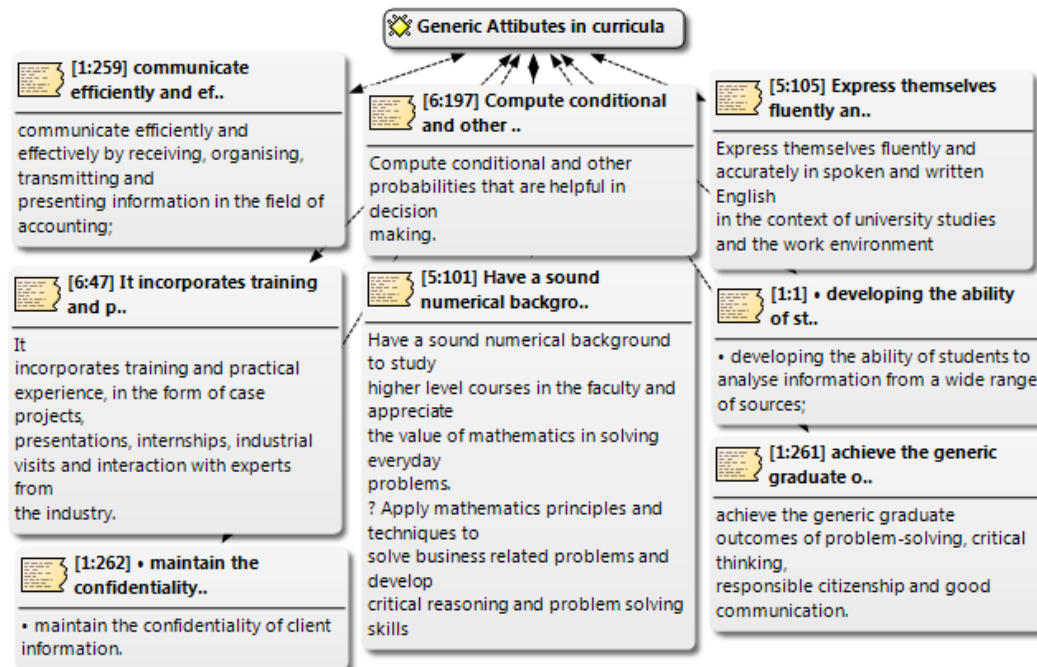


Figure 12: Example text coding using Atlas ti. Version 7.1.4.

## Results and discussion

Results of the analysis are categorised using the levels and strategies of embedding graduate employability into curricula that are presented in the literature. The hierarchy begins with assessing whether the broad aims of the programme make reference to graduate employability: the terms generally used are employability skills or attributes, transferable skills, generic attributes, graduate attributes, and soft skills. A university would have agreed on particular attributes it intends to concentrate on based on demand from the labour market. This indicates the intention and commitment of the university to equip students with employability attributes, and these become known to students, academics and industry.

***Level 1: Employability-related modules in the whole curriculum***

This level analysed whether the two universities have purposefully incorporated graduate employability attributes in the aims of the programmes. Below are excerpts from the programme documents.

**Table 4. 1: Broad programme aims in relation to graduate employability**

<b>UNIVERSITY A</b>	<b>UNIVERSITY B</b>
<b>Programme 1:</b> “Students will have the opportunity to develop the required cognitive/intellectual, practical and key transferable skills, and apply these to complex accounting issues in the context of an organisation.”	<b>Programme 1:</b> “The purpose of this qualification is to provide an academic foundation for students intending to pursue a career in the accounting profession or financial service sector.”
<b>Programme 2:</b> “The programme will enable students to acquire cognitive, practical problem-solving, and key transferable skills that are necessary for addressing pressing challenges in the current Namibian market and economy.”	<b>Programme 2:</b> “This qualification equips students with intellectual ability, executive personality and managerial skills through an appropriate blending of business and general education.”
<b>Programme 3:</b> “The programme will enable students to acquire cognitive/intellectual, practical and key transferable skills and to apply these skills in solving economic problems that face the public and private sectors, as well as the overall economy.”	<b>Programme 3:</b> “The purpose of this qualification is to produce graduates who are technically and intellectually competent in the application of economic theories, models and techniques.”

Data analyses indicated that in all three degree programmes, University A articulated that graduate employability would be enhanced in the programme. A broad statement is made in the aims section of each degree programme. Specifically, each programme asserts that students will have the opportunity to develop “*key transferrable skills*” and will be able to apply these to address challenges. This is done alongside the technical or discipline related aims of the degree programme. However, this is not the case in the aims of programmes at University B, where no reference is made to enhancing graduate

employability attributes in the broad aims of Programmes 1 and 3. The broad aim of Programme 2 makes reference to developing executive personality. The broad programme aims are further expanded into specific aims, as indicated in Table 4.2.

**Table 4. 2: Specific programme aims in relation to graduate employability attributes**

UNIVERSITY A	UNIVERSITY B
<p><b>Programme 1:</b> “Developing the ability of students to analyse information from a wide range of sources; equipping students with the requisite skills to work effectively as individuals and as members of a team; enabling students to communicate effectively in the workplace.”</p>	<p><b>Programme 1</b> “This qualification equips students with the necessary accounting knowledge and skills that allow them to pursue their career in accounting, auditing, finance, taxation, banking and other related areas to contribute towards nation building and realisation of Vision 2030.”</p>
<p><b>Programme 2:</b> “Developing the ability of students to collect, analyse and interpret information from a variety of sources; preparing students to add value in the workplace through individual endeavour, as well as within a team context; and developing the generic as well as business communication skills of students.”</p>	<p><b>Programme 2:</b> “It is meant to develop the student's practical managerial skills, communication skills and business decision-making capability. It incorporates training and practical experience in the form of case projects, presentations, internships, industrial visits and interaction with experts from the industry.”</p>
<p><b>Programme 3:</b> “Developing the ability of students to analyse information from a wide range of sources; equipping students with the requisite skills to work effectively as individuals and as members of teams, and enabling students to communicate effectively in the workplace.”</p>	<p><b>Programme 3:</b> “The qualification will sharpen the students’ analytical skills through integrating their knowledge of economic theory with real life economic issues encountered in day to day economic decision-making processes, both in the government and private sector.”</p>

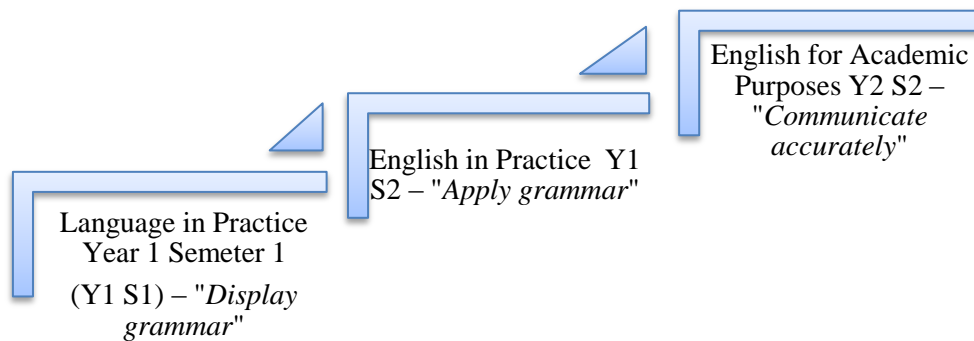
Curriculum documents from University A highlight specific graduate attributes as outcomes of its programmes. These attributes are “*skills to work effectively as individuals and as team members; ability to communicate effectively in the workplace; and analyzing information from a variety of sources.*” These appear in the intended outcomes of all three degree programmes. In contrast, Programme 1 of University B does not make reference to graduate employability attributes other than discipline-

specific knowledge and skills. Programme 2 and 3 make reference to practical projects, internships, industrial visits, and the integration of theory with real life issues. There seems to be no consistency in the intent to develop graduate employability attributes in University B programmes.

Despite the overarching statement concerning transferable skills and a second tier of attributes in University A's programmes, it was clear that there was a third tier of attributes that was unique to a given degree programme. All three programmes from University A have the uniform outcome that students will "*achieve the generic graduate outcomes of problem-solving, critical thinking, responsible citizenship and good communication*". However, Programme 1 indicates the additional outcomes of "*display honesty (integrity), social responsibility (consideration of the public interest), competence, objectivity and professional demeanour by their timeliness, due care, courteousness, respect, responsible actions and reliability.*" A comparison with University B shows that its Programme 2 notes that graduates will be able to "*apply innovation and creativity skills in a business environment; communicate effectively in a business environment*". Programme 3 from University B states that graduates should achieve "*quantitative and qualitative analysis and critical thinking skills*" as outcomes. Programme 1 from University B makes no mention of generic attribute outcomes. This does not mean that there are no graduate employability attributes embedded in the University B Programmes, however; they are not made explicit but implied, as will be shown later in this section.

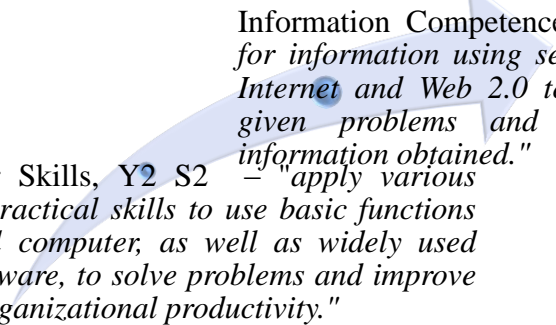
### ***Level 2: Employability in the core curricula***

Analysis has indicated that at both University A and University B, certain modules form part of the core curricula; these are compulsory for all students undertaking the degree programme. The modules focus on communication skills, information technology skills and responsible citizenship. At both universities, the modules are delivered through contact hours, directed self-learning, and self-directed learning; and are assessed by continuous assessment and exams at the end of the semester. In addition, it was observed that some employability modules in the core curricula of management sciences at University A had incremental stages of competence. For example, there are three modules aimed at enhancing communication skills in a single degree programme. Below is a depiction of employability modules with incremental stages of competency.



**Figure 13: Incremental stages of English competency**

A second graduate employability provision with incremental stages is aimed at enhancing information technology. Below is a depiction of the incremental competence.



Information Competence, Y1 S1 – *"Search for information using search engines on the Internet and Web 2.0 technologies to solve given problems and critically evaluate information obtained."*

Computer User Skills, Y2 S2 – *"apply various technical and practical skills to use basic functions of the personal computer, as well as widely used application software, to solve problems and improve personal and organizational productivity."*

**Figure 14: Incremental stages of Information Technology competency**

At University B, all management sciences programmes have common modules as part of the core curricula. These modules are: *Computer Literacy, English Communication and Study Skills, English for Academic Purposes, Contemporary Social Issues, and Business Mathematics*. As at University A, the English courses at University B are incremental. This is also the case in a University B module *Business Mathematics*, which prepares students for other mathematical and statistical modules at higher levels of the degree programme. This means that although the core curriculum serves as a foundation to prepare students for subsequent advanced levels of learning, these modules provide an implicit opportunity to develop generic employability attributes at the same time. These universities should determine whether core modules are to be considered as employability modules in core curricula.

***Level 3: Work-based or work related learning***

A module entitled Work Integrated Learning (WIL) is offered in all degree programmes at University A. It is compulsory for all students registered for any of the degree programmes. The programme is offered during the first semester of the third year of the

degree programme. Students are eligible to register for this module if they have passed all the modules in their first and second years. The WIL module enables students to “*evaluate, apply and practice learnt competencies in the workplace to improve career prospects*”. It provides an opportunity for firsthand work experience in the student’s field of study. It focuses on both discipline specific skills and employability attributes. The following is an excerpt from Programme 1 from University A: “*Enabling students to apply various accounting and finance-related theories/best practices to real world accounting and finance situations/problems; developing capabilities such as effective oral and written communication, teamwork, planning and organising, thinking creatively and problem solving; enabling students to acquire general work experience and work ethics, and to manage time, communicate effectively, make presentations and apply economic theory to the various workplace tasks.*” The WIL module is assessed through students’ workplace experience reports, the academic supervisor’s workplace visitation report, workplace supervisors’ reports, and students’ presentation skills. Although University B’s Programme 2 mentions internships as part of the degree offering, there is no specific module related to internship in any of the three management sciences programmes at this university.

The WIL experience at University A is offered in Semester 1 of Year 3; this implies that students are practicing the theory they have learned in the first two years of the degree programme. Here, employability is embedded at the mid-point of the degree programme. As learning is incremental, students enter the workplace with basic knowledge and skills learnt in the study programme. Therefore, it is important for universities to determine the best moment in the programme to offer and assess WIL so that students have the

opportunity to undergo workplace experience of the theoretical learning acquired in Year 3 and 4 of the programme.

***Level 4: Other modules enhancing discipline-contextualised attributes related to graduate employability***

In the analysis of modules that embed graduate employability in curricula, the following modules were identified by the characteristics of their outcomes, which were related to specific employability attributes. These modules are contextualised to business management but they also have characteristics of graduate employability. The table below provides descriptions of these characteristics.

**Table 4. 3: Discipline-specific modules with graduate employability attribute characteristics**

<b>Module</b>	<b>Aim – the module enables students to:</b>	<b>Year and Semester</b>
<i>“Systems Thinking”</i>	<i>“Apply knowledge of systems thinking to improve decision-making in the business administration and management domain.”</i>	Y2 S1 (University A)
<i>“Business Ethics”</i>	<i>“Analyse and apply general ethical concepts in making ethical decisions in a business environment.”</i>	Y2 S2 (University A)
<i>“Innovation, Creativity &amp; Entrepreneurship”</i>	<i>“Create innovative and feasible business ideas and develop a comprehensive and functional business plan for a sustainable entrepreneurial business.”</i>	Y3 S1 (University A)
<i>“Business Ethics &amp; Leadership”</i>	<i>“Analyse and apply general ethical concepts in making ethical decisions in a business environment.”</i>	Y1 S2 (University A)
<i>“Business Research Methods”</i>	<i>“Select a research problem, define it, do the preliminary literature review and develop research design for problem solving. Collect suitable data using appropriate methods and perform data analysis.”</i>	Y3 S2 (University B)
<i>“Research Project”</i>	<i>“Formulate a research topic and research questions, then undertake a literature study. Write a research proposal, collect and analyse relevant data and develop a written report.”</i>	Y4 S1 (University B)

The topics and aims of these modules indicate strong elements of graduate employability attributes. For example, if the term business administration is excluded from the aim of the *Systems Thinking* module, the aim will read as: “*Apply knowledge of systems thinking to improve decision-making*”. Another example from the *Business Ethics* module is “*Analyse and apply general ethical concepts in making ethical decisions*”. These examples suggest that graduate employability has a strong presence within these modules. Thus they are implicitly enhancing generic attributes required in the workplace.

### **Implicit graduate employability attributes in curricula**

Despite a lack of statements specifically intended to develop graduate employability attributes in some University B management sciences programmes, further analyses of curriculum documents have established that graduate employability attributes are implicitly embedded in all University B programmes. Below are examples of excerpts from curriculum documents.

- Numeracy and critical thinking: “*Apply mathematics principles and techniques to solve business related problems and develop critical reasoning and problem solving skills.*”
- Communication skills: “*Express themselves fluently and concisely in spoken and written English in the context of university studies and the work environment.*”
- Problem solving: “*Apply the knowledge acquired for solving the real life problems using techniques such as linear programming, network analysis.*”

- ICT skills: *“Apply practical computer skills to use relevant software effectively, including Microsoft Windows, Microsoft Word, Microsoft Excel and Microsoft PowerPoint.”*
- Innovation and creativity: *“Prepare bankable business plans, apply innovation and creativity skills in a business environment.”*
- Ethics: *“Demonstrate critical knowledge of diversity and ethics.”*
- Management skills: *“Apply conflict management and conflict resolution skills in organisations.”*
- Leadership skills: *“Demonstrate a sound knowledge of strategic leadership”.*

From the examples above, it can be concluded that there is an assumption of work-related training in the programmes. Specifically, there are elements of work-integrated learning through which students are expected to apply acquired knowledge and skills. However, there is no specific reference to prearranged work-integrated learning experiences.

## **Conclusion**

This paper analyzed levels and strategies through which graduate employability has been embedded in the curricula of management sciences, using Namibian universities as a case, and then assessed which approach was most ideal for embedding graduate employability in curricula. Graduate employability has been defined in the literature as the qualities, skills, knowledge and abilities of university graduates, beyond disciplinary content knowledge, which are applicable to a range of contexts and are acquired as the

result of completing any undergraduate degree, and which should represent the core achievements of a university education (Barrie, 2006; Yorke & Knight, 2006).

