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Original Research

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Perceptions of Employability Skills of Undergraduate Business Students in a Developing Country: An Exploratory Study

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Abstract

Objective: The purpose of this study was to determine the relative importance of different employability skills for business graduates seeking initial employment.

Method: Semi-structured survey questionnaires were administered to human resources representatives from industry, business lecturers, and graduating business students to determine gaps in perceptions between the three stakeholder groups.

Results: There was some alignment and moderate discrepancies in perceptions of the relative importance of different employability skills between the three stakeholder groups. There were statistically significant differences in perceived importance of communication, teamwork, and interpersonal skills between graduating students and employers. There is evidence that employers were satisfied with the level of academic skills possessed by business students at the time of graduation. However, there was significant difference in perception between employers and graduating students on the extent to which perseverance and initiative and risk-taking were fully developed among business graduates.

Conclusions: By increasing their self-awareness and critical reflection on their learning experiences, graduating students can take proactive steps to enhance their positional advantage in the labour market. The various stakeholders, including academics, can lead a social dialogue towards a deliberate approach to developing graduate employability.

Implications: Acquiring in-demand soft skills is one side of the employability coin; the other is developing dynamic psychological-social capital, such as self-awareness, self-directness, proactivity, adaptability, and resilience, that is underpinned by lifelong learning. Both are needed to navigate multiple job transitions and career challenges throughout one's career span.

Keywords: *employability skills; business education; business students; employers' skills need*
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Introduction

Globalization, increased competition, accelerated technological change, massification of higher education, and evolution of the knowledge/digitised economy has increased the need for ever-rising workforce capabilities in a rapidly changing world. Rapid technological change and equally rapid knowledge obsolescence has led to fast changes in job structures and skill-demands. Increasingly, organizations are looking for a more capable workforce that can handle increased complexity in the workplace, which inevitably has raised questions about the nature of graduates leaving the tertiary education system. Some governments and employers have increasingly questioned whether business graduates possess employability skills needed for entry-level positions and that will aid progression in their chosen careers (Azevedo et al., 2012; McMurray et al., 2016; Rosenberg et al., 2012). Due to growing graduate unemployment and underemployment, employability skills of new university graduates have become a concern to university administrators, employers, government ministries, graduating students, and other stakeholders (Clarke, 2018; David et al., 2011; Flanagan, 2018; Romgens, 2020; Sin & Amaral, 2017; Small et al., 2018; Succi & Canovi, 2020; Suleman, 2018). Despite this growing interest, however, most published studies on employability skills have mainly been in developed and advanced developing countries.

Some past studies have disclosed discrepancies between the skills students possess at graduation and the skills employers expects for initial employment (Ayoubi et al., 2017; Baharun et al., 2012; Bhanugopan & Fish, 2009; David et al., 2011; Hossain et al., 2020; Moore & Morton, 2017; Osmani et al., 2019). Many employers view new university graduates as not being ready for the world of work (Abelha et al., 2020; Griffiths et al., 2018; Jackson et al., 2013; Osmani et al., 2019; Robinson & Garton, 2008). The mismatch between the knowledge students acquire at university and the skills required by the labour market has been found in studies in the United States (Qenani et al., 2014; Rosenberg et al., 2012), the United Kingdom (Azevedo et al., 2012; McMurray et al., 2016), Canada (Finch et al., 2013), Australia (Jackson, 2012; Prikshat et al., 2020), Malaysia (Fahimirad et al., 2019; Hamid et al., 2014; Kenayathula et al., 2019), Germany and Italy (Succi & Canovi, 2020), South Africa (Ngulube, 2020), Ghana (Damoah et al., 2021), Nigeria (Nwajiuba et al., 2020; Okolie et al., 2020), Sri Lanka (Wickramasinghe & Perera, 2010), Portugal (Sin & Amaral, 2017), India (Unni, 2016), Vietnam (Tran, 2012), Mauritius (Hardin-Ramanan et al., 2020), China (Su & Zhang, 2015), and Bangladesh (Uddin, 2021), among others.

Consequently, universities around the world have come under pressure to produce employable graduates. Many universities have answered the call, but progress has been uneven and has encountered challenges. For example, a study in South Africa found that academics were struggling to integrate employability skills in the curriculum (Mtawa et al., 2021). A review of institutions trying to embed employability in the curriculum in Malaysia found that there was "ambiguity regarding the assessment of generic skills in the context of higher education" (Fahimirad et al., 2019, p. 26). A study in Taiwan found that "how to increase teachers' capacity to design pedagogy by adding employment-related material into the teaching system remains unclear" (Li et al., 2020, p. 8). A study of students from low social-economic status who were attending employability classes in the UK found that they were struggling to understand and mobilise the human and other capitals being promoted by the training (Parutis & Howson, 2020). As a result, such students could not mobilize and articulate the relevant capitals to employers. Jackson and Edgar (2019) observed that despite "investment in

developing 'rounded' graduates, students experience difficulties in articulating their achievements and capabilities during graduate recruitment" (p. 39).

In addition, some universities are struggling with aligning traditional learning attainment objectives with attainment of employability skills rooted in real-world conditions (Griffiths et al., 2018). What is clear is that institutional investment in improving graduate employability is a journey rather than a destination. It requires and involves significant institutional learning, capacity development, and resources. As the concept of graduate employability has evolved and more understanding has developed, there is a growing realization that graduate employability is a complex and dynamic construct. Enhancing graduate employability requires a multi-faceted approach. The question of whether current approaches used by universities to develop graduate employability are effective remains an "unanswered and complex question" (Minocha et al., 2017, p. 239).

There has been very little research done on graduate employability in South Pacific countries (excluding Australia and New Zealand). This exploratory study was undertaken to fill this gap. Developing graduate employability starts with understanding the skill needs of employers. Hence, our study examines the perceptions of employers, graduating students, and lecturers. These three groups have the most at stake in higher education.

Context and Significance of the study

There are several reasons why the current study on employability skills of students is important. First, the Papua New Guinea (PNG) economy has undergone several changes over the last decade through the development of several liquefied natural gas (LNG) projects and associated supporting industries. These industries require new and different skill sets. Second, the notion of linear career paths is not a realistic prospect for graduate employment patterns in the 21st century (Ball, 2003; Clarke, 2017; Small et al., 2018). Today's graduate career trajectories involve more frequent switching between jobs, employers, and sectors. The ability for lifelong learning in a dynamic setting and the acquisition of new skills at different stages of one's career becomes more important than skills possessed at any point in one's career path (Bridgstock, 2009). Third, there are relatively few studies where perceptions of employability skills by employers, business lecturers, and business students have been triangulated (Ball, 2003; Rosenberg et al., 2012; Wickramasinghe & Perera, 2010).

Our study attempts to capture the perceptions of the three stakeholder groups while acknowledging the complex reality that they are not the only stakeholders in business education. There is now established evidence that acquisition of (only) discipline-specific knowledge during university study is insufficient to guarantee long-term success in today's dynamic and volatile labour market (McArthur et al., 2017; Okolie et al., 2020; Scott et al., 2019; Tomlinson, 2008). For example, it may be unlikely for more discerning employers to recruit a new graduate who has a high grade point average in their area of specialization (i.e., mechanical engineering, biology, etc.) but has poor communication, teamwork, interpersonal, and analytical skills. Employers are looking for well-rounded graduates with a wide range of additional competencies and soft skills that are needed to prosper on a job (Okolie et al., 2020; Succi & Canovi, 2020; Suleman, 2018).

The objective of the present study was to explore the employability skills of graduating fourth-year business students to determine whether they are aligned with employer expectations. We also examined the perceptions of the three stakeholder groups regarding the extent to which different employability skills were fully developed in business graduates. In addition, we explored the various learning methods used by lecturers to impact knowledge and skills to business students. Our study does not explicitly focus on discipline-specific knowledge and skills.

Literature Review

Employability Skills

One definition of graduate employability is the "ability to find, create, and sustain meaningful work across the career span" (Bennett et al., 2020, p. 340). Whether students acquire all of the abilities they need for career success while at universities has been disputed by many employers. A lack of employability skills is often cited as a problem (Finch et al., 2013; Succi & Canovi, 2020; Webb & Chaffer, 2016). Employability skills are often referred to using different terms, such as generic skills, soft skills, core skills, key skills, key competencies, transferable skills, transverse skills, 21st-century skills, cross-disciplinary skills, life skills, and work-ready skills (Holmes, 2013; Kenayathula et al., 2019; Suarta et al., 2017; Weligamage, 2009). A United States survey of nearly 900 executives found that 92% thought soft skills were equally or more important than technical skills (Davidson, 2016). Moreover, 89% of those executives had difficulties recruiting employees with the required soft skills.

A study by the Association of American Colleges and Universities also found that 91% of employers thought soft skills were more important than the applicant's degree specialization (Griffiths et al., 2018; Hart Research Associates, 2015). Researchers who compared curricula of U.S. business schools and corporate needs found a disparity between what business schools focused on in their curriculum and practitioner needs; this difference was continuing and increasingly problematic (David et al., 2011). Hodges and Burchell (2003) examined employers in New Zealand on their views of whether business students were job ready at graduation. The researchers found that most employers emphasized soft skills when recruiting for entry-level positions and complained of a general lack of interpersonal skills among business graduates. A survey of employers across four European countries found that they were not confident that business graduates had developed acceptable levels of soft skills during their time at university (Azevedo et al., 2012). Abbasi et al. (2018) found that employability skills of business graduates were less than the expectations of managers in the banking industry in Pakistan. Results from a study of Scottish employers showed that when recruiting new business and management graduates, employers valued trustworthiness, reliability, communication skills, and willingness to learn (McMurray et al., 2016). A survey of executives in the UK found that 54% of employers were satisfied with graduates' technical knowledge (i.e., discipline-specific knowledge) but perceived that they were lacking in soft skills, which resulted in vacancies not being filled (Smith, 2015, as cited in Succi & Canovi, 2020).

In general, a survey of past research conducted across different countries suggests an existence of some gaps between employer expectations and the skills business students have at graduation (Abbasi et al., 2018; Kenayathulla et al., 2019; Lim et al., 2016; Succi & Canovi, 2020; Wickramasinghe & Perera, 2010). Employers still claim that new graduates do not have the necessary soft skills for them to be work-ready (Clarke, 2018; Moore & Morton, 2017). These findings point to the need for continuous re-alignment of higher education curricula with the ever-changing dynamic skill needs of industry and business. Harvey (2005) argued that graduate employability has less to do with getting a job and more about ability in the workplace. Therefore, employability skills enhance the possibility of landing a new graduate their first job and setting them on an enhanced career path of lifelong adaptive learning.

In contrast to discipline-specific knowledge and skills, employability skills are applicable across a wide range of jobs, careers, and sectors (Chamorro-Premuzic et al., 2010). Employability skills include not just higher-order cognitive skills (i.e., problem-solving skills, critical thinking, creativity, analytical skills, etc.), but also behaviours, attitudes, and educational and non-educational experiences (Finch et al., 2013; Jackson, 2012). Saunders and Zuzel (2010) evaluated United Kingdom student perceptions of employability skills and employer expectations. They found that employers generally ranked personal attributes and core skills more highly than technical/subject-specific knowledge.

