



Mauritius Research Council

**A RAPID ASSESSMENT OF THE
EXTENT OF CORAL BLEACHING
IN MAURITIUS AFTER THE 1998
SEAWATER WARMING EVENT**

Final Report

August 2017

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MRC RESEARCH PROJECT

**An Assessment of the Mismatch between Higher Education Learning Outcomes and
Job Market Requirements**

An Exploratory Study in the Business Field

FINAL REPORT

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LIST OF ABBREVIATIONS

ILO	International Labour Organisation
CIHE	Caritas Institute of Higher Education
HEFCE	Higher Education Fund Council of England
UKCES	UK Commission for Employment and Skills
HEIs	Higher Education Institutions
IPA	Institute of Public Accountants
HRM	Human Resource Management

CHAPTER 1: INTRODUCTION

Youth unemployment is a major social and economic crisis facing the world today. According to the ILO (2014), in almost every part of the world the situation has been deteriorating concerning the state of the youth labour market. The global youth unemployment rate increased from 11.6% in 2007 to 13.1% in 2013 (ILO, 2014). In Mauritius the situation is as bleak, with 30 000 unemployed individuals aged between 16 and 30 years old (CSO, 2013). In response to the growing problem of unemployment among Mauritian youths, the government has laid emphasis on increasing access to higher education. However, it should be noted that among the unemployed youths, 8 500 of them are actually graduates (CSO, 2013). As reported in the News on Sunday newspaper (2013), “the mismatch between education and the job market is glaring in Mauritius”.

Other and above the fact that there may not be enough job creation in the country, the main disparity between education and the job market that may be responsible for this current state of affairs, is skills mismatch. Skills mismatch has been defined as the “qualitative mismatch between the supply or availability of human resources and the requirements of the labour market. Skills gaps exist when workers have inadequate skill types/levels to meet their employers’ objectives or when new entrants to the labour market are apparently trained and qualified for occupations but still lack some of the skills required.” (National Skills Task Force, 1998). Graduates often lack the necessary technical and employability skills that employers look for. There is a need to align the expected educational outcomes of programmes offered by universities in Mauritius with the job market needs.

The link between higher education and employment as perceived by pure educationalist, is going against the true purpose of education. It can even be considered as going against the notion of academic freedom and viewed as arguing that higher education ought to focus on provided necessary training to students for jobs instead of aiming at raising the mental capabilities (Harvey, 2000). However, as argued by Harvey (2000) “the ‘New Realities’ facing higher education are about responsiveness – not ‘downgrading’ higher education to training”. In fact the quality of higher education is to a large extent determined by how much the universities succeed in enabling students

to acquire the necessary skills, knowledge and mindset needed in their current or future jobs (Srikanthan and Dalrymple, 2007). Quality in higher education can actually be defined as the extent to which the services provided is fit for purpose and while producing employable graduates may not be the sole purpose of higher education, it is definitely one of its main aim (Watty, 2006; Lomas, 2007). While some relevant studies have been conducted to address this issue in the Mauritian context, there is a need for a more in-depth study based on strong theoretical foundations while also looking at making substantial practical contributions.

RESEARCH AIM AND OBJECTIVES

The present research aims at identifying the necessary skills and knowledge that Mauritian graduates in the business field are expected to attain, evaluate the perceived mismatch between graduates' expectations and attainment of those skills and finally to understand the nature of any mismatch identified by analysing the view of employers.

The specific objectives of the study are:

1. To identify the essential knowledge and skills that business graduates are expected to attain.
2. To develop a gap model for higher education learning outcomes pertaining to the job market requirements.
3. To develop a conceptual framework of higher education learning outcomes.
4. To evaluate the perceived mismatch between expected and attained learning outcomes from the graduates perspectives.
5. To understand the nature of the gaps in skills and knowledge identified following the graduates survey by investigating into the views of employers.

CHAPTER 2: REVIEW OF THE LITERATURE

The following presents an analysis of existing research on the topic of higher education and the job market requirements.

2.1 THE ROLE OF HIGHER EDUCATION

Higher education as a means to an end

A few decades ago, Houle (1961) portrayed three different motivational orientations pertaining to why students choose to enter in higher education. The first is the learning orientation whereby students' progress to university because of a true enjoyment of learning and experience intellectual growth. In the second, students with a goal orientation progress to university because they acknowledge that education is the key that will empower them to be specialized in particular fields and to achieve a specific professional outcome. Thirdly, the activity orientation reflects students who are motivated to join the university because of a sheer desire to meet new people and enjoy the extra-curricular activities or as a means to escape from joining the workforce. In reporting similar findings, Clark and Trow (1996) used the terms academic, vocational and collegiate motives for choosing to enter higher education.

More recently, Kember, Ho and Hong (2010), identified six facets to explain student's motives for enrolling at university which is closely aligned to the study of Houle (1961). The six facets were labelled compliance; individual goal; university lifestyle; sense of belonging; career and interest. The compliance facet denotes the unquestioning students who believe that proceeding to university after school is a normality. The individual goal is the personal desire of students to educate themselves as far as possible. The university lifestyle facet reflects those students who are interested in tertiary education for the purpose of taking part in several social and sporting activities. The sense of belonging aspect refers to the guidance of parents, teachers and peers to go for higher studies. The career facet is the desire to enroll to university to fulfill certain career goals. Finally, the interest aspect refers to the personal interest of studying in a particular field of study. While it can be argued that students have diverse motives for joining a university, a key pull factor is that they view higher education as a stepping stone to securing a good job.

The rationale for viewing higher education as a means for better job prospects can be explained by the fact that graduates are expected to gain valuable skills and knowledge during their higher education process which shall allow them attain a level of job performance that would have been difficult to attain without higher education. In that respect, Johnes (2006) stated that individuals enter higher education to gain in depth knowledge on a specific field of study, obtain a higher qualification and hence stand a greater chance to have better employment opportunities. Rainsbury, Hodges, Burchell & Lay' (2002) stated that educational institutions are expected to develop specific competencies in students to prepare them for the world of work and to meet the expectations of employers. According to Becker (1964), graduates are expected to make investments in terms of time and money in order to have a future return on their investments in terms of "monetary and psychic income" as well as improving the chances of getting a job (Humal, 2013). The time that is invested in higher education imparts a certain set of knowledge, skills, understanding and other personal attributes leveraging an individual's productive capacities (Humal, 2013). With the growing expectations of graduates and employers with regards to the need for universities to prepare students for the workplace, questions have been raised as to the extent to which this role was being met.

The fit between university education and graduate jobs

Corominas et al (2010) stated that the debate on the fit between higher education and work basically involves the relationships of dependency and autonomy relative to the university's functions and the requirements of the economy and the production sector. Thus, while the dependency model advocate for a relationship between the educational profiles of graduates and the jobs they fill (the demands of the workplace), the relative autonomy model questions the existence of such a correlation and interestingly propose a regulation of continuous and flexible adjustments in regards to the labour supply and the production sector that adapts to the labour force (Sala et al, 2007 cited in Corominas et al, 2010).

Thus, Corominas et al (2010) explained that the workforce available at a given time is active and demand is influenced by stimulating it. Consequently, Sala et al (2007) put forward that qualification and skill cannot be developed just from formal undergraduate studies but rather from other ways of learning as well, such as work experience. It has

been equally provided that this approach supports a certain level of over-education in the workforce since this may be positive in economic terms in the sense that a greater abundance of qualification may lead to better job possibilities by increasing the overall level of innovation and competitiveness (Lemistre, 2007).

Similarly, Brown and Hesketh (2004) discussed that at the individual scale, another issue debatable is the consolidation of students' professional projects that lead them to go to university and their expectations regarding the type of employment they expect to get on finishing their studies. In this regard, Corominas et al (2010) explained that loss of investment and impossibility of using skills acquired at university to secure a job in related fields may often lead to disappointments and failures.

On the other hand, Troiano (2005) highlighted that graduates are willing to accept sacrifices, such as a change in the place of residence or longer journeys, in order to work in a job connected with their degree and personal preferences and values (Troiano, 2005).

The usefulness of higher education studies in the workplace

The level of match between graduates' qualifications and their job characteristics is a good indicator of the usefulness of higher education studies in the workplace (Catalunya, 2010). In the modern complex societies, having a higher qualification is not enough to guarantee a place in the job market. Employers are expecting graduates to possess participative, methodological and socio-emotional competencies. However, previous studies proved that the competences achieved by graduates in higher education are below the level that is required in the job market. Enhancing these competences would require higher education institutions to focus more on practical learning, teamwork and stimulation of relationships (Aracil, 2007). However, Sala et al., (2007) suggested that it would require more than just a formal qualification to enter the job market. Other ways of learning, like on-the-job training, are needed to facilitate graduates' transition from education institutions to the workplace.

Other researchers have mentioned that universities may have difficulty in providing students with the competences that can only be acquired through internships programs and that cannot be developed in a formal academic setting (Heijke et al. 2003; Rodríguez Espinar et al., 2007). In particular, Heijke et al. (2003) pointed that certain

skills like leadership, interpersonal and teamwork can only be attained through work experience. According to Reich (1991, 2002), there are two sorts of expertise that are required by the economy: one emphasizing discovery and the other focusing on exploiting the discoveries of others through market- related intelligence and the application of interpersonal skills. Higher education institutions are not particularly useful in preparing students to achieve these two sorts of expertise.

2.2 JOB MARKET REQUIREMENTS AND EMPLOYABILITY

The acquired and required competencies

The European Commission (2013) points out that the acquired and required competencies for graduates to secure a job is given utmost importance by employers. The attribute level of a graduate reflects the employer's preferences while selecting the ideal candidate, although, undeniably, every employer associates different level attributes for each job on offer. The match between the field of study and the responsibilities of the job is the main criterion for employers while making their selection of whom to call for an interview.

Employers prefer an exact match between the field of study and the job task to minimize the burden and costs that are related with the graduate's starting phase. However, this does not mean that employers expect universities to supply graduates with skills that perfectly fit the needs of a particular job position or the organization (HEQC, 1997). On the contrary, employers accept to provide training on the specific skills necessary to do the job. Needless to say, relevant work experience increases the graduate's chance to be invited for a job interview or even to secure the job as compared to others without relevant experience. Relevant work experience indicates a range of fundamental skills that graduates possess and employers prioritize. Besides, employers use relevant work experience as a marker to evaluate graduate's skill. The skills areas identified are: Professional expertise, general academic skills, innovative/creative skills, strategic/organizational skills, interpersonal skills, commercial/entrepreneurial skills and international orientation (CBI, 2007).

Archer & Davison (2008, p.8) explain that professional expertise refers to the specific awareness and talents needed to resolve job related issues. It reflects whether someone will be able to work at full speed, learn further and work productively while working

in teams. The most valued skill by employers is professional expertise as it indicates the time and investment needed for a graduate to be ready for the assigned job task. As a result, very often employers are reluctant to hire graduate below the threshold level. Thus, high level of relevant work experience is an advantage for graduates. This opinion is supported by Brown et al., (2002, p.9) who argue that possessing a degree does not give someone an advantage in the labour market, but at best, it enables the individual to stay in the race.

General academic skills can be defined as critical thinking, reflectiveness and to be able to recognize one's own weakness (Training Agency, 1990, p.5). General academic skills are typically considered less important than specific professional experience. Nonetheless, some employers consider the grades of applicants to a great extent which indicate graduate's general ability, especially those with high grades are expected to be knowledgeable, well trained and able to quickly adjust to changes in the job task. Academic qualifications are the first tick in the box and then employers move on (Brown *et al.*, 2002, p. 19). This is parallel with Stephenson's (1998) suggestion that the capable person can work effectively on familiar problems in unfamiliar contexts as well as on familiar problems in family contexts.

Innovative/creative skills is the ability to come up with new ideas and to solve problems from a different angle (Hinchliffe, 2002). Strategic/organizational skills can be described as being able to act strategically for the success of the company's objectives and main concern. These skills are more expected with experienced employees rather than fresh graduates. Interpersonal skills refer to the ability of being a team player. In the same vein, interpersonal skills are also crucial as professional expertise as it reflects a candidate's personality and ability to work in a group. However, improving interpersonal skills is a very complex task but can be developed in several ways and at different stages of life. Interpersonal skills are almost as important as professional expertise. A lack of it can pose a serious danger on the whole team and the chances to achieve the company's objectives.

Harvey, Moon and Geall (1997) claim that commercial/entrepreneurial skills is the ability to recognize commercial value of an idea and search for ways to turn them into success products. These skills are normally considered less important compared to professional expertise and interpersonal skills, especially if it is in the early stage of

career. Likewise, innovation and creativity is not considered as one of the main priority in the selection criterion. Still possessing these skills even at an average level can be a comparative advantage for somebody.

International Orientation is the fact of being a linguist and possessing intercultural skills. This helps the employee to work with people who are from different cultural backgrounds and to adapt to new cultures. International Orientation is a tipping factor than a make or break in the hiring process. However, this skill becomes a prerequisite mainly if employers operate on an international level. Many employers favor graduates who have studied abroad partly or fully. They believe that these graduates possess various language skills and specific knowledge such as the legal system of the particular country. Nevertheless, some employers fear that such graduates may have a lack of knowledge of the national rules and regulations. Indeed, according to the Bologna process and the international recognition of study programmes, employers are reluctant to hire graduates with foreign degrees. They believe that there can be difference in the quality or formality with the foreign degree (Humburg, 2013).

On the whole, while differences of relative importance between these skills exist, the size of these differences are moderate as there is no deal-breaking skill. Although certain skills are considered as most important, employers look for round profiles rather than extremes (Yorke, 2006). On the other hand, Hesketh (2000) argues that certain employers take into consideration the prestige and reputation of a university. It is believed that it sends a strong signal about their employability to employers. Nevertheless, CIHE (2011) counter argues by evoking that differences among employers on a skill's importance exist in the hiring decision. On the other hand, Sermasuk (2013) claims that all the skills are crucial in the starting phase of work for the young graduate and that all the employability skills are equal.

Expectations of employers and academics with regards to the ability of graduates

For the success of their organization, employers often require graduates that are highly educated and who are equipped with specific skills as demanded by a given job (Brown & Lauder 1992).

In his research, Harvey (2002) pointed out that employers are increasingly demanding that employees possess a certain set of skills and attributes, which are not always taught

to students during their learning process, to be successful in the workplace. These skills and attributes cover things like communication, teamwork and interpersonal skills. Good communication skills entail that employees are able to interact effectively to individual and groups alike, to those that are within the organisation as well as those who are external, to employees at all levels of the hierarchy, to be an effective team player and to be able to adapt easily to different work environment.

Employers say that they are satisfied with the level of disciplinary knowledge that students bring with them however it is not enough. Students often lack other significant skills such as IT skills, problem solving skills and personal qualities like steadfastness (Going global, 2014). According to Kornelia (2012), more than 50% of the employees that is now entering the job market lack the necessary skills, including communication skills, interpersonal skills and so on, to function successfully in an organisation. As a matter of fact, they also lack general knowledge about their own field of study.

In the UK, employers give more importance to the attributes of an individual rather than his/her degree subject. The majority of the employers fill particular posts with people from other disciplines. For example, software firms do not limit their search to individual with an IT background rather they look for individuals with the ability to work in teams and to communicate effectively. Being knowledgeable in a specific subject is not the primary criteria which employers base them on when recruiting new graduates, except if it's in the field of medicines or engineering. Instead, employers expect graduates to be bright and equipped with a number of skills (Harvey, 2002).

Key characteristics that affect graduate's employability

Elliott and Lewitt (2011) claim that universities should organized programmes with employers in order to help promote the employability of their students. Indeed, this is in line with the statements of Mason *et al.*, (2006) and Weisz (1999) as mentioned above, whereby universities do provide and cater for such initiatives: the importance of placements, internships and work-based learning.

Nowadays internships have become popular. Many universities promote placements and internships facilities for students. For example, in one English university, about 25% of students were able to do internships, placements and other work-based learning (HEI Midlands). For example, 1000 students from the South of England University and

about 50% from the university West of England have placements that focuses on business and employment. In UK, 40 universities have similar schemes. And such universities also include mentoring within their programmes to help students identify their strengths and weaknesses and their interests in particular areas they want to work in. It is a source of employability programmes that have been attached with great importance since years till present. This is so, because it instills employability skills and work-based experiences to the students. Internships can be very advantageous to students who have no professional experience but have just entered the labour market and are looking for their first opportunity.

Earlier internships were more likely provided to management and business courses where practical skills and experience is very important to achieve the required competencies and to enhance the chances of being employed. However, at present, internships, are being included in the curriculum of almost all courses available. It provides valuable feedback not only to students but to universities and it is also valuable for the businesses of the employers. However, there is only a lack of research and development on the longer-term impact of internships.

Internships further help students to market themselves efficiently to potential recruiters and it also allows them to ponder over how their university experiences contribute to their personal and vocational development. Likewise, the Degree Plus Program was introduced by one university in the Northern Ireland (2008) whereby students developed further skills through extra-curricular activities. These include a part-time job, voluntary work or even acting as a course rep. Similarly, a South University in England has a programme of employability and skills events that is held from October to March each academic year, where students are provided with advice and coaching from graduate's recruiters to help them develop the needed skills in the workforce. In line with this, Zuboff (1988, p. 395) note that

“Learning is no longer a separate activity that occurs either before one enters the workplace or in a remote classroom setting...learning is not something that requires time out from being employed in productive activity, learning is at the heart of productive activity.”

Hodges and Burchell (2003) agree by stating that these cooperatives education programs help students to understand that the workplace is simply a different learning

institution. It is a place where the curriculum is not stated and the learning outcomes are unclear but it helps them to be responsible for identifying their own learning.

Effects of business internships on marketability: the employer's perspective

Employers believe that business internships affect the job market in several ways. In line with the opinion of Archer and Davison (2008, p. 8) experience appears to be the major factor that differentiate graduates since the early 1990's. For example, the former US secretary of labor Robert Reich claims that for most of the job created, 85% requires some vocational training. Hence, experience remains a discriminating factor that can be offered to a prospective employer (Fleetwood and Shelly, 2000). Likewise, the National Association of Colleges and Employers adds that 85% of employers provide training in the form of paid internships, which increases the effectiveness while recruiting talented graduates.

Gault *et al.*, (2000) indicate that internships provide a ready and willing source of inexpensive, qualified, very passionate and motivated labor, however, it remains marginal from the academic curriculum because of a lack of research and funding (Migliore, 1999).

Employers feel that internships contribute value to the intern in terms of future job performance and would be more likely to rehire their present intern and hire future intern from the same university. A majority expressed their likelihood to hire their interns rather than non-interns if they are highly committed to quality work (DiLorenzo-Aiss and Mathisen 1996). Groves *et al.*, (1997) further add that internships act as a bridge that fill in the gap that is present between career expectations developed in the classroom and reality of the post-graduation employment. In the same vein, it promotes several advantages like obtaining a full time job and higher compensation (Gault *et al.*, 2000).