Using the above explanation, the study found that employability attributes are explicitly but, largely, more implicitly embedded in the whole curriculum. Although desirable, an absence of a principal statement on developing graduate employability in programme aims may not necessarily imply an absence of opportunities for developing employability attributes in such a programme. Core modules in curricula have a dual role to provide a foundation to university education and to act as vehicles for developing graduate employability attributes. Skills related to numeracy, communication, information and communication technology were found to be largely embedded in core curriculum modules. Discipline-specific modules may also be a valuable resource for enhancing graduate employability attributes. Specifically, skills related to leadership, management, innovation and creativity, critical thinking, and ethical conduct were found to be embedded in discipline-specific modules.

As is evident from the analysis, work-integrated learning provides an opportunity for students to practise discipline-specific skills, but it also serves as a professional space for students to learn and practise generic or transferrable attributes. This is particularly useful in developing generic attributes when the workplace learning experience is arranged during the early years of the degree programme. If workplace learning takes place during the final year of the degree programme, the student might be in position to showcase and practise advanced discipline-specific knowledge and skills, coupled with employability attributes. Therefore, a university should determine specific learning outcomes of any work-integrated learning experience.

The study revealed the degree of graduate employability embedded in discipline-specific modules. There were specific outcomes related to graduate employability. Both discipline-specific modules and employability modules specifically intended to enhance graduate employability were interlinked, and both were valuable in the development of graduate attributes.

The study concludes that the best strategy to integrate employability attributes in curricula is to develop a graduate employability module as a core module. Such a module should indicate the specific attributes that the university is intending to enhance. This should be supported by continuous workplace learning opportunities and reflection activities so that students can continuously reflect on their experiences and relate theoretical learning, from the earliest to the most advanced stage of the degree programme. However, universities should first take stock of those graduate employability attributes that are implicitly embedded in discipline-specific modules, and build on these by developing explicit employability modules. Further research should determine the best stage in the curriculum at which to effectively enhance and assess graduate employability.

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**CHAPTER 5: A CRITICAL ANALYSIS OF UNIVERSAL LITERATURE ON  
GRADUATE EMPLOYABILITY**

Romanus Shivoro, R. Kavena Shalyefu and Ngepathimo Kadhila

Faculty of Education,  
University of Namibia

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**Shivoro, R:** (Candidate)

Writing and compilation of manuscript, preparation of tables and figures

**Shalyefu, R.K:** (Main Supervisor)

Supervised and assisted with editing and co-author of manuscript

**Kadhila, N:** (Co-supervisor)

Supervised and assisted with editing and co-author of manuscript

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# **A CRITICAL ANALYSIS OF UNIVERSAL LITERATURE ON GRADUATE EMPLOYABILITY**

## **Abstract**

Enhancing graduate employability is fundamental to higher education institutions' role of producing human capital that is capable of performing competitively in the contemporary labour market. This paper presents a synoptic review of literature on graduate employability with particular focus on the conceptual and theoretical background as well as models and approaches for enhancing employability attributes. The analysis established that the discourse of graduate employability is central to higher education provision across the globe. The notion of graduate employability has evolved from conceptualization to the development of instruments for guiding integration of graduate employability attributes in higher education curricula. The paper provides a synthesis of existing research and makes recommendation for further research on strengthening collaboration between higher education institutions and the industry to enhance graduate employability.

Key words: graduate employability, higher education, labour market, employability attributes, curriculum

## **Introduction**

The contemporary world of work is characterized by intense competition and constant change, in which both employers and employees face increasing risk and uncertainty regarding financial stabilities of organizations (Reich, 2001). Higher education institutions, employers and graduates are in agreement that graduates need other attributes in addition to subject-specific knowledge and discipline (Andrews & Higson, 2008; Weligamage, 2009). Studies on graduate employability have generated varied definitions of graduate employability, and compiled varied lists of graduate attributes that are deemed important for the contemporary workforce. In addition, proponents of the concept have developed models of enhancing graduate employability (Pool & Sewell, 2007; Sumanasiri, Yajid, & Khatibi, 2015; Yorke & Knight, 2006). Furthermore, literature presents a contentious issue regarding the position of a university as supplier of employable graduates as opposed to the promotion of academic freedom. Moreover, there seems to be a debate on theoretical underpinning of graduate employability, drawing emphasis on the Human Capital and Signaling theories. Finally, scholarly contributions suggest approaches to enhance employability attributes in higher education. Therefore, the purpose of this paper is to provide a critical review of the discourse of graduate employability. The review covers aspects related to the importance of graduate attributes, conceptualization; models; the role of universities towards improving graduate employability, as well as work-related learning as a vehicle for enhancing graduate employability attributes.

## **The need for graduate employability attributes**

Employment patterns are shifting from traditional employment in large organizations to less traditional graduate vacancies in small and medium enterprises (Stewart & Knowles, 1999). In addition, many companies are moving towards customer-oriented service, which means that work has to be organized in ways that would allow greater spontaneity and flexibility in addressing customer needs (Arthur, Brennan, Weert de as cited in Pukelis & Pileicikiene, 2012). As a result of these changes, graduate jobs are no longer necessarily regarded as permanent. Graduates need to be ready to join a new world of adding value, lifelong learning, self-development and agree to the overwhelming need to stay employable (Tran, 2010). This implies that graduates need to be prepared differently to enable them to integrate faster into the increasingly changing labour market. This is supported by Finch, Hamilton, Baldwin, and Zehner (2013) as they write that when hiring new graduates, employers place the highest importance on employability attributes and the lowest importance on academic achievement. This means that graduates who have best developed employability attributes have an advantage of obtaining a job (Teijeiro, Rungo, & Freire, 2013). Thus, to increase graduates' employability, university academic provisions should place emphasis on learning outcomes associated with enhancing graduate employability attributes (Finch et al., 2013). From the literature above, it can be suggested that indeed, development of graduate employability attributes is important for the success of graduates in the labour market. Therefore, with the general understanding of the importance of enhancing graduate employability attributes, it is worthwhile to explore the evolution and conceptualization of graduate employability.

## **The evolution and concept of graduate employability**

Melink and Pavlin (2012) provide historical overview of graduate employability. In the 1970s, the concept of employability was used primarily for resolving problems with school leavers and underprivileged people with political ambitions to attain full employment and cut public losses; in the 1980s for restructuring companies with ambitions to attain efficient human resource management; and in the 1990s for individuals as motives for developing successful career opportunities in segmented and even more flexible labour markets. It is observable that, in the historical context, employability was used to induct individuals into the world of work. This historical accord places employability efforts as a catalyst to ensure that individuals meet the requirements to be employed, and once they are employed, they are able to perform well in their jobs. Similarly, Yorke (2006) notes that employability implies something about the capacity of the graduate to function in a job, and is not to be confused with the acquisition of a job, whether a 'graduate job' or otherwise; and it implies that a student exhibits employability in respect of a job if he or she can demonstrate a set of achievements relevant to that job.

In moving forward from the abovementioned historical context, Yorke (2006) presents graduate employability constructs. The first construct refers to graduate employability as demonstrated by a graduate actually obtaining a job. This construct equates employability to employment, that by virtue of obtaining a job, a graduate is considered to be employable. The second construct is graduate employability as the student being developed by his or her experience of higher education, that is, a curricula and perhaps

extra-curricular activities. This view assumes that the students learning experience in a higher education institution is a sufficient condition for enhanced employability. Yorke (2006) argues that higher education learning experience does not necessarily ensure that the student develops the various prerequisites such as cognitive, social, and practical experience for success in employment. The curricula process may facilitate the development of prerequisites appropriate to employment, but does not guarantee it. Therefore it is a mistake to assume that students are highly employable on the basis of curricula provision alone. The third construct looks at graduate employability in terms of the possession of relevant achievements. For example, a Business Studies graduate who has inadequate training of quantitative techniques would not be appropriate for a market research post in which statistical analysis would figure strongly. He or she might, however, make a valuable contribution in human relations. This shows that employability is dependent on a given context of employment. A range of attributes and achievements may have a general value, but may well prove insufficient for some specific situations.

It is observable that the above constructs are very abstract and ambiguous. They seem to have missed the point of the need for employability attributes. The labour market needs other attributes in addition to the actual area of discipline specialization (Andrews & Higson, 2008). It is then necessary to find out how various scholars have conceptualized graduate employability attributes.

## Conceptualizing graduate employability

Different universities and higher education systems have used varied terminologies to refer to qualities and skills that are needed in addition to the subject-specific skills. Some of the terminologies commonly used are transferrable skills, key skills, soft skills, generic attributes, employability skills, and key competencies, core skills, and underpinning skills. In most cases, these terms have been used interchangeably to refer to graduate employability (Curtis & McKenzie, 2001; Tempone et al., 2012a).

Numerous scholars have attempted to conceptualize graduate employability.

1. Proponents of graduate employability discourse defined employability as “*a set of achievements that comprise skills, understanding and personal attributes that make an individual more likely to secure and be successful in his/her chosen occupation to the benefit of him/herself, the workforce, the community and the economy*” (Yorke & Knight, 2006:3).
2. Another definition of employability is “*the capacity to gain initial employment, maintain employment and obtain employment if required*” (Hillage & Pollard, 1998:2).
3. Bowden *et al.* (as cited in Hounsell, 2010:1) defined graduate attributes as “*the qualities, skills and understanding a university community agrees its students would desirably develop during their time at the institution and, consequently, shape the contribution they are able to make to their profession and as a citizen.*”

4. Barrie (2006); Yorke and Knight (2006) have concluded that in Australia, graduate employability attributes have come to be accepted as being the *qualities, skills, knowledge and abilities of university graduates, beyond disciplinary content knowledge, which are applicable to a range of contexts* and are acquired as a result of completing any undergraduate degree, and they should represent the core achievements of a university education.
5. Wickramasinghe and Perera (2010) asserted that subject skills and transferrable skills are the two aspects of employability. Transferable skills refer to certain personal abilities of an individual, which can be taken from one job role to another, used within any profession and at any stage of his/her career. Subject skills are more relevant to one's career as they are discipline specific knowledge and skills.
6. Archer and Chetty (2013:138) refers employability as “graduateness”, meaning the qualities such as being independent, responsible, caring citizen, fulfill and serve in multiple roles, analytical, critical thinking, acquired and knowing how to use discipline-specific skills.
7. Rospigliosi, Greener, Bourner, and Sheehan (2014) conceptualize employability as the graduates proven ability to learn and willingness to learn. Through completing their university education where they have met requirements and have become specialists in the practice of learning.

From the definitions provided, it is noticeable that there is consistent emphasis on application of graduate attributes in the workplace and for lifelong learning. Therefore, it can be concluded that graduate employability attributes are the generic qualities and skills that are suitable for contemporary workplace, and that allows a graduate to

identify relevant further learning opportunities for continuous professional and personal growth.

Some authors have claimed that the more definitions of graduate employability are suggested, the more ambiguity arises, and that there is no agreement as to which attributes are most important in shaping graduate employment outcomes (Tomlinson, 2012; Tran, 2016). In addition, there are claims that no empirical evidence has been produced in the development of the employability notion, and graduate employability lacks clarity and precision as an operational concept (Lees, 2002). Furthermore, Sumanasiri et al. (2015) argues that despite the large number of studies, graduate employability appears to be suffering from the problems of lack of theoretical control and politicization which appear to have become major obstacles for future developments of the concept. Although there are expressed concerns, literature has continuously established the importance of enhancing graduate attributes in addition to discipline-specific skills. Therefore, it is important to explore this through the models of graduate employability.

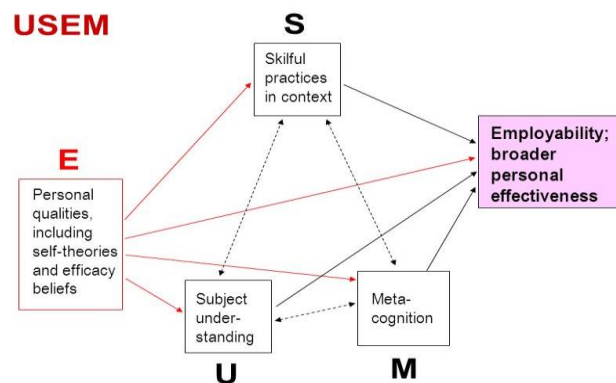
### **Models of graduate employability attributes**

Models of graduate employability depict essential elements for graduate's preparation to enter the world of work. Several proponents of graduate employability have developed models of graduate employability. Among these models, are Yorke and Knight's USEM model (2006); the DOTS Model by Law and Watts (1977); and the CareerEDGE model

by (Pool & Sewell, 2007). Below are summaries of these models of graduate employability.

### *USEM Model of employability*

The USEM model presents five common descriptions of employability, ranging from getting a graduate job to the outcome of skillful career planning and interview technique. This approach to employability suggests that employability is a combination of Understanding of subject discipline, apprehension and applicability; Skillful practices in context, subject specific and generic abilities (the capacity to apply understanding judiciously); Efficacy beliefs, that is awareness and understanding of one’s self and one’s abilities, students’ self-theories and personal qualities – the extent to which students feel that they might ‘be able to make a difference’; and Metacognition, encompassing self-awareness regarding the student’s learning and the capacity to reflect on, in and for action; and self-regulation (Knight & Yorke, 2006; Oliver, 2015).

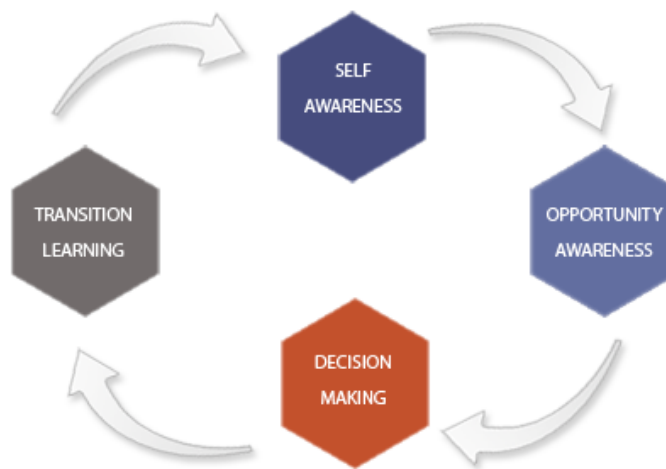


**Figure 15: USEM Model of employability**

This model assumes that the qualities that would enable an undergraduate to successfully complete a degree would also equip them to be successful in their subsequent careers. It also gives a typology of employability skills whereby each student is required to demonstrate specific employability abilities in both general education and the specialist subject chosen (Yorke & Knight, 2006).

### ***DOTS Model of employability***

Developed by Law and Watts (as cited in Watts, 2006), the DOTS Model consists of planned experiences designed to facilitate the development of Decision making skills, Opportunity awareness, Transition learning, and Self-awareness (DOTS).



**Figure 16: DOTS Model of employability**

According to Pool and Sewell (2007), the value of the DOTS Model lies in its simplicity as it allows individuals to organize a great deal of the complexity of career development learning into a manageable framework. However, critics of this model argue that it is over-reliant on a mechanistic matching of person and environment, and therefore underplays other critical issues such as social and

political contexts. Another critic is that there is an implication that failure to secure a self-fulfilling occupation can be presented as the fault of the unsuccessful individual. In addition, critics suggest that students introduced to basic concepts of career development through DOTS would be incapable of developing and learning about more sophisticated analyses through this simple introductory structure. Elements of DOTS are considered to be static and contain no aspects of growth.

***CareerEDGE Model of employability***

Pool and Sewell (2007) developed a CareerEDGE model of graduate employability. The model combines all the main factors of USEM, and other employability skills models.