In summary, researchers have identified several employability skills that employers value. These include oral and written communication, teamwork, problem solving, interpersonal skills, numeracy, creativity, leadership, flexibility, adaptability, agility, critical thinking, time management, willingness to learn, conflict management, ethical awareness, self-confidence, enthusiasm and motivation, self-awareness, self-management, working under pressure, independent thinking and working, organization and planning, initiative, resilience, proactivity, ICT literacy, positive attitudes and behaviours, and work experience (Chhinzer & Russo, 2018; Finch et al., 2013; Osmani et al., 2019; Webb & Chaffer, 2016).

Domains of Employability Skills

We borrowed from the conceptual framework used by the Conference Board of Canada and other researchers (Abas & Imam, 2016; Abas-Mastura et al., 2013; Castillo, 2014; Conference Board of Canada, 2013; Idkhan et al., 2021; Suarta & Suwintana, 2021). While there are other conceptual frameworks used by different researchers, we selected this one for its simplicity (i.e., easy for non-specialists to understand), and other researchers have used it recently. This framework classifies employability skills into three sub-groups: academic, personal management, and teamwork (Idkhan et al., 2021; Suarta & Suwintana, 2021). Academic skills (sometimes referred to as fundamental skills) are seen as the foundation to getting, keeping, and progressing on a job and to achieving optimal effectiveness. These include communication, critical and analytical thinking, and learning. Personal management skills comprise a combination of skills, behaviours, and attitudes. These may include positive attitudes and behaviours, personal responsibility, and continuous adaptability. Teamwork skills are required to be effective when operating in work teams and participating in projects (Kornelakis & Petrakaki, 2020; Osmani et al., 2015).

Teaching and Learning Methods

Apart from the importance of identifying employers' skill requirements, higher educational institutions (HEIs) need to use effective teaching and learning methods and pedagogical approaches to develop employability skills in students. The discussion often compares traditional teaching methods with action learning methods and innovative integrative pedagogies. Other terms have been used to describe traditional teaching methods, such as teacher-centric methods and lecture-centric teaching methods. Traditional or lecture-centric teaching methods largely involve a teacher leading the class during a lecture with students quietly taking notes. Characteristics include largely one-way communication, memorization, and regurgitation of theoretical knowledge during tests and exams (Teng et al., 2019; Uddin, 2021). Lecture-centric teaching methods tend to promote passive learning (Guardia et al., 2021; Pasilabban, 2006; Teng et al., 2019; Tran, 2012). It is called passive learning because the student quietly receives information and occasionally responds to questions when prompted by the teacher. Traditional lecturing methods have been associated with passive learning in studies on Mauritius (Hardin-Ramanan et al., 2020), Nigeria (Igwe et al., 2020), Hong Kong (Ma, 2016), Taiwan (Li et al., 2020), Vietnam (Tran, 2012), Malaysia (Fernandez-Chung & Ching, 2018), Bangladesh (Uddin, 2021), China (Teng et al., 2019), East Africa (Tanzania, Uganda, and Kenya; Guardia et al., 2021), and in China, Qatar, and Lebanon (Du et al., 2020). Several studies in developing countries have found that most teaching in HEIs is still heavily focused on theoretical and academic knowledge at the expense of practical or workplace skills (Guardia et al., 2021; Hardin-Ramanan et al., 2020; Igwe et al., 2020; Lim et al., 2016; Su & Zhang, 2015; Teng et al., 2019).

On the positive side, traditional lecture-centric methods have been found to be effective in disseminating to students theoretical and abstract knowledge (i.e., discipline/subject-specific knowledge; Okunuga & Ajeyalemi, 2018; Virtanen & Tynjala, 2019). These teaching methods are also better at transmitting information to large classes. Despite these strengths, however, lecture-centric methods are ineffective in developing employability skills such as communication, teamwork, problem-solving, interpersonal skills, creativity, and innovation (Teng et al., 2019; Tran, 2012; Virtanen & Tynjala, 2019). They also tend to

encourage students to excessively focus on passing exams and getting higher grades, rather than on acquiring new knowledge and skills (Guardia et al., 2021; Hardin-Ramanan et al., 2020; Teng et al., 2019;). In addition, such methods may promote a view among students that acquisition of discipline-specific knowledge and getting a certificate is sufficient to evidence employability competencies (Igwe et al., 2020). Developing employability or soft skills requires moving away from ineffective teaching and learning methods to student-centred learning approaches and integrative pedagogies. Effective learning of soft skills requires that the university curriculum use pedagogical approaches that are constructivist, inquiry-based, reflective, collaborative, and integrative (Bennett et al., 2020; Relleve, 2019; Virtanen & Tynjala, 2019).

Finally, some argue that graduate employability development should consider contextual factors associated with the unique characteristics of the local labour markets (Hossain et al., 2020; Uddin, 2021). Graduate employability in developing countries is affected by several factors that may not be key determinants in developed economies. Chronic government underfunding, inadequate infrastructure, ineffective teaching and learning methods, outdated curriculum, focus on theory, corruption, nepotism, and the role of social networks (i.e., family status and political connections) are some of the issues unique to labour markets in developing countries (Hardin-Ramanan et al., 2020; Hossain et al., 2020; Igwe et al., 2020; Okolie et al., 2020; Tran, 2012; Uddin, 2021).

Research Questions

The study addressed the following research questions:

1. Which employability skills do employers, graduating business students, and lecturers perceive as most important when new business graduates are being recruited for entry-level positions?

2. Are there perceptual differences between employers, graduating business students, and lecturers regarding full development of three specific employability skills—academic, personal management, and teamwork—in new business graduates?

3. Which learning methods did graduating students and lecturers find most helpful in facilitating the acquisition of employability skills among business students?

Method

Sample and Sampling

We adopted a largely exploratory descriptive research methodology. The triangular design approach was adopted from Rosenberg et al. (2012) and Wickramasinghe and Perera (2010). Most comparative studies on graduate employability examine two stakeholder groups at most. We administered questionnaires to representatives of employers, business lecturers, and graduating business students as a proxy for graduates. Other researchers have also used final year student perceptions as a proxy for graduates (Atfield & Purcell, 2010; Calvo & Garcia, 2020; Kenayathula et al., 2019). At the time of the survey, graduating business students were two months from completing their studies. Issues of first employment would certainly pre-occupy their thoughts at this stage of their degree program.

The university vice chancellor at the time approved the study through his support for academic research. We collected data from one department of the university. At the time of the study, the business department had four sections, with many of the sections running only a single degree program. The researchers distributed the questionnaire to graduating students in management, accounting, economics, and information technology (IT) programs. Convenient sampling was used. One researcher distributed the questionnaire to academic

staff. Two researchers were involved in administering the questionnaires to companies/employers that had come for the career fair hosted by the university.

Instrumentation

A questionnaire was developed that included six sections. These were demographics, employability skills, academic skills, personal management skills, teamwork skills, and teaching/learning methods. Demographic factors included the section in which the graduating student was doing his/her study, number of years the lecturer had worked in the business department, the lecturer's nationality, the sector in which the employer was operating, and the ownership type of the employer.

The employability skills section included skills such as communication, problem-solving, positive attitudes and behaviours, teamwork skills, learning skills, interpersonal skills, etc. The section on academic skills included questions related to fundamental skills such as academic performance, business communication, critical thinking, decision-making, IT literacy, etc. The section on personal management skills included personal skills, attitudes, and behaviours, such as honesty, integrity, and personal ethics; perseverance; self-confidence; creativity and innovative thinking, positive attitudes; etc. The section on teamwork skills included skills needed to work in teams and on projects, such as team-building skills, ability to take responsibility of assigned tasks by the group; respecting the thoughts and opinions of others in the group; resolving and managing conflicts, etc. The last section covered various teaching and learning methods used by graduating students to acquire employability skills, such as lectures, tutorials, case studies, assignments, tests, exams, industrial tours, internships, etc.

The items under each section were derived from the various literature reviews, especially from Finch et al. (2013), Hamid et al. (2014), Wickramasinghe and Perera (2010), Rosenberg et al. (2012), and Weligamage (2009). Some items were modified by the researchers. Each of the three researchers went through the draft questionnaires to ensure that question items included reflected the major skills and attributes relevant to the study. The length of the questionnaire was kept at three pages to maximize the response rate. Questionnaires distributed to the three stakeholder groups were largely similar, with the addition of one or two questions to tailor it to a particular group. A sample of the questionnaire administered to employers is shown in the Appendix.

We developed a ranking system and Likert scale to capture information needed to answer the three research questions. A ranking system was used to capture information relevant for research question 1 and research question 3. For example, to capture information relevant to answering research question 1, a question asked graduating students, employers, and lecturers the following: "When new Business studies graduates are being recruited for initial employment, which skills do you rank as most important? (Please rank in importance, i.e., 1, 2, 3, 4, etc., with 1 = most important)." To answer research question 2 and capture the extent to which academic, personal management, and teamwork skills were fully developed in graduating students, a 5-point Likert scale was developed, ranging from 1 to 5 (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree). To answer research question 3, we developed the following question for graduating students to answer: "Which of the following learning methods did you find most helpful in facilitating/enabling you to acquire employability skills? (Please rank in terms of most helpful, i.e., 1, 2, 3, 4, etc., with 1 = most helpful)".

Data Analysis

SPSS (V22) was used for data analysis. The analytic approach to each research question is described below.

Research Question 1

The research question was exploratory in nature and asked the three stakeholder groups to rank the relative importance of the various employability skills. The mean scores and ranking captured which skills employers prioritized when recruiting new business graduates for entry-level positions. Other research has used mean scores to rank the relative importance of skills (i.e., Abbasi et al., 2018; Konig & Ribaric, 2019; Lim et al., 2016; Rosenberg et al., 2012; Strong et al., 2020; Succi & Canovi, 2020; Wickramasinghe & Perera, 2010). The ANOVA test was done to compare mean scores across the three stakeholder groups to see if there were significant differences in perceptions on the relative importance of each skill type. Following the methodology of Hodge and Lear (2011) and Jones, M. et al. (2016), we analysed the four most important employability skills employers used when recruiting new business graduates for entry-level jobs. Konig and Ribaric (2019) also focused on the four most important skills in parts of their analysis.

Research Question 2

The research question was also exploratory and sought to determine any differences among the three stakeholder groups' perceptions about the extent to which different academic, personal management, and teamwork skills were fully developed in business graduates at the time of recruitment. The ANOVA test was done to compare mean scores across the three stakeholder groups to see if there were significant differences in perceptions on each skill type. When we found a statistically significant difference, we conducted a post hoc test to determine where differences existed.

Research Question 3

This research question investigated which teaching and learning methods were perceived by graduating students and lecturers as most helpful in the acquisition of employability skills among business students. Mean scores were used to rank and determine the relative effectiveness of different teaching/learning methods in developing employability skills as perceived by graduating students and lecturers. The questions given to graduating students and lecturers were slightly different, but broadly collecting similar information.