Employer's perceptions of the employability skills of new graduates

In the study, "Employers Perceptions of the employability skills of new graduates" employers claim that there are particular characteristics, skills, knowledge and intellectual capacity elements that graduates should possess (Eliott and Lewitt, 2011). These are:

- Team working
- Problem solving
- Self-management
- Knowledge of the business
- Literacy and numeracy relevant to the post
- ICT Knowledge
- Good interpersonal and communication skills
- Ability to use own initiative but also to follow instructions
- Leadership skills where necessary

Employers advocate that:

Firstly; field specific knowledge and general academic skills can never be developed separately. In other words, they explain that it is not possible to acquire general academic skills without applying it to a specific context, and vice versa. Therefore, both skills compensate for each other (Smith, 2011).

Secondly; graduates who lack these skills will not be able to apply and find the specific knowledge on the internet to solve these complex expert tasks. Their view is supported by the Eurobarometer Survey on “Employers Perceptions of the Employability Skills of New Graduates” (2011) whereby some psychologists argued that general academic skills cannot be developed separately. This is in line with Rudman’s (1995) opinion than an individual has the capability to perform a specific task because he or she possesses the necessary knowledge and skills but may not become fully competent in the task until he or she gains some experience.

When given the option, employers would prefer to choose a specialist but not someone who doesn’t possess a certain level of general academic skills or specific knowledge. The reason for their choice is that both skills are necessary to be efficient in work and to make progress (Lee, 2011). Mark & Martinez (2015) agree by arguing that employers differentiate between graduates who have required work experience with those who do not possess this skill while recruiting graduates. They are more concern of the

performance or productivity issues of their organization. Even Glass *et al.*, (2008) in their case study found that a majority of employers hire graduates with specific skills they want to bring in their organization.

Certain skills should mainly be developed at the university, for instance, professional expertise and general academic skills (Weisz, 1999). They further add that these skills can be or should be taught in primary or secondary school as well (Sermsuk, 2013). Nevertheless, it is *sine qua non* to acknowledge that larger companies can afford to hire graduates who have general profiles as they provide their own training programmes as compared to smaller ones.

Employability skills for new graduates should be included as “real work practices” in the curriculum. As a result, students will have the opportunity to apply whatever they have learnt in actual or stimulated case studies, internships, guest lectures, or direct involvement in the curriculum design. Purcell and Pitcher (1996) support this view by enunciating that the reason why employers do not rank general academic skills highly is because they expect graduates to already possess an average level of general academic skills once they graduate from a university.

However, in the study conducted on new graduates by HEFCE, employers revealed that graduates experience difficulty in verbal communication, time management and task juggling (Leon, 2002). Hence, Vishnich (2009) reveals that graduates from the business field should possess general skills not only to ensure employment but to do further studies and specific trainings. This study corresponds to a study carried out in Nigeria, where employers relate that there is skills mismatch between their requirements and graduate’s competencies. Similarly, Chung and Yet (2009) conducted a study in Malaysia and reported that the students possessed personal skills however, there is a mismatch in skills such as critical analysis, planning, problem solving, oral communication, decision making and negotiating.

Mason *et al.*, (2006) study on higher education employability skills initiatives in different universities reveal that practical training is very effective for the practical development of employability skills in graduates. However, Stasz (1997) suggests that it is the workplace context that determines the importance attached to each particular skills and competencies. Hence, Haber (1993) evokes that the undergraduate courses should ensure the development of the particular skills needed for business graduates.

Hodges and Burchell (2011) report that employers can instill some skills but cannot drive passion and motivation. These are internal attitude which affect the importance of business graduates to employers. Employers employ people with the right attitude and then they provide practical training to develop their theory skills in practice. Such a conclusion is in line with UKCES (2009a) findings which conclude that there are particular attitudes and outlooks that depends on the graduate itself.

The research conducted by Eliott and Lewitt (2011) also revealed that there were systematically no approach from universities to employers but rather are more interested to conduct further research and development. Nevertheless, an early study by Joseph and Joseph (1997) report that employers were of the opinion that higher education institutions do provide internships for business graduates but general competencies are given less importance. Similarly, Allison *et al.*, (2002) declare that many universities work in collaboration with employers to promote employability skills in graduates by providing placement and work based learning opportunities.

The British Council (2014) argues that employers should take into consideration the quality of primary and secondary education of a graduate as the “classroom” represents all formal learning related to degree courses. However, Bailly (2008) claimed that the learning process in school does not guarantee quality of work since the determining factors have their roots elsewhere. This is in line with what Boud and Gamick (1999, p.2) note:

“No longer are the pools of knowledge and expertise acquired in initial education sufficient for the “new work order”. What is now required are the abilities to put that knowledge and expertise to use in unfamiliar circumstances and so we find demands for flexibility, communication skills, teamwork and so on.”

In the same vein, Sweeney and Twomey (1997, p. 229) note that:

“Employers are looking beyond content and focusing more on attributes and skills that will be adaptive, adaptable and transformative”.

Likewise, Case (1999) adds that in the future employers will expect employees to be responsible for their own professional development independent of the recruiting organization.

Humburg (2013) asserts that employers do not have a crystal ball to forecast the future. This problem of mismatch in skill and labour market cannot be solved by asking many employers how they think skill demands should be developed. Despite that, in the study “Graduate Employability- what do employers think and want?” conducted by Archer and Davison (2008) the views of employers clearly demonstrate that there is a huge difference between what universities are promoting and what the labour market requires. A review of studies conducted 10 years ago examining general competencies required of graduates by Dunne *et al.*, (2008), Harvey (2000), Lees (2002) and Mason *et al.*, (2006) proclaim that tension still remains.

Effects of employability skills initiatives on graduate labor market

Skills of an individual are an important factor on the graduate labor market. Its significance is becoming even more distinct in this new era.

The skills that are often mentioned in employability literatures has more to do with enterprise and entrepreneurship skills. Graduates with enterprise skills would be considered as an important asset in any organisation. In Dacre’s (2007) study, he mentioned that a graduate with enterprise skills would be someone who is “imaginative, creative, adaptable, a willing learner...” Conversely, entrepreneurial skills are additional skills that some graduates will want to develop.

According to Moynagh and Worsley (2005), emotional intelligence is an important asset to a graduate and with the expected increase in customer service like jobs; it will become even more important in the future labor market. Goleman (1998) describes emotional intelligence as the ability of an individual to recognize his/her own feelings as well as that of others and to manage these emotions effectively in ourselves and in our relationships with others. Previous literatures on emotional intelligence reveal that individuals who have high levels of emotional intelligence are able to achieve more simply by motivating themselves as well as others. In addition, they achieve more in terms of successful careers, stronger relationships and better health as compared to those with low levels of emotional intelligence (Cooper, 1997). Improving an individual’s emotional intelligence is possible through higher educational learning (Jaegar, 2003).

For a successful entry into the labor market, several researchers mention the importance of having education in career development learning. Watts (2006) pointed out that career development has not been given its due importance in higher education institutions although this is now changing. Career development learning encompass acquiring the best way to explore the labor market and seek opportunities, learning how to present themselves to future employers, and how to make effective decisions concerning their careers (Dacre, 2007). Other career development learning activities include teaching students to become self-aware and to motivate them to consider the things they love doing.

The nature and causes of graduate unemployment

Graduates who enter the labour market are heterogeneous which makes them more likely to be unemployed due to those several disparities caused by their demographic characteristics and human capital attainment such as race, age, type of qualification, field of study and duration of job.

According to the human capital theory the perception that higher educational qualification entails that higher income over the working of a person (Barker 2007: 206). Marshall (1988:1), on the other hand, claims that the undergoing years of educational attainment is not an indication of the quality of education and training, hence does not in itself guarantee a job security. Darwin (2012: 2) supports this view by explaining that an increased year of education does not necessarily mean that the person will be productive at work. Thus, it is the “ability” of the graduate that counts at the end (Barker 2007: 209). Many graduates lack abilities that can determine the extent to which they can be productive in the workplace. Therefore, the attributes of graduates are fundamental in justifying their employability (Rheede, 2012).

On the other hand, Schugurensky (2010: 3) argues that family background and financial status play an important role for graduates to secure a job. In other words, it could facilitate the entrance to higher paying occupations and graduates who are better suited for a job and may be productive have a greater chance of being unemployed due to a lack of necessary contexts or status (Barker 203: 249).

The human capital theory further predicts that there is often a change of demand in the level of labour productivity as a country develops (Stryker, 2001: 27). For instance,

organization value particular skills but these skill's value change over time in ones that fit the needs of the time. Hence, graduates may have studied fields that are no longer in demand as it is impossible to predict future labour market requirements (Schugurensky, 2010: 3). Thus, there is a mismatch in demand and supply (Pedersen and lund, 1987:5).

Fedderke (2005: 38) found that quality of education determines the probability of being employed to a great extent. In other words, the increased access and the level of education is not a true signal of the employability and productivity of the graduates.

Likewise, it happens that after graduation, the individual does not secure immediately but after three years or suddenly becomes unemployed as a result of his skills that becomes obsolete and might need to undergo further training to upgrade his/her skills, in order, to get a chance to be employed again.

Other than mismatch there is discrimination among graduates based on the tertiary institution they have graduated, their ethnic background and disadvantaged groups that contribute to graduate unemployment (Riley and College, 2006: 1).

MacGregor (2008: 1) advocates that the rate of graduates unemployed has increased from 6.6 % in 1995 to 9.7% in 2005. Hence, graduates unemployment is the fastest growing type of unemployment in South Africa since 1995.

The rigidity of labour legislation entails graduates unemployment. Employers are more likely to hire on a contractual basis, or hire more experienced workers who are less of a risk or they would rather invest in the capital as it is difficult to dismiss employees due to the rigid legislation. As if they do not comply, this can lead to increased costs for their business and entail legal action.

In compliance with the opinion of Archer & Davison (2008), Mannack (2009: 2) one of the reasons of graduate's unemployment is lack of professional expertise. According to the National Treasury (2011: 4), unexperienced graduates are considered as risky investment.

The World Bank (2009: 46) further states that if they succeed in finding a job then employers should provide training to make then productive and can incur unnecessary costs (Du Toit, 2003). In fact, there are several countries that suffers from high rate of graduates unemployed such as China, India and Europe including South Africa.

Strategies and responsibilities to increase employability

To increase the level of employability it is important that strategies be taken at the institutional level as well as at national level.

Across time, several researchers, like Roberts & Maycock 1995; Anderson & Gubbay 1997; Atlay 1998, have suggested different strategies in order to increase employability including developing the required skills at the higher education institutions, changing or adapting the school curriculum to match the skills required in the labor market, the use of live projects and providing relevant work experience through internship programs (Harvey, 2002).

In line with this, there are arguments concerning whether these skills should be incorporated within the curriculum or a third-party institution be employed to develop these skills in students. When employability skills are acquired within the curriculum they are given the same status as knowledge however ‘bolt-on’ options guarantee that the required skills and attributes are developed and have experienced educators to teach them (Tait & Godfrey 1999). Previous literatures have also shown that learning that takes place outside the curriculum is vital in improving the level of employability. However, if the basic pillars of education itself have not been uprooted then there is little point involving a separate unit to develop additional tailored skills in students. Other skills such as written communication, problem solving and so on rely much on quality teaching in higher education institutions (Going global, 2014).

The European Commission (2007) stated that “Young people need to be prepared for entry into the labor market but also to be able to carry on their education throughout their lives, for their personal development and to help them adapt to changing professional circumstances.” Nevertheless, this is not something that is easily accomplished. To increase the level of employability would require a combination of governmental efforts as well as societal efforts.

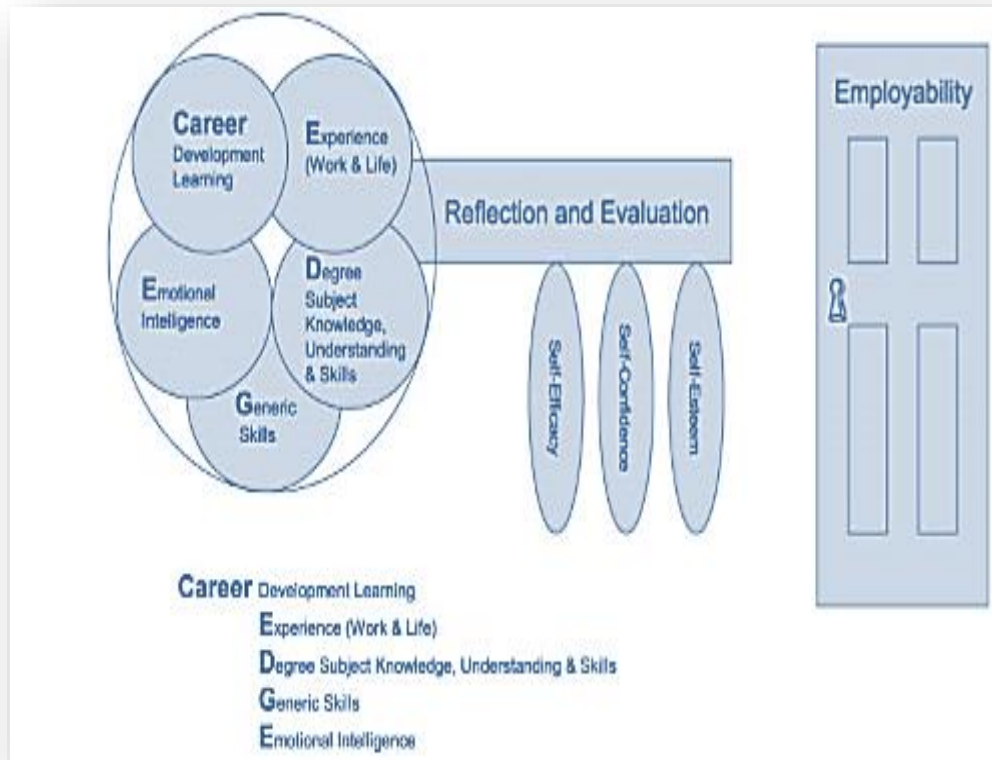


Figure 1: A model of employability (Dacre, 2007)

In the study of Dacre (2007), a unique model of employability was construed based on the components considered essential for employability. The model consisted of the following components:

Degree subject knowledge, understanding and skills

Degree subject knowledge, understanding and skills are perceived as the core component in this model. In fact, Johnes (2006) argued that this component is essential since students enter higher education mainly to acquire particular skills and knowledge in relation to their career, and thus obtaining a degree and securing a fulfilling job.

Generic skills

Knight and Yorke's (2002) discussed that generic skills is equally valued as one of the most important component of employability. They further added that employers believe that graduates should possess generic skills for them to be able to build specific expertise in the organisation. Likewise, Harvey et al (1997) further supported that employers are constantly looking for well - developed generic skills in a number of areas. The Pedagogy for Employability Group (2004 cited in Dacre: 2007) provided a list of those generic skills including imagination/creativity; teamwork, adaptability/flexibility; Willingness to learn; independent working/autonomy; ability to manage others; . Ability to work under pressure; good communication skills; time management, ability to use new technologies amongst others.

Emotional intelligence

Goleman (1998 cited in Dacre: 2007) stated that in a time with no guarantees of job security, emotional intelligence is the prime quality that make and keep us employable. These qualities comprise of the character, personality, soft skills and competence and are deemed as an essential component in the employability model. Furthermore, Yorke and Knight (2002) also listed emotional intelligence as one aspect of employability under their personal qualities section.

Moynagh and Worsley (2005) further added that in the future knowledge-based economy, emotional intelligence will become even more important with the predicted expansion of customer-facing jobs in which human interaction plays a central part. As a matter of fact, Qualter et al., 2007, argued that taking into consideration the academic and life success of people with high levels of emotional intelligence, it is practically difficult to construct any model of graduate employability without the inclusion of emotional intelligence.

Career development learning

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. According to Watts (2006), career development learning is very

essential in the conceptualisation of employability model, though there is little consideration about it.

Foster (2006) further added that there is little to be gained in developing employability if, at the end of the day, a student cannot identify a market in which to advertise their newly developed employability. Consequently, after acquiring knowledge, understandings and skills at university, a career development learning is very important to help and guide them to explain to potential employers about their achievements and how they will be of benefit to them, in application forms, CVs and interview activities.

Experience – work and life

According to the Work Experience Group (2002 cited in Dacre, 2007), employers value people who have undertaken work experience, been able to reflect upon that experience and then go on to articulate and apply what they have learnt.

According to The Pedagogy for Employability Group (2004), it is widely agreed that graduates with work experience are more likely to secure employment than graduates without. Therefore as stated by Dacre (2007) it is also important to consider the wider life experiences in this framework that many students, particularly mature students, bring with them into Higher Education to heighten their levels of employability.

Reflection and evaluation

Dacre (2007) pointed out that along with the provision of necessary skills, knowledge, understanding and attributes, there is a need to provide opportunities for reflection on and evaluation of the learning experiences that have already taken place too. He further added that without these opportunities, a student is unlikely to give full consideration to how far they have come in developing their employability and what they may need to do in order to develop it further.

Consequently, Dacre (2007) discussed that the element of reflection and evaluation is also a key to development of the “three Ss” namely **Self-efficacy, self-confidence, self-esteem**. In essence, the three closely-linked “Ss” of self-efficacy, self-confidence and self-esteem provide a crucial link between knowledge, understanding, skills, experience and personal attributes and employability.

Reviews of other employability model

Vidanapathirana (2001 cited in Weligamage, 2009) identified four main parties in his model consisting of employers, candidates (graduates), state (government) and Institutions (university). He argued that graduates are the first party in his model since often they do not have the required competencies, knowledge, skills and experience. While Employers are the second party in his model since they are the one who search for core potencies in candidates. The third party is the educational institute since they are the main ones for ensuring and dealing with the volume and variety of students demand, inflexible curricula and teaching methods and lack of research output. The fourth party is the government since their contribution is essential to solve any related problems.

On the other hand, Harvey (2002) presented the simplistic model of employability namely the magic bullet model.

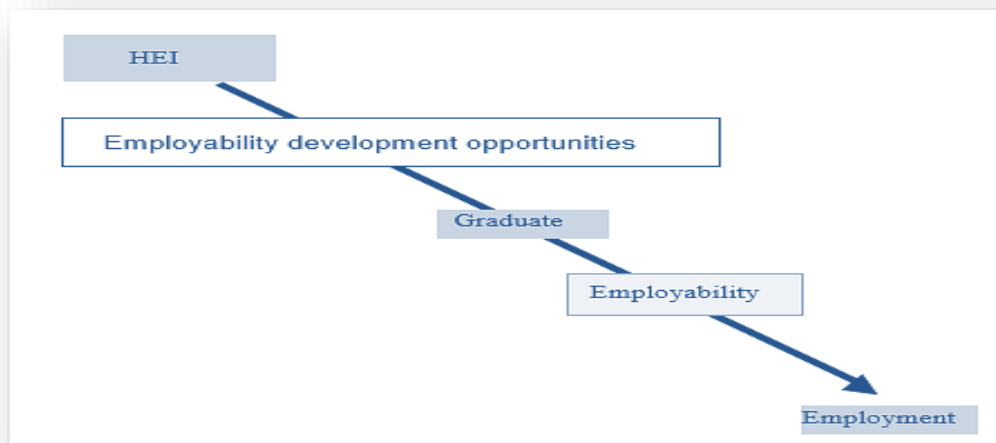


Figure 2: Magic Bullet Model (Harvey, 2002)

However, after considering all the parties involving in this process and all important employability factors, Harvey (2002) presented another model. In the second model, Harvey (2002) pointed out the importance of linking all factors together with the 3 main parties namely graduates (students), HEIs and employers in a quest to develop graduate attributes. He argued that graduates have the responsibility to choose and engage with the employability development opportunities provided by HEIs and they can equally

use their extracurricular experiences to enhance their skills. Harvey (2002 cited in Weligamage, 2009) further identified employability development activities as the development of employability attributes, work experience, the development of self-promotional and career management skills and a willingness to learn and reflect on learning in the second model shown below.