**Figure 17: CareerEDGE Model of employability**

According to Sumanasiri et al. (2015), the model suggests that employability is achieved through a complex interaction with social concepts such as self-esteem, self-efficacy, and self-confidence in addition to five lower order factors. Firstly, degree subject knowledge, understanding and skills – A similar element to Understanding in the USEM model; the motivator to enter higher education is generally perceived to be to study a specific discipline in-depth, to gain a degree, get a higher qualification and thus get a better job. Secondly, generic skills also referred to as core skills, key skills, or transferrable skills. Bennett (2002) defines generic skills as skills which can support study in any discipline, and which can potentially be transferred to a range of contexts, in higher education or the workplace. These include creativity, adaptability, willingness to learn, team work, communication, time management, etc. Thirdly, emotional intelligence as the capacity for recognizing one's feelings and those of others, for self-motivation, and for managing emotions. Fourthly, career development learning – this covers the DOTS elements; for a graduate to stand the best chance of securing occupations in which they can be satisfied and successful, it is essential that they receive some education in career development learning. Finally, experience -reflecting the fact that having some form of work or life experience is likely to help a graduate develop a wider range of skills and make them more attractive to prospective employers. The CareerEdge model suffers from the limitation of being categorized as a snap-shot view of employability that limits its application (Sumanasiri et al., 2015). Even though this model has limitations, it is a comprehensive and widely accepted model of graduate employability (Pool & Sewell, 2007)

All three models contain similar attributes such as generic and specific skills, reflective thinking, application of skills, and self-knowledge and attitude and drive of the graduate. Therefore, the models inform that graduate employability attributes cannot be considered in isolation as there are various components at play in the development of graduate employability. Therefore it is pertinent to explore theories through which the discourse graduate employability can be explained.

### **Theories of graduate employability attributes**

Scholarly contributions have associated graduate employability to Signaling theory, and Human Capital theory (HCT) (Cai, 2013b; Fincher, 2007; Jonck, 2014; Rospigliosi et al., 2014). The job market Signaling theory is based on the premise that hiring is an investment decision for employers. Employers have to make hiring decisions in conditions of uncertainty by taking into account signals from a graduate (Cai, 2013b). Human Capital Theory deals with the relationship between educational attainment and labour market outcomes (Jonck, 2014). It emphasizes that education is the primary economic enabler and essential for participation in the global economy, and it refers to the quality of labour, thus, skills and knowledge of employees, and the value of expected returns in terms of the output it can generate.

Signaling theory (Stiglitz, 1975) assumes that job seekers send signals about their ability level to employers by acquiring certain educational credentials, while employers screen the job applications according to the signals that the educational credentials transmit. Therefore, education only serves as a tool for job-seekers to signal their inherent ability

to employers. Rospigliosi et al., (2014) write that employers use educational attainment to identify individuals with certain valuable inborn traits that cannot be observed directly. It is argued that education per se does not enhance productivity; rather it is used by employers as a signal about an applicant's potential productivity, including their ability to learn on the job. For university graduates, the attainment of a university degree would send a strong signal to employers that the graduate applicant was highly capable and thus that their initial and subsequent productivity, enhanced by on-the-job training, would be utilised efficiently, due to the employees' assumed high capability (Rospigliosi et al., 2014).

Bailly (2008) explains that the validity of Signalling theory is based on the employer's belief system, whereby the employer tends to attribute an anticipated level of productivity to these people depending on the information transmitted by job-applicants' educational credentials, and then makes recruitment decisions based on that. The process of adjusting employer beliefs will depend on the productivity of graduates. This means that the employer has accumulated enough experience to determine employability of graduates.

Research on Human Capital (HC) theory has established that higher education is an investment for productivity in the labour market. The HC theory explores the concept of investing in people to enhance their value and usefulness (Fincher, 2007; Melink & Pavlin, 2012). It assumes that individuals invest in themselves to increase future earnings (Weber, 2014). Through investment in people, the quality of work improves; and employment prospects increases (Cai, 2013b; Kaplan & Norton, 2004). Moreover,

Weber (2014) notes that persons having more education are likely to be in a position to adjust more easily than those with less education. In other words, higher education provides marketable skills and abilities relevant to job performance, and thus the more highly educated people are, the more successful they will be in labour markets in terms of both incomes and job offers.

It is worth noting that HC investment was not universally accepted as a justification for the support of higher education, and significant studies dismissed the two theories (Fincher, 2007). Nonetheless, (Rospigliosi et al., 2014, p. 423) articulate that

“the debate between human capital and signalling explanations was never really resolved. It proved impossible to devise empirical tests that could convincingly discriminate between them. This is not to suggest that there is, in reality, little difference between them. It is quite easy to envisage situations where they make contradictory predictions: a young person who is undecided about whether to apply for university or whether to seek a job hears government forecasts of a significant rise in applications to university next year. Will this news make them more or less likely to apply to university? Signalling theory predicts that the young person will conclude that more graduates will push them further down the jobs hierarchy and so will increase the incentive and likelihood of applying for university. Human capital theory predicts that the rise in the number of graduates will depress the “graduate premium”, thereby reducing the incentive and likelihood of applying for university. It has, however, proved difficult to test these theories empirically.”

In conclusion, Robert (2006) summarized that the key difference between graduates and non-graduates is that the former have acquired the knowledge, skills and attitudes of a university education and a proven ability and willingness to learn, and that is the basis of both human capital and signalling theories. Therefore, given that business and industry is the primary consumer of the knowledge, skills and attitudes of university graduates, university curricula should be adjusted to meet the requirements of an increasingly changing labour market, thereby enhancing graduate employability (Jonck, 2014). This places a role on higher education to ensure that graduates are employable.

### **Higher education as a supplier of employable graduates**

There has been an ongoing debate about the purposes of higher education and university. On one hand, there is a position that assumes a correspondence between educational profiles of graduates and the jobs they fill, that is, matching and responding to the demands of the workplace (Corominas et al., 2010). On the other hand, there is a position that advocates for the university's autonomy and academic freedom; that universities should not accommodate opportunist employer-driven agendas but offer education based on research and enduring academic values (Kettis et al., 2013). Hildreth (2011) affirms that narrow training for a specific job is a cramped view of education, that it is inimical to growth. Moreover, Wilton (2014) writes that policy discussion on graduate employability has been focusing on enhancing employability attributes to respond primarily to the demands of employers. This, Milton claims, is based on an assumption that the demands of the employers and workplace requirements are uniform across sectors. Therefore, what is required is an education that can prepare students for

future working lives, allowing industry growth, and at the same time, an education that fosters academic freedom and holistic development of a graduate.

Tran (2016) notes that due to the increasing neoliberal pressure in the labour market, universities are placed under pressure to demonstrate that they are effectively and efficiently providing relevant and worthwhile education to produce graduates that meet the demands of the 21<sup>st</sup> century labour market. Therefore, universities should offer graduates the skills required by the labour market, through dedicated programmes or internships (Barrie, 2006; Guilbert, Bernaud, Gouvernet, & Rossier, 2016); (Barrie, 2006). There is a consensus among stakeholders that higher education course design should take into consideration employer's perspectives on students' preparation (Vivas & Hevia, 2009). Romenti, Invernizzi, and Biraghi (2012) notes that the engagement of professionals and employers in the process of standard definition allows universities to refine their ability to deliver value to their stakeholders more effectively.

Research contributions have identified graduate attributes that are important for graduates to possess in order to function in the evolved world of work. They suggest that graduates should possess skills such as team-working, networking, problem solving, teamwork, leadership skills ,innovative skills, research skills, interpersonal skills, critical thinking, skills to manage process rather than functional skills, and other qualities in order for graduates to be employable (Donleavy, 2012; Quek, 2005). These employability attributes can be enhanced using work-integrated learning. Table 5.1 is an example of employability attributes that should be developed for business management students.

**Table 5.1: Graduate employability attributes for business management graduates, adopted from Jackson and Chapman (as cited in Jackson, 2014)**

<b>Skill</b>	<b>Behaviour</b>
Core business skills	Numeracy; technology
Critical thinking	Pattern recognition and conceptualisation; evaluation
Problem solving	Analytical / convergent reasoning; diagnosing
Decision management	Lateral thinking / creativity; information management; decision making
Political skills	Influencing others; conflict resolution
Working with others	Task collaboration; team working; social intelligence; cultural and diversity management
Oral communication	Verbal communication; giving and receiving feedback
Personal ethics	Personal ethics
Confidence	Self-Efficacy
Self-awareness	Meta-cognition; lifelong learning
Self-discipline	Self-regulation; stress tolerance; work/life balance
Innovation	Entrepreneurship; change management
Leadership	Project management; performance management; meeting management; developing others
Formal communication skills	Public speaking; meeting participation; written Communication
Performance	Efficiency; multi-tasking; autonomy
Organisational skills	Goal and task management; time management
Environmental awareness	Organisational awareness; commercial awareness
Professional responsibility	Social responsibility; accountability
Work ethic	Drive; initiative

### **Work-Integrated Learning (WIL) as a vehicle for enhancing graduate employability attributes**

Yorke and Knight (2006) proposed approaches through which graduate employability attributes can be enhanced. Firstly, employability through the whole curriculum where by individual students are expected to demonstrate competency in given abilities in a

progressive manner; secondly, employability in the core curriculum where by a university designate a module or two as vehicles for enhancing employability attributes (Quality Assurance Agency for Higher Education, 2009); thirdly, employability-related modules within the curriculum whereby students are required to take theoretical employability module at the beginning of an undergraduate degree; fourthly, work-based or work-related learning in parallel with the curriculum whereby students are employed part-time in parallel with their studies (R. Muldoon, 2009); and finally, work-based or work-related learning interspersed within the curriculum. This approach includes placements and internships. Among the five approaches, the most popular and advocated for by many universities is the Work-based learning within the curriculum, which is referred to in literature as Work-Integrated Learning (Jackson, 2014c).

The concept of WIL is becoming increasingly popular in higher education sector across the globe. Jackson (2014) describes WIL as the practice of combining traditional academic study, or formal learning, with student exposure to the world-of-work in their chosen profession, has a core aim of better preparing undergraduates for entry into the workforce. It is a curriculum design in which students spend time in professional, work, or other practice settings relevant to their degrees of study, and to their occupational futures (Smith, 2012). The difference between WIL and other terms such as placements and internships, is that WIL emphasizes the integration of subject learning and practical work. This means that curriculum is central to the purpose and practice of WIL. This may not necessarily be the case with placements or internship where there is no focus on practicing what has been learned into the real world of work (Smith, 2012). Forms of WIL include work placements, internships, field work, sandwich year degrees, job

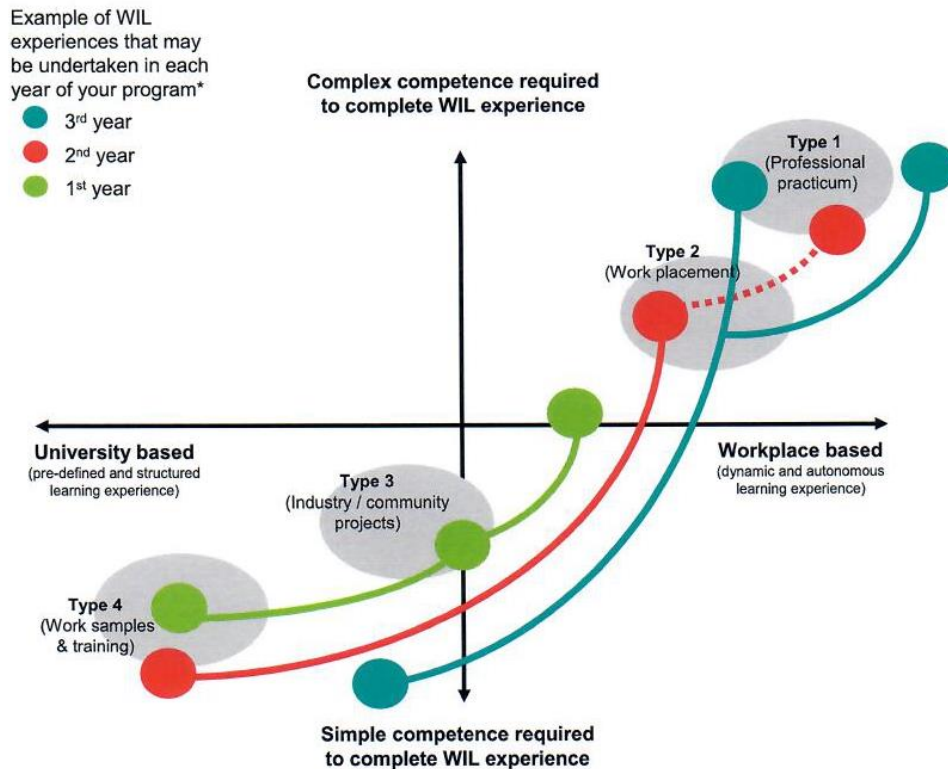
shadowing, cooperative education, and service learning (Von Treuer et al. 2010; Clinton and Thomas as cited in Jackson, 2014).

The model or approach of WIL has benefits to graduates, higher education institutions, and employers. For graduates, as tool to enhance graduate employability, WIL has benefits in terms of building student confidence in their workplace capabilities; providing students with a better understanding of the nature and standard of industry-required skills; and a better appreciation of the world-of-work; promoting certain elements of career self-management; providing education that responds to present and future needs; and providing learning that is useful to society and not just an addition to students' disciplinary knowledge base. In addition to these benefits, it alleged that graduates that have completed will during undergraduate education are better skilled at team working, problem solving, communication, information literacy and professionalism; and that students participating in WIL are encouraged by activities such as reflective journaling, product development, research activities, in a real world of work (Freudenberg, Brimble & Cameron, as cited in Jackson, 2014).

Universities benefit from WIL in such a way that university enhances its engagement with community through partnerships with the different industries and community organisations; and it produce more employable and work-ready graduates (Jackson & Wilton, 2016; Smith, 2012). In addition, WIL brings about changing teachers' attitudes towards recognizing the importance of work experience arrangements; a more relevant curriculum because WIL becomes part of the curriculum leading to improvement of curriculum to address skills and qualities that employers seek in new employees

(Blackwell et al., 2001). For employers, WIL brings about informed employers, about higher education and the circumstances under which it operates; and an employability signal, that graduates who have participated in WIL during university education have advantage during recruitment because of the on-the-job learning experience (Blackwell et al., 2001).

Therefore, in order for WIL to be successful, there is a need for close interaction between educators and practitioners to bridge the gap between ‘capability’, acquired at university, and ‘competence’, that are demonstrated in the workplace (Leong & Kavanagh, 2013). Some countries have developed national frameworks that guide the implementation of WIL, bridging the higher education sector and the industry. These are further translated into university standards for the development of graduate employability attributes (Jackson, 2013, 2014c). Like any other curriculum initiative, WIL requires active involvement of university educators and curriculum designers in developing effective learning activities for students and to assess progress made towards desired employability attributes from the beginning of the programme of study to completion (Cavanagh, Burston, Southcombe, & Bartram, 2015). Therefore, it is important that universities develop an institutional WIL framework for developing employability attributes for students. Figure 18 is an example of an institutional WIL framework.



**Figure 18: Example of a university WIL framework** adopted from Leong and Kavanagh (2013)

The graphic depicts the education process including workplace based learning, university based, and the incremental process from simple to complex competencies required to complete the WIL experience. However, this example of a framework is silent on the duration of workplace based learning as opposed to university based learning. Nonetheless, using this example, a plan for WIL experience can be clearly communicated to students and the industry. Therefore, it is important that, in their efforts to enhance graduate employability, a framework to guide such is pertinent.

## **Conclusion**

This paper provided a synoptic review of the literature on graduate employability, from conceptualization, models, theories, and enhancing employability attributes using workplace based learning. From the review, it is made clear that, for graduates to perform and be productive in the knowledge economy, they should be equipped with employability attributes. These will allow them to have a competitive edge in getting a job, successfully perform their job, and become lifelong learners. Models of employability such as USEM, DOTS, and CareerEDGE can guide the development of curriculum content on graduate employability. To achieve this, higher education institutions need to employ instruments such as guidelines and frameworks for incorporating graduate employability attributes in the curricula. In particular the concept of WIL seems to be appropriate as the practice benefits the stakeholders such as graduates, industry, and the university. It is also important to state that WIL strengthens the relationship between higher education institutions and industry. From this analysis, therefore, this paper recommends that the focus for future research should be targeted towards harnessing and improving partnership between higher education institutions and industry during the process and practice of curriculum development and delivery.

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## **CHAPTER 6: DEVELOPING A FRAMEWORK FOR INTEGRATING GRADUATE EMPLOYABILITY IN THE CURRICULUM**

Romanus Shivoro, R. Kavena Shalyefu and Ngepathimo Kadhila

Faculty of Education,  
University of Namibia

Under review: Manuscript submitted for publication and awaiting review feedback

### **Statement of contributions of joint authorship**

**Shivoro, R:** (Candidate)

Writing and compilation of manuscript, analysis, preparation of tables and figures.