Results

Sample characteristics are given in Table 1. Fifty questionnaires were handed out to companies that attended the career fair at the university; of these, 22 were returned and, of those, 2 were not usable due to missing data, resulting in an effective response rate of 40%. Twenty-one questionnaires were handed out to business studies lecturers; 10 were returned, representing a response rate of 48%. Sixty-five questionnaires were handed out to graduating business students; of these, 33 were returned, and three were not usable due to missing data, thus yielding an effective response rate of 46%. Students who replied were enrolled in management, accounting, and economics sections. No students from the IT section responded.

Regarding employers, five firms were locally owned, seven were government owned, four were international, and four were multinational corporations (MNCs). International firms where those whose ownership was outside Papua New Guinea (PNG) but were not MNCs. The companies represented different sectors. Regarding lecturers who returned the questionnaire, four were from management, two from accounting, one from economics, and three from IT. Seven lecturers were PNG citizens and three were expatriates.

Table 1. *Demographic Data*

Characteristics	Responses	
	No.	%
Type of respondents		
Graduating business students	30	50
Employers	20	33.3
Lecturers	10	16.7
Total	60	100
Sections in which students were studying		
Management	11	36.7
Accounting	7	23.3
Economics	12	40
Ownership structure of employers		
Locally owned	5	25
Government owned (including SOEs)	7	35
International*	4	20
Multinational Corporation (MNC)	4	20
** Ownership is outside PNG, but not an MNC*		
Sector of employers		
Banking and finance	2	10.0
Construction, engineering and energy	6	30.0
Wood industries	1	5.0
General manufacturing	2	10.0
Sub-contracting	1	5.0
Agribusiness	1	5.0
Public service and SOEs	4	20.0
Sports	1	5.0
Aviation	1	5.0
Telecommunication	1	5.0
Section in which lecturers are based		
Management	4	40
Accounting	2	20
Economics	1	10
IT	3	30
Nationality of lecturers		
Local	7	70
Expatriates	3	30

We performed reliability tests for the Employability, Academic, Personal Management, and Teamwork skills scales. Results are shown in Table 2. Since the Cronbach's alpha coefficients are above 0.7, all measures used in the study present acceptable internal consistency reliability (Field, 2000; Nunnally & Bernstein, 1994).

Table 2. *Internal Consistency Reliabilities for Scales*

Indicators/factors	Cronbach's Alpha	No. of items
Employability skills	0.937	13
Academic skills	0.761	9
Personal management skills	0.912	13
Teamwork skills	0.870	10

Research Question 1: Which employability skills do employers, graduating business students and lecturers perceive as most important when new business graduates are being recruited for entry-level positions?

Table 3 summarizes the employability skills perceived by employers, graduating students, and lecturers as being most important when employers are recruiting new graduates for entry-level positions. Communication, problem-solving, positive attitudes and behaviours, and teamwork skills were ranked by employers as the top four most important employability skills they seek. Adaptability skills were considered moderately important (ranked 8th), while personal development skills were ranked lower (ranked 10th). Pre-graduation work experience was ranked the least important skill (ranked 12th) by employers when recruiting new graduates for entry-level positions.

Table 3. *Employability skills*

Skill type	Employers			Students			Lecturers			One-way ANOVA	
	Mean**	SD	Rank	Mean**	SD	Rank	Mean**	SD	Rank	F	Sig*
Communication skills	6.65	0.48936	1	4.57	3.08146	3	4.60	3.50238	4	4.192	0.020*
Problem-solving skills	5.90	1.86096	2	4.73	2.62525	2	4.80	2.48551	3	1.567	0.217
Positive attitudes and behaviours	5.55	2.39462	3	4.77	2.54183	1	5.30	2.71006	2	0.611	0.546
Teamwork skills	5.50	1.90567	4	3.40	3.49975	7	5.40	2.17051	1	3.917	0.025*
Learning skills	5.40	2.39297	5	3.63	3.22152	6	4.50	3.53553	5	2.055	0.137
Interpersonal skills	5.35	2.05900	6	3.73	2.80312	5	5.40	1.42984	1	3.491	0.037*
Time management skills	5.10	2.77014	7	3.90	2.86898	4	4.30	3.59166	6	0.987	0.379
Adaptability skills	5.00	2.99122	8	2.73	3.59054	8	2.60	4.24788	9	2.852	0.066
Leadership skills	4.05	3.87264	9	1.50	4.10004	9	1.80	4.75628	11	2.405	0.099
Personal development skills	3.45	4.29780	10	1.40	3.73797	10	1.40	5.54176	12	1.547	0.222
Working with diversity	3.15	4.81527	11	0.40	4.62079	12	3.30	3.94546	7	2.797	0.069
Understanding the workplace	3.15	5.11216	11	1.07	4.79895	11	3.10	3.63471	8	1.423	0.249
Pre-graduation work experience	2.20	5.04297	12	0.13	5.09045	13	1.90	4.88649	10	1.152	0.323

* *The mean difference is significant at the 0.05 level.*

** *Perceptions of the importance of skills ranked 1, 2, 3, 4, etc., with 8 = most important. The mean scores were reversed scored out of 8 so that the highest mean score represents more important skills.*

Graduating business students perceived positive attitudes and behaviours, problem-solving skills, communication, and time management skills as the most important employability skills sought after by employers for initial entry-level graduate employment. Student rankings were like employers on three of the four most important employability skills. Students ranked adaptability skills as moderately important, which was like rankings by employers and lecturers. Understanding the workplace, working with diversity, and pre-graduation work experience were perceived by graduating students as the three least important skills emphasized by employers when recruiting for entry-level positions.

Lecturers perceived teamwork and interpersonal skills as the two most important employability skills employers seek when recruiting entry-level business graduates (both skills were ranked first). Of the five most important skills ranked by lecturers, four were similarly identified by employers as very important (teamwork skills, positive attitudes and behaviours, problem solving skills, and communication skills).

Results of ANOVA are also shown in Table 3. There were significant differences in mean importance for Communication ($F = 4.192$, $p = 0.020$), Teamwork ($F = 3.917$, $p = 0.025$), and Interpersonal Skills ($F = 3.491$, $p = 0.037$). Results of post hoc test showed that the significant difference in perceptions was between employers and students (see Table 4). As shown in Table 4, employers ranked both communication skills and teamwork skills higher in importance than students. For interpersonal skills, employers ranked the importance of these skills higher than students, even though the difference was significant only at 10% significance level. The mean scores for the other 10 employability skills were not significantly different, which suggest similar perception on the relative importance of these skills across the three stakeholder groups.

Table 4. *Summary of Relevant Post Hoc Test Results*

Relationships (I-J)	Mean difference**	Significance*
Communication skills *employers—students*	6.65 - 4.57 = 2.08	0.003
Interpersonal skills *employers—students*	5.35 - 3.73 = 1.62	0.068
Teamwork skills *employers—students*	5.50 - 3.40 = 2.10	0.026

* *The mean difference is significant at the 0.05 level*
** *The "mean" value captures the perceived importance of each skill type*

Research Question 2: Are there perceptual differences between employers, graduating business students, and lecturers as to which academic, personal management, and teamwork skills are fully developed in new business graduates?

The three groups of respondents were asked to rate the extent to which different employability skills were perceived to be fully developed in new business studies graduates. Results are shown in Tables 5, 6, and 8. Results presented in Table 5 show that employers, graduating students, and lecturers agreed that almost all academic skills were fully developed in graduates at the time of graduation. Except for two skills (i.e., IT literacy rating by students [3.40] and acting logically to evaluate different situations rating by lecturers [3.40]), all mean scores given by the three stakeholders were greater than 3.5 (4 = Agree).

In terms of the least developed skills, the ability to act logically to evaluate different situations was ranked by employers and lecturers as the least developed academic skill in graduating students. Students ranked IT literacy as the least developed academic skill among graduating students. To determine if the mean scores for the three stakeholders were significantly different for each skill type, we again used one-way ANOVA. The results show that there were no significant differences in the way the three groups of stakeholders rated each of the various academic skills.

Table 5. *Academic Skills—Mean and Ranking Comparisons*

Skill type	Employers			Students			Lecturers			One-way ANOVA	
	Mean	*SD*	Rank	Mean	*SD*	Rank	Mean	*SD*	Rank	*F*	Sig*
Understanding and solving problems using mathematics	4.1000	0.64072	1	3.5333	1.16658	8	3.6000	0.96609	4	2.082	0.134
Academic performance—GPA	4.0000	0.64889	2	3.7667	0.81720	5	3.9000	0.73786	2	0.589	0.558
Understanding, speaking, and writing effectively in business language (business communication)	4.0000	0.91766	2	3.7333	0.73968	6	3.7000	1.05935	3	0.690	0.506
Apply knowledge from various fields (i.e., organizational behaviour, marketing, management science, etc.)	3.9500	0.82558	3	4.000	1.01710	2	3.9000	0.73786	2	0.050	0.952
IT literacy	3.9500	0.94451	3	3.4000	2.24845	9	4.1000	0.73786	1	2.359	0.104
Decision making	3.9000	1.02084	4	4.0333	0.88992	1	3.7000	0.67495	3	0.527	0.593
Critical thinking	3.9000	0.96791	4	3.9000	0.92289	3	3.9000	0.87560	2	0.000	1.000
Understanding the importance of continuous lifelong learning	3.9000	0.78807	4	3.6333	1.09807	7	3.6000	1.07497	4	0.507	0.605
Can act logically to evaluate different situations	3.8500	0.98809	5	3.8333	0.74664	4	3.4000	1.26491	5	0.938	0.397

* *The mean difference is significant at the 0.05 level*

** *Which skills are perceived to be fully developed in business graduates at the time of recruitment? (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree).*

Table 6 contains results for the personal management skills and attributes. In general, employers rated all the skills developed in business graduates to be higher than the scores given by graduating students or academics. Employers agreed that honesty, integrity and personal ethics, perseverance, self-confidence, creativity and innovative thinking, and being responsible (accountability for own actions) were fully developed in business graduates. Employers rated self-awareness as the least developed personal management skill among graduating students. Students agreed that ability to work independently with minimum supervision, self-confidence, being responsible, positive attitude, and ability to set goals and priorities at work were fully developed in graduating students. Students rated initiative and risk-taking and perseverance as the two least developed skills among graduating students. Lecturers agreed that positive attitude, self-confidence, ability to plan and manage time, and creativity and innovative thinking were fully developed among graduating students. They viewed initiative and risk-taking and recognition and respect for people's diversity and individual differences to be the least developed personal management skills in graduating students. Only positive attitude and self-confidence were selected by all the three stakeholders to be among the four most fully developed personal management skills.

Results of the ANOVA test indicated significant differences in the mean scores given by the three stakeholder groups on perseverance ($F = 4.658$, $p = 0.013$) and initiative and risk-taking ($F = 3.727$, $p = 0.030$). Results of the post hoc test was conducted to identify where the significant difference in perceptions existed. The results showed the significant differences were between the perceptions of employers and students (see Table 7). Employers perceived perseverance and "initiative & risk-taking" to be more developed in business graduates than the perceptions of graduating students on development of such skills. It is worth noting that graduating students rated these two attributes as the least developed personal management skills.