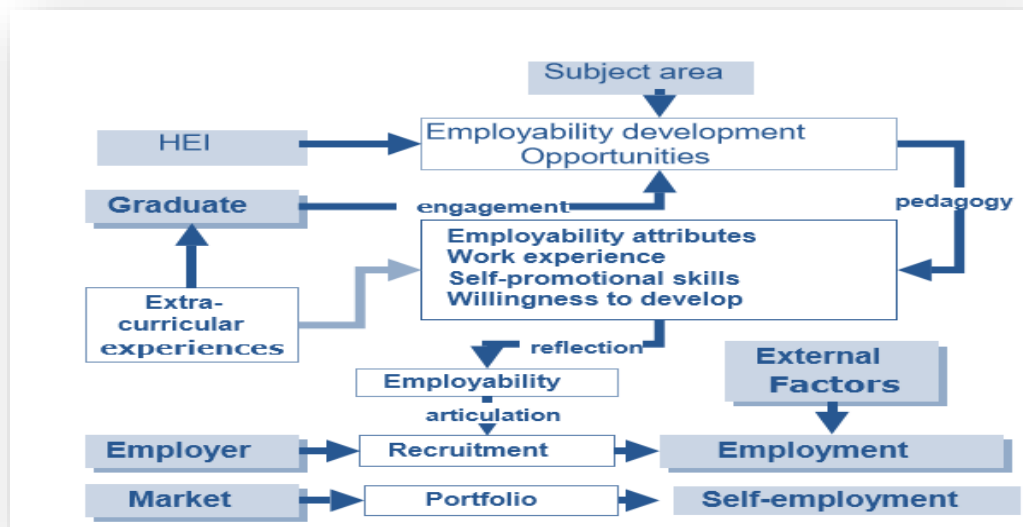


Figure 3: A model of graduate employability development (Weligamage, 2009)

Most importantly, the model presented three core processes having an impact on employability as (a) pedagogic process that encourages development, (b) self-reflection by the student and (c) the articulation of experiences and abilities (Weligamage, 2009).

2.3 JOB MISMATCH

Types of Job mismatch

According to the study of Farooq (2011), the three types of job mismatch are education-job mismatch, qualification-job mismatch and field of study and job mismatch. Education-job mismatch has been defined as the acquired education by a worker with that required by his/her current job.

Similarly, a worker is said to be mismatched in qualifications when the attained qualification possessed by the workers, may be lower or higher than the required qualification in their prospective jobs (Farooq, 2011). On the same landmark, Klosters

(2014) explained that this type of mismatch arises when the level of qualification and/or the field of qualification is different from that required to perform the job adequately. While, Farooq (2011) pointed out that the field of study and job mismatch analyses the level of match between the individual's field of study and his/her contents of job mismatch.

Reasons for job mismatch

For some time, researchers have been analyzing the reasons for job mismatch. Some of these arguments are presented below.

According to Kornelia (2012), there are 2 factors that could possibly be the causes for job mismatch. Traditionally, the difference that exists between the acquired and required level of education was the primary cause of unemployment. Workers found themselves with a lack of education which limited their chance to find a job that could equal their level of education. Danacica (2010) specifically pointed out that the difference between finding a job with a higher education and primary education was 17.1%. However, with the changes in the structure of the economy and the constant advancement of technology, the situation has now become even more complex. Graduates struggle to enter the job market not because they lack the required education but because they have more than is demanded by a particular job (Mavromaras et al., 2010). The reason for job mismatch at this time is not because of being under-educated but because graduates are overeducated on the job market.

The second cause of job mismatch is the difference that exists between the acquired and required skills. The reason for this difference lays in the imperfections of the job market for example, market rigidities, imperfect information and so on. Though, this divergence exists because the skills acquired by individuals throughout their learning process do not match the skills that are required for a given job. According to Green and McIntosh (2007), though individuals are able to increase their skill set through higher education learning, it is still not enough to meet the skills that is demanded to perform adequate work in the job market. In line with this, being under skilled is still the main problem. In addition to this, a study carried out by the European Commission in 2008 have pointed out that the disparity between the acquired and required skill set is actually increasing and higher education institutions are unable to meet the requirements of the job market.

Other researchers have pointed out towards different factors as being the reasons for job mismatch. Farooq (2011) in his study argued that barriers such as inadequate information about the job market, geographical barriers, and personal characteristics of individuals; gender or race and so on are the various causes of job mismatch. Likewise Humal (2013) mentioned that a poor level of information about the job market when making decisions concerning education or occupation could lead to job mismatch. However, it is also true that such information is not always easy to find. In addition, structure of the economy may change from the time a student has enrolled in a particular course to the time he/she graduates. As a result, the supply of labor does not meet the demand of the job market.

Mismatch in skills and job requirements

According to Holzer (2013), the concept of mismatch in skills and job requirements refers to a set of skills that employers consider as being important for a specific job task. And when their demand exceeds the skills that have been supplied by universities, then a mismatch in skills occurs. For instance, the supply and demand of particular skills for a field of study may shift over time, which in turns shift employers demand away from the practice of routine tasks to those that requires higher level of skills (Autor and Acemoglu, 2012).

On the other hand, the match between skills and job requirements is not an easy process. Several graduates and the labor market are very heterogeneous in quality and thus lengthy period of job search is required (Mortensen and Pissarides, 1999).

The answer to the question whether there is any kind of mismatch and are they persistent depends entirely on the nature of the mismatch. Skills mismatch might occur because of an ongoing shift in the labor demand across various sectors and occupation. This can be due to new technologies or globalization to which higher education institution and graduates have difficulty in adjusting.

Geographic locations of jobs might be an obstacle for the graduate's skills and the business needs. For example, graduates possessing the particular skills that fit the job requirement are situated at another region. This aspect makes them unsuitable for application of the particular post. The question is thus, to what extent the issue of skill mismatch is real (Blanchard and Katz, 1992)? Although, skill mismatch are not eternal

features of the labor market, but it is time consuming to develop measures to counter it. Symonds *et al.*, (2008) claim that higher education institutions are failing to provide training and instill skills for specific occupations that are in high demand. Likewise, employers report unmet demand for higher level analytical and communication skills (U.S Department of labor, 1991) and difficulty in finding skilled workers in specific occupational categories (Mishel, 2010).

Borghans *et al.*, (2001) outline that the relationship 'between skills and educational attainment is not a consistent one for four reasons:

1. Equal investments in education can lead to different quantities of skills or to skills that differ in market value;
2. Mismatch may cause not all skills to be used;
3. Education might be used as a signal for ability rather than a source of skill supply;
4. The acquisition and depreciation of skills continues after school

Nevertheless, very little is known about contextual conditions such as human resources practices in firms. Hence, perceptions of how and when skills become obsolete, which then create skill mismatch remains unknown (Van Loo *et al.*, 2001).

Verhaest and Omey (2008) assert that over education and under education can also have a negative impact on skill match and the job satisfaction.

According to the study, "Education and Skills Mismatch, in the Italian Graduate Labour Market" (Urwin, 2006) 80.32% of graduates felt that a degree was excessive and that they have used 'none' or 'little' of the skills and knowledge acquire at universities. Hence, tertiary education is not necessary nor a sufficient conduction for skills. Only 27.00% of graduates considered their level of education to be appropriate for their job. One possible explanation is that universities impart skills more general and transferable which will enable graduates to quickly learn and use those techniques and processes that are specifically required to perform their job tasks. On the contrary, Groot (1993) advocates that skills mismatch can occur due to the university system's focus on theoretical knowledge rather than on-the-job training. Allen and Velden (2001) identified four types of skills mismatch namely:

1. Wrong skills (characteristics by the simultaneous presence of skill deficit and over skilling)
2. Skill shortage (skill deficit and no over skilling)
3. Skill match (no skill deficit and no skill underutilization)
4. Skill surplus (no skill deficit and over skilling)

Skills mismatch is present on both the demand and supply side according to Desjardins and Rubenson (2011). Skill mismatch driven by the supply side is attributed to the insufficiency of the education and training system. In contrast, skill mismatch driven by the demand side is attributed to the inadequacies of labor market practices and of employers to identify and rectify the mismatch.

According to Doherty, Street & Webber (2007) research shows that employers perceive business graduates to lack strong skills because of a lack of experience. Therefore, there is a mismatch between job market requirements and the skills possessed by students. There is a disparity between the required and current skills of business graduates (Lee, 2012).

Effects of job mismatch on unemployment

The job mismatch phenomenon is a serious concern for individuals, society as well as organizations.

At the individual level, job mismatch would lower the graduates' marginal product. This may in turn result in lower level of job satisfaction, higher rates of turnover and demotivation. At the organizational level, it would lead to lower levels of productivity and as the rate of turnover rises, organization may have to incur increased costs in terms of constant recruitment and training of new graduates.

Job mismatch manifests itself in improper balances on the job market. A surplus of graduates with particular sets of skills leads to unemployment or over-education in the economy. Increased demand for a specific type of human capital can lead to under-education. This imbalance on the job market limits an economy to grow and compete. This issue of over education may cause other problem for those well-matched graduates

as they would increase employers criteria required to fit in a particular position (Battu et al., 2000).

Education and the labor market

There has been quite a significant segment of theories on education and the labor market. According to Job Competition Theory, wages are not associated with individual characteristics but rather job characteristics. Similarly, The Human Capital Theory affirms that earnings are fixed in relation to potential jobs. Hence, employees who are over-educated perform at the same level as those employees whose education match their job characteristics and both receive the same wages (Schultz, 1962; Becker, 1964). The distribution of salary is based on existing supplies of both labor force and jobs. More so, education is simply the vehicle to find a job, there is no return to human capital, as all employees in a particular job receive the same pay (Farook, 2011). According to the Job Screening Model, education allows employees to be identified as being competent and productive in an imperfect job market (Spence, 1973). Hence, employees spend heavily on education so as to be able to stand out from among other employees on the job market (Farook, 2011).

In this modern society, education is deeply characterized by instrumental learning, which takes 2 opposing forms. On one hand is the instrumentalism of the discipline apprenticeship and on the other is the instrumentalism associated with employability (Harvey, 2002). Graduates in higher education institutions tend to display more overtly instrumental learning. This learning is often intended to obtain a qualification or a job instead of gathering a full learning experience. Linked to this is the question regarding the effects of employability skills initiatives on graduate labor market?

Job satisfaction as result of job-worker and education mismatch

According to Amador (2013), job-worker mismatches, either in education or in skills, reflect inefficiencies in the allocation of resources in the economy, since workers' investment in human capital is not adequately used in production when workers' education or skills do not match accurately with those required in their jobs. However Amador explained that another issue is whether or not job-worker mismatches have effects on job satisfaction, and which one, education mismatch or skill mismatch, has the most prevalent influence.

In essence, both over education (Johnson and Johnson, 2000) and under education (Hersch, 1991) have been reported as reducing workers' job satisfaction. Additionally, studies including simultaneously education and skill mismatches typically closed up that both over skilled and under skilled workers are less satisfied than well-matched comparable workers, while education mismatch often shows neutral effects (Green and McIntosh, 2007 cited in Amador.,2013).

The negative impact of skills mismatches

Gambin *et al.*, (2016) evoke that skill mismatch gives rise to a workplace environment that often results in high rate of labour turnover. This is so because, each employer have their own way of organizing their work including the configuration of skills in their workplace. And when they have low skills demands, this results in high quit levels.

Due to lack of skill match employers are obliged to recruit unskilled graduates and provide training and make investment to instill the unique bundles of skills in the individual, which is time and money consuming for the organization and once trained, employers are at potential risk that the employee is recruited by other firms (Lazear, 2004).

Impacts of skills mismatches on organizational performance:

- a) Increased workload for other staff
- b) Have difficulties meeting customer service objectives
- c) Delay developing new services
- d) Lose business or orders to competitors
- e) Experience increased operating cost
- f) Have difficulty meeting quality standards
- g) Outsource work
- h) Withdraw from offering certain products or services altogether
- i) Have difficulties introducing technological change (Amador, 2013)

Individual who possesses skills that are at a higher level than those needed for the job are more likely to be dissatisfied and tend to earn less over their lifetime than those who

find jobs that are commensurate with their skills. In line with this, evidence from France concludes that employers are not willing to pay employees just because they are well qualified for the job offer. Similarly, working in a job below one's level of qualification limits the utilization of the skills possessed. However, it is also a fact that several graduates accept a low level job than the qualification they possess with the intention of acquiring on-the-job training and learning to help them advance more quickly than waiting to get a job better matched to their skills (Verdugo and Verdugo, 1989).

CHAPTER 3: METHODOLOGY

The study adopts a pragmatic research philosophy and the choice of research methods have been made based on the research objectives set. A mixed methods approach has been deemed the most suitable. More specifically sequential mixed methods is used, whereby qualitative methods are followed by quantitative methods.

The main aim of this research is to develop a conceptual model of higher education-job market gap and gain an in-depth understanding of the disparities that exist between learning outcomes of business graduates and job requirements. The first phase of this research therefore seeks to provide a comprehensive understanding of a phenomenon (education-job mismatch) and develop new conceptualisations instead of generalising findings and testing existing theories. A qualitative approach thus seems warranted. Qualitative methods of primary data collection such as in-depth interviews and focus group discussions will be used. A sample of past business graduates from the University of Mauritius has been chosen using a purposive sampling technique. The population of cases for graduates will be restricted to students having completed their degree during the last five years (2010-2014). The sample of employers is selected based on the graduate's respective place of employment. Qualitative data collected are supplemented with secondary data when needed, for example programme structures and module information sheets. The second phase of the research comprises of a survey among a sample of past graduates from the University of Mauritius and their respective employers using a probability sampling technique. Relevant statistical analyses will be employed. Table 1 provides a description of the various research methods to be used and depicts their link with the specific objectives of this research project.

The following is a detailed description of the research design:

Table 1: Summary of the Research Design

Research Objective(s)	Research Question(s)	Research Methods
To identify the critical learning outcomes that higher educational institutions expect business graduates to attain	What are the main knowledge and skills that a graduate should acquire according to higher education providers?	Secondary Data In-Depth Interview with a sample of academics
To determine whether the expected learning outcomes are in line with the expectations of employers	What are the knowledge and skills that employers consider most important? Is there a mismatch between what educational providers think is important for business	In-Depth Interviews with a sample of employers from leading firms across different industries

	graduates to achieve compared to what employers consider most important?	
To gain an in depth understanding of the present ability of graduates to meet the expected learning outcomes from the perspective of employers, employed graduates and academics	<p>Do employed graduates think that they have been able to acquire the necessary knowledge and skills at the end of their higher education course?</p> <p>Do employers think that graduates they have employed possess the necessary skills and knowledge?</p> <p>Do academics think that their university is able to produce graduates who have the necessary knowledge and skills to excel in the workplace?</p>	<p>Focus Group Discussions with employed graduates</p> <p>In-Depth Interview with a sample of academics</p> <p>In-Depth Interviews with a sample of employers from leading firms across different industries</p>
To develop and test a measuring instrument for assessing the perceived importance and attainment of education outcomes from the perspective of major stakeholders	<p>Does the measurement scales possess content validity and construct validity?</p> <p>Are the measurement scales reliable?</p>	A pilot study among a small sample of employers, students and academics
To investigate into the perceived mismatches between knowledge and skills acquired by business graduates and that considered important by employers using IPA	<p>Is there a mismatch between importance of expected educational outcomes and perceived attainment of these outcomes?</p> <p>Is there a difference (mismatch) between the perception of various stakeholders' with respect to the perceived importance and perceived attainment of educational outcomes?</p>	A survey among a sample of employers/ employed graduates and academics

CHAPTER 4: STUDY 1 RESULTS

QUALITATIVE STUDY AND DEVELOPMENT OF THE CONCEPTUAL FRAMEWORKS

We first aimed at identifying the competencies that a graduate should possess at the end of the educational process. Following the thematic analysis conducted a list of expected competencies was obtained.

Communication and Negotiation Skills

- Communication skills – both written and oral communication as well as presentation skills (Natasha)
- Communication and presentation skills; Appropriate body language skills (Diana)
- Communication; Negotiation; Writing/drafting; presentation (Survesh)
- Ability to deal with subordinates; Good communication and negotiation skills (Danraj)

Time Management

- Being able to handle pressure (Participant D)
- Work in a timely manner. (time management) (Participant A)

Leadership Skills

- Leadership (Participant B)
- Managerial skills (Participant A)

Teamwork

- Team building/spirit (Participant D)
- Be able to work in a team (get along well with team members and collaborate for a project work/assignments) (Participant C)

Subject-specific knowledge and skills

- Have an understanding of accounting & auditing theories/concepts/jargons not just in theory but also as applied in business

- Know about the rules, laws and regulations governing the financial sector not only in Mauritius but also international ones (Participant C)

Generic Cognitive Abilities

- Analytical and critical analysis thinking (Participant D)
- Think critically and analysis skills (Participant C)

Research Skills

- Doing research work (being able to do research work independently) (Participant C)

2. To what extent do you think that you have been able to acquire the above skills and knowledge at the end of your programme?

Participant A

Participant A denotes that some of the skills have been acquired to some extent. For e.g., communication skills and negotiation skills are acquired during class presentation and group discussion which has enable him to negotiate within group and which helped him in securing a job

Participant B

Participant B evokes that only 50% of skills have been attained as there is more emphasis laid on the theoretical part rather than on how things are in practice. He further states that although he did a mini – pupillage while being a legal student at the university and is very interested to work with lawyers however at present he is working in the human resource section. Thus, he may possess a degree in LLB, however it is really different when they step in the job market. Likewise, he is in fact not applying anything what he has learnt at university at his workplace.

He relates that even if he has acquired a minimum of skills and knowledge in the legal field this is of no use. For e.g., although he is qualified with a LLB degree still he has been posted in the civil service as compared to him he would prefer to work in a legal

firm. He believes that qualification has less importance as compared to experience. This is so because he came across some seniors who have experience in the particular field as compared to people like him are not getting opportunities to secure such post even if they are better qualified.

Participant C

According to participant C 60% of the skills and knowledge have been acquired.