**Shalyefu, R.K:** (Main Supervisor)

Supervised and assisted with editing and co-author of manuscript

**Kadhila, N:** (Co-supervisor)

Supervised and assisted with editing and co-author of manuscript

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# **DEVELOPING A FRAMEWORK FOR INTEGRATING GRADUATE EMPLOYABILITY ATTRIBUTES IN THE CURRICULUM**

## **Abstract**

Universities should develop strategies to enhance graduate employability attributes if they are to respond to growing employer concerns about graduates' lack of preparedness for the world of work. The purpose of this paper is to describe a framework, the outcome of a doctoral study on graduate employability in Namibia. This framework was informed by the results of a sequential explanatory study comprising a survey that collected quantitative data and a thematic analysis of curriculum documents to collect qualitative data. Using results from this study, the paper proposes a framework for the integration of graduate employability attributes in curricula. The framework comprises components that are essential if universities are to enhance graduate employability as part of their curriculum provision. In addition, the framework seeks to guide universities in responding to increasing demands from industry for work-ready graduates. The proposed framework could be used for management sciences degree programmes and other academic disciplines.

Key words: employability, graduate attributes, university, curriculum, industry, Namibia, framework.

## **Introduction**

The subject of graduate employability continues to be pressing in higher education sectors across the globe. Tran (2016) suggests that this can be mostly attributed to the

effects of globalisation, competition for jobs and increasingly, changing patterns of graduate recruitment. This demands of universities to produce employable graduates (Hill, Walkington, & France, 2017). Specifically, many universities have begun working towards the inclusion of explicit employability attributes in undergraduate curricula. This is evident in the varied lists of graduate attributes that universities deem important for their graduates to possess. These efforts continue to proliferate, driven in many cases by policy imperatives for increased business involvement in higher education curriculum development (Wilton, 2014). In addition, in order to determine graduate employability attributes, universities and government agencies have gone further by developing employability frameworks to provide guidance in producing employable graduates.

Although employers in Namibia have been lamenting graduates' lack of work-readiness, no attempt has been made to interrogate the issue of graduate employability in order to inform the development of strategies to address the challenge expressed by employers. Therefore, this paper suggests a framework for integrating graduate employability attributes in the curriculum to enhance graduate readiness to satisfy the ever-changing labour market requirements. The proposed framework is an outcome of a doctoral study.

### **Higher education and industry**

The relationship between higher education and industry can be explained using by Human Capital Theory and Signalling Theory. Research on human capital has established that higher education is an investment in productivity in the labour

market, enhancing job performance and ultimately maximising organisational productivity and outputs (Cai, 2013; Fincher, 2007; Jonck, 2014; Weber, 2014). Signalling Theory, on the other hand, proposes that employers use educational attainment to identify individuals with certain valuable attributes that cannot be observed directly, but only through learning experiences (Rospigliosi, Greener, Bourner & Sheehan, 2014). These two theories provide a theoretical framework for work on enhancing graduate employability.

Tran (2016) argues that universities are placed under pressure to demonstrate that they are producing graduates who are ready for the 21st century's world of work. Thus, universities should offer graduates the skills required by the labour market, through dedicated programmes or internships, in collaboration with enterprise (Barrie, 2006; Guilbert, Bernaud, Gouvernet & Rossier, 2016). Higher education and employers appear to have reached consensus on the notion that higher education course design should take into consideration employers' perspectives on students' preparation (Vivas & Hevia, 2009). This is supported by Romenti, Invernizzi and Biraghi (2012), who believe that the engagement of professionals and employers in the process of a standard definition of graduates allows universities to refine their ability to deliver value to their stakeholders more effectively. To this end, it could be argued that higher education should prepare students for their future working lives, allowing industry growth, and at the same time fostering academic freedom and the holistic development of the graduate.

## **Methodology**

The overall study employed a mixed methods research approach using a Sequential explanatory design. The design comprised two distinct phases: firstly, a quantitative phase in which survey questionnaires were administered to management sciences graduates, employers and lecturers to determine which employability attributes were important to job performance, which attributes were emphasised in the curriculum, and those in which graduates needed additional training. The survey used a questionnaire adapted from Rosenberg et al. (2012). The second phase of the study was qualitative. A content analysis method was used to analyse six bachelor degree programmes in the management sciences discipline from two universities in Namibia. The purpose of content analysis was to identify the strategies through which employability attributes had been incorporated into these programmes. Using best practices from literature, these results were then used to recommend a framework for higher education institutions in Namibia.

## **Key findings**

### **Quantitative phase results**

The objective of this phase was to determine which graduate employability attributes graduates, employers and lecturers perceived as most important for job performance, which attributes had been incorporated into curricula, and which attributes required more emphasis for students/graduates. The survey focused on the following attributes: literacy and numeracy, critical thinking, management, leadership,

interpersonal skills, information technology, systems thinking and work ethic. The survey also solicited opinions through open-ended questions that required respondents to list any other attributes they thought would be important for job performance, those that were emphasised in curricula and those in which graduates needed additional training. Below is a summary of the results.

### **Graduate employability attributes**

Literature has indicated that it is important that students are equipped with graduate employability attributes while at university. This study adopted a working definition of graduate employability attributes as the qualities, skills, knowledge and abilities of university graduates, beyond disciplinary content knowledge, which are applicable to a range of contexts and are acquired on completing any undergraduate degree. These should represent the core achievements of a university education, Barrie (2006) and Yorke and Knight (2006). In light of the working definition, scholarly contributions produced different lists of graduate employability attributes that are viewed as important for the world of work. These lists were similar with only some minor differences. In contrast to the varied lists from literature, however, the list produced by Rosenberg, Heimler and Morote (2012) is more coherent as it groups lists of qualities and skills according to eight graduate employability dimensions or attributes. These employability attributes appear to be more congruent, less complex, easier to explain and more generally agreed upon by various authors.

Below is a brief description of each attribute.

- ***Basic literacy and numeracy*** – the ability to read, write, speak, listen and to perform basic mathematical procedures. Reading includes the ability to

interpret written information, writing includes the ability to communicate thoughts in letters and reports and mathematical skills include the ability to solve practical problems through the use of a variety of mathematical techniques.

- ***Critical thinking skills*** – the use of cognitive skills or strategies that increase the probability of a desirable outcome. The term critical thinking refers to thinking that is purposeful, reasoned and goal directed – the kind of thinking involved in solving problems, making inferences, calculating likelihoods and making decisions when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task.
- ***Management skills*** – these include the activities of planning, organising, leading and controlling to meet organisational goals.
- ***Leadership skills*** – the ability to take control of a situation and to empower peers, and to motivate and positively influence others to achieve organisational goals. Graduates should make plans for their own or group activities, identify and mitigate risks, and deal with change and uncertainty.
- ***Interpersonal skills*** – these include the ability to work in teams, help others to learn, provide customer service, negotiate agreements, resolve differences and work in a multicultural organisation. This includes also the ability to relate to and feel comfortable with people at all levels, and to maintain relationships as circumstances change.
- ***Information technology (IT)*** – refers to the use of technology in a way that contributes to the effective execution of tasks. This includes the ability to select procedures and the equipment and tools to acquire and evaluate data.

- *Systems thinking skills* – these include the ability to understand and operate within social, organisational and technological systems, as well as to design and suggest modifications to systems and explain the interaction of systems in the context of the global economy.
- *Work ethic* – refers to the individual’s attitude towards work and includes attendance, punctuality, motivation, the ability to meet deadlines, patience, positive attitude, dependability, honesty, professionalism and realistic expectations of job requirements and career advancement.

In response to the objectives of the quantitative phase, perspectives of employers, graduates and higher education institutions are presented below.

**a) Perspectives on attributes needed for job performance**

Results revealed that in most cases, stakeholders have conflicting views on what given attributes are essential for the workplace. For example, 90% of employers think that basic literacy and numeracy and critical thinking skills are essential for job performance. This is in contrast to management sciences lecturers, as only 70% and 63% of lecturers respectively had similar views regarding the importance of these attributes. In addition, 100% of employers viewed interpersonal attributes as essential for job performance, but only 30% lecturers regarded them as important. As to graduates, 87% regarded these attributes as important. Almost half (43%) of the lecturers indicated that leadership attributes were not important for job performance, in contrast to fewer than 10% of graduates and employers. These results suggest that

expectations of management sciences lecturers are lower than those of employers.

**b) Perspectives on attributes that are emphasised in the curriculum**

The findings revealed that management sciences lecturers were generally unsure of whether employability attributes were emphasised in the curriculum. For example, only 50% of lecturers indicated that management sciences curricula at their university had a focus on enhancing interpersonal attributes. In addition, fewer than 60% of lecturers and graduates indicated that systems thinking skills and work ethic were emphasised in curricula. About 75% of employers believe that curricula place emphasis on management attributes.

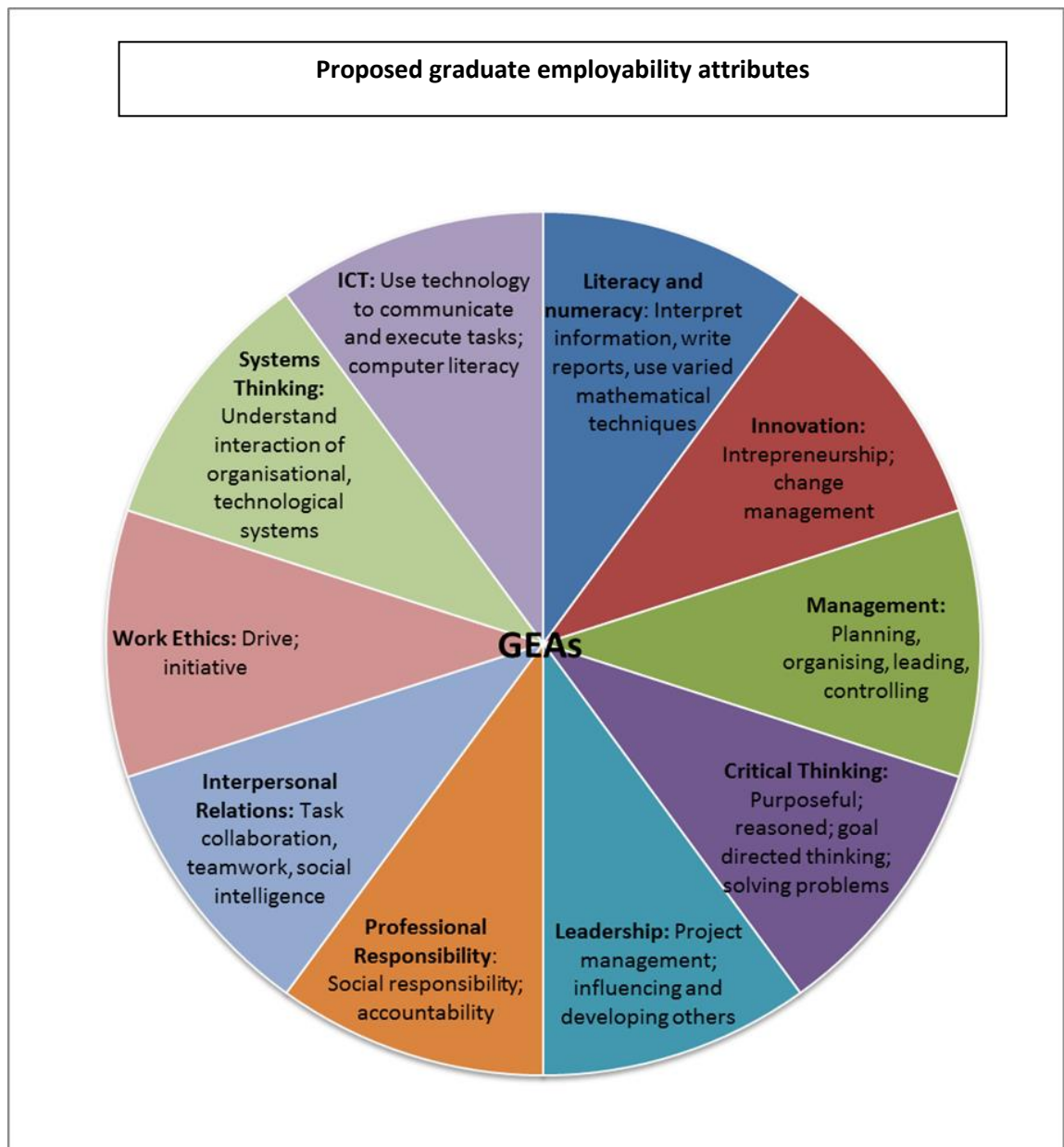
**c) Perspectives on attributes in which graduates need more training**

The majority of employers indicated that graduates need additional training in all attributes. For example, 75% of the employers indicated that graduates need more training in basic literacy and numeracy, 70% in critical thinking, 75% in management attributes, 85% in information technology and 72% indicated that graduates need additional training in work ethics. In contrast, fewer graduates thought that they needed additional training. Only 50% of the graduates in this study indicated that they needed additional training in work ethics, 55% in information technology, 50% in interpersonal skills, and 50% in critical thinking skills. The majority of lecturers indicated that graduates

needed more training. For example, most lecturers (75%) believed that additional training was needed in basic literacy and numeracy, in critical thinking (70%), in management (75%) and in work ethics (74%). These results show that although graduates think they possess employability attributes needed by the labour market, their employers and lecturers have a different opinion.

Results of the quantitative phase indicated that graduates, employers and lecturers believed that all eight employability attributes suggested by Rosenberg et al. (2012) were essential for job performance, and that greater effort should be made to emphasise these in curricula. In addition to these eight attributes, all three stakeholders were unanimous in their opinion that the attributes of innovation and professional responsibility were important for job performance and should be emphasised in curricula. Therefore, in order to accommodate the stakeholders' common interests, these two new attributes were added to the eight attributes. This brings the total number of graduate employability attributes to ten. In light of these additional attributes, a classic definition of innovation is provided by Thompson (as cited in Hurley and Hult, 1998) as the "generation, acceptance and implementation of new ideas, processes, products or services". Responsible and accountable employees see their actions or behaviours as salient, important or consequential. Accountability increases self-awareness relative to a task, role, or a decision to be made (Dose & Klimoski, 1995).

Below is a diagram depicting the ten graduate employability attributes that require enhancement.



**Figure 19: Proposed graduate employability attributes for management sciences in Namibia**

The results of the quantitative phase made a significant contribution to the framework for higher education institutions to ensure that cognisance is taken of these attributes. It is clear that more emphasis should be given to training students in

these attributes to increase their preparedness for the world of work and to ensure success in graduate jobs in the 21<sup>st</sup> century labour market. In addition, the fact that lecturers have less regard for the importance of these attributes to job performance may imply that a closer link between higher education institutions and industry is required to develop a mutual understanding of the labour market and curricular requirements. This is supported by Corominas, Saurina and Villar (2010) who urge stakeholders to advocate for the matching of graduate skills and attributes to the demands of the workplace. In addition, Vivas and Hevia (2009) suggest that higher education should take into consideration employers' views on students' preparation.

### **Qualitative phase results**

Using results from the quantitative phase, the researchers conducted a content analysis of curricular documents from management sciences to assess the extent to which the ten graduate employability attributes had been embedded into the curriculum and to determine the best approaches to integrate these attributes. Mason, Williams and Cranmer (2009) argue that the chief purpose of teaching graduate attributes is to enhance graduates' skill sets in an attempt to boost their competitiveness in the job market. Some researchers have suggested approaches through which graduate employability could be enhanced. Saunders and Zuzel (2010) observe that the current trend in enhancing graduate employability is to incorporate opportunities for employability skills alongside subject-specific knowledge and skills. This approach separates the employability intervention from the programme of study and it is not clear whether this intervention is credit bearing. In contrast, Mason et al. (2009) observe that some universities have adopted

strategies to integrate graduate employability in programmes of study. Here, employability is built into the programme together with specific learning outcomes of the degree programme. These strategies include offering work experience, work-related learning and employability skills modules and 'ready for work' events, as well as involving employers in course design and delivery. A further strategy is mentioned by Gardner (1998) who suggests that faculty should incorporate employability attributes such as leadership, teamwork and communication skills in their courses of study and not as stand-alone modules or once-off experiences. Gardner argues that this should be accompanied by internships or work-based placements and should be contextualized in the discipline. However, Gardner acknowledges the difficulty of incorporating such opportunities in incremental stages for the intellectual, professional and personal development of students.