Table 6. *Personal Management Skills—Mean and Ranking Comparisons*

Skill type	Employers			Students			Lecturers			One-way ANOVA	
	Mean	*SD*	Rank	Mean	*SD*	Rank	Mean	*SD*	Rank	*F*	Sig
Honesty, integrity, and personal ethics	4.1000	0.91191	1	3.4667	1.10589	8	3.6000	1.07497	5	2.280	0.112
Perseverance	4.0500	0.75915	2	3.2333	1.07265	10	3.3000	0.94868	7	4.658	0.013*
Self-confidence	4.0500	0.75915	2	3.8333	0.98553	2	4.0000	0.66667	1	0.408	0.667
Creativity and innovative thinking (i.e., ability to identify and suggest new ideas)	4.000	0.91766	3	3.4333	1.07265	9	3.8000	1.03280	3	1.941	0.153
Responsible (i.e., accountable for own actions)	4.0000	0.79472	3	3.7333	1.20153	3	3.6000	0.96609	5	0.610	0.547
Conscientious (i.e., task-focused, self-motivated, self-control, dependability, etc.)	3.9500	0.75915	4	3.6000	0.85501	6	3.7000	0.94868	4	1.050	0.357
Positive attitude (i.e., "can do" approach, willingness to learn, willingness to change, etc.)	3.9500	0.75915	4	3.7333	0.82768	3	4.0000	0.66667	1	0.682	0.510
Recognition and respect for people's diversity and individual differences	3.9500	0.75915	4	3.4333	1.27802	9	3.0000	1.05409	9	2.760	0.072
Initiative and risk-taker	3.9500	0.88704	4	3.2000	1.06350	11	3.2000	1.03280	8	3.727	0.030*
Can work independently with minimal supervision	3.9000	1.02084	5	3.8667	0.89955	1	3.3000	0.94868	7	1.563	0.218
Ability to set goals and priorities at work	3.9000	0.96791	5	3.7000	0.95231	4	3.5000	1.35401	6	0.533	0.590
Ability to plan and manage time	3.9000	1.02084	5	3.5000	1.13715	7	3.9000	0.99443	2	1.033	0.362
Self-awareness (i.e., one's weaknesses & strengths, etc.)	3.7000	0.97872	6	3.6333	1.06620	5	3.6000	1.07497	5	0.039	0.962

* *The mean difference is significant at the 0.05 level*

** *Which skills are perceived to be fully developed in business graduates at the time of recruitment? (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree)*.

Table 7. *Summary of Relevant Post Hoc Test Results*

Relationships (I-J)	Mean difference**	Significance*
Perseverance *employers—students*	*4.0500 – 3.2333= 0.8167*	*0.013*
Initiative and risk-taking *employers—students*	*3.9500 – 3.2000 = 0.75*	*0.030*

* *The mean difference is significant at the 0.05 level*
** *The "mean" value captures the extent to which each skill type is perceived as fully developed in new business graduates*

Table 8 contains results describing the extent to which teamwork skills were perceived to be fully developed in graduating students. All groups agreed that the various teamwork skills were fully developed in graduating students (i.e., all mean scores were between 3.5 – 4.4). According to employers, the ability to take responsibility of assigned tasks by the group, respect for the thoughts and opinions of others in the group, exercise give and take to achieve group results, resolving and managing conflicts, and leadership skills were the most developed teamwork skills among graduating students. Employers rated the ability to mobilize the group for high performance as the least developed teamwork skill among graduating students. Students agreed that the ability to contribute to group problem-solving, leadership skills, respect for the thoughts and opinions of others in the group, and planning and making decisions with others and supporting the outcomes were fully developed teamwork skills among graduating students. They rated team building skills as the least developed teamwork skill among graduating students. Lecturers agreed that the ability to take responsibility of assigned tasks by the group, ability to contribute to group problem-solving, planning and making decisions with others and supporting the outcome, and leadership skills were the four fully developed teamwork skills among graduating students. Lecturers rated respect for the thoughts and opinions of others in the group as the least developed teamwork skill. Results of the one-way ANOVA showed no significant differences in the way the three stakeholder groups rated the extent to which each of the different teamwork skills were developed among graduating students; this suggest that employers, graduating students, and lecturers had similar perceptions about the extent to which each teamwork skill was fully developed in new business graduates.

Table 8. *Teamwork Skills—Mean and Ranking Comparisons*

Skill type	Employers			Students			Lecturers			One-way ANOVA	
	Mean	*SD*	Rank	Mean	*SD*	Rank	Mean	*SD*	Rank	*F*	Sig
Ability to take responsibility of assigned tasks by the group	4.1500	0.87509	1	3.8000	1.03057	6	4.2000	0.63246	1	1.184	0.314
Respect the thoughts and opinions of others in the group	4.1500	0.67082	1	4.0000	0.90972	3	3.5000	0.70711	6	2.218	0.118
Exercise “give and take” to achieve group results	4.1000	0.78807	2	3.7000	0.91539	8	3.7000	0.94868	4	1.376	0.261
Resolving and managing conflicts	4.1000	0.85224	2	3.9333	0.98027	5	3.6000	1.07497	5	0.912	0.407
Leadership skills (i.e., lead when appropriate)	4.1000	1.02084	2	4.0667	0.82768	2	3.8000	0.78881	3	0.420	0.659
Plan and make decisions with others and support the outcomes	4.0500	0.88704	3	3.9667	0.76489	4	4.0000	0.94281	2	0.059	0.942
Seeks a team approach where appropriate (i.e., as opposed to a preference for a “go it alone” approach)	4.0000	0.79472	4	3.7333	0.90719	7	3.7000	0.67495	4	0.725	0.489
Team building skills	3.9500	0.88704	5	3.5333	1.13664	9	3.7000	1.33749	4	0.867	0.426
Contributing to group problem-solving	3.8500	0.81273	6	4.1333	0.77608	1	4.2000	0.78881	1	0.987	0.379
Mobilize the group for high performance	3.6500	0.93330	7	3.7333	0.98027	7	3.6000	1.07497	5	0.087	0.917

* *The mean difference is significant at the 0.05 level*

** *Which skills are perceived to be fully developed in business graduates at the time of recruitment? (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree).*

Research Question 3: Which learning methods did graduating students and lecturers find most helpful in facilitating the acquisition of employability skills among business students?

Graduating students were asked to identify which learning methods they found most helpful in enhancing the acquisition of employability skills in their degree programs. The results are shown in Table 9. Students ranked participation in class during tutorials as the most helpful means of acquiring employability skills. However, of the six most highly ranked learning methods, five are associated with traditional teaching and learning methods in which the lecturer takes a leading role in designing, administering, or structuring the learning process. In comparison, reflective learning portfolios, industrial tours, group assignments with presentations, internships and industry placements were ranked relatively low in importance.

Table 9. *Learning Methods Used to Acquire Employability Skills (Students' Perspectives)*

Learning methods	Mean	Std. Deviation
Participation in class during tutorials	7.0667	1.77984
Through lectures	6.5000	2.66199
Lecturer showing how to solve a particular problem during tutorials	6.4667	3.05956
Applying the learned concepts through assignments	6.1667	2.54725
Applying the learned concepts through tests and quizzes	5.4333	3.51041
Reading the course materials when preparing for the final examination	4.8667	3.89282
Case studies discussed in tutorials classes	4.7333	2.89986
Writing of a "Reflective" learning portfolio	4.2333	3.56886
Industrial tours	4.1333	4.28899
Group assignments that involve class presentations	3.7667	3.54949
Internship/industrial placement	2.7667	4.65857
Working on and submitting a group assignment	0.1000	20.88614

Note: This is in response to the question, Which learning methods were most helpful in facilitating/enabling you to acquire employability skills? (Please rank 1, 2, 3, 4, etc., with 1 = most helpful).

Lecturers were asked to identify which techniques/teaching methods they thought were frequently used to impact knowledge and skills to business students. Results are shown in Table 10. Academics viewed lecturing as the most frequently used method to impart skills and knowledge to business students. The teaching techniques used to facilitate application and discovery were used less frequently when compared to lecturing. There seems to be broad agreement between graduating students and lecturers about the pre-eminence of lecture-centric teaching approaches.

Table 10. *Most Frequently Used Teaching Method (Lecturers' Perspectives)*

Teaching methods	Mean	Std. Deviation
Lecturing (I am telling you)	2.8000	0.42164
Demonstration (I am showing you)	1.7000	1.15950
Application (You do it)	1.6000	0.69921
Discovery (You figure it out)	0.8000	1.13529

Note: This is in response to the question, *Which teaching techniques are frequently used by faculty to impart knowledge to business students? (Please rank 1, 2, 3, 4, etc., with 1 = most frequently used).*

Discussion

The study investigated the extent to which employers, graduating business students, and lecturers perceived the relative importance of different employability skills when new graduates were being considered for entry-level positions. The study also aimed to capture the perceptions of the three stakeholder groups regarding the extent to which different academic, personal management, and teamwork skills were fully developed in new business graduates at the time of recruitment. Additionally, the study examined the most effective teaching and learning methods used to transfer knowledge and employability skills to graduating students.

Most Important Employability Skills

Communication, problem-solving, positive attitudes and behaviours, and teamwork skills were ranked as the top four most important employability skills that employers seek when recruiting new business graduates for entry-level positions. The findings are broadly in line with past research (Abbasi et al., 2018; Hossain et al., 2020; Karzunina et al., 2018; Osmani et al., 2019; Strong et al., 2020). All stakeholder groups ranked communications, problem-solving, and positive attitudes and behaviours as among the top four most important employability skills that employers seek when evaluating new business graduates for entry-level positions.

Differences in perceptions of importance were found for communication, teamwork, and interpersonal skills. Discrepancies in perceptions between stakeholders are likely to lead to a mismatch between those skills required by employers and those possessed by business graduates (Azevedo et al., 2012). These three skills have often been identified as among the most important skills sought by employers in several studies (Finch et al., 2013; Kenayathula et al., 2019; Lim et al., 2016; Osmani et al., 2019). Alignment in perceptions of importance between the three stakeholder groups of the other 10 skills is consistent with some past research (Castillo, 2014; Konig & Ribaric, 2019; Strong et al., 2020). Ideally, such alignment in perceptions among stakeholders should be a base on which to build and strengthen existing collaborative relationships/partnerships between HEIs and industry, and to enhance the development of current market-relevant skills among business students.

Surprisingly, pre-graduation work experience was ranked least important by employers and students. This is despite some study findings in the United Kingdom and elsewhere that found that employers place a higher value on work experience, seeing it as a good indicator of work-readiness (Andrews & Higson, 2008). Other studies have also shown that pre-graduation work experience is important for building graduate employability (Finch et al., 2013; Jones, S. et al., 2016; Lowden et al., 2011; Mason et al., 2009; McMurray et al., 2016; Pitan, 2016). In general, pre-graduation work experience provides students with a more realistic and contextualized expectation of the workplace, increases confidence, produces more rounded graduates who are exposed to real-work challenges, enhances connection to the labour market, and facilitates transfer of knowledge acquired at university into the workplace (Andrews & Higson, 2008; Clarke, 2018; Finch et al., 2013; McMurray et al., 2016). Pre-graduation work should be encouraged even in courses where it is optional. Studies have shown that internships/placements often open doors to full employment after graduation (Clarke, 2018; Mason et al., 2009; Tomlinson, 2017). Internships and placements increase the number of opportunities for reflective and authentic experiential learning that merge theory with practice (Boahin, 2018; Bennett et al., 2020; Relleve, 2019; Virtanen & Tynjala, 2019).