Participant D

Participant D affirms that she has been able to acquire most of the skills she mentioned above. In fact, she got to get a glimpse of different fields of study be it marketing, human resource, ethics, accounting and IT.

Requirements of the job market

Participants were asked to describe whether, from their personal experiences, the skills and knowledge they have acquired are in line with the requirements of their present job. In session 1, all participants responded that the theoretical part of their learning are being applied in the workplace, however the element of practical learning are still missing. According to them, practical learning through internship programmes in their related field would have given them a better stand in the job market.

The majority of the participants explained that the skills and knowledge they have acquired are, for the most part, in line with the requirements of their present job. Nevertheless, there are certain tasks performed at the workplace which require skills that have not been acquired at the university. A sample of their statements is provided below.

'Some of the skills are inline but some are not. For example, in International market we have two module of accounting where we learn how to do accounts including Profit and Loss, Cash Flow and Balance sheet. But it is important to highlight that we don't even know how large company manage their accounts and how they manage their financial performance. It will be perfect if one of the modules included practical session where we might be given some companies information and thereby we can construct its financial account. That is the real skills that will be needed in the job market especially for those opting to work in the finance department. On the other hand, there are some

skills which are in line with the job requirements. For example, we have learned motivational factors, HRM methods and skills to deal with people in organization. In the Human resource department of some companies the same methods are being used while dealing with workers.'

'Being a Law student, I am now employed in the Human Resources field and I found all skills learned at the end of programme still useful and applicable to deliver best of myself. However, I do believe I need to acquire my own skills to be totally prepared to what is in the job market.'

'I work in an offshore management company – I believe the knowledge I acquired at university on accounting/auditing have helped me in my present job. However, I also do some other tasks (e.g. drafting of Board minutes, attending to client emails and other administration/compliance work, etc.) which is not directly linked to my degree.'

'Yes, I personally believe the skills and knowledge that I have acquired are to a great extent to the requirement of my present job as corporate administrator. Nevertheless, maybe if more practical training could have been added in the program could be a plus, since it would add up to the experience on field factor.'

Based on the literature review and qualitative phase, two conceptual frameworks were developed. The first one depicts the overarching sources of gaps between higher education and the job market. The second, focuses on the specific competencies that graduates are expected to attain.

4.1 THE HELO-JMR GAP MODEL

The Higher Education Learning Outcomes – Job Market Requirements Gap Model contains seven potential gaps related to the outcomes of higher education and the requirements of the job market as perceived by the students and employers. While the main emphasis is to represent the potential mismatches between higher education-learning outcomes and job market requirements, the distinction is also made between students' perceptions and employers' perceptions since both their views do matter in the context of higher education and there is some evidence of potential discrepancies between their views from the exploratory study.

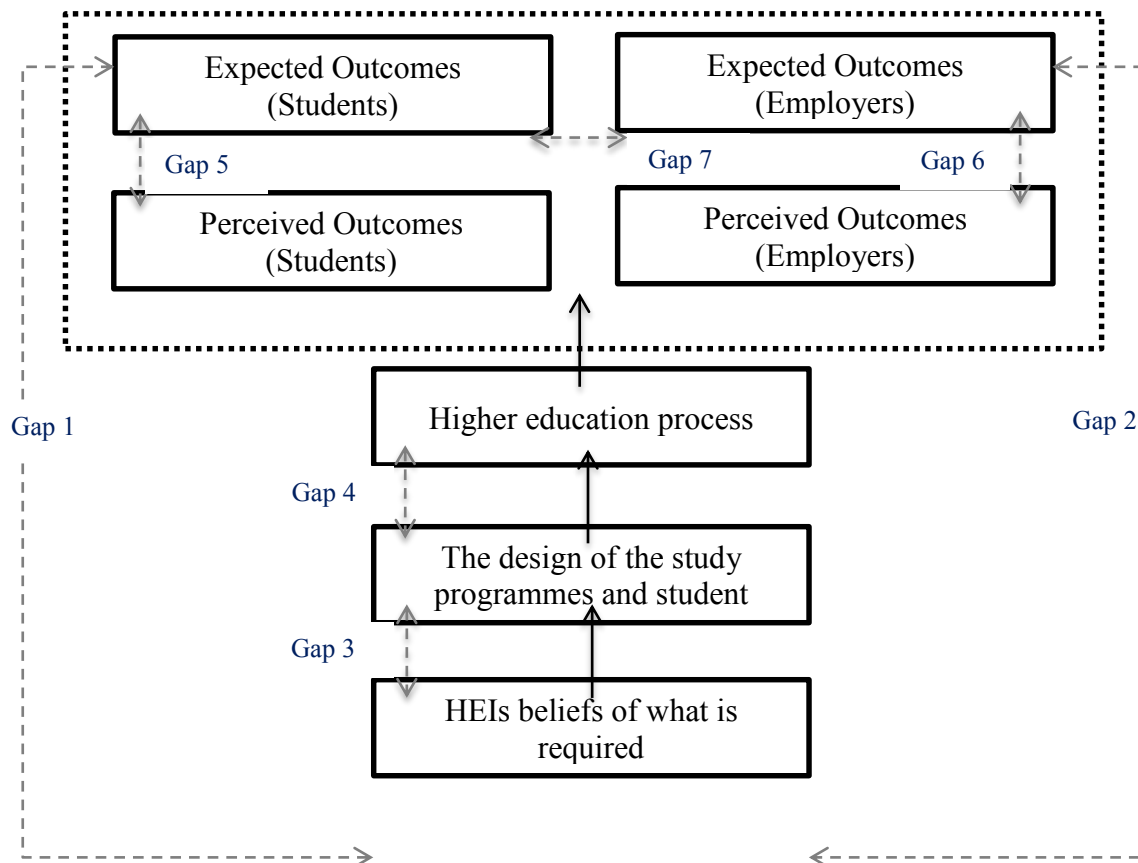


Figure 4: The HELO-JMR Gap Model

Gap 1: The gap between higher education institutions beliefs of what is required and what students expect is required will lead to a mismatch

From the analysis of qualitative data, it was observed that there are some potential divergence between what higher education providers believe about the expected outcomes of higher education and the actual expectations of students.

Gap 2: The gap between higher education institutions beliefs of what is required and what employers believe is required will lead to a mismatch

Similarly, there are potential discrepancies between the opinion of the higher education providers about the required outcomes of higher education and what employers expect.

Gap 3: The gap between higher education institutions beliefs about what is required and what is offered in terms of programme of studies and overall services will lead to a mismatch

Another gap identified in the higher education learning outcomes – job market requirements nexus is between beliefs of HEIs with regards to what is required and the translation of same into their offerings via programme of studies and support services. Indeed, as noted by Parasuraman *et al.* (1985), while the service provider might actually have a good understanding of the expectations of its customers, there is no guarantee that this is accurately translated in the design of the service.

Gap 4: The gap between what is supposed to be offered by the higher education institutions and the actual higher education process will lead to a mismatch

Gap 5: The gap between students' expected outcomes and students' perceived outcomes

Gap 6: The gap between employers' expected outcomes and employers' perceived outcomes

Gap 7: The gap between students' and employers' outcome quality

4.2 A MULTI-DIMENSIONAL MODEL OF EMPLOYABILITY

Building on existing research and the findings from the qualitative data collected, a set of essential themes were identified with respect to higher education learning outcomes and/or job market requirements. Three primary dimensions were extracted: (1) Generic knowledge and skills; (2) Disciplinary knowledge and skills; (3) Personal attributes and qualities. These are described in table 2 below.

Table 2: Higher Education Learning Outcomes

<i>Generic Knowledge and Skills</i>
Team-working skills
Communication skills
IT and digital literacy and applications
Numeracy literacy and applications
Problem-solving abilities
Time management skills
Entrepreneurship skills (creative and innovative)
Flexibility and adaptability
Leadership skills (motivating others)
Stress management skills
Autonomous and independent
<i>Disciplinary Knowledge and Skills</i>
Overall disciplinary knowledge and skills (Management/ Finance/ Accounting/ Law)
<i>Personal Qualities and Attributes</i>
Self-Efficacy
Positive Attitude
Emotional Intelligence
Self-confidence

Integrity and Honesty

Self-awareness / Metacognition

Grit

CHAPTER 5: STUDY 2 RESULTS

EVALUATION OF PERCEIVED MISMATCH BETWEEN HIGHER EDUCATION OUTCOMES AND JOB MARKET REQUIREMENTS

5.1 INTRODUCTION

The evaluation of the perceived mismatch between higher education supply and job market requirements was done using data gathered from a survey with a sample size of 85 recent graduates and interviews of a sample of 12 well-established employers. The following are the results obtained from the analysis of the data gathered through (i) questionnaires and focus group discussions which provides information about graduates' views (section 5.2) and (ii) interviews which gives a description of the perceptions of employers (section 5.3).

5.2 ANALYSIS OF SURVEY DATA: GRADUATES PERSPECTIVE

5.2.1 Demographic profile of respondents

The demographics of the respondents (students in Mauritius HEI's) were captured to ensure a proper distribution based on their characteristics. Thus, data relating to their gender, age, university attended along with their CPA/average marks were collected.

Table 3: Frequencies for gender of respondents

Gender	Frequency	Percentage
Female	51	60.0
Male	34	40.0
Total	85	100.0

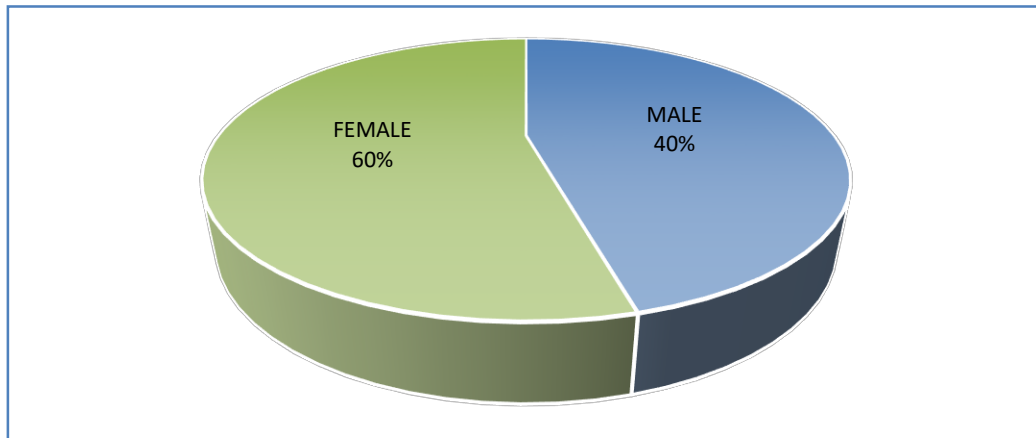


Figure 5: Gender of respondents

As can be observed from the pie chart above, the majority of the respondents were female as compared to male. Thus, while female respondents represent 60% of the sample size taken, 40% of the respondents were male. This percentage represents a proper distribution of graduates with regards to their gender.

Table 4: Frequencies for age of respondents

Age	Frequency	Percentage
<26	33	38.8
26-35	42	49.4
36-45	8	9.4
>45	2	2.4
Total	85	100.0

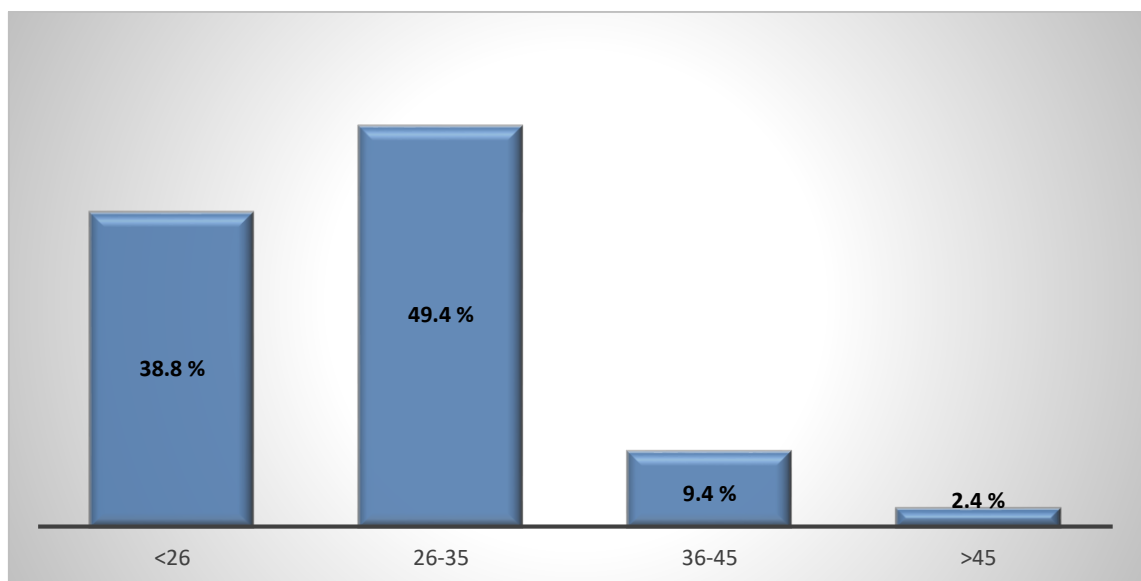


Figure 6: Age of Respondents

In the above figure, it can be clearly seen that 49.4 % (nearly half) of the respondents were between the age 26 to 35, 38.8 % were below 26, while 9.4% were between the age of 36 to 45 and only 2.4% were above 45. This may indicate that most of the respondents may have gained some experiences in the job market.

Table 5: Frequencies for CPA of respondents

CPA	Frequency	Percentage
<50	5	5.9
51-60	32	37.6
61-70	35	41.2
>70	13	15.3
Total	85	100.0

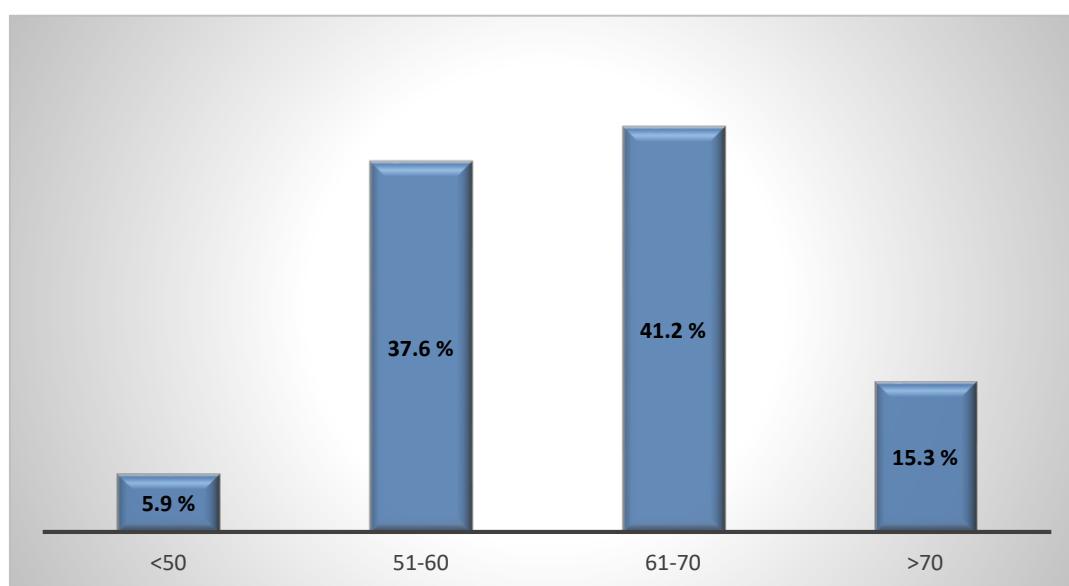


Figure 7: CPA/Average Marks of Respondents

According to the figure above, the majority of the students (41.2%) scored a CPA/Average marks of 61-70. While 37.6% scored from 51-60 as compared to 15.3% which had a CPA/Average marks above 70%. In contrast, only 5.9 % had a score of less than 40. Hence, it can be inferred that the majority of the respondents performed quite well in their studies.

5.2.2 Graduates Expectations with respect to Generic Skills

The expectations of graduates with regards to the 12 generic skills were analysed. It can be observed from the table and figure below that all the 12 indicators of generic skills received a relatively high score, with an overall mean of 5.51. This indicates that graduates do consider these attributes important and have quite lofty expectations with regards to each of them. Problem-solving skill is the attribute which received the

highest average score and this implies that graduates believe that this skill needs to be fostered during their university education. The lowest mean value was obtained by stress management skill (M=4.69); however alike all the other skills, it was found to be significantly greater than the mid-point value of 4 ($t = 3.85$, $p < 0.05$). Given that all the mean scores were above 4, the significant differences between the mean scores and the mean point value indicate that graduates have high expectations with respect to all the 12 generic skills assessed.