The literature has proposed the following levels of the curriculum at which graduate employability could be enhanced (Muldoon, 2009; Quality Assurance Agency for Higher Education, 2009; Yorke & Knight, 2006). Firstly, *employability through the whole curriculum*, in which individual students are expected to demonstrate competency in given abilities such as teamwork, problem solving and communication in a progressive manner; secondly, *employability in the core curriculum* where a university designates a module or two as vehicles for enhancing employability attributes. These modules should seek to enable students to acquire a variety of employability skills through practical, voluntary experience and reflection (Quality Assurance Agency for Higher Education, 2009). Thirdly, *employability-related modules within the curriculum* in which students are required to take a theoretical employability module during an undergraduate degree; fourthly, *work-*

*based or work-related learning interspersed within the curriculum* which includes short and long-term placements and internships; and finally, *work-based or work-related learning in parallel with the curriculum* in which students are employed part-time while they are completing their studies (Muldoon, 2009). In relation to the above levels, Fallows and Steven (2000) argue that for the university to ensure that every student is fully equipped with the employability attributes necessary for the workplace, such a university should make decisions on the attributes to be highlighted, on how the university recognises meaningful skills progression from Year 1 to Year 4 and on how it will ensure that each student is fully exposed to each attribute. The results of the analysis of the degree programmes are discussed below.

***Graduate employability in the general aims and intended outcomes of degree programmes***

Three of the six programmes studied contained an overarching statement in the aims of the programme that made reference to graduate employability. Specifically, each of the three programmes, in addition to discipline-specific aims, asserted that “*students will have the opportunity to develop key transferrable skills and be able to apply these in a context of an organization*”. In addition, each programme specified intended outcomes. In this case, a generic outcome in each of the three programmes stated that students would gain the “*skills to work effectively as individuals and as team members, ability to communicate effectively in the workplace, and analyzing information from a variety of sources*”. Furthermore, each of the three programmes placed additional emphasis on specific employability attributes as programme outcomes, such as “*problem solving, critical thinking, responsible citizenship, and*

*good communication*”, and “*display honesty, social responsibility, objectivity and professional demeanor*”.

Reference to graduate employability attributes was not explicitly stated in the remaining three programmes. In a business programme it was stated that the course was aimed at developing the “*intellectual ability, executive personality, management skills*” of students. A second programme stated that its aim was to develop “*quantitative and qualitative analysis, and critical thinking skills*”. One of the programmes noted vaguely that “*the qualification will sharpen the students’ analytical skills through integrating their knowledge of economic theory with real life economic issues encountered in day-to-day economic decision-making processes, both in the government and private sector*”. One of the programmes made no reference to graduate employability. However, analysis revealed implicit employability attributes in the curriculum.

From the above analysis, it became evident that some programmes had made reference to ‘key transferable skills’ such as critical thinking, good communication, work ethic and professional responsibility. Some did not contain labels to refer to attributes that were not discipline specific, but used random terms such as analytical skills. The analysis revealed a need to define graduate employability attributes. In addition, the intention of the programmes to develop graduate employability attributes should be clearly articulated. It is important that this intention and commitment is understood by lecturers, students and employers so that all stakeholders play their part in this endeavour. Graduate employability should therefore form part of the general aims of these programmes. All graduate

employability attributes that will be developed as a result of participating in the degree programme should be specified.

### ***Graduate employability in the core curricula***

Edith Cowan University (2013) suggests that regardless of the course content, there should be multiple opportunities at module level to provide students with the chance to develop and demonstrate their employability attributes. Analysis of graduate employability in core curricula in this study established that none of the core courses made reference to graduate employability in their course outcomes. The descriptions of these modules placed emphasis on preparing students solely for the next levels of academic engagement. However, there appeared to be implicit employability attributes in course content of modules such as Computer User Skills, Computer Literacy, Information Competence, English Communication and Study Skills, Language in Practice, English for Academic Purposes, English in Practice, Contemporary Social Issues and, in some in Business Mathematics. It seems clear that universities should enhance relevant employability attributes in these modules. This should be made explicit in module outcomes and assessment.

### ***Graduate employability through work-based or work-related learning***

The concept of work-integrated learning (WIL) has become a popular method of work-based or work-related learning (Jackson, 2014a). It is described as “the practice of combining traditional academic study, or formal learning, with student exposure to the world-of-work in their chosen profession, with a core aim of better preparing undergraduates for entry into the workforce” (Jackson, 2014b). Similarly, Smith (2012) notes that WIL is a curriculum design which allows students to spend time in professional, work or other practice settings relevant to their degrees of study and their occupational futures. It has benefits for students, universities and employers. It

builds students' confidence and understanding of the standard of industry skills required (Jackson & Wilton, 2016; Smith, 2012). Universities benefit through producing employable or work-ready graduates (Blackwell, Bowes & Harvey, 2001). Employers become informed about universities and the circumstances under which they operate, and this sends an employability signal with regard to students who have participated in WIL experiences (Blackwell et al., 2001). WIL requires a close interaction between educators and practitioners to bridge the gap between capabilities acquired and competencies required in the industry (Leong & Kavanagh, 2013). Typologies of WIL include the following:

- **Sandwich course**, which comprises periods of work experience between years of a course, usually six or 12 months;
- **Co-operative programmes**, which are periods of work experience that may be integrated into the overall curriculum, designed both to integrate theory and practice and to improve graduate employment;
- **Job shadowing**, which places emphasis on observation and absorption of the organisational culture of the workplace;
- **Placement/Practicum**, which is an extended period in work settings to learn skills and gain experience of requirements of future work; and
- **Field work**, which comprises short periods, such as one day per week of field work in an agency to observe and learn about the organisational culture of the workplace (Gibson et al., 2002).

Analysis of management sciences degree programmes revealed that one of the universities had a compulsory WIL module offered during either Semester 1 or 2 of Year 3 of the four-year degree programme. This module was customised to each of the degree programmes. For example, the statement for an accounting programme

reads that the module enables “*students to apply various accounting and finance-related theories/best practices to real world accounting and finance situations/problems; developing capabilities such as effective oral and written communication, teamwork, planning and organising, thinking creatively and problem solving; enabling students to acquire general work experience and work ethics; and to manage time, communicate effectively, make presentations...*”, while the WIL module in economics states that students will “*apply economics theory to the various tasks that they are to do during WIL, manage time, communicate effectively, and prepare for business meetings; make presentations to large groups of people, conduct supervised practical mini researches on organisations of their choice; and review some practical economic aspects of the Namibian economy and make appropriate recommendations*”. Literature indicates that the most popular type of WIL is placements/internships in which students spend a period of three to six months at an organisation. In most cases, the student spends a whole semester there and earns between 12 and 16 credits. In the case of short WIL experiences such as shadowing and field work, students are usually required to spend between 100 to 160 hours on WIL experience (Business/Higher Education Roundtable, 2017). WIL has benefits in terms of building student confidence in their workplace capabilities; providing students with a better understanding of the nature and standard of industry-required skills, and a greater appreciation of the world-of-work; promoting certain elements of career self-management; providing education that responds to present and future needs; and providing learning that is useful to society and not just an addition to students’ disciplinary knowledge base (Coll et al., Freudenberg, Brimble & Cameron, as cited in Jackson 2014a).

In two of the programmes, the WIL module made up 360 notional hours, and 240 hours in another programme. These programmes did not specify the type of WIL experience that students were required to undertake. The analysis, furthermore, established that the WIL module ran concurrently with other semester modules. If the WIL experience is internship, it is not clear how students would fulfil the requirements of this experience while at the same time attending to the academic demands of their other semester modules. Other programmes did not have a work-integrated learning module or component. In light of these differences, it is important that universities specify the types of WIL experiences that students are required to undertake. In addition, universities should make appropriate adjustments to the curriculum to suit the types of WIL experiences. Furthermore, they should all develop a structured WIL programme as part of a degree offering.

#### ***Graduate employability through other modules in the degree programme***

Edith Cowan University (2013) proposes that while all employability attributes are important, there are likely to be some that are more appropriately developed within the context of a given module. In order to incorporate these attributes in the module, universities should ensure that there is a written outcome for the attribute: teaching and learning activities should be designed, indications of WIL experience that is relevant to the attribute should be provided, and suitable assessment tasks developed.

Analysis of management sciences curricula found strong relationships between graduate employability attributes and the learning outcomes of the modules. Modules such as Systems Thinking, Business Ethics, Innovation Creativity and Entrepreneurship, Business Ethics and Leadership, Business Research Methods, and Research Projects contained objectives that could be regarded as employability

attributes. For example, the Systems Thinking module enabled students to “*Apply knowledge of systems thinking to improve decision-making in the business administration and management domain*”. Another example was the objective of the Innovation, Creativity & Entrepreneurship module, which enabled students to “*Create innovative and feasible business ideas and develop a comprehensive and functional business plan for a sustainable entrepreneurial business*”. These examples could be viewed as falling within the employability attribute dimension of Systems Thinking and of Innovation as identified during Phase 1 of the study.

Although graduate employability was not explicitly stated in the aims of these modules, it was clear that they could be regarded as enhancing graduate employability. It is therefore important that explicit reference to the development of graduate employability attributes is inserted in the intended outcomes of modules. In addition, universities should identify modules that could be used as vehicles to enhance relevant attributes.

### **Embedding graduate employability in a stand-alone module**

Owens and Tibby (2014) stress that, increasingly, employers expect graduates to be innovative, adaptable, resilient and flexible, and to have an enterprising mind-set. Graduates need these attributes to be successful in the ever changing global economic environment. In relation to this, a report entitled “Enterprise Education for All” was compiled, advocating that all universities in the United Kingdom should offer training in enterprise and entrepreneurship. Below are three examples of these

stand-alone modules. Owens and Tibby (2014) provide examples of ways through which graduate attributes could be enhanced, using stand-alone modules.

- A stand-alone ‘Biotechnology and Business Module’ for the School of Bioscience at Cardiff University. This module is offered during Year two of the four-year degree and is aimed at developing commercial awareness, enterprise core skills such as communication, interpersonal and team work, and at developing students’ professional identity and interests before they begin industry placement.
- A university-wide ‘Think it. Try it. Do it’ module offered at the University of Exeter, aimed at raising students’ awareness of enterprise, entrepreneurship and self-employment as alternative career paths, and of the pervasiveness of enterprise skill requirements across all career paths. This module allows students to take part in enterprise workshops, to engage with alumni and local entrepreneurs; overall, it prepares them to start up their own business.
- A university wide programme on ‘Enterprise, Entrepreneurialism and Employability (3Es)’ at Staffordshire University. The programme is aimed at improving students’ discipline expertise, professionalism and professional integrity, their global citizenship and sustainability, communication and teamwork. It is designed to make them reflective and critical learners who engage in lifelong learning. This programme is delivered through different disciplines as a core module but customised to fit a specific discipline.

This study found that employers, graduates and higher education institutions in Namibia were unanimous that graduates need training in ‘Innovation’ and ‘Professional Responsibility’. In response to this expressed need, universities should

consider developing specific training modules for graduates in ‘Innovation’ and ‘Professional Responsibility’ in all degree programmes.

### **Developing an employability framework**

Cole and Tibby (2013) argue that the goal of an employability framework is to develop a defined, cohesive and more comprehensive approach to employability. They suggest comprehensive guidelines on developing a graduate employability attributes framework for a university, faculty, or department. These guidelines are divided into four stages. Firstly, ‘Discussion and Reflection’, which involves creating and defining a shared point of reference, including agreement on a working definition of graduate employability, addressing employability responsibilities and activities in the curriculum, and discussing work-based or work-integrated learning with employers. Secondly, ‘Reviewing and Mapping’ specific employability attributes in the curriculum and determining how these could be audited. Thirdly, ‘Action’ involves addressing the gaps identified in the first two stages and determining how these might be prioritised; capacitating staff and sharing the lessons learnt and best practices on enhancing graduate employability. Finally, ‘Evaluating’ what success looks like and reflecting on whether all faculty members are engaged, and then assessing the impact. Hughes and Barrie (2010) caution that universities should develop novel techniques to assess graduate employability attributes rather than employing traditional assessment methods. This is because graduate employability attributes are hard to stipulate completely, as they are a combination of qualities and capabilities learned overtime and are context dependent. However, the following task dimensions should guide the development of assessment approaches.

Firstly, Authenticity to the practices of communities of practice; secondly, authenticity to the conditions in which the task is undertaken; thirdly, clarity of the relationship between assessment criteria used and specified graduate employability attribute; finally, the extent to which students are actively involved in ways that foster meta-cognitive abilities associated with lifelong learning.

Although the above guidelines may be further elaborated to fit a given university, faculty, department or course context, the overall employability approach for each university would differ depending on the outcomes of the above process. The UK Quality Assurance Agency for Higher Education (2009) advises that approaches to employability and personal development planning should allow for diversity in subject-based approaches while maintaining a coordinated institutional approach. In addition, such an approach should ensure an even rate of progress in its implementation across faculties, schools and departments to ensure consistency in student experiences and to enable a more effective monitoring of students' progress.

In light of the results of the study, this paper proposes the following framework for higher education institutions in Namibia:

1. Reaching consensus on a definition of graduate employability; this should be understood by students, lecturers and employers. The present understanding is that graduate employability attributes are qualities, skills, knowledge and abilities of university graduates, beyond disciplinary content knowledge, which are applicable to a range of contexts and are acquired as a result of completing any undergraduate degree. These should prepare graduates for their working lives in an ever-changing global economic environment.

2. The specific graduate employability attributes identified by stakeholders are numeracy and literacy, critical thinking, systems thinking, interpersonal skills, leadership, management, work ethic, information technology, innovation and professional responsibility.
3. Key stakeholders in the enhancement of these attributes are the students, academic staff, employers and those responsible for Work-Integrated Learning, Career Development Officers, alumni and all other relevant offices. Employability is a university-wide responsibility; therefore, all members of the institution should be exposed to a university's employability efforts.
4. There are many ways in which employability may be embedded in the curriculum. Universities should develop strategies for embedding graduate employability attributes in programmes of study. This should be preceded by curriculum mapping to determine the present state and how to improve it. Efforts to incorporate GEAs in curricula could include:
  - a. The general aims of all degree programmes, specific intended outcomes of individual programme modules and units of learning. This should be done through discussions with all academic staff to ensure that all have an understanding of enhancing graduate employability attributes and are motivated to plan appropriate activities.
  - b. Using foundational courses such as English and computer literacy to enhance related attributes such as communication and information communication technology with a specific focus on graduate employability. Current academic foundational modules

taken by all university students should be enhanced to equip students with relevant employability attributes. These modules should be offered across all degree programmes. Academic staff should be prepared to deliver such modules containing an employability component.

c. Development of appropriately structured WIL experiences in all degree programmes and identification of specific modules to enhance a given attribute. It has been acknowledged that WIL is an indispensable vehicle with which to combine theoretical knowledge and the practical work environment:

i. Every university student should participate in some form of WIL experience while at university.

ii. Curricula should be adjusted to suit the envisaged WIL experiences. WIL calls for structured delivery specifying the intended outcomes, the attributes to be developed, the type of WIL and how such experience will be assessed.

iii. The duration of WIL experience should be specified, for example six months, 360 hours, etc.

iv. Credits earned from WIL experiences should be specified, for example four, eight or 16 credits.

v. Universities are encouraged to ensure that WIL experiences are coupled with reflective journaling and portfolios to allow students to think about their professional growth and to plan how to improve subsequent experiences.

- vi. Engagement of industry in WIL planning is essential for effective and efficient delivery of the WIL experience.
      - vii. Typologies of WIL include: job shadowing, field work, internships, placements, sandwich courses, cooperative learning and service learning.
  - d. Development of a special employability module to respond to the expressed needs of industry. For instance, a module on innovation for all students:
    - i. Given the changing labour market, universities should develop programmes, in addition to other modules in the programme, to enhance innovation and prepare students for their professional working lives as responsible members of society.
    - ii. These modules prepare students to become enterprising and creative and at the same time to take responsibility and to be accountable for their actions.
    - iii. These modules should be offered to students in various disciplines.
- 5. Employability attributes should be reflected in module outcomes if such modules have been identified to enhance a given attribute.
- 6. Development of university–industry partnerships:
  - a. The industry is a major stakeholder in the enhancement of graduate employability.