Perceptual Differences Between Stakeholder Groups on the Extent to Which Skills Are Fully Developed in Business Graduates

There is indication that employers were, in general, satisfied with the level of academic skills possessed by new business graduates at the time of recruitment. These results may suggest that employers were happy with the level of academic skills that may have a more direct connection with technical (discipline-specific) knowledge acquired by graduating business students. The result is consistent with some past findings that

suggest that employers may sometimes be satisfied with graduates' discipline-specific knowledge, but they still observe that the level of soft skills are below what the labour market expects (Abbasi et al., 2018; Hardin-Ramanan, 2020; Mello et al., 2021; Monteiro et al., 2020). However, a degree with good grades in mainly discipline-specific knowledge is no longer sufficient for career success in today's labour markets (Hossain et al., 2020; Okolie et al., 2020; Succi & Canovi, 2020; Tomlinson, 2008).

There were two personal management skills, perseverance and "initiative and risk taking," for which there was a significant difference in perceptions between the employers and graduating students. People who are high on initiative can take risks, think independently, act to solve problems without waiting to be told, have a drive to achieve, and continue to learn and grow in their professional careers (Rawlings, 2016). From employers' point of view, the difference in perception is unlikely to affect initial recruitment since employers viewed new business graduates as having a higher possession of the two skills than graduating business students themselves reported. It may, however, be a problem if graduating students failed to evidence and articulate possession of these skills in job interviews.

Graduating students' lower rating of themselves was partly validated by similar lower scores given by lecturers on the level of perseverance and initiative and risk-taking possessed by graduating students. Studies that show higher employer than student ratings of possession of those skills are rare, but not non-existent. A study in Kosovo found that "most of the students believed that their actual soft skills were at a less than the desired level" (Lokaj et al., 2021, p. 283). A similar result was found in a Romanian study, where employers rated skills possessed by students to be higher than students' self-rating on the possession of the same skills. This was attributed to employers being exposed to top-performing graduates, as their selection processes led to recruiting only top graduates (Nicolescu & Paun, 2009). One PNG study confirmed that selection processes were preventing weaker graduates from entering the labour market, because "recruitment procedures in the formal sector are robust and improving" (Salonda et al., 2017, p. 31). It is possible that companies involved in campus career fairs are more proactive in trying to recruit the best students from a targeted cohort of new graduates.

However, the low self-rating by graduating students relative to ratings given by employers on possession of specific skills can have a negative effect on their perceived employability. Studies have shown that students can and do act on their perceptions. Perception of having low competences in particular skills can affect students' ability to confidently and convincingly articulate ability to potential employers (Qenani et al., 2014; Soares & Mosquera, 2020; Vanhercke et al., 2014).

Most Helpful Learning and Teaching Methods

Students rated participation in class during tutorials as the most helpful method in facilitating the acquisition of relevant knowledge and employability skills. It is worth noting that participation in tutorials (rated first) is more effective in acquisition of knowledge and skills than the "lecturer showing how to solve a particular problem during tutorials" (rated third). These results do mirror finding by Garcia-Aracil et al. (2018) who found that students perceived participation in lectures and developing collective work to have a positive influence on work readiness, while regular attendance at lectures was perceived to be negatively associated with being work-ready. Thus, learning methods that promote active engagement and collaborative learning are critical to acquisition of soft skills.

There is evidence that lecturers were facilitating the acquisition of some soft skills using an interactive student-centred technique (i.e., participation in tutorials), thereby encouraging students to get engaged in their own learning. However, most of the other learning methods perceived by students to be helpful in the acquisition of knowledge and skills are linked to lecture-centric teaching methods. Lecturing is a time-honoured teaching method in the history of higher education. The observed preeminence of lecture-centric teaching methods is not unique to Papua New Guinea but is common in several HEIs in developing countries

(Guardia et al., 2021; Li et al., 2020; Okolie et al., 2020; Tran, 2012; Uddin, 2021). Learning methods that are associated with interactive learning, engagement, exploration, critical reflection, and knowledge application were ranked relatively low by students (i.e., case studies, reflective learning portfolios, group assignments with presentation, industrial tours, internships, and placements).

In summary, the takeaway for HEIs from the above results and discussion are: (a) identify the most important in-demand soft skills by the labour market; (b) identify gaps between skills possessed by graduating students and those demanded by employers; (c) to identify skill gaps, HEIs may need to know which skills are fully developed (or not) in students at the time of graduation; (d) use action learning and multiple integrative pedagogies to close the skill gaps, and (e) raise students' self-awareness of personal responsibility to critically reflect on their own learning, develop ability to evidence acquired skills, and convincingly articulate such to employers during job interviews and in the workplace.

Limitations

The study was based on a relatively small sample. Hence, future research should expand sample sizes. The study was based on one business department in one university in Papua New Guinea. Some of our preliminary findings may not be generalizable to other departments in the university. For example, it is possible to assume that integrative pedagogies are used more frequently in degrees related to social work than in degrees in sciences and engineering. In addition, it is possible that university–industry networks (associated with industry visits, internships, and placements) are more developed in degree programs that are related to the mining sector and LNG projects. Future research could replicate this study in other departments. In addition, comparative studies between business schools in other local universities could be done. The impact of other factors that affect graduate employability were not covered in this study. For example, the role of discipline-specific knowledge; social, cultural, and psychological capital; institutional reputation; university career services; extra-curricular activities; company recruitment processes; individual circumstances; ethnicity; family and political networks; and the state of the local economy on graduate employability were not explored in this study. These factors represent opportunities for future research.

Implications for Theory and Practice

The following implications flow from the study findings:

1. Depending on where universities, faculties or schools are on their "employability journey," they may consider developing explicit strategies on how to support the development of certain employability skills where there are identified gaps between students' possessed skills and in-demand soft skills. Since institutional resources are often limited, business schools or departments could prioritize the embedding of soft skills in the curriculum where the identified gaps between possessed and in-demand skills are the greatest. It is important to increase students' awareness of which skills are demanded by employers and explicitly encourage them to take personal responsibility for proactively enhancing their employability profiles. While graduate employability is not the same as employability skills, being able to identify skills that are prioritized by employers during the recruitment selection process is seen as a good starting point. Studies have shown that students often do not always have a clear view of what skills are valued and expected by employers (Abbasi et al., 2018; Lim et al., 2016; Succi & Canovi, 2020).

2. Identification of in-demand soft skills is critical to designing and regular updating of curricula that are more aligned with the evolving needs of the labour market (Abbasi et al., 2018; Strong et al., 2020).

3. The study found that student respondents didn't feel confident that perseverance and "initiative & risk-taking" were fully developed among graduating students. Some of these traits, attributes, dispositions, and behaviours represent the growing importance of psychological-related factors to 21st-century careers (Caballero et al., 2020). Today's workplace represents several challenges, including increased work intensity, stress, long working hours, cultural diversity, work redesign, multi-tasking, rapid changing technologies, large scale restructuring, and increased competitive pressures. Today's new graduates need psychological-related resources to cope with the complexities and dynamic changes taking place in the modern workplace.

4. Using student-centred learning approaches and integrative pedagogies that focus on experiential, reflective and collaborative learning rooted in real-world conditions is key to the development of employability/soft skills that employers seek in new graduates. However, experiences from several countries—including the United States, Canada, Western Europe, and Australia—suggest that applying innovative and integrative pedagogical approaches requires significant staff training to be effective (Hora et al., 2015).

5. Our understanding of graduate employability keeps evolving. From the conceptual point of view, the study's results partially support some aspects of the "possession," "position," and "process" accounting of graduate employability (Byrne, 2020; Clarke, 2018; Holmes, 2013; Okay-Somerville & Scholarios, 2017). The three employability skills that have been identified as needing enhancement in graduating business students—communication, teamwork, and interpersonal skills—support the "possession" approach to graduate employability. The possession of a variety of in-demand skills is important to getting a job, sustaining it, and growing in one's chosen career. The two personal management skills that require further development—perseverance and "initiative & risk-taking"—support the "process" approach. With the decline of lifetime employment in a single organization, new graduates need to take charge of their career development and proactively enhance their chances in the labour market. Long-term employability is not just about acquisition of demanded skills, it also includes the dynamic process of exerting career building efforts, adaptability, exercising entrepreneurial initiatives, lifelong learning, and resilience needed to remain relevant in uncertain and ever-changing labour markets. Both "possession" and "process" approaches to employability are relevant and complementary.

Conclusion

The current study points out the importance of identifying soft skills that are prioritized by the labour market; the need to examine discrepancies in perceptions of the three stakeholder groups on the level of development of academic, personal management, and teamwork skills possessed by new business graduates; and the centrality of student-centred learning approaches and innovative integrative pedagogies in developing relevant employability skills among graduating students. The debates on "graduate employability" have moved beyond short-term acquisition and development of in-demand soft skills that mainly focuses on smoothing approaching university-to-work transition to its conceptualization as a complex, dynamic, and multifaceted construct. Developing graduate employability is a daunting task, requiring myriad approaches and shared responsibility between employers, HEIs, and students as primary stakeholders. A more general recommendation for university systems in both the developed and developing world is for a more structured, systematic, deliberate, and evidence-based process that recognise graduate employability as the fourth pillar of the university mission alongside teaching, research, and community service. The aims of university education should be to develop graduates who are critical reflective thinkers, adaptable and flexible, entrepreneurial and agile, digitally literate, proactive, resilient, globally competitive, and open to learning new skills and work approaches throughout their working lives. They should have enhanced self-awareness, self-

directedness, a growth mindset, enhanced commitment and passion for lifelong learning, self-driven career building skills, an understanding of the labour market, and the ability to tap into various support systems. Developing a wide range of relevant employability skills while at university (and beyond) enables graduating students to embark on proactive, self-directed careers that flexibly adapt to rapidly changing labour markets and help them navigate challenging multiple job transitions over their career span. Reskilling, upskilling, and continuously building a variety of constantly changing in-demand skills, knowledge, and attributes throughout one's graduate career is the new normal in the 21st century labour market. Such self-driven adaptive capacities—which include the psychological–social related factors covered in this study (i.e., perseverance/resilience/grit, personal initiative and risk-taking)—go beyond students' immediate concern to achieve good grades in their field of specialization.

Disclosure

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The views in this paper are those of the authors and do not represent the views of any institutions they have been or are associated with.

Note: Luis Alamil and Wise Mainga have since left the Papua New Guinea University of Technology.