Table 6: Descriptive Statistics for Graduates Expectations – Generic Skills

	Mean	SD	Skewness		Kurtosis		t	Sig.
	Stat	Stat	Stat	SE	Stat	SE	Stat	
Team-Working Skills	5.27	1.426	-.821	.261	.345	.517	8.216	.000
Communication Skills	5.49	1.403	-.969	.261	.696	.517	9.821	.000
IT Skills	5.14	1.619	-.820	.261	-.082	.517	6.497	.000
Numeracy Skills	5.26	1.497	-.849	.261	.309	.517	7.751	.000
Problem Solving Skills	5.85	1.350	-1.411	.261	1.681	.517	12.617	.000
Time Management Skills	5.45	1.492	-1.095	.261	.837	.517	8.941	.000
Entrepreneurial Skills	5.60	1.390	-1.287	.261	1.925	.517	10.609	.000
Research Skills	5.42	1.409	-1.056	.261	1.102	.517	9.315	.000
Self-regulation Skills	5.34	1.585	-.766	.261	-.280	.517	7.800	.000
Leadership Skills	5.18	1.537	-.788	.261	.177	.517	7.058	.000
Stress Management Skills	4.69	1.662	-.549	.261	-.335	.517	3.850	.000
Self-Management Skills	5.27	1.538	-.891	.261	.144	.517	7.615	.000
Overall Score	5.51	.85394	-.287	.269	-.481	.532	15.777	.000

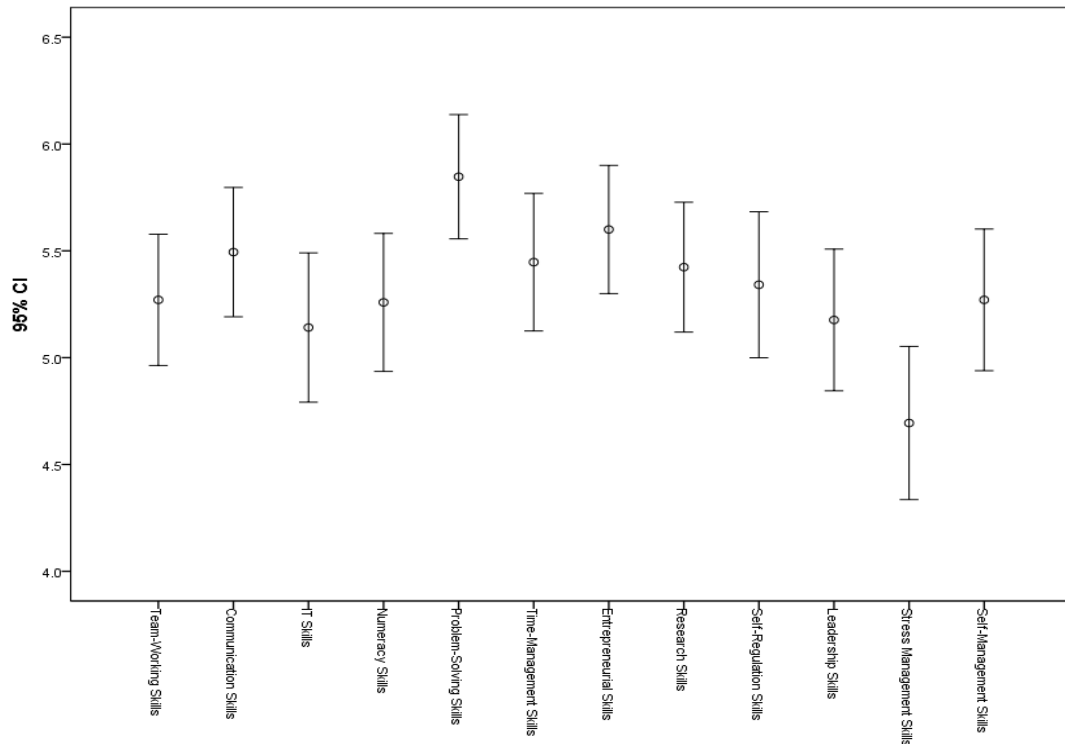


Figure 8: Graduates Expectation - Generic Skills

5.2.3 Graduates Perceived Performance with respect to Generic Skills

As shown from table 7, it can be depicted that most of the graduates rated the university performance with regards to the acquisition of the various skills above moderate level. The highest rating is attributed to problem solving skills with a mean score of 5.02 followed by team-working skills ($M = 4.95$, $SD = 1.79$). While most skills obtained a rating which are significantly above the mid-point value ($p < 0.05$), two of them, stress management skills ($t = 0.832$, $p = 0.408$) and leadership skills ($t = 1.865$, $p = 0.066$), are found to be not significantly greater the 5% level of significance.

Table 7: Descriptive Statistics for Graduates Perceptions of Performance – Generic Skills

	Mean	SD	Skewness		Kurtosis		t	Sig.
	Stat	Stat	Stat	SE	Stat	SE		
Team-Working Skills	4.95	1.792	-.805	.261	-.266	.517	4.902	.000
Communication Skills	4.72	1.716	-.576	.261	-.350	.517	3.857	.000
IT Skills	4.76	1.578	-.363	.261	-.593	.517	4.466	.000
Numeracy Skills	4.88	1.499	-.641	.261	.065	.517	5.426	.000
Problem Solving Skills	5.02	1.669	-.731	.261	-.151	.517	5.654	.000
Time Management Skills	4.76	1.770	-.569	.261	-.554	.517	3.982	.000

Entrepreneurial Skills	4.64	1.696	-.636	.261	-.405	.517	3.453	.001
Research Skills	4.68	1.706	-.549	.261	-.627	.517	3.688	.000
Self-regulation Skills	4.72	1.743	-.782	.261	-.241	.517	3.796	.000
Leadership Skills	4.33	1.629	-.500	.261	-.239	.517	1.865	.066
Stress Management Skills	4.15	1.704	-.397	.263	-.612	.520	.832	.408
Self-Management Skills	4.78	1.700	-.683	.261	-.355	.517	4.211	.000
Overall Score	4.71	1.269	-.609	.261	-.172	.517	5.118	.000

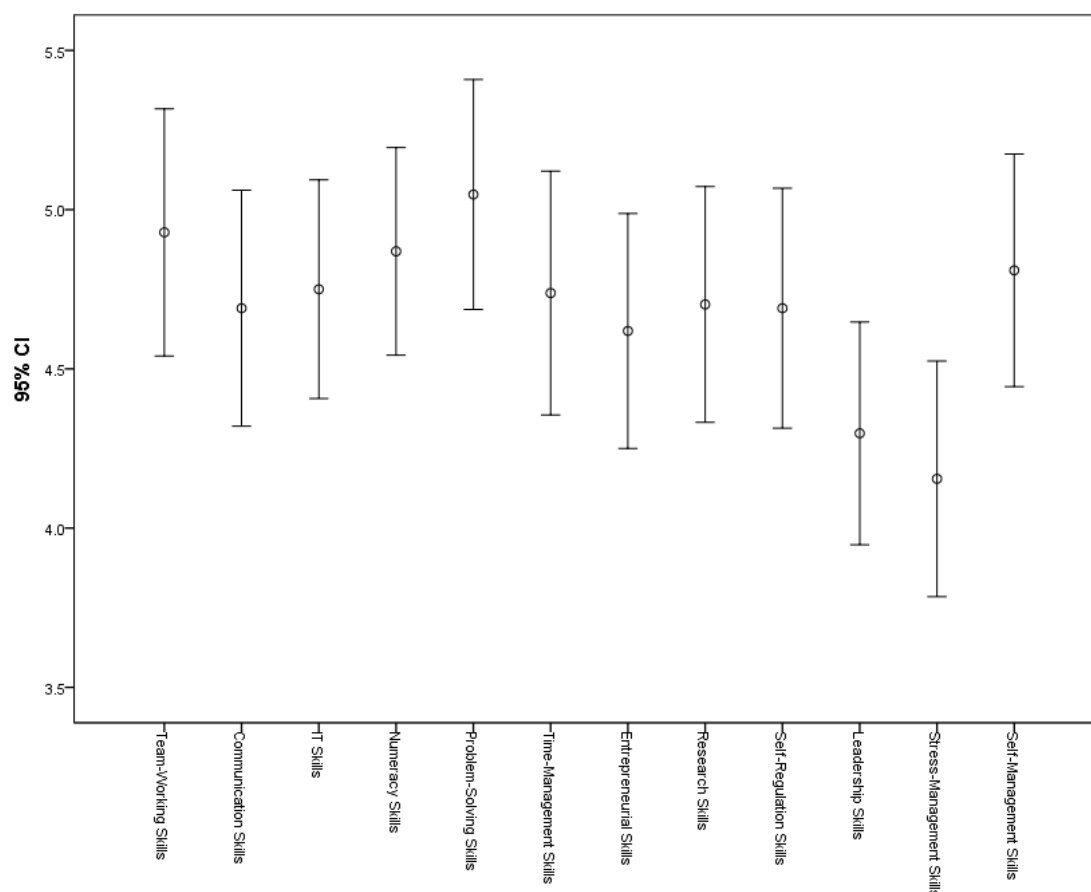


Figure 9: Graduates Perception of Performance – Generic skills

5.2.4 Differences between perceived performance and expectations

We further examine the differences between the expectations and perceived performance of graduates with regards to each generic skill using a series of paired samples t tests. The results show that to the exception of two skills, IT skills and Team-Working skills, all the other skills performance fell short of expectations. Significant differences were found between expectations and performance for communication skills, numeracy skills, problem-solving skills, time management skills, entrepreneurial skills, research skills, self-regulation skills, leadership skills, stress management skills,

and self-management skills. These results show that graduates are not satisfied with the quality of university education with regards to the attainment of these particular outcomes. The insignificant differences between perceived performance and expectations for team-working skills ($t = -1.554$, $p = 0.124$) and IT skills ($t = -1.965$, $p = 0.053$) demonstrate that graduates are reasonably satisfied with respect to these in particular.

Table 8: Paired Samples t tests – Performance-Expectations – Generic Skills

		Paired Differences					t	df	Sig. (2-t)	Effect
		Mean	SD	SE	95% CI - DIFF					Size
					Lower	Upper				r
Pair 1*	EXP-PERF	-.318	1.885	.204	-.724	.089	-1.554	84	.124	0.167s
Pair 2*	EXP-PERF	-.776	1.714	.186	-1.146	-.407	-4.177	84	.000	0.415m
Pair 3*	EXP-PERF	-.376	1.766	.192	-.757	.004	-1.965	84	.053	0.210s
Pair 4*	EXP-PERF	-.376	1.464	.159	-.692	-.061	-2.371	84	.020	0.250s
Pair 5*	EXP-PERF	-.824	1.692	.183	-1.188	-.459	-4.489	84	.000	0.440m
Pair 6*	EXP-PERF	-.682	1.995	.216	-1.113	-.252	-3.153	84	.002	0.325s
Pair 7*	EXP-PERF	-.965	1.816	.197	-1.356	-.573	-4.899	84	.000	0.471m
Pair 8*	EXP-PERF	-.741	1.677	.182	-1.103	-.379	-4.074	84	.000	0.406m
Pair 9*	EXP-PERF	-.624	1.752	.190	-1.002	-.246	-3.280	84	.002	0.337m
Pair 10*	EXP-PERF	-.847	1.924	.209	-1.262	-.432	-4.059	84	.000	0.405m
Pair 11*	EXP-PERF	-.560	1.922	.210	-.977	-.142	-2.668	83	.009	0.280s
Pair 12*	EXP-PERF	-.494	1.616	.175	-.843	-.146	-2.820	84	.006	0.294s

expectations are found to be significantly less than performance with a mean difference of -0.73.

Table 9: Paired Samples t tests – Performance-Expectations

		Paired Differences					t	df	Sig. (2-t)
		Mean	SD	SE	95% CI - DIFF				
					Lower	Upper			
Pair 1*	EXP-PERF	-.73536	1.27561	.14262	-1.01923	-.45149	-5.156	79	.000

5.2.4 Graduates Perceived Performance with respect to Technical Skills

Graduates' perceptions with respect to the acquisition of technical skills are also assessed. We find that on average graduates agree that universities are able to equip them with the necessary disciplinary knowledge with a mean score of 6.42.

Table 10: Descriptive Statistics for Graduates Perceptions – Technical Skills

	Mean	SD	Skewness	Kurtosis
			SE	SE
Technical Skills	6.42	1.851	-.180	.263
				-.466
				.520

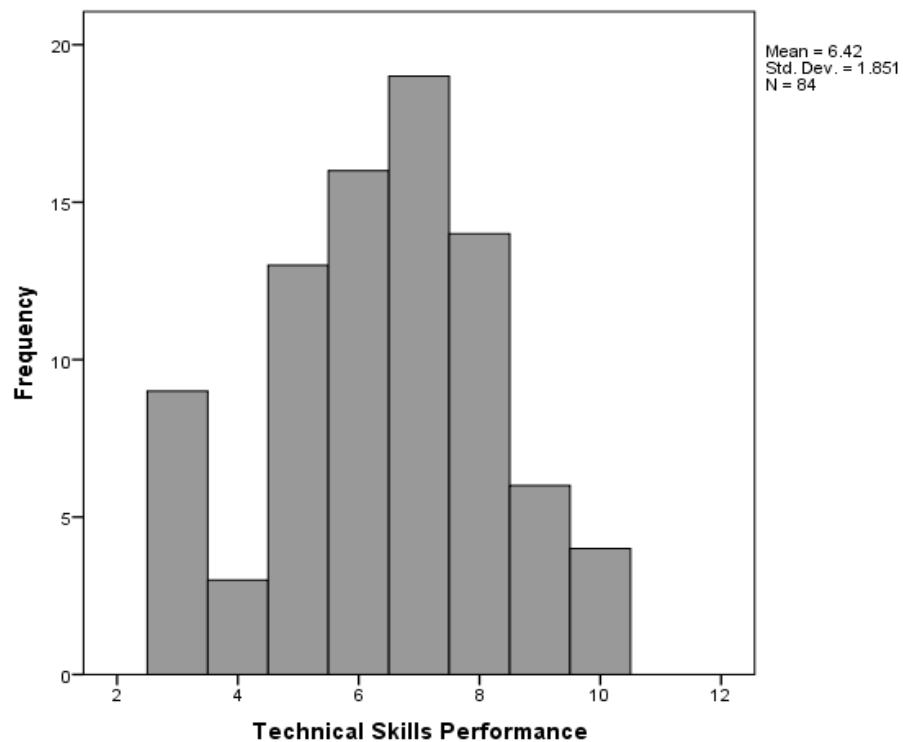


Figure 11: Graduates Perceptions – Technical Skill

5.2.5 Graduates Perceived Performance with respect to Metacognitive Skills

We consider two types of metacognitive skills, namely, self-efficacy and grit.

Self-Efficacy

Self-efficacy is measured using eight items. The description of these eight items is presented in table 11.

Table 11: Description of items – Self-Efficacy

Items	Description
Item 1	Increased my belief that I can achieve the goals I set for myself
Item 2	Provided me with enhanced confidence that I shall overcome difficulties to accomplish my tasks
Item 3	Increased my overall belief that I can obtain outcome that are important to me
Item 4	Improved my belief that I can succeed at most any endeavor to which I set my mind.
Item 5	Developed my problem-solving skills.
Item 6	Increased my belief that I can perform effectively on many different tasks.
Item 7	Increased my belief that I can do most tasks better than or as well as other people.
Item 8	Increased my belief that even when things are tough, I can perform quite well.

As can be observed in table 12 below, the mean scores for all the items were above the mid-point value of 4 for both performance and improvement.

Table 12: Descriptive Statistics – Performance and Improvement for Self-Efficacy (Items)

		Mean	SD	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	SE	Statistic	SE
Item 1	Performance	5.42	1.073	-.329	.261	-.434	.517
	Improvement	5.08	1.265	-.556	.261	.025	.517
Item 2	Performance	5.59	1.050	-.745	.261	.320	.517
	Improvement	5.04	1.331	-.593	.261	.048	.517
Item 3	Performance	5.66	.907	-.341	.261	.311	.517
	Improvement	5.05	1.272	-.659	.261	-.121	.517
Item 4	Performance	5.65	1.066	-.576	.261	-.013	.517
	Improvement	5.01	1.350	-.736	.261	.004	.517
Item 5	Performance	5.73	.956	-.516	.261	.146	.517
	Improvement	5.05	1.479	-.535	.261	-.567	.517
Item 6	Performance	5.60	.978	-.522	.261	.219	.517
	Improvement	5.16	1.353	-.987	.261	.965	.517
Item 7	Performance	5.44	.993	-.526	.261	.084	.517
	Improvement	5.04	1.367	-.695	.261	.527	.517
Item 8	Performance	5.52	1.109	-.824	.261	.959	.517

Improvement	5.04	1.304	-.858	.261	.902	.517
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Table 13: Descriptive Statistics – Performance and Improvement for Self-Efficacy (Overall)

	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Self-Efficacy (Performance)	5.5750	.77084	-.449	.261	.365	.517
Self-Efficacy (Improvement)	5.0574	1.11446	-.715	.261	.335	.517

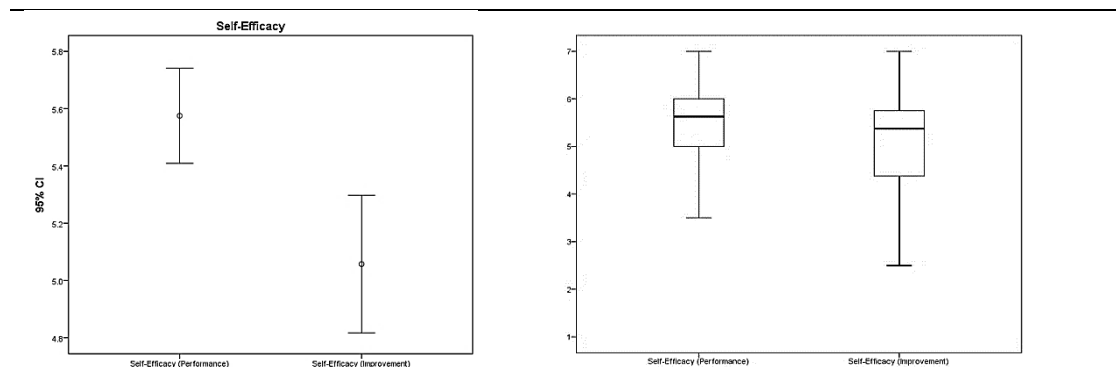


Figure 12: Performance for Self-Efficacy

Grit Dimensions

We also measured the level of grit of graduates as another component of metacognitive skills. Grit as operationalized by Duckworth (2007) comprises of two core dimensions, namely, consistency of interest and perseverance of efforts. Both are measured on a seven-point Likert scale. We find that perseverance of effort level is quite high with a mean value of 5.56; however, the consistency of interest dimension scores a mean slightly lower than moderate level ($M = 3.93$).

Table 14: Descriptive Statistics – Grit Dimensions

	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Consistency of Interest	3.9275	1.33716	.373	.261	-.450	.517
Perseverance of Effort	5.5569	.92851	-.786	.261	2.310	.517

The figures below further depict the difference in ratings between the two distinct components of grit.

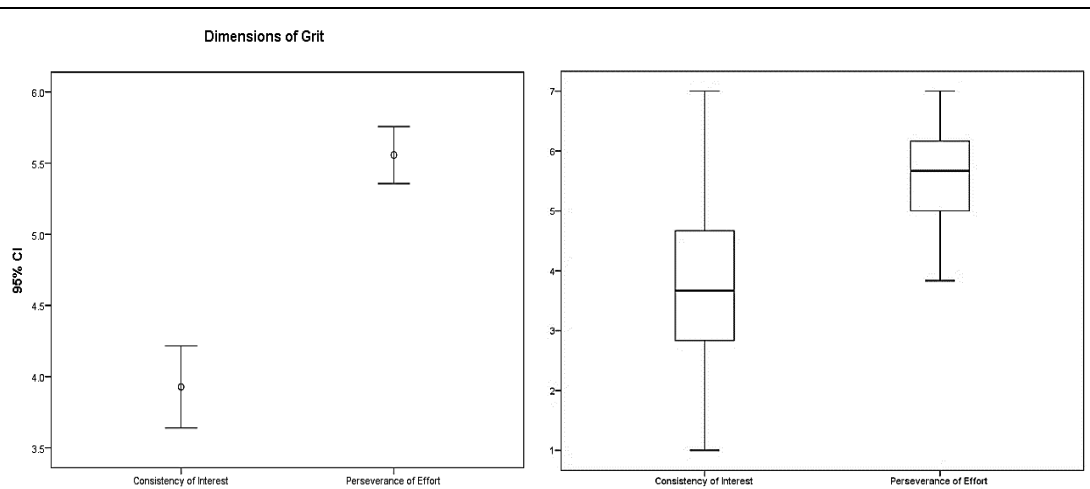
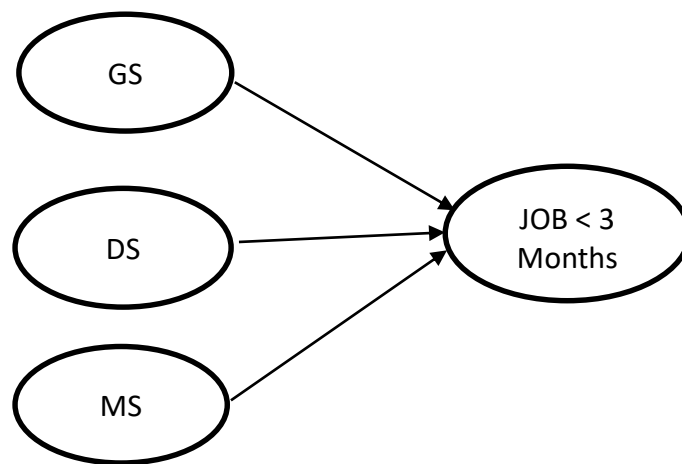


Figure 13: Difference between the 2 Dimensions of Grit

5.3 IMPACT OF SKILL SETS ON EMPLOYABILITY OF GRADUATES

We tested the effect of the different skill sets on employability defined as the ability of graduates to secure a job in less than 3 months. The analysis was conducted using a logistic regression analysis given that the outcome variable is a dichotomous one.