- b. In order to assist universities in planning for relevant skills and experiences, industry should be involved to ensure the appropriateness and relevance of this to industry needs.
  - c. Industry can serve as a resource in preparing students effectively for their working lives. There should be continuous collaboration between university and industry.
- 7. Assessment, both formative and impact, of university employability efforts should be conducted:
  - a. To celebrate and improve the practice
  - b. To share success and good practice, including assessment practices beyond traditional assessment approaches.
- 8. Platforms where good employability practices can be shared should be created among members of the university and other institutions. These could include activities such as faculty seminars, scholarly papers and university conferences.

Graduate employability discourse is supported by Human Capital and Signaling theories	1. Developing a common understanding of graduate employability attributes across the university	Key stakeholders: Students, industry, and HEIs
	2. Obtaining the views of key stakeholders to identify essential graduate employability attributes	
	3. Assessing curriculum to determine current scenarios of graduate employability in the curriculum	
	4. Determining best strategies for embedding identified attributes and adjusting curriculum	
	5. Establishing close partnership with the industry for Work-Integrated Learning	
	6. Continuously assessing impact of employability efforts and sharing best practices internally and externally	

**Figure 20: A framework for embedding GEAs into the curriculum**

The diagram above provides a summary of the components of the proposed framework. Although the study used the case of management sciences, the framework is generic and could fit various disciplines, more so because employability attributes cut across all disciplines. When considering the framework, universities have the task of determining specific actions required at all levels of the university, that is university management, faculty, department, course, module and unit levels. Although there might be differences in the operationalisation of GEAs among programmes, there should be consistency in the rigor of embedding GEAs across the university curriculum. This would ensure equal benefit for all university students. Thus, enhancing graduate employability would become an important part of the curriculum offering.

## **Conclusion**

The purpose of the paper was to introduce a framework for the integration of graduate employability attributes in curricula. The proposed framework was developed from the results of a study on graduate employability in Namibia. The framework contains components that are considered important for universities in enhancing graduate employability. These components include: understanding the concept of graduate employability, identifying key stakeholders; determining the employability attributes to be enhanced; determining strategies to best integrate employability in the curriculum; university-industry partnerships; assessing university employability efforts; and sharing good practice through scholarly contributions and information sharing platforms. Although the study used the case of management sciences curricula in Namibia, the framework could be used in all disciplines. Further work on the framework will be done to pilot it at one of the universities and provide feedback to improve the practice.

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## **CHAPTER 7 : CONCLUSION AND RECOMMENDATIONS**

This chapter presents a conclusion of the study. Employers in Namibia have expressed concern over graduates' lack of preparedness for the labour market due to inadequate training on employability attributes. The study was then conducted to determine the types of employability attributes that are needed by the labour market, and to assess integration of employability attributes in management sciences curricula, with the aim of suggesting a framework for the integration of graduate employability attributes in curricula. Firstly, there was a need to understand opinions of university lecturers, employers in the industry, and recent graduates, regarding graduate attributes they consider important for job performance, those that are emphasized in curricula, and those in which graduates are lacking competence. Therefore, the first research question was:

- What are the lecturers, graduates and employers' perceptions on the integration of graduate employability attributes in management sciences curricula?

Secondly, it was deemed important to assess current management sciences curricula at HEIs in Namibia to find out ways in which graduate employability attributes are currently enhanced through curricula. Therefore, the second research question was:

- How are the graduate employability attributes integrated in the curricula of management sciences at HEIs in Namibia?

Finally, using results from the first two questions and literature on best practices on enhancing graduate employability through curricula, the study aimed to develop a graduate employability framework for management sciences curricula in Namibia.

Thus, the third question of the study was:

- What framework can be developed to guide the integration of graduate employability attributes in Namibia's management sciences curricula?

The study employed a mixed-methods approach using a sequential explanatory design that consisted of a quantitative phase followed by a qualitative phase. The researcher collected quantitative data using survey questionnaires, and qualitative phase employed content analysis. Findings of the study are presented in stand-alone chapters 3, 4, 5, and 6. The chapters are presented as research papers. Chapter 3 is an accepted manuscript to be published in South African Journal of Higher Education. Chapter 4 has been published by the Journal of Teaching and Learning for Graduate Employability 8 (1), 123-136. Chapter 5 is an accepted manuscript to be published by the Journal for Studies in Humanities and Social Sciences. Chapter 6 is a manuscript under review for possible publication.

As detailed in Chapter 3, the study found a mismatch in the viewpoints of the three target groups regarding prioritizing attributes that are needed for job performance, those that are emphasized in curricula, and those in which graduates need more training. Specifically, while employers think that management attributes are highly important for job performance, university lecturers think that management attributes is of least priority, and that priority should be given to Information Communication Technology skills. University lecturers were not assertive to pronounce on the question of whether graduate employability attributes (GEAs) are incorporated into curricula. Employers asserted that graduates need more remedial training in all employability attributes. To the question on whether there are other attributes that should form part of the degree programme, all three stakeholders have asserted that

innovation and professional responsibility or accountability should be emphasised in curricula. The two recommended attributes should then be boosted together with the eight pre-identified employability attributes of literacy and numeracy, critical thinking, management, leadership, information communication technology, systems thinking, work ethics, and interpersonal relations. This brings the number of GEAs to ten. These should form part of the framework.

Chapter 4 presented results of phase two of the study that aimed to find out what strategies have been currently used by the two institutions and what are the best strategies to incorporate GEAs into curricula. Findings of this phase inform that there is a strong presence of implicit GEAs in core curricula modules such as English communication and study skills, computer literacy, and business mathematics. Although intended outcomes of these modules do not specify employability attributes, these modules may be regarded as vehicles for enhancing GEAs at levels that are desirable by the labour market. However, there should be intentional efforts to develop these to the standards required by the graduate labour market. In addition, both lecturers and students should be sensitized about the employability qualities embedded in core curricula modules. Curricula material should make specific reference to workplace skills that are embedded in core curricula modules.

The qualitative phase also established that some programmes have not made reference to graduate employability in their aims and purpose statements. However, a large number of GEAs were found to be randomly and implicitly embedded into discipline specific modules. This illustrates a lack of structure in enhancing GEAs. Furthermore, the extent of competency required has not been made clear. Some

programmes were found to have a work-integrated learning module as part of enhancing graduate attributes. This once-off experience without minimum and maximum duration is aimed at providing students with an opportunity to step into a real work environment.

Analysis of literature related to employability framework, as presented in previous chapters have emphasised the need for universities to enhance GEAs through embedding these into curricula. There are different levels and strategies of embedding these into curricula. Best practices of embedding GEAs into curricula includes an introduction of a module specifically targeting GEAs that have been identified as important for graduates to possess. This module should be supported by multiple Work-Integrated Learning (WIL) experiences at different levels of the degree programme. More importantly, universities should explore the use of different types of WIL in efforts to enhance graduate employability.

In light of the above, a framework for the integration of graduate employability attributes in curricula has been proposed. The framework is presented in Chapter 6 as an attempt to provide an answer to the third question of the study: *What framework can be developed in order to guide the integration of graduate employability attributes in the management sciences curricula in the Namibian HEIs?* Although the question made reference to management sciences, it appears that the proposed framework could be adapted to other academic disciplines if the attributes identified as important to these disciplines are similar to those of management sciences. The study recommends that further research be done to pilot the proposed framework at different levels of the university and conduct an assessment to find out whether the

proposed framework is usable in integrating employability attributes in a curriculum or programme of study.

Given that there is inadequate internship placements for students, it is important that the industry is made aware of the need for Work-Integrated Learning to enhance graduate employability. HEIs should make internship placements as policy issue so that all students obtain exposure to workplace and enhance their employability attributes. Academic staff of universities should engage the industry for close collaboration in the interest of promoting graduate employability. Apart from recommending the framework, results of this study also calls for a broader engagement between HEIs and the industry to develop and promote graduate employability initiatives, for the growth and competitiveness of the economy.

### **7.1 Lessons Learned from undertaking a PhD by Publication**

Although the programme, PhD by Publication has been successfully completed, the journey was characterized by some challenges and benefits. Benefits: Emphasis on writing scholarly academic work. The doctoral candidate graduates with published peer reviewed journal articles, which is important for professional career. The candidate benefits from the demanding review comments, both by the PhD supervisors and respective journal reviewers. Some articles were presented at conferences which allowed for intellectual exchange that subsequently benefited the research work. One of the challenges was that each Journal has a scope and focus in terms of discipline and specific subjects, therefore, choosing and having a journal article accepted for review requires ample groundwork. Also, given the divergent scopes of various journals, the candidate made sure that accepted journal articles did

not deviate from the main objectives of the study and that the golden thread remained throughout all published journal articles.

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## APPENDIX A: RESEARCH ETHICAL CLEARANCE



### STUDENT ETHICAL CLEARANCE CERTIFICATE

**Ethical Clearance Reference Number:** FOE/42/2015

**Date:** 9 July 2015

This Ethical Clearance Certificate is issued by the University of Namibia Research Ethics Committee (UREC) in accordance with the University of Namibia's Research Ethics Policy and Guidelines. Ethical approval is given in respect of undertakings contained in the Research Project outlined below. This Certificate is issued on the recommendations of the ethical evaluation done by the Faculty/Centre/Campus Research & Publications Committee sitting with the Postgraduate Studies Committee.

**Title of Project:** A FRAMEWORK FOR THE INTEGRATION OF GRADUATE EMPLOYABILITY ATTRIBUTES IN THE CURRICULA OF MANAGEMENT SCIENCES AT HIGHER EDUCATION INSTITUTIONS IN NAMIBIA

**Nature/Level of Project:** Doctorate

**Principal Researcher:** R.S. Shivoro

**Student Number :** 9977686

**Host Department & Faculty:** Faculty of Education

**Supervisor(s) :** Dr. R.K. Shalyefu (Main) Dr. N. Kadhila(Co)

Take note of the following:

- (a) Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the UREC. An application to make amendments may be necessary.
- (b) Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the UREC.
- (c) The Principal Researcher must report issues of ethical compliance to the UREC (through the Chairperson of the Faculty/Centre/Campus Research & Publications Committee) at the end of the Project or as may be requested by UREC.
- (d) The UREC retains the right to:
  - (i). withdraw or amend this Ethical Clearance if any unethical practices (as outlined in the Research Ethics Policy) have been detected or suspected,
  - (ii). request for an ethical compliance report at any point during the course of the research.

UREC wishes you the best in your research.

Prof. I. Mapaure  
UNAM Research Coordinator  
ON BEHALF OF UREC

## APPENDIX B: INFORMED CONSENT LETTER

### INFORMED CONSENT

**Title of study:** A Framework for the Integration of Graduate Employability Attributes in the Curricula of Management Sciences at Higher Education Institutions in Namibia

**Researcher:** Romanus Shivute Shivoro, email [rshivoro@gmail.com](mailto:rshivoro@gmail.com),  
Faculty of Education, University of Namibia

You are invited to take part in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information.

The purpose of this study is to determine the current state of graduate employability in the curricula of management sciences at higher education institutions in Namibia, and to propose a framework for the integrating graduate employability attributes in the curriculum. This survey forms part of a doctoral study at the University of Namibia.

You are invited to complete the questionnaire attached to this letter. Instructions on completing the questionnaire are contained in the questionnaire. You are expected to spend about 30 minutes to fill out the questionnaire.

Participation in this study is voluntary and there is no risk or discomfort anticipated from participation in this study. There is no direct benefit to you for your participation in this study; however, the researcher hopes that findings from this study may lead to improved curricula provisions for higher education institutions in Namibia, in terms of enhancing graduate employability. Participant data will be kept confidential and responses to this survey will be anonymous.

If you have questions regarding your rights as a research participant, please contact University of Namibia Research Ethics Committee at 061 206 3061.

#### Participant Consent

I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's signature \_\_\_\_\_ Date \_\_\_\_\_

Investigator's signature \_\_\_\_\_ Date \_\_\_\_\_

## APPENDIX C: PERMISSION TO ACCESS A RESEARCH SITE



**POLYTECHNIC OF NAMIBIA**

transforming into

**OFFICE OF THE REGISTRAR**

Namibia  
University of  
Science and  
Technology

Private Bag 13388 | 13 Storch Street | Windhoek, NAMIBIA  
Tel: (+264-61) 207-2008/2118 | Fax: (+264-61) 207- 2113 | E-mail: registrar@polytechnic.edu.na

24 August 2015

Mr RS Shivoro  
Windhoek  
NAMIBIA

Dear Mr Shivoro

**RE: CONSENT TO CONDUCT RESEARCH WITH POLYTECHNIC OF NAMIBIA STAFF AND STUDENTS**

The letter with approval date 09 July 2015 from Prof I. Mapaure, University of Namibia, and your email correspondence received on 24 August 2015 has reference.

Approval is hereby granted for you to conduct the research on "A Framework for the Integration of Graduate Employability Attributes in the Curricula of Management Sciences at Higher Education Institutions in Namibia" in the Polytechnic of Namibia (transforming into University of Science and Technology). Any information gathered during the research is to be used for the purpose of the study only and must be treated as confidential. The results of the study should be shared with the Polytechnic. Individual information of staff and students will not be made available, nor will biographical information of students be made available in such a way that individual students can be identified.

You are advised to contact Mr Efraim Dumeni, MIIR, Ms Riette Duvenhage, Human Resources Department and Ms Ester Johannes, Programme Development Unit to compile a list of possible respondents to your data collection instrument.

I wish you all the best with your research.

Yours sincerely,

  
Corneels H. Jafta  
REGISTRAR



CC: Dean of Students  
Director: Human Resources  
Vice Rector: Academic Affairs and Research  
Assistant Registrar: Academic Administration  
Director: DICT  
Manager: MIIR  
Programme Development Unit

## **APPENDIX D: DATA COLLECTION INSTRUMENTS**

The instrument used for all three groups of respondents is similar with difference in demographic information, and the opening statement. For graduates the statement begins with “I can...”, for lecturers begins with “Our graduates can...” while for employers it begins with “Recent graduates with less than 2 years job experience can...” The following is an example of the questionnaire given to graduates.

**Questionnaire for management sciences graduates**

**Purpose:** The purpose of this study is to develop a framework for the integration of graduate employability attributes in the curricula of management sciences at higher education institutions in Namibia.

**Directions:** Please answer all questions. Information collected will be treated confidential and binding to the conditions of permission obtained from the institution.

**1. PART I: Demographic Information**

Part I of the questionnaire is used to provide demographic information about the participants. Please complete questions 1-2-3-4-5-6 by selecting one answer. Please write in your answer to questions 7 and 8.

1. What is your gender? Male  Female
2. Are you currently employed? Yes  No
3. University attended: UNAM  NUST
4. Please state name of employer:.....
5. Did you participate in an Internship before entering the workforce fulltime?  
Yes  No
6. Have you taken professional development or continuing education courses?  
Yes  No
7. Years of employment since graduation \_\_\_\_\_
8. What field do you work in? (e.g. Banking) \_\_\_\_\_

**2. PART II**

Please indicate below how important the following **basic literacy and numeracy skills** are in your job, the extent that you acquired these skills in university, and if you will require additional training in the skill after graduation

**9. I can perform basic computations and approach practical problems with different mathematical techniques**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**10. I can organize basic ideas, communicate orally**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**11. I can communicate basic thoughts, ideas, and messages in writing; create documents such as letters, directions, manuals, reports, graphs, and flow charts**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**12. I have the ability to understand and interpret basic written information in documents such as manuals, graphs, and schedules**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**3. PART II Continued**

Please indicate below how important the following **critical thinking skills** are in your job, the extent that you acquired these skills in university, and if you will require additional training in the skill after graduation

**13. I can generate new ideas**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**14. I can specify goals and constraints, generate alternatives, consider risks, and evaluate and choose the best alternative**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**15. I can recognize problems and devise and implement a plan of action**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**16. I can acquire and apply new knowledge and skills from multiple print and digital sources**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**17. I can discover a rule or principle underlying the relationship between two or more objects and apply it when solving a problem**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**4. PART II Continued**

Please indicate below how important the following **leadership skills** are in your job, the extent that you acquired these skills in university, and if you will require additional training in the skill after graduation

**18. I can exert a high level of effort and persevere toward goal attainment**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**19. I believe in my own self-worth and maintain a positive view of myself**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**20. I can set personal goals, monitor progress, exhibit self control and take responsibility for my actions**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**21. I can choose ethical courses of action**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**22. I can communicate ideas to justify positions, persuade and convince others, responsibly challenge existing procedures and policies**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**5. PART II Continued**

Please indicate below how important the following **management skills** are in your job the extent that you acquired these skills in university, and if you will require additional training in the skill after graduation.