References

Abas, M. C., & Imam, O. A. (2016). Graduates' competence on employability skills and job performance. *International Journal of Evaluation and Research in Education*, *5*(2), 119–125. https://files.eric.ed.gov/fulltext/EJ1108534.pdf

Abas-Mastura, M., Imam, O. A., & Osman, S. (2013). Employability skills and task performance of employees in government sector. *International Journal of Humanities and Social Science*, *3*(4), 150–162. http://www.ijhssnet.com/view.php?u=http://www.ijhssnet.com/journals/Vol_3_No_4_Special_Issue_February_2013/16.pdf

Abbasi, F. K., Ali, A., & Bibi, N. (2018). Analysis of skill gap for business graduates: Managerial perspective from banking industry. *Education + Training*, *60*(4), 354–367. https://doi.org/10.1108/ET-08-2017-0120

Abelha, M., Fernandes, S., Mesquita, D., Seabra, F., & Ferreira-Oliveira, A. T. (2020). Graduate employability and competence development in higher education—A systematic literature review using PRISMA. *Sustainability*, *12*(15), 1–27. https://doi.org/10.3390/su12155900

Andrews, J., & Higson, H. (2008). Graduate employability, "soft skills" versus "hard" business knowledge: A European study. *Higher Education in Europe*, *33*(4), 411–422. https://doi.org/10.1080/03797720802522627

Atfield, G., & Purcell, K. (2010). *Graduate labour market supply and demand: Final year students' perceptions of the skills they have to offer and the skills employers seek*. Working Paper 4, Futuretrack, Institute for Employment Research, University of Warwick, UK. https://warwick.ac.uk/fac/soc/ier/futuretrack/findings/ft3.1_wp4_skills_-_final.pdf

Ayoubi, R. M., Alzarif, K., & Khalifa, B. (2017). The employability skills of business graduates in Syria: Do policy makers and employers speak the same language? *Education + Training*, *59*(1), 61–75. https://doi.org/10.1108/ET-10-2015-0094

Azevedo, A., Apfelthaler, G., & Hurst, D. (2012). Competency development in business graduates: An industry-driven approach for examining the alignment of undergraduate business education with industry requirements. *The International Journal of Management Education*, *10*(1), 12–28. https://doi.org/10.1016/j.ijme.2012.02.002

Baharun, R., Suleiman, E. S., & Awang, Z. (2012). Changing skills required by industries: Perceptions of what makes business graduates employable. *African Journal of Business Management*, *6*(30), 8789–8796. https://doi.org/10.5897/AJBM10.918

Ball, L. (2003). Future directions for employability research in the creative industries. *ADM (The Higher Education Academy Subject Centre for Arts, Design and Media).* York: The Higher Education Academy. http://www.adm.heacademy.ac.uk/resources/resources-by-topic/employability/future-directions-for-employability-research-in-thecreative-industries

Bennett, D., Knight, E., Dockery, A. M., & Bawa, S. (2020). Pedagogies for employability: Understanding the needs of STEM students through a new approach to employability development. *Higher Education Pedagogies*, *5*(1), 340–359. https://doi.org/10.1080/23752696.2020.1847162

Bhanugopan, R., & Fish, A. (2009). Achieving graduate employability through consensus in the South Pacific island nation. *Education + Training*, *51*(2), 108–123. https://doi.org/10.1108/00400910910941273

Boahin, P. (2018). The changing nature of work and employability skills development in higher education institutions in Ghana. *European Journal of Educational and Development Psychology*, *6*(3), 21–32. https://www.eajournals.org/wp-content/uploads/The-Changing-Nature-of-Work-and-Employability-Skills-Development-in-Higher-Education-Institutions-in-Ghana.pdf

Bridgstock, R. (2009). The graduate attributes we've overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development*, *28*(1), 31–44. https://doi.org/10.1080/07294360802444347

Byrne, C. (2020). What determines perceived graduate employability? Exploring the effects of personal characteristics, academic achievements and graduate skills in a survey experiment. *Studies in Higher Education*. https://doi.org/10.1080/03075079.2020.1735329

Caballero, G., Alvarez-Gonzalez, P., & Lopez-Miguens, M. J. (2020). How to promote the employability capital of university students? Developing and validating scales, *Studies in Higher Education*, *45*(12), 2634–2652. https://doi.org/10.1080/03075079.2020.1807494

Calvo, J. C. A., & Garcia, G. M. (2020). The influence of psychological capital on graduates' perception of employability: The mediating role of employability skills. *Higher Education Research & Development*, *40*(2), 293–308. https://doi.org/10.1080/07294360.2020.1738350

Castillo, R.C. (2014). Employability skills of graduating business and accounting students of Batangas State University. *International Journal of Sciences: Basic and Applied Research*, *13*(1), 303–315. https://www.gssrr.org/index.php/JournalOfBasicAndApplied/article/view/1808

Chamorro-Premuzic, T., Arteche, A., Bremner, A. J., Greven, C., & Furnham, A. (2010). Soft skills in higher education: Importance and improvement ratings as a function of individual differences and academic performance. *Educational Psychology: An International Journal of Experimental Educational Psychology*, *30*(2), 221–241. https://doi.org/10.1080/01443410903560278

Chhinzer, N., & Russo, A. M. (2018). An exploration of employer perceptions of graduate student employability. *Education + Training*, *60*(1), 104–120. https://doi.org/10.1108/ET-06-2016-0111

Clarke, M. (2017). Building employability through graduate development programmes: A case study in an Australian public sector organization. *Personnel Review*, *46*(4), 792–808. https://doi.org/10.1108/PR-12-2015-0321

Clarke, M. (2018). Rethinking graduate employability: The role of capital, individual attributes and context. *Studies in Higher Education*, *43*(11), 1923–1937. https://doi.org/10.1080/03075079.2017.1294152

Conference Board of Canada. (2013). *Employability Skills 2000+*. The Conference Board of Canada. https://www.conferenceboard.ca/edu/employability-skills.aspx

Damoah, O. B. O., Peprah, A. A., & Brefo, K. O. (2021). Does higher education equip graduate students with employability skills employers require? The perceptions of employers in Ghana. *Journal of Further and Higher Education, 45*(10), 1311–1324. https://doi.org/10.1080/0309877X.2020.1860204

David, F. R., David, M. E., & David, F. R. (2011). Are business students learning what employers need? *Business Horizons*, *54*(1), 51–62. https://doi.org/10.1016/j.bushor.2010.09.001

Davidson, K. (2016, August 30). Employers find "soft skills" like critical thinking in short supply. *The Wall Street Journal*. https://www.wsj.com/articles/employers-find-soft-skills-like-critical-thinking-in-short-supply-1472549400

Du, X., Chaaban, Y., Sabah, S., Al-Thani, A. M., & Wang, L. (2020). Active learning engagement in teacher preparation programmes—A comparative study from Qatar, Lebanon and China. *Asia Pacific Journal of Education*, *40*(3), 283–298. https://doi.org/10.1080/02188791.2020.1717436

Fahimirad, M., Nair, P. K., Kotamjani, S. S., Mahdinezhad, M., & Feng, J. B. (2019). Integration and Development of Employability Skills into Malaysian higher education context: Review of the literature. *International Journal of Higher Education*, *8*(6), 26–35. https://doi.org/10.5430/ijhe.v8n6p26

Fernandez-Chung, R. M., & Ching, L. Y. (2018). Phase III—Employability of graduates in Malaysia: The perceptions of senior management and academic staff in selected higher education institutions. TNE Graduate Employment Study: An analysis of graduate employment trends in Malaysia—A Three-Phase Study. University of Nottingham Malaysia. https://www.britishcouncil.org/sites/default/files/tne_final_export_pdf.pdf

Field, A. (2000). *Discovering Statistics Using SPSS for Windows*. Sage Publications.

Finch, D. J., Hamilton, L. K., Baldwin, R., & Zehner, M. (2013). An exploratory study of factors affecting undergraduate employability. *Education + Training*, *55*(7), 681–704. https://doi.org/10.1108/ET-07-2012-0077

Flanagan, S. (2018). Exploring the practical and philosophical implications of the employability concept for stakeholders in higher education. *International Journal of Multidisciplinary Comparative Studies*, *5*(1–3), 79–95. http://www.ijmcs-journal.org/wp-content/uploads/2018/12/SARAH-FLANAGAN.pdf

Garcia-Aracil, A., Monteiro, S., & Almeida, L.S. (2018). Students' perceptions of their preparedness for transition to work after graduation. *Active Learning in Higher Education*, *22*(1), 49–62. https://doi.org/10.1177/1469787418791026

Griffiths, D. A., Inman, M., Rojas, H., & Williams, K. (2018). Transitioning student identity and sense of place: Future possibilities for assessment and development of student employability skills. *Studies in Higher Education*, *43*(5), 891–913. https://doi.org/10.1080/03075079.2018.1439719

Guardia, L., Mancini, F., Jacobetty, P., & Maina, M. (2021). Graduates' employability skills in East Africa. *Journal of Teaching and Learning for Graduate Employability*, *12*(2), 169–184. https://doi.org/10.21153/jtlge2021vol12no2art988

Hamid, M. S. A., Islam, R., & Manaf, N. H. A. (2014). Employability skills development approaches: An application for the analytic network process. *Asian Academy of Management Journal*, *19*(1), 93–111. http://web.usm.my/aamj/19012014/Art%205%20(93-112).pdf

Hardin-Ramanan, S., Gopee, S., Rowtho, V., & Charoux, O. (2020). Graduate work-readiness in Mauritius: A multi-stakeholder approach. *Journal of Teaching and Learning for Graduate Employability*, 11(1), 93–109. https://doi.org/10.21153/jtlge2020vol11no1art937

Hart Research Associates. (2015). Falling short? College learning and career success; Selected findings from online surveys of employers and college students. https://www.aacu.org/sites/default/files/files/LEAP/2015employerstudentsurvey.pdf

Harvey, L. (2005). Embedding and integrating employability. *New Directions for Institutional Research*, *128*, 13–28. https://doi.org/10.1002/ir.160

Hodge, K. A., & Lear, J. L. (2011). Employability skills for 21st century workplace: The gap between faculty and student perceptions. *Journal of Career and Technical Education*, *26*(2), 28–41. http://doi.org/10.21061/jcte.v26i2.523

Hodges, D., & Burchell, N. (2003). Business graduate competencies: Employers' views on importance and performance. *Asia-Pacific Journal of Cooperative Education*, *4*(2), 16–22. https://www.ijwil.org/files/APJCE_04_2_16_22.pdf

Holmes, L. (2013). Competing perspectives on graduate employability: Possession, position or process? *Studies in Higher Education*, *38*(4), 538–554. https://doi.org/10.1080/03075079.2011.587140

Hora, M. T., Benbow, R. J., Oleson, A. K., & Wang, Y. (2015). *A different take on the "skills gap": Why cultivating diverse competencies is essential for success in the 21st century economy*. WISCAPE

Policy Brief. University of Wisconsin-Madison, Wisconsin Center for the Advancement of Postsecondary Education (WISCAPE). 0.13140/RG.2.1.4103.3042

Hossain, M. M., Alam, M., Alamgir, M., & Salat, A. (2020). Factors affecting business graduates' employability—empirical evidence using partial least squares (PLS). *Education + Training*, Vol. *62*(3), 292–310. https://doi.org/10.1108/ET-12-2018-0258

Idkhan, A. M., Syam, H., Sunardi., & Hasim, A. H. (2021). The employability skills of engineering students': Assessment at the university. *International Journal of Instruction*, *14*(4), 119–134. https://www.e-iji.net/dosyalar/iji_2021_4_8.pdf