The results of the logistic regression analysis show that the three skills set have a substantial impact on graduates' employability.

Classification Table ^{a,b}					
	Observed		Predicted		
			Obtained job		Percentage Correct
			No	Yes	
Step 0	Obtained job	No	0	27	.0
		Yes	0	58	100.0
	Overall Percentage				68.2
a. Constant is included in the model.					
b. The cut value is .500					

Classification Table ^a					
	Observed		Predicted		
			Obtained job		Percentage Correct
			No	Yes	
Step 1	Obtained job	No	17	10	63.0
		Yes	5	53	91.4
	Overall Percentage				82.4
a. The cut value is .500					

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	67.142 ^a	.369	.517
a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.			

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	DS	.487	.328	2.206	1	.137	1.628	.856	3.097
	GS	.885	.267	10.973	1	.001	2.423	1.435	4.091
	MS	1.023	.426	5.757	1	.016	2.782	1.206	6.418
	Constant	-11.707	2.673	19.180	1	.000	.000		
a. Variable(s) entered on step 1: MS.									

CHAPTER 6: ANALYSIS OF INTERVIEW DATA: EMPLOYERS PERSPECTIVE

We conducted a total of 12 interviews with employers to capture their views on the mismatch between higher education learning outcomes and job market requirements.

Table 15: Descriptive Statistics for Graduates Perceptions – Technical Skills

INTERVIEWEES	ORGANISATION
1	HRDC
2	HUAWEI
3	KPMG
4	MCCI
5	EWF
6	ACCA
7	IFS
8	MARIOTT INTERNATIONAL
9	BOI
10	MOOLLAN AND MOOLLAN
11	SBM
12	MCB

6.1 Employers Perceptions of Graduates' Generic Skills

Team Working Skills

Employers expressed a moderate level of satisfaction with team working skills of graduates. They believe that graduates show adequate ability to work in teams and meet deadlines. However, they observed some weaknesses such as the prevalence of a competitive mind-set instead of a more collaborative mind-set, the difficulty to properly integrate in heterogeneous teams, and a general reluctance on the part of graduates to seek help from their peers and seniors. The views of the employers are summarized in table 16 below.

Table 16: Sample of Statements for Team Working Skills

Sample Statements	
Statement 1	<i>Students having conducted collaborative work in their field of study have a higher level of team work. Team working skills is nonetheless to be inculcated in the working environment. Students having conducted internships also have a higher level of team working skills.</i>
Statement 2	<i>Generic skills can also be referred to as transversal skills.</i>
Statement 3	<i>Many graduates work in a variety of teams very soon after appointment, and the most successful show an ability to be able to work in different ways in a variety of challenging contexts. Working confidently, co-operatively and flexibly as a member of a team such as completing assignment within deadlines.</i> <i>Accommodating the expertise, motivations and behaviours of other team members and still remain focused on what the team is tasked with doing is a crucial job skill</i>
Statement 4	<i>Very competitive mind-set which makes them less Team Player Attitude</i>
Statement 5	<i>Graduates lack team spirit and often need hand holding in order to become a team player. They do not integrate easily in teams and they</i>

do not seem accustomed to working with people from different backgrounds and with varying aptitudes.

Statement 6 *The graduates have the tendency to work on their own when they are assigned a job. They do not interact with other employees when they have difficulties or need additional information to do a work.*

Statement 7 *Performance varies between very low and very high, but most graduates work effectively in team*

Competitive Mind-set instead of Collaborative Mind-set

A few employers observed that graduates tend to have a competitive mindset and consequently have some difficulties in working in team. They view their colleagues as competitors instead of collaborators. For instance, one interviewee stated that “*graduates have a very competitive mind-set which makes them less equipped with a team player attitude*”. Similarly, another interviewee reported that “*the graduates have the tendency to work on their own when they are assigned a job. They do not interact with other employees when they have difficulties or need additional information to do a work*”.

Difficulties to integrate heterogeneous teams

Employers advocated that graduates faced difficulties to collaborate with colleagues which are from different background. They tend to stay with fellow employees with whom they are already acquainted with and seem to be much reluctant to work with people who are unfamiliar to them. An interviewee specifically mentioned that “*they do not integrate easily in teams and they do not seem accustomed to working with people from different backgrounds and with varying aptitudes*”.

Reluctance to seek help from peers and seniors

An additional weakness with regards to graduates’ team work skills that was identified by employers is that graduates are sometimes hesitant to ask for help. This is presumably an ego issue as reported by one employer, who stated that “*graduates have the tendency to work on their own when they are assigned a job. They do not interact*

with other employees when they have difficulties or need additional information to do a work. It would seem that they feel ashamed to ask for help at times.”

Communication Skills

The views of employers with regards to the communication skills of graduates provided some novel insights. While some persisting issues with regards to the oral communication were reported, there were other weaknesses which employers laid emphasis on. Many employers report that graduates face a lot of difficulties to effectively communicate using formal written communication means. Employers also believe that graduates are unable to make proper use of communication channels and take too much time to adapt to it. Table 17 below contains a summary of the statements from interviewees with respect to their evaluation of communication skills of graduates.

Table 17: Sample of Statements for Communication Skills

Answers for Communication skills	
Statement 1	<i>Students having conducted class presentations and delivery have higher levels of communications skills, especially oral communications. There is however a lack of skills in written communications.</i>
Statement 2	<i>They have difficulties to communicate effectively when having to adhere to communication channels.</i>
Statement 3	<i>Written communication has a new focus because of the wide adoption of e-mail. Written communication skills have deteriorated significantly over the past 10 years. The main disparity is written communication. Graduate employees may need to have a greater understanding of and a focus on the commercial realities of the modern workplace.</i>
Statement 4	<i>Good Oral and Written Communication Skills.</i>
Statement 5	<i>Generally, graduates make grammatical mistakes and struggle to formulate descriptive sentences. They are also poor at verbally</i>

	<i>communicating in a single language and tend to mix English, French and Creole.</i>
Statement 6	<i>The graduates have difficulties to communicate with internal and external parties as they have not acquired sufficient skills and experience in that sector. Their verbal communication should be improved through practice and their written communication should be structured for business purposes. They should also demonstrate presentational skills.</i>
Statement 7	<i>Overall ok, but could be more proactive and assertive in presenting to an audience, leading discussions and building networks.</i>
Statement 8	<i>They have no trouble in preparing for a presentation for which they are given enough time. They in fact tend to excel at it. However, when faced with a novel situation such as when required to provide ideas in a board meeting they often struggle to communicate their views effectively.</i>
Statement 9	<i>They do well with regards to presentations.</i>
Statement 10	<i>Different communication styles. Some are introvert while others are extrovert. Their communication skills need to be improved.</i>
Statement 11	<i>Need for training in communication skills.</i>

Difficulties with respect to formal written communication

Many employers pointed out that graduates often have difficulties to communicate effectively in writing. For example, one interviewee stated that “*students having conducted class presentations and delivery have higher levels of communications skills, especially oral communications. There is however a lack of skills in written communications.*” In the same line, another interviewee stated that “*their written communication should be structured for business purposes.*” According to some employers, this degradation in the quality of written communication can be attributed to the prevalence of alternative forms of written communications such as emails and

social network chatting platforms. For instance, an interviewee observed that “*written communication has a new focus because of the wide adoption of e-mail. Written communication skills have deteriorated significantly over the past 10 years. The main disparity is written communication. Graduate employees may need to have a greater understanding of and a focus on the commercial realities of the modern workplace.*”

Lack of proper adherence to communication lines

Another major weakness identified from the interviews is a deficiency with regards to communicating through the proper channels. Employers believe that graduates are not prepared enough to adapt to the need of observing proper communication channels. For example, it was pointed out that “*they have difficulties to communicate effectively when having to adhere to communication channels.*”

Persisting oral communication issues in specific situations

Notwithstanding the above two issues, some employers reiterate the common need for better oral communication in some instances. While most employers concur that graduates possess good presentation skills overall, they tend to have difficulties in some specific situations. The latter argument is exemplified by one interviewee who stated that graduates “*have no trouble in preparing for a presentation for which they are given enough time. They in fact tend to excel at it. However, when faced with a novel situation such as when required to provide ideas in a board meeting they often struggle to communicate their views effectively.*”

Information Technology Skills

Overall employers report that they are satisfied with the Information Technology skills of graduates from the Mauritian public universities. Yet there are some areas that they believe can be improved. One major area is identified, which is the need for acquisition of specialized IT skills.

Table 18: Sample of Statements for Information Technology Skills

Answers for IT skills	
Statement 1	<i>Students generally have a good command of IT Skills. There is nonetheless a lack of skills and practice in use of special software.</i>

Statement 2	<i>Need for better specialized IT skills.</i>
Statement 3	<i>Graduates are well versed with IT since they are up to date with the change in technology and bring new methods of technology at work which enhanced the level of productivity and effectiveness at work.</i>
Statement 4	<i>Very good at Social Media but less effective on intermediate use of Excel and Word, Power Point.</i>
Statement 5	<i>Their IT skills are satisfactory. However, they should keep abreast of business trends with advanced skills in Excel and PowerPoint, especially with the advent of Big Data and presentations to an audience.</i>
Statement 6	<i>The graduates possess adequate basic IT skills. However, they have problems to use more advanced IT tools. Sometimes they have no knowledge at all about how to use excel. Making use of intermediate to advanced excel functions is essential in today's business-related jobs and graduates often join the workforce unprepared.</i>
Statement 7	<i>Most accounting related jobs now require the use of relevant IT tools and graduates face major difficulties to use them. We have to provide long period of training to them and we believe that universities should do a better job in providing them with those skills.</i>
Statement 8	<i>The young graduates are highly computer literate.</i>
Statement 9	<i>They have necessary skills.</i>

Lack of proficiency in using intermediate to advance IT tools

The graduates possess adequate basic IT skills. However, they have problems to use more advanced IT tools. Sometimes they have no knowledge at all about how to use excel. Making use of intermediate to advanced excel functions is essential in today's

business-related jobs and graduates often join the workforce unprepared. Employers further commented that most accounting related jobs now require the use of relevant IT tools and graduates face major difficulties to use them. Employers have to provide long period of training to them and believe that universities should do a better job in providing them with those skills.

Numeracy Skills

Employers felt that there are no key issues as far as numeracy skills are concerned. They unanimously agree that graduates possess sufficient skills to perform numerical operations whenever required.

Table 19: Sample of Statements for Numeracy Skills
Answers for *Numeracy Skills*

Statement 1	<i>Generally, numeracy skills are good.</i>
Statement 2	<i>Graduates from all types of universities seem to possess cognitive skills like numerical skills since they are able to provide numerical facts when preparing reports.</i>
Statement 3	<i>Satisfactory level of numeracy skills especially for graduates in accounting and finance.</i>
Statement 4	<i>Performance varies between low and high.</i>
Statement 5	<i>Graduates make good use of their numeracy skills in the work place.</i>

Problem-Solving Skills

Graduates are perceived to have quite good problem-solving skills; however, they sometimes face the problem with a negative attitude and they also neglect to consider issues of efficiency relating to the solutions proposed.

Table 20: Sample of Statements for Problem-Solving Skills

Answers for <i>Problem-solving abilities</i>	
Statement 1	<i>Problem-solving abilities are a must in the work-force. While students have a basic ability for problem-solving, when faced with complex situations, they do not seem to manage as easily.</i>
Statement 2	<i>Graduates are hesitant when it comes to problem solving situations. They lack the ability to voice out their point of view since there are workers having a higher position.</i>
Statement 3	<i>With practice on real life scenarios, an area to be developed with experience.</i>
Statement 4	<i>Most of the time, graduates focus on the problem instead of the solution. They also tend to find complex solutions instead of straightforward one.</i>
Statement 5	<i>During their studies, the graduates had been dealing with hypothetical problems and they have applied their theoretical knowledge to find solutions. In real-life business situations, they have difficulties to find appropriate solutions.</i>
Statement 6	<i>Graduates should acquire on job knowledge before they can apply problem solving skills.</i>
Statement 7	<i>In this field they lag behind desperately.</i>

Not solution driven enough

Some employers pointed out that graduates tend to spend too much time reflecting and complaining about problems instead of finding solutions “*most of the time graduates focus on the problems instead of the solutions*”. They suggest that there is a need for change in attitude mainly since they do possess the necessary technical abilities but sometimes fail to solve problems due to an adverse attitude towards the problem.

Difficulties to solve complex business problem efficiently

Graduates are found to be too theoretical in their approach to solve problems. While they manage to find solutions, these are sometimes themselves complex in nature. As observed by one interviewee, “*They also tend to find complex solutions instead of straightforward one*”. As a consequence, the solutions proposed are often difficult to implement. Moreover, employers believe that graduates should focus more on finding solutions that are more efficient, that is, which will require the less input while maximizing output.

Time Management Skills

Overall there are no major concerns raised by employers with regards to time management skills. The only issue that some employers pointed out is that graduates face some difficulties in setting priorities.

Table 21: Sample of Statements for Time Management Skills

Answers for Time management skills	
Statement 1	<i>Training on time management is part of university experience. Students having conducted dissertation works with tight deadlines tend to have better time management skills.</i>
Statement 2	<i>It seems that graduates enjoy a favourable status regarding time management behaviour since they are free from responsibilities and are more likely to take jobs even during odd hours.</i>
Statement 3	<i>Prioritising tasks is an issue. However, once coached, graduates make good progress with managing their time better.</i>
Statement 4	<i>They have a satisfactory level of time management skills but they need to apply discipline in planning their work so that they can deliver on time.</i>
Statement 5	<i>They need coaching on time management skills.</i>
Statement 6	<i>Lack of planning skills.</i>
Statement 7	<i>Graduates understand the importance to respect deadlines.</i>

Priority Setting and Proper Planning

While employers tend to agree that graduates possess time management skills overall, they also point out that the latter often neglect to plan their work. The absence of proper planning results in difficulties to meet deadlines due to inefficient priority considerations.

Entrepreneurship Skills

Employers do not think that graduates are sufficiently equipped with entrepreneurial skills and often rely to large extent on instructions from their seniors. They do not view it as a major concern though, since most of them believe that this is a skill that graduates get to learn during their work experience.

Table 22: Sample of Statements for Entrepreneurship Skills

	Answers for <i>Entrepreneurship skills (creative and innovative)</i>
Statement 1	<i>Most graduates are formed academically and in a systematic process. Entrepreneurship skills are quite low as compared to other countries. Graduates are not necessarily moulded in having an entrepreneurial mind-set.</i>
Statement 2	<i>Graduates bring along new entrepreneurship skills like competencies in their jobs since they are working for the first time and so want to show their interest in the work.</i>
Statement 3	<i>More driven to win a job than to invest in own set of entrepreneurship skills.</i>
Statement 4	<i>Most of the graduates seem lost without proper guidance. During interviews in particular, they get confused when asked open questions.</i>
Statement 5	<i>They do not have entrepreneurial skills as their objective in having a degree is to find a job, preferably in the fields they have studied. This is a skill that needs to be inculcated into the young graduates over years, encouraging them to take risks in the business world.</i>

Statement 6	<i>They lack initiatives and practical skills which they would acquire after a period of time in the work environment. Accordingly, they will also develop the right leadership skills.</i>
Statement 7	<i>Entrepreneurial skills lacking across.</i>

Hesitancy to propose innovative ideas

Employers believe that graduates tend to rely too much on ideas of their superiors. For example, one participant stated that “*most of the graduates seem lost without proper guidance. During interviews in particular, they get confused when asked open questions.*” Nevertheless, employers do not view the lack of entrepreneurship skills as a major issue for fresh graduates in particular.

Research Skills

Employers tend to have diverse views with regards to the research skills of graduates. Some of them reported to be satisfied with the research skills of graduates, in particular with those graduates who have conducted a dissertation.

Table 23: Sample of Statements for Research Skills

Statement	Answers for Research Skills
Statement 1	<i>Most graduates not having conducted dissertations tend to have difficulty in conducting advanced research work. Students might not necessarily know how to conduct research, where, how and what to search.</i>
Statement 2	<i>Graduates are less likely to get involved in research if their courses are HR, Management and Accounting. However, those involved in marketing and psychology are more likely to go deeper in research.</i>
Statement 3	<i>Many graduates tend to do research academically. Unfortunately, business skills of today require a mind-set towards practical and objective problem-solving, not theoretical research.</i>

Statement 4	<i>They have a good level of research skills based on the fact that they have to write a dissertation. They should include empirical evidence based on real-life situations in the business world.</i>
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Need for final year dissertation

Employers observed that graduates having completed a dissertation in the course of their programme of studies tend to be well equipped with the necessary research skills. For example, it was stated that “*They have a good level of research skills based on the fact that they have to write a dissertation. They should include empirical evidence based on real-life situations in the business world.*”

Difficulties to apply theory to practice

While employers are agreeable that graduates having done a dissertation do possess the necessary skills and knowledge to conduct quality research, some of them suggest that graduates face difficulties to adequately apply the knowledge gained for the purpose of decision making and make practical contributions in the workplace. One particular interviewee stated that “*many graduates tend to do research academically. Unfortunately, business skills of today require a mind-set towards practical and objective problem-solving, not theoretical research.*”

Self-Regulation Skills (Flexibility and Adaptability)

Graduates are expected to show a reasonable degree of flexibility and ability to adapt to change. Employers tend to have different views with regards to this particular skill. While most employers appreciate that graduates do exhibit a satisfactory level of self-regulatory skills, a few others believe that graduates should make more efforts to understand the constraints and needs of the organisation.