**23. I can select goal-relevant activities, rank them, allocate time, and prepare and follow schedules**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**24. I can use or prepare budgets, make forecasts, keep records, and make adjustments to meet objectives**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**25. I can acquire, store, allocate, and use materials or space efficiently**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**6. PART II Continued**

Please indicate below how important the following **interpersonal skills** are in your job, the extent that you acquired these skills in university, and if you will require additional training in the skill after graduation.

**26. I contribute to group efforts**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**27. I help others to learn**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**28. I work to satisfy customers' expectations**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**29. I work well with men and women from diverse backgrounds**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**30. I can demonstrate understanding, friendliness, adaptability, empathy, and politeness in group settings**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**7. PART II Continued**

Please indicate below how important following **information technology skills** are in your job, the extent that you acquired these skills in university, and if you will require additional training in the skill after graduation.

**31. I understand overall intent and proper procedures for the setup and operation of equipment**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**32. I can prevent, identify, or solve problems with equipment, including computers and other technology**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**33. I can identify the need for data, obtain data from existing sources or create it, and evaluate its relevance and accuracy**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**34. I can organize, process and maintain written or computerized records and other forms of information**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**35. I can select and analyze information and communicate the results to others in oral, written, graphic, pictorial or multimedia methods**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**36. I can employ computers to acquire, organize, analyze and communicate information, and demonstrate some proficiency with standard software**

	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Graduate Employability Attributes: Graduate Survey 2015

**8. PART II Continued**

Please indicate below how important the following **systems thinking skills** are in your job the extent that you acquired these skills in university, and if you will require additional training in the skill after graduation.

**37. I know how social, organizational and technological systems work**

Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**38. I can distinguish trends, and predict the impacts of actions on system operations**

Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**39. I make suggestions to modify existing systems to improve products and services and develops new or alternative systems**

Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**40. I know how to assess the efficient operation of social, organizational and technological systems**

Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Graduate Employability Attributes: Graduate Survey 2015

**41. I know how to recognize the efficient operation of social, organizational and technological systems**

Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**42. I understand the interaction and interrelationship of systems within an organization**

Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**43. I understand the interaction and interrelationship of systems in a global economy**

Skills needed for job performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Graduate Employability Attributes: Graduate Survey 2015

**9. PART II Continued**

Please indicate below how important following work **ethic skills** are in your job, the extent that you acquired these skills in college, and if you will require additional training in the skill after graduation.

**44. I attend required organizational meetings and events**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**45. I am on time for organizational meetings and events**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**46. I achieve organizational and personal goals independently**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**47. I complete my work on-time**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**48. I understand organizational protocols and procedures**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Graduate Employability Attributes: Graduate Survey 2015

**49. I demonstrate a positive attitude at work**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**50. I am dependable at work**

Skills needed for job performance	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree
Skills received in university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To what extent do you require additional training in this skill after graduation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**PART III**

**51. Other attributes not included in the questionnaire**

Using the blank table, please **mention and rank the attributes** you consider important for job performance (Skills needed); skills that were emphasized in the management sciences curriculum (Skills received); and skills that require more training (Skills training needed). Please rate each skill listed on the scale of 1 to 5 whereby 1 means strongly disagree, 2 disagree, 3 neutral, 4 agree, and 5 strongly agree, with the statement.

Skills	Skills needed	Skills received	Skills training needed
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>

Thank you for participating in the study!

**APPENDIX E: SUPPLEMENTARY DATA: Perspectives on graduate employability attributes for management sciences graduates**

**Table: E1**

<b>Basic Literacy and Numeracy Attributes</b>				
	<b>Scale</b>	<b>Graduates %</b>	<b>Lecturers %</b>	<b>Employers %</b>
<b>Importance of attributes in job performance</b>	Strongly disagree	1.6	2.2	0.7
	Disagree	1.3	4.4	0.7
	Neutral	2.5	25.3	11.6
	Agree	45.9	40.7	52.1
	Strongly agree	48.7	27.5	34.9
<b>Attributes emphasized in university curricula</b>	Strongly disagree	-	1.1	-
	Disagree	1.3	8.0	1.4
	Neutral	9.1	18.4	13.4
	Agree	59.1	49.4	61.3
	Strongly agree	30.5	23.0	23.9
<b>More training required in this attribute after graduation</b>	Strongly disagree	3.2	1.2	0.7
	Disagree	16.5	8.1	8.0
	Neutral	31.3	15.1	17.4
	Agree	27.5	34.9	50.0
	Strongly agree	21.5	40.7	23.9

**Table: E2**

<b>Critical Thinking Attributes</b>				
	<b>Scale</b>	<b>Graduates %</b>	<b>Lecturers %</b>	<b>Employers %</b>
<b>Importance of attribute in job performance</b>	Strongly disagree	-	2.6	-
	Disagree	0.8	9.6	0.5
	Neutral	5.0	24.3	10.5
	Agree	39.2	33.9	55.8
	Strongly agree	55.0	29.6	33.2
<b>Attribute emphasized in university curricula</b>	Strongly disagree	0.5	-	-
	Disagree	2.8	10.9	5.7
	Neutral	12.6	32.7	14.9
	Agree	55.3	40.0	54.9
	Strongly agree	28.8	16.4	24.6
<b>More training required in this attribute after graduation</b>	Strongly disagree	1.5	-	-
	Disagree	18.3	9.2	6.9
	Neutral	34.3	22.0	19.4
	Agree	28.7	36.7	50.3
	Strongly agree	17.3	32.1	23.4

**Table: E3**

<b>Interpersonal Attributes</b>				
	<b>Scale</b>	<b>Graduates %</b>	<b>Lecturers %</b>	<b>Employers %</b>
<b>Importance of attribute in job performance</b>	Strongly disagree	0.4	3.3	-
	Disagree	1.3	5.5	4.2
	Neutral	2.5	24.2	8.9
	Agree	43.9	40.7	60.0
	Strongly agree	51.9	26.4	26.8
<b>Attribute emphasized in university curricula</b>	Strongly disagree	-	1.1	-
	Disagree	1.7	10.3	2.1
	Neutral	13.0	32.2	15.5
	Agree	54.6	35.6	50.8
	Strongly agree	30.7	20.7	31.6
<b>More training required in this attribute after graduation</b>	Strongly disagree	0.8	2.3	1.1
	Disagree	15.2	9.2	17.6
	Neutral	34.6	33.3	18.1
	Agree	26.2	29.9	42.3
	Strongly agree	23.2	25.3	20.9

**Table: E4**

<b>Leadership Attributes</b>				
	<b>Scale</b>	<b>Graduates %</b>	<b>Lecturers %</b>	<b>Employers %</b>
<b>Importance of attribute in job performance</b>	Strongly disagree	0.3	3.5	1.6
	Disagree	1.8	14.2	2.1
	Neutral	4.1	25.7	10.6
	Agree	47.3	29.2	61.4
	Strongly agree	46.6	27.4	24.3
<b>Attribute emphasized in university curricula</b>	Strongly disagree	0.3	-	-
	Disagree	4.6	20.8	2.3
	Neutral	21.1	29.2	16.1
	Agree	50.0	33.0	58.0
	Strongly agree	25.1	17.0	23.6
<b>More training required in this attribute after graduation</b>	Strongly disagree	4.6	-	-
	Disagree	25.3	11.0	15.5
	Neutral	27.3	27.5	18.4
	Agree	27.0	34.9	42.5
	Strongly agree	15.8	26.6	23.6

**Table: E5**

<b>Management Attributes</b>				
	<b>Scale</b>	<b>Graduates %</b>	<b>Lecturers %</b>	<b>Employers %</b>
<b>Importance of attribute in job performance</b>	Strongly disagree	0.4	4.3	-
	Disagree	1.3	13.0	2.7
	Neutral	2.5	27.5	7.1
	Agree	43.9	42.0	67.3
	Strongly agree	51.9	13.0	23.0
<b>Attribute emphasized in university curricula</b>	Strongly disagree	-	-	1.9
	Disagree	1.7	7.6	4.8
	Neutral	13.0	31.8	18.1
	Agree	54.6	40.9	48.6
	Strongly agree	30.7	19.7	26.7
<b>More training required in this attribute after graduation</b>	Strongly disagree	0.8	1.5	-
	Disagree	15.2	9.1	11.4
	Neutral	34.6	30.3	15.2
	Agree	26.2	31.8	46.7
	Strongly agree	23.2	27.3	26.7

**Table: E6**

<b>Information Technology Attributes</b>				
	<b>Scale</b>	<b>Graduates %</b>	<b>Lecturers %</b>	<b>Employers %</b>
<b>Importance of attribute in job performance</b>	Strongly disagree	-	2.2	-
	Disagree	2.1	3.7	2.3
	Neutral	7.1	21.3	23.1
	Agree	46.4	53.7	57.9
	Strongly agree	44.4	19.1	16.7
<b>Attribute emphasized in university curricula</b>	Strongly disagree	1.1	0.8	-
	Disagree	5.0	6.9	9.5
	Neutral	13.6	29.8	15.5
	Agree	58.7	47.3	55.5
	Strongly agree	21.6	15.3	19.5
<b>More training required in this attribute after graduation</b>	Strongly disagree	0.9	1.5	-
	Disagree	9.9	12.1	3.5
	Neutral	34.1	25.8	11.9
	Agree	31.7	35.6	55.5
	Strongly agree	23.5	25.0	29.1

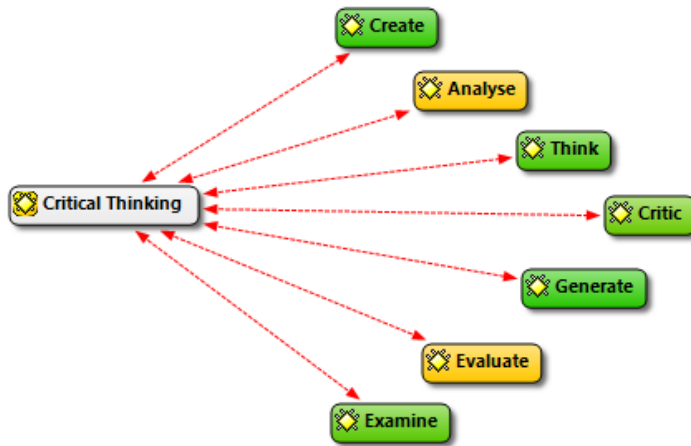
**Table: E7**

<b>Systems thinking Attributes</b>				
	<b>Scale</b>	<b>Graduates %</b>	<b>Lecturers %</b>	<b>Employers %</b>
<b>Importance of attribute in job performance</b>	Strongly disagree	-	2.7	-
	Disagree	2.9	9.4	0.8
	Neutral	15.4	28.9	10.5
	Agree	46.6	51.7	66.4
	Strongly agree	35.0	7.4	22.3
<b>Attribute emphasized in university curricula</b>	Strongly disagree	-	-	-
	Disagree	8.4	16.3	5.9
	Neutral	27.3	26.1	18.8
	Agree	44.0	49.7	60.4
	Strongly agree	20.2	7.8	14.9
<b>More training required in this attribute after graduation</b>	Strongly disagree	0.4	-	-
	Disagree	10.7	10.0	3.6
	Neutral	29.8	23.3	15.7
	Agree	33.5	45.3	60.1
	Strongly agree	25.6	21.3	20.6

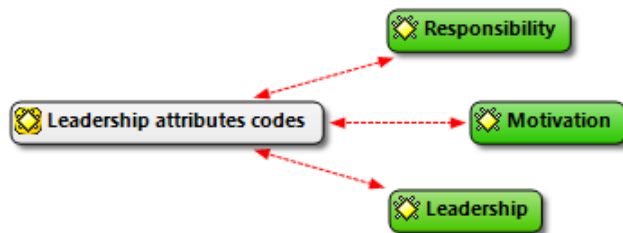
**Table: E8**

<b>Work Ethics</b>				
	<b>Scale</b>	<b>Graduates %</b>	<b>Lecturers %</b>	<b>Employers %</b>
<b>Importance of attribute in job performance</b>	Strongly disagree	0.4	-	0.4
	Disagree	10.7	8.4	5.6
	Neutral	29.8	25.3	12.9
	Agree	33.5	42.2	51.9
	Strongly agree	25.6	24.0	29.2
<b>Attribute emphasized in university curricula</b>	Strongly disagree	2.1	-	-
	Disagree	10.7	11.9	5.2
	Neutral	19.8	25.2	20.2
	Agree	39.2	47.7	54.9
	Strongly agree	28.1	15.2	19.7
<b>More training required in this attribute after graduation</b>	Strongly disagree	3.5	-	0.9
	Disagree	18.9	9.5	13.7
	Neutral	27.4	16.9	13.7
	Agree	26.6	44.6	50.7
	Strongly agree	23.7	29.1	21.1

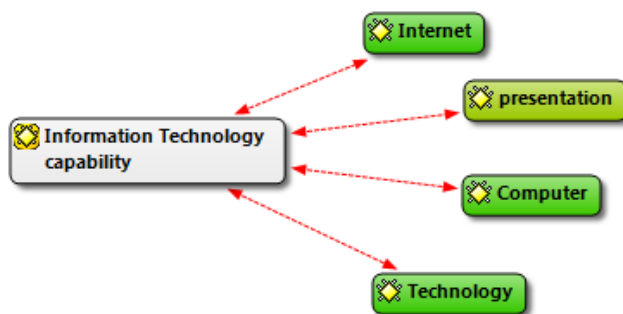
**APPENDIX F: SUPPLEMENTARY DATA:** Embedding graduate employability attributes in curricula of management sciences: a case of two Namibian universities