Igwe, P. A., Lock, D., & Rugara, D. G. (2020). What factors determine the development of employability skills in Nigerian higher education? *Innovations in Education and Teaching International*. https://doi.org/10.1080/14703297.2020.1850319

Jackson, D. (2012). Business undergraduates' perceptions of their capabilities in employability skills: Implication for industry and higher education. *Industry and Higher Education*, *26*(5), 345–356. https://doi.org/10.5367/ihe.2012.0117

Jackson, D., Sibson, R., & Riebe, L. (2013). Delivering work-ready business graduates—Keeping our promises and evaluating our performance. *Journal of Teaching and Learning for Graduate Employability*, *4*(1), 2–22. https://doi. org/10.21153/jtlge2013vol4no1art558

Jackson, D. A., & Edgar, S. (2019). Encouraging students to draw on work experiences when articulating achievements and capabilities to enhance employability. *Australian Journal of Career Development*, *28*(1), 39–50. https://doi.org/10.1177/1038416218790571

Jones, M., Baldi, C., Phillips, C., & Walkar, A. (2016). The hard truths about soft skills: What recruiters look for in business graduates. *College Student Journal*, *50*(3), 422–428. https://www.ingentaconnect.com/contentone/prin/csj/2017/00000050/00000003/art00014

Jones, S., Mann, A., & Morris, K. (2016). The "employer engagement" cycle in secondary education: Analysing the testimonies of young British adults. *Journal of Education and Work*, *29*(7), 834–856. https://doi.org/10.1080/13639080.2015.1074665

Karzunina, D., West, J., da Costa, G. M., Phillippou, G., & Gordon, S. (2018). *The global skills gap in the 21st century*. QS Intelligence Unit. https://info.qs.com/rs/335-VIN-535/images/The%20Global%20Skills%20Gap%2021st%20Century.pdf

Kenayathulla, H. B., Ahmad, N. A., & Idris, A. R. (2019). Gaps between competence and importance of employability skills: Evidence from Malaysia. *Higher Education Evaluation and Development*, *13*(2), 97–112. https://doi.org/10.1108/HEED-08-2019-0039

Konig, L. S., & Ribaric, H. M. (2019). Is there a mismatch between employers' and university teachers' perceptions on graduate employability in Croatia? *Journal of Contemporary Management Issues*, *24*(1), 87–102. https://doi.org/10.30924/mjcmi.24.1.6

Kornelakis, A., & Petrakaki, D. (2020). Embedding employability skills in UK higher education: Between digitalization and marketization. *Industry and Higher Education*, *34*(5), 290–297. https://doi.org/10.1177/0950422220902978

Li, K., Peng, M. Y-P, Du, Z., Li, J. Yen, K-T., & Yu, T. (2020). Do specific pedagogies and problem-based teaching improve student employability? A cross-sectional survey of college students. *Frontiers in Psychology*. 11:1099. https://doi.org/10.3389/fpsyg.2020.01099

Lim, Y-M, Lee, T. H., Yap, C. S., & Ling, C. C. (2016). Employability skills, personal qualities, early employment problems of entry-level auditors: Perspectives from employers, lecturers, auditors, and

students. *Journal of Education for Business*, *91*(4), 185–192. https://doi.org/10.1080/08832323.2016.1153998

Lokaj, A. S., Miftari, V., & Hajdari, V. (2021). Leading students toward a new soft-skills perspective: Development for employment. *Journal of Education Culture and Society*, *12*(1), 283–296. https://doi.org/10.15503/jecs2021.1.283.296

Lowden, K., Hall, S., Elliot, D., & Lewin, J. (2011). *Employers' perceptions of the employability skills of new graduates*. The SCRE Centre, University of Glasgow. https://www.educationandemployers.org/wp-content/uploads/2014/06/employability_skills_as_pdf_-_final_online_version.pdf

Ma, C. M. S. (2016). Reflective teaching in a holistic personal development course for Chinese university students: A case study. *International Journal on Disability & Human Development*, *15*(2), 187–193. https://doi.org/10.1515/ijdhd-2016-0709

Mason, G., Williams, G., & Cranmer, S. (2009). Employability skills initiatives in higher education: What effects do they have on graduate labour market outcomes? *Education Economics*, *17*(1), 1–30. https://doi.org/10.1080/09645290802028315

McArthur, E., Kubacki, K., Pang, B., & Alcaraz, C. (2017). The Employers' View of "Work-Ready" Graduates: A Study of Advertisements for Marketing Jobs in Australia. *Journal of Marketing Education*, *39*(2), 82-93. https://doi.org/10.1177/0273475317712766

McMurray, S., Dutton, M., McQuaid, R., & Richard, A. (2016). Employer demand from business graduates. *Education + Training*, *58*(1), 112–132. https://doi.org/10.1108/ET-02-2014-0017

Mello, L. V., Varga-Atkins, T., & Edwards, S. W. (2021). A structured reflective process supports student awareness of employability skills development in a science placement module. *FEBS Open Bio*, *11*, 1524–1536. https://doi.org/10.1002/2211-5463.13158

Minocha, S., Hristov, D., & Reynolds, M. (2017). From graduate employability to employment: Policy and practice in UK higher education. *International Journal of Training and Development*, *21*(3), 235–248. https://doi.org/10.1111/ijtd.12105

Monteiro, S., Almeida, L., Gomes, C., & Sinval, J. (2020). Employability profiles of higher education graduates: A person-oriented approach. *Studies in Higher Education*. https://doi.org/10.1080/03075079.2020.1761785

Moore, T., & Morton, J. (2017). The myth of job readiness? Written communication, employability, and the "skills gap" in higher education. *Studies in Higher Education*, *42*(3), 591–609. https://doi.org/10.1080/03075079.2015.1067602

Mtawa, N., Fongwa, S., & Wilson-Strydom, M. (2021). Enhancing graduate employability attributes and capabilities formation: A service-learning approach. *Teaching in Higher Education*, *26*(5), 679–695. https://doi.org/10.1080/13562517.2019.1672150

Ngulube, B. (2020). Undergraduate economics curriculum and employability skills in South Africa. *Problems of Education in the 21st Century*, *78*(6), 1000–1013. http://oaji.net/articles/2020/457-1607330036.pdf

Nicolescu, L., & Paun, C. (2009). Relating higher education with the labour market: Graduates' expectations and employers' requirements. *Tertiary Education and Management*, *15*(1), 17–33. https://doi.org/10.1080/13583880802700024

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.

Nwajiuba, C. A., Igwe, P. A., Akinsola-Obatolu, A. D., Ituma, A., & Binuomote, M. O. (2020). What can be done to improve education quality and graduate employability in Nigeria? A stakeholder approach. *Industry & Higher Education*, *34*(5), 358–367. https://doi.org/10.1177/0950422219901102

Okay-Somerville, B., & Scholarios, D. (2017). Position, possession or process? Understanding objective and subjective employability during university-to-work transitions. *Studies in Higher Education*, *42*(7), 1275–1291. https://doi.org/10.1080/03075079.2015.1091813

Okolie, U. C., Igwe, P. A., Nwosu, H. E., Eneje, B. C., & Mlanga, S. (2020). Enhancing graduate employability: Why do higher education institutions have problems with teaching generic skills? *Policy Futures in Education*, *18*(2), 294–313. https://doi.org/10.1177/1478210319864824

Okunuga, R. O., & Ajeyalemi, D. (2018). Relationship between knowledge and skills in the Nigerian undergraduate chemistry curriculum and graduate employability in chemical-based industries. *Industry & Higher Education*, *32*(3), 183–191. https://doi.org/10.1177/0950422218766913

Osmani, M., Weerakkody, V., Hindi, N.M., & Eldabi, T. (2019). Graduate employability skills: A review of literature against market demand. *Journal of Education for Business*, *94*(7), 423-432. https://doi.org/10.1080/08832323.2018.1545629

Osmani, M., Weerakkody, V., Hindi, N. M., Al-Esmail, R., Eldabi, T., Kapoor, K., & Irani, Z. (2015). Identifying the trends and impact of graduate attributes on employability: A literature review. *Tertiary Education and Management*, *21*(4), 367–379. https://doi.org/10.1080/13583883.2015.1114139

Parutis, V., & Howson, C. K. (2020). Failing to level the playing field: Student discourse on graduate employability. *Research in Post-Compulsory Education*, *25*(4), 373–393. https://doi.org/10.1080/13596748.2020.1846312

Pasilabban, S. (2006). Higher education issues in the PNG context. *Contemporary PNG Studies—DWU Research Journal*, *5*(November), 58-65. https://www.dwu.ac.pg/en/images/All_Attachements/Research%20Journals/vol_05/2006-V5-5_Pasilibban_Higher_Education_Issues_58-65.pdf

Pitan, O. S. (2016). Employability development opportunities (EDOs) as measures of students' enhanced employability. Higher Education, *Skills and Work-Based Learning*, *6*(3), 288–304. https://doi.org/10.1108/HESWBL-05-2016-0024

Prikshat, V., Montague, A., Connell, J., & Burgess, J. (2020). Australian graduates' work readiness—deficiencies, causes and potential solutions. *Higher Education, Skills and Work-Based Learning*, *10*(2), 369–386. https://doi.org/10.1108/HESWBL-02-2019-0025

Qenani, E., MacDougall, N., & Sexton, C. (2014). An empirical study of self-perceived employability: Improving the prospects for student employment success in an uncertain environment. *Active Learning in Higher Education*, *15*(3), 199–213. https://doi.org/10.1177/1469787414544875

Rawlings, L. J. (2016, June 21). *What is initiative and why it is important*. Youth Employment UK. https://www.youthemployment.org.uk/what-is-initiative-and-why-is-it-important/

Relleve, C. C. O. (2019). *Values education pedagogy for Z learners*. https://www.dlsud.edu.ph/coed/ncvre/docs/2019/DrChesterRelleve-PEDAGOGYGENZ.pdf

Robinson, J., & Garton, B. (2008). An assessment of the employability skills needed by graduates in the College of Agriculture, Food and Natural Resources at the University of Missouri. *Journal of Agricultural Education*, *49*(4), 96–105. https://www.jae-online.org/attachments/article/100/Robinson_Garton_49_4_96-105.pdf

Romgens, I., Scoupe, R., & Beausaert, S. (2020). Unravelling the concept of employability, bringing together research on employability in higher education and the workplace. *Studies in Higher Education*, *45*(12), 2588–2603. https://doi.org/10.1080/03075079.2019.1623770

Rosenberg, S., Heimler, R., & Morote, E. S. (2012). Basic employability skills: A triangular design approach. *Education + Training*, *54*(1), 7–20. https://doi.org/10.1108/00400911211198869

Salonda, L., Siaguru, P., Yoko, J., & Oliver, W. (2017). *A rapid assessment of the Papua New Guinean graduate labour market*. Western Pacific University, Papua New Guinea. https://www.wpu.ac.pg/images/downloads/Assessment_of_PNG_Labour_Market.pdf

Saunders, V., & Zuzel, K. (2010). Evaluating employability skills: Employer and student perceptions. *Bioscience Education*, *15*(1), 15–20. https://doi.org/10.3108/beej.15.2