Table 24: Sample of Statements for Self-Regulatory Skills

Answers for Self-Regulation Skills (Flexibility and Adaptability)	
Statement 1	<i>Mostly good.</i>
Statement 2	<i>Graduates show punctuality at work and adapt themselves to the culture of the organisation rapidly.</i>
Statement 3	<i>They are more inclined towards “what’s in it for me” than being flexible to understand and to adapt.</i>
Statement 4	<i>Most graduates tend to wish a stable 9 to 5 job, with set tasks / a clear job description. It seems that a change in mind set is necessary for graduates to become flexible and adapt to changing job requirements – admittedly within limits.</i>
Statement 5	<i>They have a reasonable level of self-regulation skills.</i>

Need to think about “we” rather than “I”

A complaint made by a few employers is that graduates do not think enough about the interest of the organisation and as such they often find it hard to understand the need to adapt to the organisation’s requirements. One employer observed that graduates “*are more inclined towards “what’s in it for me” than being flexible to understand and to adapt.*”

Leadership Skills

Employers overall believe that graduates do exhibit a reasonable level of leadership abilities. While they opine that there is scope for improving such skills, they feel it is natural for graduates to have difficulties initially to directly motivate others given that they themselves require some time to understand the dynamic of the organisation and prefer to focus on their own job.

Table 25: Sample of Statements for Leadership Skills

Answers for Leadership skills (motivating others)	
Statement 1	<i>Leadership skills are found in a few graduates having conducted "Student Society" work and such other work which consists of leading a team. Most graduates who only focus on the academic aspect, tend to lose out on leadership skills.</i>
Statement 2	<i>Graduates can motivate others indirectly through their behaviour at work such as being regular but are unwilling to motivate others directly since they are new in the firm.</i>
Statement 3	<i>Leadership skills are found in a few graduates having conducted "Student Society" work and such other work which consists of leading a team. Most graduates who only focus on the academic aspect, tend to lose out on leadership skills.</i>
Statement 4	<i>Except for a few cases, many graduates tend to be followers rather than leaders. In cases where graduates have led projects during their studies, significant positive difference is observed in terms of leadership abilities.</i>
Statement 5	<i>Very few have leadership skills as most normally execute what they have been asked to do. The level of initiative is limited as they do not question the status-quo, being not used to think critically.</i>

Stress Management Skills

The ability of graduates to cope with stressful situations falls short of employers' expectations. Employers report that graduates are not prepared enough to manage their stress to keep an optimum level of performance.

Table 26: Sample of Statements for Stress Management Skills

Statements	Answers for Stress management skills
Statement 1	<i>Graduates have major issues dealing with stress. They often adopt the “freeze” option where they are unable to do anything because of stress. It is sometimes frustrating for us to see technically good graduates to be unable to perform well because of their difficulties to manage stress.</i>
Statement 2	<i>Graduates are reluctant to work under pressure. They are more likely to take their time in doing the job but doing it correctly.</i>
Statement 3	<i>Little ask for feedback to tackle stress from a coach.</i>
Statement 4	<i>There have been several cases of graduates leaving their jobs because of their inability to manage stress. This inability ends up affecting other team members.</i>
Statement 5	<i>They manage comfortably well when they are in administrative roles but are under pressure when they operate in customer facing environment.</i>

Difficulties to deal with work pressures

Employers view that graduates face major difficulties to cope with pressure at work. The most commonly cited source of work related stress is tight deadlines. Graduates are found to underperform when having to deal with such situations. For example, one participant stated that “*Graduates have major issues dealing with stress. They often adopt the “freeze” option where they are unable to do anything because of stress. It is sometimes frustrating for us to see technically good graduates to be unable to perform well because of their difficulties to manage stress.*”

Self-Management Skills (Autonomy and Independence)

Graduates are expected to show some degree of autonomy at the workplace. While it is comprehensible that they need some time to adapt, when compared to graduates from foreign universities, graduates from Mauritian Universities are short of this skill.

Table 27: Sample of Statements for Self-Management Skills

Statements	Answers for <i>Self-Management Skills (Autonomous and Independence)</i>
Statement 1	<i>First degree graduates tend to be limited in working autonomously. Unlike in other countries where students are encouraged to work independently, this seems to be limited in Mauritius.</i>
Statement 2	<i>Graduates like doing their work independently with less supervision.</i>
Statement 3	<i>Very often we see the need to educate graduates on this area as they believe that everything can be done in a fast manner rather than in a planned manner.</i>
Statement 4	<i>Most graduates need hand-holding and seem to lack the ability to function independently.</i>
Statement 5	<i>They tend to be dependent on their superiors at work as they have not acquired sufficient business experience to be autonomous in their approach.</i>

Over-reliance on guidance and instructions

In general employers suggest that graduates tend to lack the required level of autonomy. They rely a lot on guidance and instructions. This is, as pointed out by a participant, due to their lack of experience and is therefore perfectly understandable. Certainly, one particular employer stated that graduates “...*tend to be dependent on their superiors at work as they have not acquired sufficient business experience to be autonomous in their approach.*”

It was also observed that “*first degree graduates tend to be limited in working autonomously. Unlike in other countries where students are encouraged to work independently, this seems to be limited in Mauritius.*”

Suggested Initiatives to Improve Graduates' Generic Skills

Employers were requested to make recommendations with respect to initiatives that universities could take to improve the specific generic skills of graduates for which they believed substantial improvement was possible. Table 28 presents the statements of the employers gained during the interviews.

Table 28: Sample of Statements for Initiative to Improve Generic Skills

Statements	Initiatives to Improve Generic Skills
Statement 1	<i>Higher group work, individual assignments and research works as well as presentation of findings. Critical thinking exercises.</i>
Statement 2	<i>Experiential education (internships and field-based projects).</i>
Statement 3	<i>Employers are seeking graduates who have positive personal values including integrity, honesty, confidence, self-control, understanding, and personal grooming. These can be encompassed under Integrity and Professional Ethics.</i>
Statement 4	<i>You may focus on those skills which you consider as a priority to be addressed for graduates in the business (management or accounting or finance) field.</i>
Statement 5	<i>Universities should interact more with employers to ensure that graduates are trained to have work-ready skills. Unfortunately, we often observe that graduates are under the impression that a University degree places them in a position to understand a business well when in actual fact they are not prepared for the work environment. A placement for a period of 4 to 6 months might be a far better preparation for the workplace than a two-month internship during which little to no practical knowledge is acquired.</i>
Statement 6	<i>Communication Skills - The students should be taught the basics of communication skills at the start of their course and be regularly assigned to do presentations and verbal communication to an audience.</i>

Problem-solving abilities - In the business sector, the focus is on problem-solving. Students should be presented to real case-studies and be required to find solutions in groups, thus at the same time encouraging team-work.

Entrepreneurship skills - During their studies, students should be required to prepare a business proposal in a field in which they are interested. The lecturers should assist them in this task. Successful entrepreneurs and business leaders should be invited to talk about their experience.

Leadership skills - A course on leadership should be included in the curriculum and the students should be given the opportunity to lead teams and put in practice the skills they have learnt. Examples of role-models should be identified and commented on by the lecturers.

Statement 7 *Universities should try to set up business incubators and laboratory learning settings (including virtual reality). Gamification of learning about business concepts can also help graduates to acquire many of the generic skills.*

Statement 8 *I think students would benefit a lot from participation in collaborative applied research in organisations. May be assignments should be more applied in nature.*

Statement 9 *Graduates would benefit a lot by learning through consultation with industry practitioners. Case studies can be developed in consultation with industry people.*

Opportunity for experiential higher education

Employers observe that the more opportunities graduates have to gain work experience during their programme of studies, the better they are able to acquire generic skills. For example, one participant observes that “a placement for a period of 4 to 6 months might be a far better preparation for the workplace than a two-month internship during which little to no practical knowledge is acquired.” It therefore entails that students must be

exposed as much as possible to experiential learning. One particular interviewee explicitly mentioned that “*experiential education (internships and field-based projects)*” should be part of the curriculum.

Setting up of business incubators and use of gamification

As stated by one interviewee, “*Universities should try to set up business incubators and laboratory learning settings (including virtual reality). Gamification of learning about business concepts can also help graduates to acquire many of the generic skills.*”

Course work based on applied research

It was suggested that having course work which is based on applied research would help. For instance, it was stated that “*students would benefit a lot from participation in collaborative applied research in organisations. May be assignments should be more applied in nature.*” *Opportunities for interaction with industry professionals*

Employers also observed that in addition to work placement, there should be other mechanisms in place to encourage the interaction between industry professionals and graduates. It was noted that “*graduates would benefit a lot by learning through consultation with industry practitioners. Case studies can be developed in consultation with industry people.*”

6.1.1 Employers Perceptions of Graduates’ Technical Skills

Employers were also asked about their perceptions regarding the technical skills of business graduates from Mauritian Public Universities.

Table 29: Sample of Statements for Technical Skills

Statements	Sample Statements
Statement 1	<i>Generally good in the Business-related courses.</i>
	<i>Lack of key skills in the Sciences specialities such as Life Sciences, Marine Technology etc.</i>
Statement 2	<i>Graduates lack the computing techniques and written communication needed when doing reports or filing.</i>

	<p><i>Initiative: The knowledge of accounting packages and spreadsheet packages need to be further developed as spreadsheet packages, word-processing packages and knowledge of communication software (for example Outlook) are highly needed and graduates lacked sufficient knowledge.</i></p>
Statement 3	<p><i>Many graduates have a good understanding of the technical skills required. Many also however struggle to apply their knowledge.</i></p> <p><i>(i) University could invite seasoned professionals to share their experience and provide an insight into the working world.</i></p> <p><i>(ii) There should also be a focus on practical work and increasing work-related knowledge, so as to enable graduates to be work-ready on graduating. Structured placements with strict objectives should be considered as part of the degree programme</i></p>
Statement 4	<p><i>The graduates have a good level of technical/disciplinary knowledge and skills. However, the knowledge is too theoretical and thus the graduates have difficulties to apply them.</i></p> <p><i>Initiative: The lecturers should use examples (local and international) from the business world during the course to show how the theory applies to real-life situations. Students should be requested to do research to find more examples. The core subjects should have a link or relevance to a particular professional qualification in the field.</i></p>
Statement 5	<p><i>Application of knowledge by graduates is sometimes sluggish; they often need to be handheld.</i></p> <p><i>Initiative: More practical applications; test labs.</i></p>

Difficulties to apply knowledge to practice

Overall employers agree that graduates possess the necessary technical skills and knowledge. However, according to most employers interviewed, graduates have

difficulties to apply the knowledge acquired in practice. For example, it was stated that *“the graduates have a good level of technical /disciplinary knowledge and skills. However, the knowledge is too theoretical and thus the graduates have difficulties to apply them.”*

Application of IT tools in core disciplinary tasks

In line with the findings in relation to the generic skills component, employers reiterated the fact that graduates had major difficulties to use IT tools in their core subject area. Employers further observe that some specific IT skills should be considered as being part of technical skills, especially in the accounting field. It is thus recommended that *“knowledge of accounting packages and spreadsheet packages need to be further developed as spreadsheet packages, word-processing packages and knowledge of communication software (for example Outlook) are highly needed and graduates lacked sufficient knowledge.”*

6.1.2 Employers Perceptions of Graduates’ Metacognitive Skills

Finally, the perceptions of employers with regards to the metacognitive skills of graduates were analysed.

Table 29: Sample of Statements for Initiative to Improve Generic Skills

Statements	Sample Statements
Statement 1	<i>Mid-level of skills; Initiatives: Presentations, encouragement of graduates to publish in journals.</i>
Statement 2	<i>Graduates recruited in the last three to five years have had the skills required to work in my organisation since placement prepared the graduates for a career; Initiatives: Universities need to include subjects like regulatory affairs in their curriculum and need to talk with industry experts regularly.</i>
Statement 3	<i>An area that is very low as we have seen many graduates failing in interviews and performance once in the employment market.</i>
Statement 4	<i>Graduates seem to believe that the skills acquired can get them through any hurdle and when they are not able to meet their</i>

requirements, they tend to blame everybody else for their shortcomings. The lack of contact with the work environment and ethos of real life companies do not help; As already indicated, the interaction with the work environment is a key success factor.

Statement 5 *The students are at a critical stage of their life when starting university education. For most of them, tertiary studies look like an extension of the HSC. As such, their methodology of learning does not change or move to a higher level. Thus, they have difficulties on a personal level when they enter the working environment; Initiatives: There should be an introductory non-credit course on the methodology of learning at university level so that students know at the start how to acquire knowledge/skills and develop critical thinking. The university should have a psychologist visiting the campus regularly to advise students in need to develop their metacognitive skills. A career guidance adviser will also assist them to prepare for the working world.*

Statement 6 *Often need detailed directions instead of guidance and coaching; Initiatives: More involvement in research and development; Courses that help improve metacognitive skills; On-campus students, including foreign students; Exchange programs with foreign universities.*

CHAPTER 7: DISCUSSION AND CONCLUSION

DISCUSSION OF EMPIRICAL RESULTS AND RECOMMENDATIONS

Mismatch in Graduates' Knowledge and Skills

Team-working skills - The surveyed graduates reported that they perceived to have quite high level team-working skills. Furthermore no significant differences were found between their perceptions about their level of attainment of team-working skills and their expectations of same. The satisfaction of the graduates with their team-skills was not echoed by the employers who raised some major concerns with regards to graduates' team-working skills. Three key issues were identified following the interviews with the employers. These are: an excess of competitive mind-set; major difficulties to integrate heterogeneous teams; and hesitancy to ask for help when needed. There is therefore a need for universities to focus on these specific issues in curriculum development.

Communication Skills – Communications skills were reported to be below expectations by the surveyed sample of graduates with a medium effect difference, thus indicating that overall they were not satisfied with the extent to which their communication skills matched the need of their current job. While overall employers agreed that there has been considerable improvement in graduates' communication skills over the last few years, they also highlighted some major weaknesses. There is therefore some convergence with respect to the views of employers and graduates regarding the mismatch between graduates' skills and their job requirement as far as communication is concerned. More specifically, employers point out that graduates face difficulties in efficient written formal communication, adhere to communication lines; and oral communication in quasi-informal settings.

Information Technology Skills – Overall the surveyed graduates demonstrate a quite high level of satisfaction with their IT skills and the latter's adequacy for their respective jobs. While employers tend to conquer that graduates do possess good IT skills overall. They also criticise the weaknesses of graduates to make use of intermediate to advanced IT tools. Indeed, what employers require is the ability of business graduates to make use of information technologies for their core duties and

according to them, the graduates have major limitations in making proper use of specialised IT tools.

Problem Solving Skills – The surveyed graduates show awareness of their weaknesses with respect to problem-solving skills. Reporting that their perceptions fell below their expectations regarding the extent to which their ability to solve problems efficiently was good enough for their job. Employers also shared these views, expressing some concerns in this area. More specifically, they highlight two main issues. The first one pertains to the graduates' mind-set, whereby they tend to adopt a complaining behaviour instead of seeking to find solutions to problems. Secondly, they complain that graduates' have an excessive "theoretical" approach to solving problems.

Research Skills – Graduates report not to be satisfied with their research skills. Employers are also of the opinion that there are some mismatches with regards to the fit between graduates' research skills and job market requirements. More specifically they point out that graduates have difficulties to link theory and practice. However, employers highlight the fact that graduates' who have done a dissertation and done it well are much better equipped to make use of research skills at the workplace.

Self-regulation Skills – Graduates are self-critical with regards to their ability to adapt to new situations reporting that these skills of theirs shall short of their own expectations. Employers do echo that feeling, pointing out that graduates tend to resist change even during early days of their employment. A major remark was that graduates often have an individualistic mind-set whereby they fail to think about the organisation as a whole.

Stress Management Skills – Graduates report to be satisfied overall with their skills to cope with stress. On the other hand employers find that graduates often get over-stressed and have difficulties to bear work pressures and tight deadlines. They also report that graduates tend to get over anxious when conflicts arise with other colleagues and these do lead to negative impact on their work.

Self-Management Skills – Graduates are satisfied with their level of autonomy as required by their jobs. However, employers express concerns with the ability of graduates to be autonomous and independent. According to them graduates tend to over-rely on instructions given to them.

Numeracy Skills – Both graduates and employers opined that there are no major issues with regards to graduates’ numeracy skills.

Time Management Skills – Employers do not believe that there are major concerns with regards to time management skills, especially given the fact that graduates are closely supervised in the initial stages of their job. The only remark was about difficulties they have to set priorities which sometimes result in poor time management.

Entrepreneurial Skills –. Employers are however quick to highlight that they their own expectations with respect to entrepreneurial skills are relatively low. There is a grooming period during which graduates are expected to learn those skills on-the-job.

Leadership Skills –As for entrepreneurial skills while they do recognise that graduates have much room for improvement, they generally believe that these are skills that require experience to learn and are therefore less demanding in that matter.

Disciplinary Skills - Overall employers agree that graduates possess the necessary technical skills and knowledge. However, according to most employers interviewed, graduates have difficulties to apply the knowledge acquired in practice. For example, it was stated that “*the graduates have a good level of technical /disciplinary knowledge and skills. However, the knowledge is too theoretical and thus the graduates have difficulties to apply them.*” Graduates themselves tend to view their disciplinary skills to fall short of their job requirements overall.

Metacognitive Skills – As for disciplinary skills, employers report a high variation among graduates level of metacognitive skills. They do conquer that these skills are essential for long-term success. Graduates themselves report to have a quite high level of metacognitive skills.

Impact of Skill Sets on Employability

Our findings also demonstrate that the different skills set (e.i disciplinary skills; generic skills and metacognitive skills) have a significant combined effect on graduates’ employability. In particular, we provide evidence for the significant contributions of generic (soft skills) and metacognitive skills.

Conclusion

The present study aims to identify the important skills that business graduates should possess, and to find out whether the expected and attained learning outcomes of business graduates in Mauritius correspond to the knowledge and skills needed in the workplace. We formulated three specific research objectives which are: to identify the essential skills and knowledge that Mauritian graduates in the business field are expected to attain; to assess the perceptions of graduates with regards to the attainment of those skills; and to analyse the critical mismatch areas that need to be addressed from the perspective of employers. A sequential mixed method approach is employed. The first phase of this study therefore seeks to provide a comprehensive understanding of a phenomenon (education-job mismatch) and develop new conceptualisations instead of generalising findings and testing existing theories. A qualitative approach thus seems warranted. In-depth interviews are conducted among employers to gain an in depth understanding of their perception regarding the expected learning outcomes and also about the attainment of these learning outcomes by the graduates. Views of graduates and academics are also sought to meet the various research objectives. A framework is also developed that will enable the development of policies, both at university and government level in view of increasing the match between higher educational demand and supply. The second phase of the research comprises of a survey among a sample of past graduates from the University of Mauritius and relevant statistical analyses are employed.

Firstly, the findings allowed for the development of a model which suggests that the skills can be categorized into three main components which are generic skills, technical skills and metacognitive skills. The generic skills dimension contains specific skills such as team working skills, communication skills and IT skills. The technical dimension relates to the disciplinary skills and knowledge, such as accounting or marketing. The metacognitive skills component refers to empowering assets such as self-confidence and self-efficacy. The assessment of the skills provided evidence for critical mismatch areas such as IT skills and leadership skills. Metacognitive skills were also found to be a major area of concern whereby employers emphasized on the lack of self-confidence exhibited by Mauritian graduates. Overall the study provides useful empirical evidence about skills mismatch areas that needs to be addressed by

Universities in Mauritius so as to reduce the mismatch between higher education outcomes and the job market requirements and thus to increase the employability of Mauritian graduates in the business field.