**Figure: F1**



**Figure: F2**



**Figure: F3**

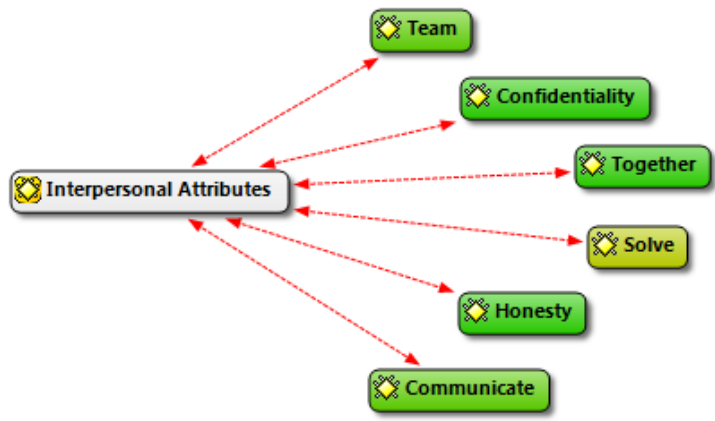


Figure: F4

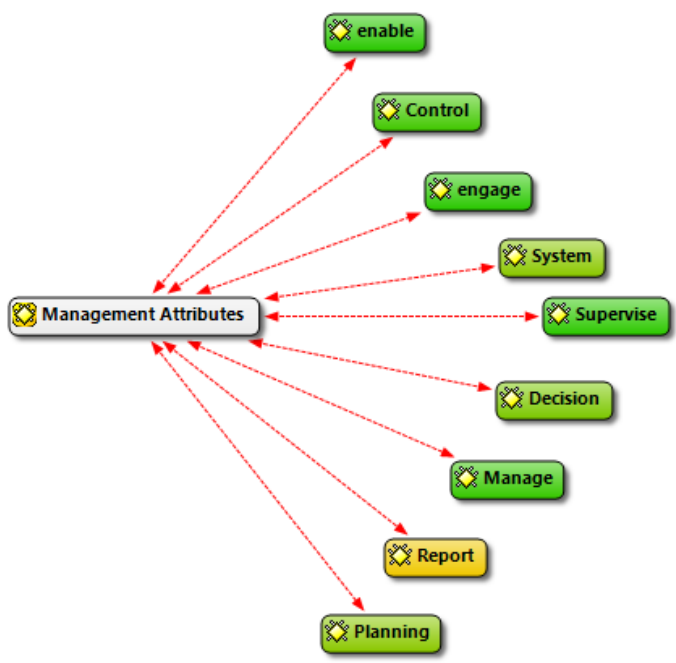


Figure: F5

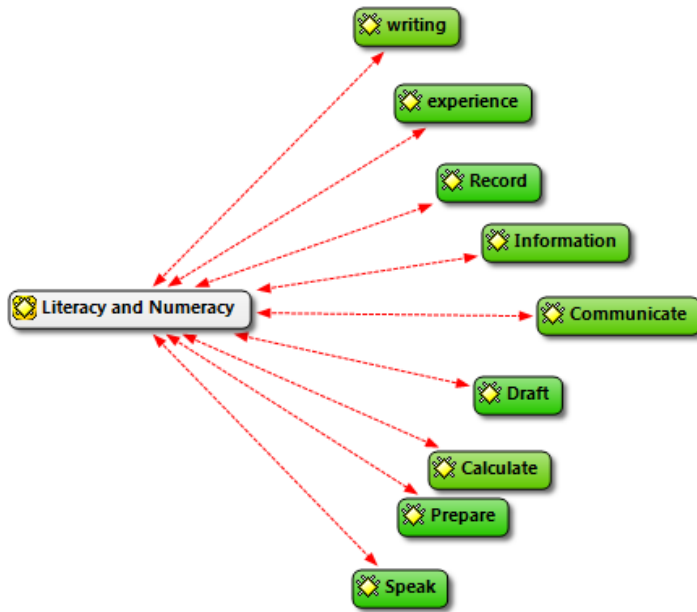


Figure: F6

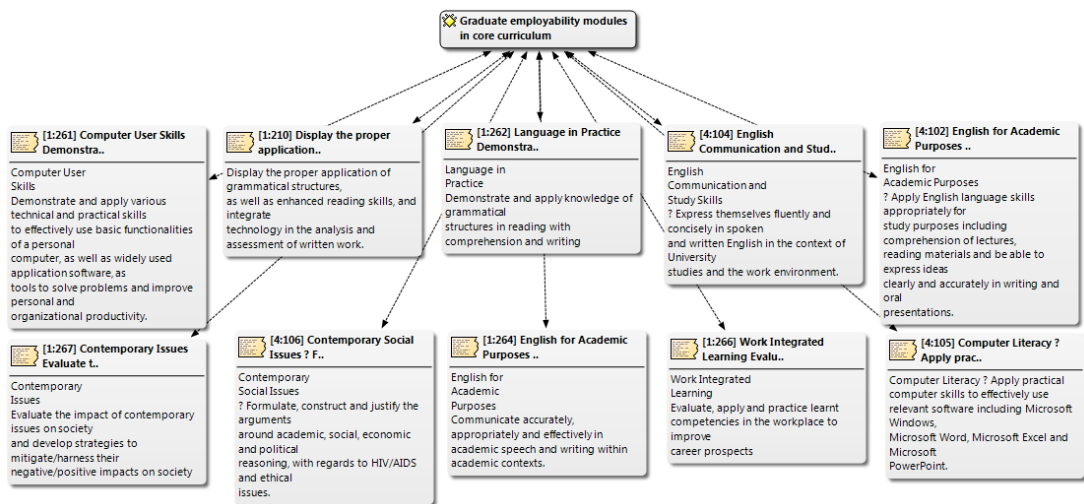


Figure: F7

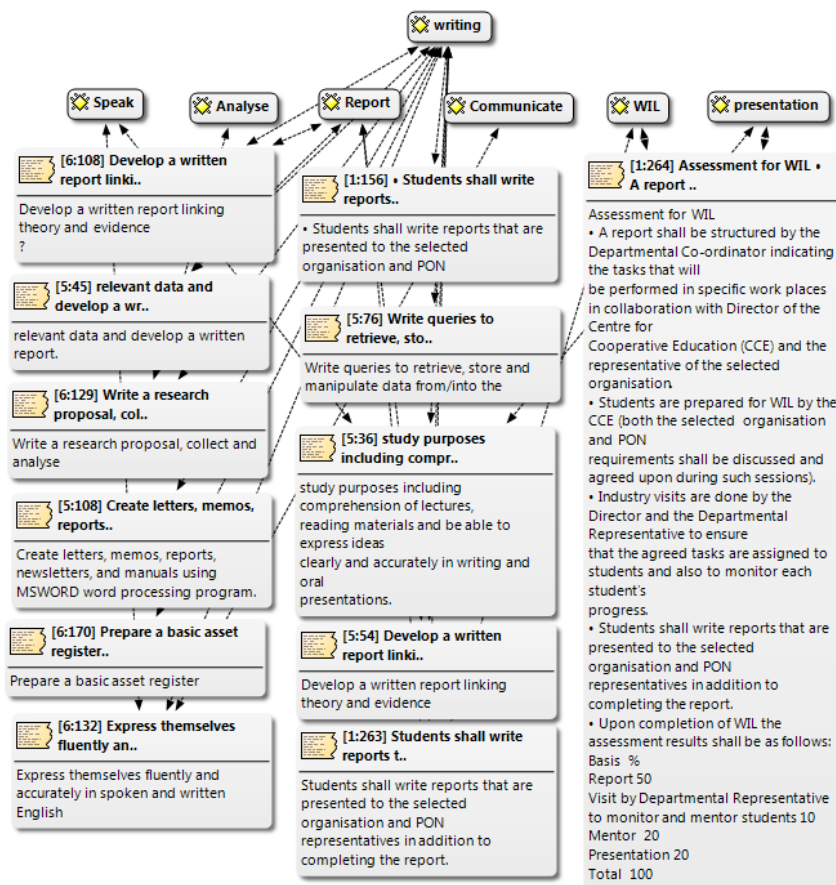
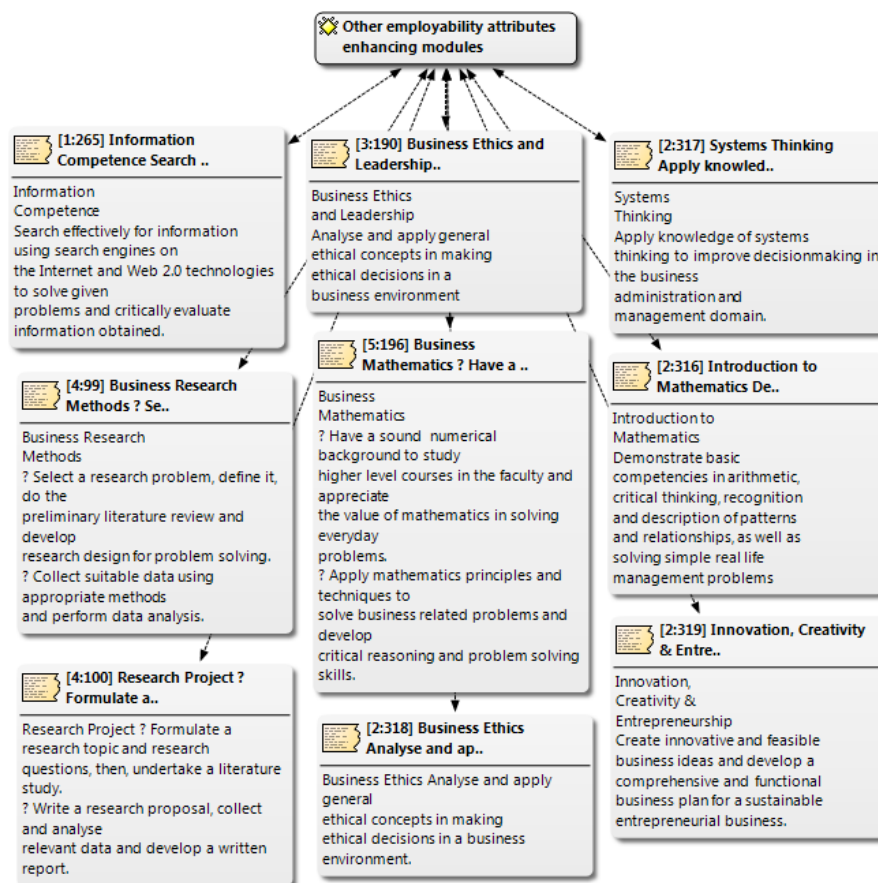


Figure: F8



**Figure: F9**

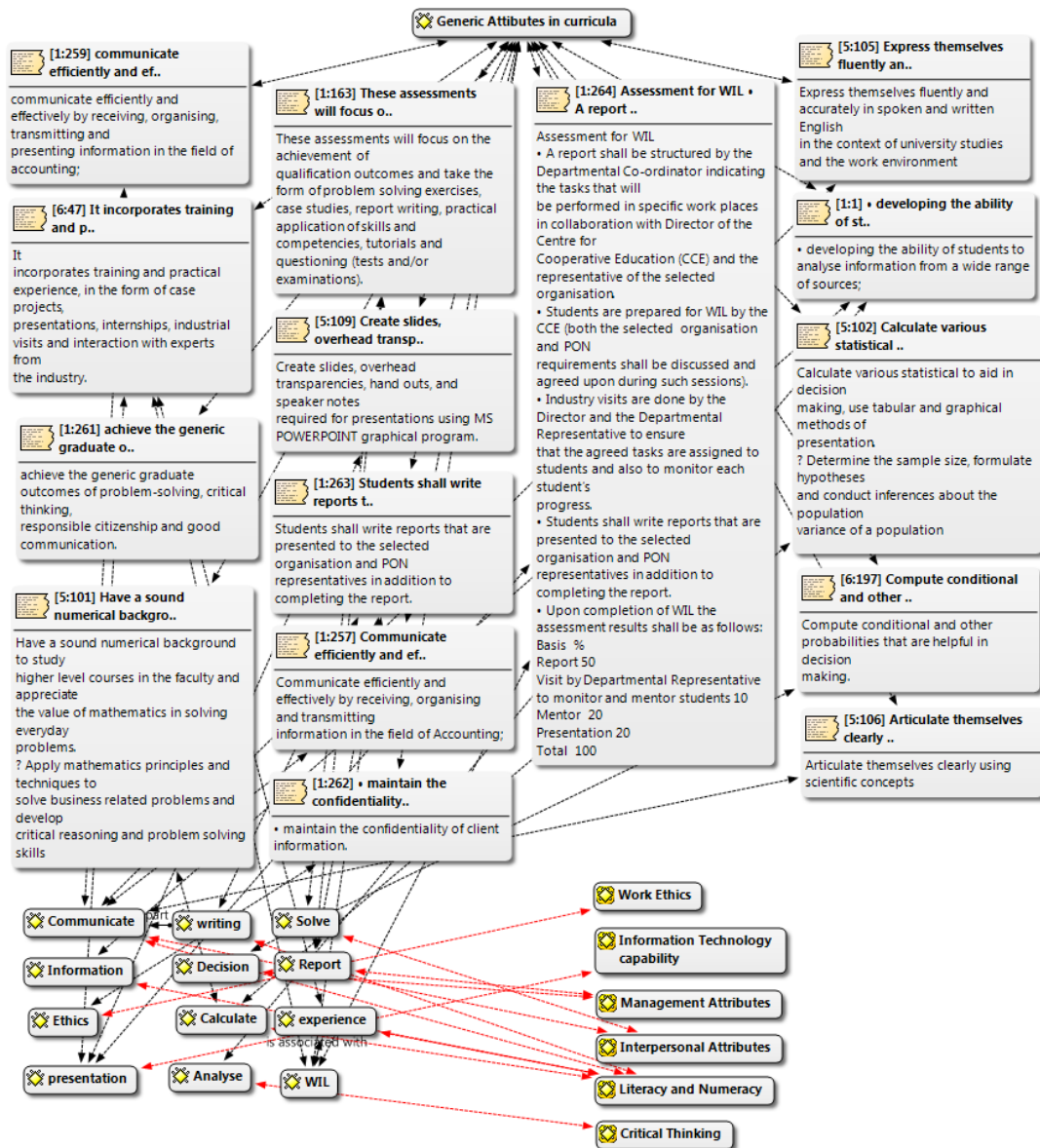


Figure: F10

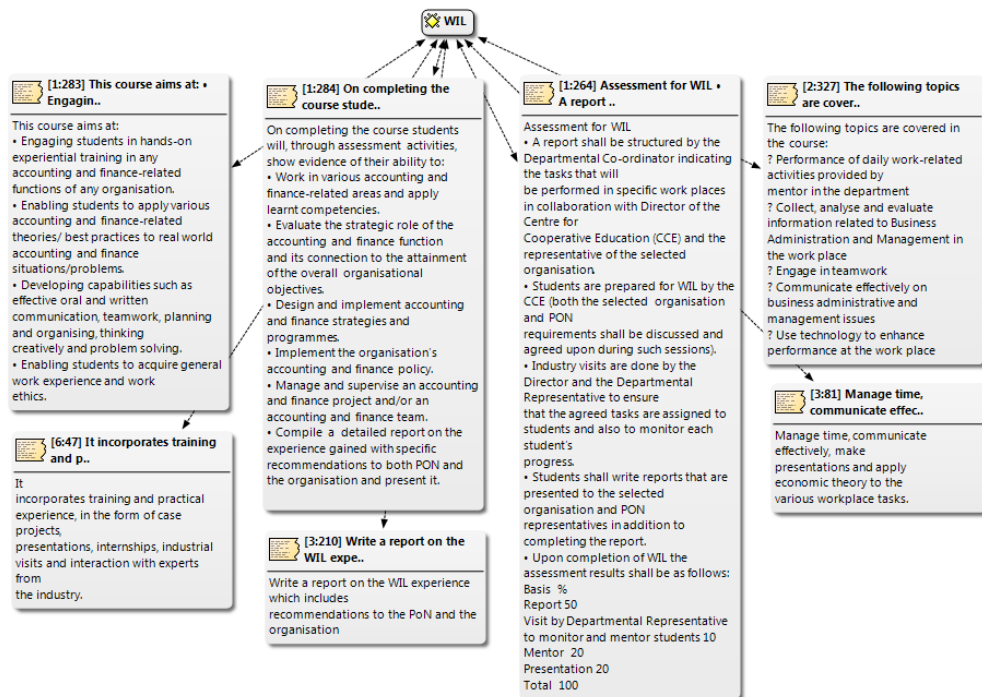


Figure: F11

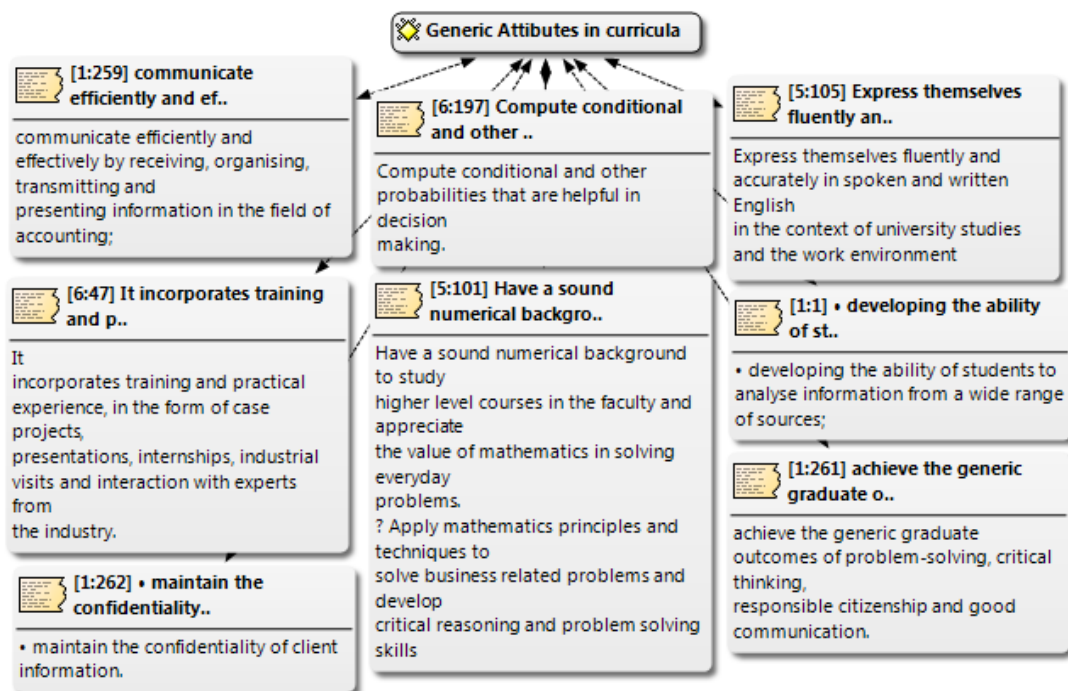


Figure: F12