Scott, F. J., Connell, P., Thomson, L. A., & Willison, D. (2019). Empowering students by enhancing their employability skills. *Journal of Further and Higher Education*, *43*(5), 692–707. https://doi.org/10.1080/0309877X.2017.1394989

Sin, C., & Amaral, A. (2017). Academics' and employers' perceptions about responsibilities for employability and their initiatives towards its development. *Higher Education*, *73*, 97–111. https://doi.org/10.1007/s10734-016-0007-y

Small, L., Shacklock, K., & Marchant, T. (2018). Employability: A contemporary review for higher education stakeholders. *Journal of Vocational Education and Training*, *70*(1), 148–166. https://doi.org/10.1080/13636820.2017.1394355

Soares, M. E., & Mosquera, P. (2020). Linking development of skills and perceptions of employability: The case of Erasmus students. *Economic Research-Ekonomska Istrazivanja*, *33*(1), 2769–2786. https://doi.org/10.1080/1331677X.2019.1697330

Strong, M. H., Burkholder, G. J., Solberg, E. G., Stellmack, A., Presson, W. D., & Seitz, J-B. (2020). Development and validation of a global competency framework for preparing new graduates for early career professional roles. *Higher Learning Research Communications*, *10*(2), 67–115. https://scholarworks.waldenu.edu/hlrc/vol10/iss2/5/ (DOI: 10.18870/hlrc.v10i2.1205)

Su, W., & Zhang, M. (2015). An integrative model for measuring graduates' employability skills—A study in China. *Cogent Business & Management*, *2*(1). http://dx.doi.org/10.1080/23311975.2015.1060729

Suarta, I. M., & Suwintana, I. K. (2021). The new framework of employability skills for digital business. *Journal of Physics: Conference Series*. https://iopscience.iop.org/article/10.1088/1742-6596/1833/1/012034

Suarta, M., Suwintana, K., Sudhana, G. P. F. P., & Hariyanti, N. K. D. (2017). Employability skills required by the 21st-century workplace: A literature review of labour market demand. *Advances in Social Science, Education and Humanities Research*, *102*, 337–342. https://doi.org/10.2991/ictvt-17.2017.58

Succi, C., & Canovi, M. (2020). Soft skills to enhance graduate employability: Comparing students and employers' perceptions. *Studies in Higher Education*, *45*(9), 1834–1847. https://doi.org/10.1080/03075079.2019.1585420

Suleman, F. (2018). The employability skills of higher education graduates: Insights into conceptual frameworks and methodological options. *Higher Education*, *76*, 263–278. https://doi.org/10.1007/s10734-017-0207-0

Teng, W., Ma, C., Pahlevansharif, S., & Turner, J. J. (2019). Graduate readiness for the employment market of the 4th industrial revolution: The development of soft employability skills. *Education + Training*, *61*(5), 590–604. https://doi.org/10.1108/ET-07-2018-0154

Tomlinson, M. (2008). The degree is not enough: Students' perceptions of the role of higher education credentials for graduate work and employability. *British Journal of Sociology of Education*, *29*(1), 49–61. https://doi.org/10.1080/01425690701737457

Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. *Education + Training*, *59*(4), 338–352. https://doi.org/10.1108/ET-05-2016-0090

Tran, J. T. T. (2012). Vietnamese higher education and the issue of enhancing graduate employability. *Journal of Teaching and Learning for Graduate Employability*, 3(1), 2–16. https://doi.org/10.21153/jtlge2012vol3no1art554

Uddin, M. (2021). Addressing employability challenges of business graduates in Bangladesh: Evidence from an emerging economy perspective. *Australian Journal of Career Development*, *30*(2), 83–94. https://doi.org/10.1177/1038416220986887

Unni, J. (2016). Skill gaps and employability: Higher education in India. *Journal of Development Policy and Practice*, *1*(1), 18–34. https://journals.sagepub.com/doi/pdf/10.1177/2455133315612310

Vanhercke, D., Cuyper, N. D., Peeters, E., & Witte, H. D. (2014). Defining perceived employability: A psychological approach. *Personnel Review*, *43*(4), 592–605. https://doi.org/10.1108/PR-07-2012-0110

Virtanen, A., & Tynjala, P. (2019). Factors explaining the learning of generic skills: A study of university students' experiences. *Teaching in Higher Education*, *24*(7), 880–894. https://doi.org/10.1080/13562517.2018.1515195

Webb, J., & Chaffer, C. (2016). The expectation performance gap in accounting education: A review of generic skills development in UK accounting degrees. *Accounting Education*, *25*(4), 349–367. https://doi.org/10.1080/09639284.2016.1191274

Weligamage, S. S. (2009). *Graduates' employability skills: Evidence from literature review, Sub Theme A—Enhancing employability through quality assurance—ASAIHL*. https://fac.ksu.edu.sa/sites/default/files/weliganmage_2009_graduates_emplyability_skills_evidence_from_literature_review.pdf

Wickramasinghe, V., & Perera, L. (2010). Graduates, university lecturers, and employers' perceptions towards employability skills. *Education + Training*, *52*(3), 226–244. https://doi.org/10.1108/00400911011037355

Appendix

Survey Questionnaire—Companies

EMPLOYABILITY SKILLS

Instructions:

The Questionnaire focuses on 'Employability Skills' (generic skills that are NOT subject/discipline-specific, are transferable across jobs, careers, employers, and important for life-long learning).

1. Please kindly answer all or as many questions as possible.
2. For those respondents receiving an emailed questionnaire, please download the questionnaire onto your computer's drive, fill it in, save it, and then re-attach it to any of the three return email addresses given below.
3. For those respondents receiving a mailed questionnaire, you can post back the filled-in questionnaire using the enclosed envelope.

We would like to express how very grateful we are for your understanding help in filling-in the questionnaire. All information provided will be treated with strictest confidence, for academic research purposes only, and NO identity of any respondent will be revealed in the final research report.

Section A: General Questions

The information collected here is for demographic analysis only

Q1. What is the job title you hold in your company? _____

Q2. In which sector is your company (mainly) operating? _____

Q3. Please tick below which best describes the ownership structure of your company/organization?
Local (private): [ ]; Govt: [ ]; International: [ ]; Multinational Corporations (MNC): [ ]

Section B: General Ranking of Employability Skills

Q4. When fresh Business studies graduates are being recruited for initial employment, which skills do you rank as most important? (please rank in importance, i.e., 1, 2, 3, 4, etc., with 1 = most important, and 13 = least important)

No	Employability Skills	Rank in order of importance
i	Communication skills (i.e., verbal skills, writing skills, etc.)	
ii	Problem-solving skills (i.e., critical and creative thinking, logical thinking, etc.)	
iii	Learning skills (i.e., willingness to learn something new, life-long learning, etc.)	
iv	Positive attitudes and behaviours (i.e., self-confidence, initiative, energy and persistence to get the job done, etc.)	
v	Interpersonal skills (i.e., ability to interact with people, negotiate, work effectively with colleagues, etc.)	

vi	Teamwork skills (i.e., ability to work effectively as a member of the team, understand team dynamics, respect of others' opinion, etc.)
vii	Time management skills (i.e., ability to set right priorities, allocate time effectively to meet deadlines, etc.)
viii	Adaptability skills (i.e., positive attitude toward change, flexibility, ability to identify and suggest new ideas, etc.)
ix	Personal Development skills (i.e., ability to manage one's careers in a constantly changing world, take ownership for his/her own development, etc.)
x	Leadership skills (i.e., ability to lead, influence and motivate others, etc.)
xi	Understanding the Workplace (i.e., ability to grasp the underlying values of the workplace, its dynamics and expectations, etc.)
xii	Working with Diversity (i.e., ability to respect and tolerate different points of views, values and philosophies of life, etc.)
xiii	Pre-graduation work experience (i.e., internship, part-time work, etc.)

Section C: Different Employability Skills

Employability Skills are divided into three groups: (i) Academic Skills, (ii) Personal Management Skills, and (iii) Teamwork Skills

Q5. Which of the following skills do you perceive as fully developed in Business studies students at the time of recruitment? (please say whether you agree or disagree with statements given below, using the following scale: 5 = strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly disagree). Please tick the appropriate box selected.

No	Academic Skills	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
i	Critical thinking					
ii	Can act logically to evaluate different situations					
iii	Understand and solve problems involving mathematics (i.e., numeracy skills)					
iv	Apply specialized knowledge from various fields (i.e., organizational behaviour, marketing, management science, etc.)					
v	Decision Making					
vi	IT literacy (i.e., use Computer technology, programs and information systems effectively)					
vii	Understand, speak and write effectively in the languages in which business is conducted					

viii	Understand the importance of continuous life-long learning
ix	Academic Performance (i.e., Grade Point Average)

Q6. Which of the following skills do you perceive as fully developed in Business studies students at the time of recruitment? (please say whether you agree or disagree with statements given below, using the following scale: 5 = strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly disagree). Please tick the appropriate box selected.

No	Personal Management Skills	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
i	Self-confidence					
ii	Conscientious (i.e., task-focused, self-motivated, self-control, dependability, etc.)					
iii	Self-awareness (i.e., weaknesses & strengths, etc.)					
iv	Ability to set goals and priorities at work					
v	Ability to plan and manage time					
vi	Responsible (i.e., accountable for own actions)					
vii	Positive attitude (i.e., 'can do' approach, willingness to learn, willingness to change, etc.)					
viii	Creativity and innovative thinking (i.e., ability to identify and suggest new ideas)					
ix	Recognition of and respect for people's diversity and individual differences					
x	Honesty, integrity and personal ethics					
xi	Initiative and risk-taker					
xii	Perseverance					
xiii	Can work independently with minimal supervision					

Q7. Which of the following skills do you perceive as fully developed in Business studies students at the time of recruitment? (please say whether you agree or disagree with statements given below, using the following scale: 5 = strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly disagree). Please tick the appropriate box selected.

No	Teamwork Skills	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
i	Contributing to group problem-solving					
ii	Plan and make decisions with others and support the outcomes					
iii	Respect the thoughts and opinions of others in the group					
iv	Exercise 'give and take' to achieve group results					
v	Seeks a team approach where appropriate (i.e., as opposed to a preference for a 'go it alone' approach)					
vi	Leadership Skills (i.e., lead when appropriate)					
vii	Mobilize the group for high performance					
viii	Team building skills					
ix	Resolving and managing conflicts					
x	Ability to take responsibility of assigned tasks by the group					

Q8. Does your company/organization run a Graduate Development Management Program?

(a). Yes [ ] ---→ Go to Q9 below

(b). No [ ] ---→ End of Questionnaire

Q9. What is/are the objective(s) of your Graduate Development Management program (i.e., please rank the most applicable objective in order of importance, i.e., 1, 2, 3, 4, etc., with 1 = most important)

No	Objective of the Graduate Development Management Program	Select and rank those applicable
i	Filling-in gaps in missing skills	
ii	Increase commercial awareness about the organization	
iii	Orientation to the company's operations	
iv	Improve personal effectiveness	
v	Socialization of new graduates	
vi	Improve professionalism of graduates	
vii	Others, please specify:	

Once more, we sincerely thank you for taking the time to answer our questionnaire.
Yours sincerely,
WM (Dr), RDM(Mr), and LA (Dr)

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