Consistency of interest – counselling

The changing role of higher education is undeniable. With the advent of information and communication technologies the secrecy of disciplinary knowledge is over. Students have access to a wide access of resources from best the universities around the world; universities who are the creator of the bulk of knowledge themselves. Public universities in Mauritius are bound to adapt to this wind of change blowing since the last decade and which is seemingly going to grow stronger with time. Our findings present some interesting insight into the future roles of universities in Mauritius.

Limitations and Scope for future research

- Is there a difference between graduates and secondary school leavers?
- Skills mismatch across other fields, example engineering and natural sciences.
- Build multi-item scales for generic skills.
- We make use of a single item scale to measure the impact of graduates' skills on employability outcomes. More specifically we measure focused on satisfaction with job match with regards to the graduates' field of study. Future research should seek to develop more comprehensive scales to evaluate the level of match between higher education and the acquired job.
- Comparative analysis for specific programme of studies. Specialised IT skills highly relevant to the accounting field in particular.
- Disciplinary Skills – Graduates report a low level of satisfaction – need for further research

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ANNEX 1 QUESTIONNAIRE

UNIVERSITY OF MAURITIUS



Title of Study:

AN ASSESSMENT OF THE MISMATCH BETWEEN HIGHER EDUCATION LEARNING OUTCOMES AND JOB MARKET REQUIREMENTS IN THE BUSINESS FIELD. AN EXPLORATORY STUDY

Thank you for accepting to participate in this survey. The purpose of our study is to identify the necessary skills, knowledge and attributes that graduates should possess, and assess any potential mismatches pertaining to these. We are therefore conducting a survey with a sample of past graduates from Mauritian higher education institutions and their respective employers. The information obtained from this survey is of vital importance for successfully completing this research. The findings from this research will help to improve university programmes.

Your participation should take about 10 minutes. Please be assured that all responses will remain strictly confidential. Respondents shall remain anonymous since there is no need to provide your name or any other identifying information in the questionnaire itself. Additionally, the data will be organised and merged so that respondents shall remain unknown.

Although some questions investigate similar issues, please treat each one as being unrelated to any other question and be sure to give all questions equal attention. Your time and effort in answering the question with due diligence is of utmost importance to the outcome of this research.

In case you have any queries about the study, please feel free to contact Dr Viraiyan Teeroovengadam.

I now kindly invite you to participate in the survey.

With Thanks and Gratitude

Dr Viraiyan Teeroovengadam

(Principal Investigator)

University of Mauritius; Department of Management; Reduit, Mauritius;

E-mail: v.teeroovengadam@uom.ac.mu; Tel: 57694503

Thank you again for participating in this survey. Please note that there are no ‘right’ or ‘wrong’ answers and no tricky questions. The first answer that comes into your head is probably the right one for you. If you find some of the questions difficult, please give the answer that is true for you in general or for most of the time.

Please state the undergraduate degree:

BSc/BA _____ *

From which University:

Year of Award: _____

***Please refer to this undergraduate degree when answering the following questions, henceforth referred to as your “programme of study”**

SECTION A: GENERIC KNOWLEDGE AND SKILLS

*The following statements refer to your expectations and outcome evaluations with respect to the acquisition of **generic knowledge and skills**. Please answer according to your own judgment, there are no right or wrong answers. For all the statements please indicate your level of agreement where: 1 = Strongly Disagree; 2 = Disagree; 3 = Slightly Disagree; 4 = Neutral; 5 = Slightly Agree; 6 = Agree; 7 = Strongly Agree.*

	Expectations from the undergraduate programme (At the time of enrollment)							Outcome of the Undergraduate Programme						
1	I expect that my programme of study teaches me how to work in a team							My programme of study has taught me how to work in a team						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
2	I expect my programme of study to teach me how to listen and communicate effectively							My programme of study has taught me how to listen and communicate effectively						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7

3	I expect my programme of study to develop my IT and digital skills	My programme of study has developed my IT and digital skills
	1234567	1234567
4	I expect my programme of study will develop my numeracy skills	My programme of study has developed my numeracy skills
	1234567	1234567
5	I expect my programme of study to develop my problem-solving skills	My programme of study has developed my problem-solving skills
	1234567	1234567
6	I expect my programme of study to teach me how to manage my time effectively	My programme of study has taught me how to manage my time effectively
	1234567	1234567
7	I expect my programme of study to teach how to be more creative and innovative	My programme of study has taught me how to be more creative and innovative
	1234567	1234567
8	I expect my programme of study to teach me how to effectively cope with and adapt to change	My programme of study has taught me how to effectively cope with and adapt to change
	1234567	1234567
9	I expect my programme of study to teach me how to discover knowledge through scientific research	My programme of study has taught me how to discover knowledge through scientific research
	1234567	1234567
10	I expect my programme of study to teach how to motivate and become a role model for my peers	My programme of study has taught me how to motivate and become a role model for my peers
	1234567	1234567
11	I expect my programme of study to teach me how to cope with and overcome stress	My programme of study has taught me how to cope with and overcome stress

	1	2	3	4	5	6	7		1	2	3	4	5	6	7
12	I expect my programme of study to teach me how to be more independent								My programme of study has taught me how to be more independent						
	1	2	3	4	5	6	7		1	2	3	4	5	6	7

SECTION B: DISCIPLINARY KNOWLEDGE AND SKILLS

1. Overall my programme of study enabled me to acquire the necessary concepts, tools and techniques pertaining to my subject area (e.g. management or finance or accounting, etc.) to enable me to work efficiently and effectively in my chosen field.

Not at

Absolutely

All

1 2 3 4 5 6 7 8 9 10

2. Please state your cumulative point average (CPA) for your undergraduate programme: _____

SECTION C: METACOGNITIVE SKILLS

***C1:** The following statements refer to your outcome evaluations with respect to the acquisition of some **metacognitive skills**. Please answer according to your own judgment, there are no right or wrong answers. For all the statements please indicate your level of agreement where: 1 = Strongly Disagree; 2 = Disagree; 3 = Slightly Disagree; 4 = Neutral; 5 = Slightly Agree; 6 = Agree; 7 = Strongly Agree.*

	PRESENT EVALUATION		OUTCOMES OF THE UNDERGRADUATE PROGRAMME
1	I will be able to achieve most of the goals that I have set for myself		My programme of study has increased my belief that I can achieve the goals I set for myself
	1 2 3 4 5 6 7		1 2 3 4 5 6 7
2	When facing difficult tasks, I am certain that I will accomplish them		My programme of study has provided me with enhanced confidence that I

									shall overcome difficulties to accomplish my tasks								
		1	2	3	4	5	6	7			1	2	3	4	5	6	7
3		In general, I think that I can obtain outcomes that are important to me								My programme of study has increased my overall belief that I can outcomes that are important to me							
		1	2	3	4	5	6	7			1	2	3	4	5	6	7
4		I believe I can succeed at most any endeavor to which I set my mind								My programme of study has improved my belief that I can succeed at most any endeavor to which I set my mind							
		1	2	3	4	5	6	7			1	2	3	4	5	6	7
5		I will be able to successfully overcome many challenges								My programme of study has developed my problem-solving skills							
		1	2	3	4	5	6	7			1	2	3	4	5	6	7
6		I am confident that I can perform effectively on many different tasks								My programme of study has increased my belief that I can perform effectively on many different tasks							
		1	2	3	4	5	6	7			1	2	3	4	5	6	7
7		Compared to other people, I can do most tasks very well								My programme of study has increased my belief that I can do most tasks better or as well as other people							
		1	2	3	4	5	6	7			1	2	3	4	5	6	7
8		Even when things are tough, I can perform quite well								My programme of study has increased my belief that even when things are tough, I can perform quite well							
		1	2	3	4	5	6	7			1	2	3	4	5	6	7

C2: The following statements refer to your outcome evaluations with respect to the acquisition of some **metacognitive skills**. Please answer according to your own judgment, there are no right or wrong answers. For all the statements please indicate your level of agreement where: 1 = Strongly Disagree; 2 = Disagree; 3 = Slightly Disagree; 4 = Neutral; 5 = Slightly Agree; 6 = Agree; 7 = Strongly Agree.

1	I often set a goal but later choose to pursue a different one						
	1	2	3	4	5	6	7
2	I have been obsessed with a certain idea or project for a short time but later lost interest						
	1	2	3	4	5	6	7
3	I have difficulty maintaining my focus on projects that take more than a few months to complete						
	1	2	3	4	5	6	7
4	New ideas and projects sometimes distract me from previous one						
	1	2	3	4	5	6	7
5	My interests change from year to year						
	1	2	3	4	5	6	7
6	I become interested in new pursuits every few months						
	1	2	3	4	5	6	7
7	I finish whatever I begin						
	1	2	3	4	5	6	7
8	Setbacks don't discourage						
	1	2	3	4	5	6	7
9	I am diligent						
	1	2	3	4	5	6	7
10	I am a hard worker						
	1	2	3	4	5	6	7
11	I have achieved a goal that took years of work						
	1	2	3	4	5	6	7
12	I have overcome setbacks to conquer an important challenge						
	1	2	3	4	5	6	7

SECTION D: RESPONDENT PROFILE

Please state the following:

Your Gender:

Your Age:

Your Place of Work:

Your Job Position:

Your Employer:

ANNEX 2 INTERVIEW GUIDE

UNIVERSITY OF MAURITIUS



Title of Study:

**AN ASSESSMENT OF THE MISMATCH BETWEEN HIGHER EDUCATION LEARNING
OUTCOMES AND JOB MARKET REQUIREMENTS IN THE BUSINESS FIELD.
AN EXPLORATORY STUDY**

INTERVIEW GUIDE (ACADEMICS / EMPLOYERS)

Participant Information

Name:

Position:

Organisation:

Date:

Dear Sir/Madam

Thank you for agreeing to participate and contribute to this study. The study aims at assessing the perceived mismatch between higher education learning outcomes and job market requirements.

We are interested in hearing about your experiences and opinions in this area, and would be asking you questions pertaining to the topic. All responses will be treated with utmost confidentiality.

Thank you again for your valuable contribution.

Best wishes

Dr Viraiyan Teeroovengadum (*Principal Investigator*)

Please find the questions on the next page.

SECTION A: GENERIC SKILLS

A1 Evaluation of Graduates' Performance

This section relates to your opinion with regards to the performance of graduates with respect to their generic/transferrable/soft skills. Please comment on the performance of business graduates with regards to the following generic skills acquired during to their programme of studies and provide your views about the initiatives that Universities can take to improve same. Please also provide a rating where: 1: Very low performance, 2: Low Performance; 3: Moderate Performance; 4: High performance. 5: Very high performance.

Team working Skills (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their team working skills with appropriate examples where applicable.

Communication Skills (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their communication skills with appropriate examples where applicable.

IT Skills (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their IT skills with appropriate examples where applicable.

Numeracy Skills (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their numeracy skills with appropriate examples where applicable.

Problem-solving abilities (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their problem-solving skills with appropriate examples where applicable.

Time management skills (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their time management skills with appropriate examples where applicable.

Entrepreneurship skills (creative and innovative) (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their entrepreneurship skills with appropriate examples where applicable.

Research Skills (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their research skills with appropriate examples where applicable.

Self-regulation Skills (Flexibility and adaptability) (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their self-regulation skills with appropriate examples where applicable.

Leadership skills (motivating others) (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their leadership skills with appropriate examples where applicable.

Stress management skills (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their stress management skills with appropriate examples where applicable.

Self-Management Skills (Autonomous and independent) (Rating 1 to 5) _____

Please comment on the performance of graduates with regards to their self-management skills with appropriate examples where applicable.

A1 Initiatives to Improve Generic Skills

Please suggest initiatives that Universities can take to improve the graduates' generic skills. You may focus on those skills which you consider as a priority to be addressed for graduates in the business (management/accounting/finance) field.

SECTION B: DISCIPLINARY (TECHNICAL) KNOWLEDGE AND SKILLS

This section relates to the evaluation of graduates with regards to their core technical knowledge and skills acquired according to their programme of studies. For example, graduates of BSc (Hons) Marketing Management are expected to have acquired

necessary marketing management knowledge and skills. Similarly graduates of BSc (Hons) Accounting, should possess necessary accountancy knowledge and skills.

Please comment on the performance of graduates with regards to their technical/disciplinary knowledge and skills.

Please suggest initiatives that Universities can take to improve the graduates' competencies with regards to technical/disciplinary knowledge and skills.

SECTION C: METACOGNITIVE SKILLS

This section relates to the evaluation of graduates with regards to their metacognitive knowledge and skills acquired during their programme of studies. Metacognitive skills refer to skills such as self-confidence, emotional intelligence and self-efficacy/self-belief.

Please comment on the performance of graduates with regards to their metacognitive skills.

Please suggest initiatives that Universities can take to improve the graduates' competencies with regards to their metacognitive skills.

ANNEX 3 FOCUS GROUP DISCUSSION GUIDE

Focus Group Discussion Guide

(15 min.) Introduction

- Greeting
- Purpose of focus group
- Opportunity to discuss each participant's experience with their university experience
- Ground rules
- Roles of moderator
- Recording groups
- Confidentiality of comments
- Individual opinions (no right or wrong answers)
- Speak one at a time and as clearly as possible

(1 hour) Discussion

- Presentation of: (1) the potential perceived mismatch between expected learning outcomes and job market requirements (2) the importance of identifying expected learning outcomes
 1. According to you, what are the necessary skills, knowledge and competences you should have acquired at the end of your programme?
 2. To what extent do you think that you have been able to acquire these skills, knowledge and competences at the end of your programme?
 3. From your personal experience, do you believe that the skills, knowledge and competences you acquired, are in line with the requirements of your present job? Is there anything required by the job market, that was not provided by your higher education programme?
 4. In general, to what extent do you think the business degrees offered by Mauritian universities, in line with the need of the job market?
 5. Would you say that there is a mismatch between higher education and the job market requirements?

(15 min.) Closing Comments

- Any additional comments or suggestions?
- Thank participants.



UNIVERSITY OF MAURITIUS

FACULTY OF LAW AND MANAGEMENT

CONSENT FORM: INTERVIEW/FOCUS GROUP DISCUSSION

Thank you for agreeing to participate and contribute to this research project. The purpose of this study is to assess the perceived mismatch between higher education learning outcomes and job market requirements. The information obtained from this interview/focus group discussion will be used to meet the objectives of the study. The findings from this research will help to reduce the mismatch between higher education and the job market.

Thank you again for your willingness to participate in the interview/focus group discussion. The interview/focus group discussion will be recorded and transcribed. However, if there is any question that you do not wish to answer, we can skip the question. A copy of the transcripts will be shown to you for verification purposes. The interview/focus group discussion should last between 1 hour to 1½ hours.

There are no potential risks to you for participating in this study. You can be assured that your identity will be kept strictly confidential. If you have any queries about the study, please feel free to contact me, Viraiyan Teeroovengadum, at 59168870 or via email, at v.teeroovengadum@uom.ac.mu.

I have read and understood the above and hereby agree to help in the study.

Signature

Date

The 33-item emotional intelligence scale

- (1) I know when to speak about my personal problems to others
 - (2) When I am faced with obstacles, I remember times I faced similar obstacles and overcame them
 - (3) I expect that I will do well on most things I try
 - (4) Other people find it easy to confide in me
 - (5) I find it hard to understand the non-verbal messages of other people*
 - (6) Some of the major events of my life have led me to re-evaluate what is important and not important
 - (7) When my mood changes, I see new possibilities
 - (8) Emotions are one of the things that make my life worth living
 - (9) I am aware of my emotions as I experience them
 - (10) I expect good things to happen
 - (11) I like to share my emotions with others
 - (12) When I experience a positive emotion, I know how to make it last
 - (13) I arrange events others enjoy
 - (14) I seek out activities that make me happy
 - (15) I am aware of the non-verbal messages I send to others
 - (16) I present myself in a way that makes a good impression on others
 - (17) When I am in a positive mood, solving problems is easy for me
 - (18) By looking at their facial expressions, I recognize the emotions people are experiencing
 - (19) I know why my emotions change
 - (20) When I am in a positive mood, I am able to come up with new ideas
 - (21) I have control over my emotions
 - (22) I easily recognize my emotions as I experience them
 - (23) I motivate myself by imagining a good outcome to tasks I take on
 - (24) I compliment others when they have done something well
 - (25) I am aware of the non-verbal messages other people send
 - (26) When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself
 - (27) When I feel a change in emotions, I tend to come up with new ideas
 - (28) When I am faced with a challenge, I give up because I believe I will fail*
 - (29) I know what other people are feeling just by looking at them
 - (30) I help other people feel better when they are down
 - (31) I use good moods to help myself keep trying in the face of obstacles
 - (32) I can tell how people are feeling by listening to the tone of their voice
 - (33) It is difficult for me to understand why people feel the way they do*
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SHORT GRIT SCALE

TABLE 1.—Item-level correl

Item	C
Consistency of Interest	
1. <i>I often set a goal but later choose to pursue a different one.</i>	
5. <i>I have been obsessed with a certain idea or project for a short time but later lost interest.</i>	
6. <i>I have difficulty maintaining my focus on projects that take more than a few months to complete.</i>	
2. <i>New ideas and projects sometimes distract me from previous ones.</i>	
4. <i>My interests change from year to year.</i>	
3. <i>I become interested in new pursuits every few months.</i>	
Perseverance of Effort	
9. <i>I finish whatever I begin.</i>	
10. <i>Setbacks don't discourage me.</i>	
12. <i>I am diligent.</i>	
11. <i>I am a hard worker.</i>	
7. <i>I have achieved a goal that took years of work.</i>	
8. <i>I have overcome setbacks to conquer an important challenge.</i>	

Scales Used

Behavioral Integrity

The following items were rated on a 5-point Likert scale (5 = *strongly agree*, 4 = *agree*, 3 = *neither agree nor disagree*, 2 = *disagree*, 1 = *strongly disagree*):

- There is a match between my manager's words and actions.
- My manager delivers on promises.
- My manager practices what he/she preaches.
- My manager does what he/she says he/she will do.
- My manager conducts himself/herself by the same values he/she talks about.
- My manager shows the same priorities that he/she describes.
- When my manager promises something, I can be certain that it will happen.
- If my manager says he/she is going to do something, he/she will.

APPENDIX
New General Self-Efficacy Scale

1. I will be able to achieve most of the goals that I have set for myself.
 2. When facing difficult tasks, I am certain that I will accomplish them.
 3. In general, I think that I can obtain outcomes that are important to me.
 4. I believe I can succeed at most any endeavor to which I set my mind.
 5. I will be able to successfully overcome many challenges.
 6. I am confident that I can perform effectively on many different tasks.
 7. Compared to other people, I can do most tasks very well.
 8. Even when things are tough, I can perform quite well.
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