

Article

Graduate Employability of Business Students

Wise Mainga *, Marlo B Murphy-Braynen, Remelda Moxey and Syed Abdul Quddus

College of Business, University of The Bahamas, Nassau P.O. Box N-4912, Bahamas;
marlo.murphy-braynen@ub.edu.bs (M.B.M.-B.); remelda.moxey@ub.edu.bs (R.M.);
syed.quddus@ub.edu.bs (S.A.Q.)

* Correspondence: wise.mainga@ub.edu.bs

Abstract: The objective of the study was to examine the perceptions of business students on their employability skills at the point of graduation. The study was partially driven by past research which identified lack of soft skills as one of the main contributing factors in younger workers' dismissal from work, and the need to understand the level of employability skills younger graduates have at graduation. An exploratory descriptive research methodology was used for the study. A survey was administered to 189 fourth-year business students. In total, 90 students filled-in the questionnaire, representing a 47.6% response rate. Based on a structured survey questionnaire administered to final-year undergraduate business students, the four most important employability skills for recruitment to entry-level positions are communication skills, learning skills, positive attitudes and behaviours, and problem-solving skills. The main prominent result was that 'learning skills' were ranked the second most important employability skills. In today's fast-paced, rapidly changing work environments that are characterised by rapid knowledge obsolescence and an unknown future, willingness to learn and proactive lifelong learning are key to sustaining long-term graduate employability. Students seem to be satisfied with their perceived level of academic, personal management, and teamwork skills they possessed at the point of graduation. However, there are possible areas for further improvement regarding creativity and innovative skills, and ability to 'resolve and management conflicts' in teamwork. The study found that students used a combination of traditional and student-centred learning methods and pedagogies to acquire employability skills. As business students approach graduation, it is important to focus on areas they can improve and emphasise self-directed lifelong learning throughout their careers. The study confirms the role of external factors—labour market demand—in influencing *perceived employability*. The perceptions of students need to be systematically included in HEIs' employability policy and discourse.

Keywords: employability skills; business graduates; learning methods; perceived employability



Citation: Mainga, Wise, Marlo B Murphy-Braynen, Remelda Moxey, and Syed Abdul Quddus. 2022. Graduate Employability of Business Students. *Administrative Sciences* 12: 72. <https://doi.org/10.3390/admsci12030072>

Received: 25 May 2022

Accepted: 16 June 2022

Published: 22 June 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Rapid technological change, digitisation, and globalisation are changing the structure of today's workplace. Technologies that did not exist barely a decade ago are increasingly changing the nature of jobs, work practices, and skills requirement today (PwC 2018; WEF 2016; Pennington and Stanford 2019; World Bank 2019). Technologies such as artificial intelligence, robotics, 3D printing, big data, the Internet of things, machine learning, drone technologies, nanotechnology, renewable energy technologies, and biotechnology are increasingly becoming mainstream in the workplace. In the process, these technologies are destroying old jobs as well as creating new ones (OECD 2018; World Bank 2019). New technologies have also changed the skill composition required to perform the remaining jobs, often moving them towards more skill-intensity (T. A. Campbell 2018; De Vos et al. 2021). Consequently, the "lifecycle of competencies needed for successful performance in the job is shortening rapidly" (De Vos et al. 2021, p. 11). Rapid technological change and equally rapid knowledge obsolescence have meant that workers must continuously reskill and upskill to retain their employability (Deloitte 2020). In addition, the global trends

towards massification of higher education have meant that more and more graduates are competing for fewer jobs, reducing the currency of a first degree, as well as increasing the competition in graduate labour markets (Pinto and He 2019; Tomlinson 2008; Moore and Morton 2017). Increasingly, new graduates are entering graduate labour markets that are very competitive, congested, dynamic, precarious, turbulent, and unpredictable (Lock and Kelly 2020; Watzlawik and Kullasepp 2016; Tomlinson 2017b). In addition, more and more new graduates are entering non-graduate and recently graduated jobs (i.e., clerical and administrative jobs in banks (tellers), customer services, marketing, etc.), which are linked to wide-spread underemployment and problematic long-term career development trajectories (Osseiran 2020; Erdsiek 2017).

The phenomenon of graduate underemployment and unemployment has become a policy issue in many developing and developed economies (Calvo and Garcia 2021; Mgaiwa 2021; Suleman 2018; Succi and Canovi 2020; Romgens et al. 2020). One supply side approach to tackling graduate underemployment and unemployment has been a focus on strengthening graduate employability. Consequently, employability has increasingly been adopted by some universities as a credible fourth mission, in addition to teaching, research, and community service (M. Campbell et al. 2019; Pereira et al. 2020; Bennett 2018). Graduate employability broadly comprises of knowledge, skills, behaviours, and attributes that enables a graduate to get a job, stay on a job, do well on a job, find another job if necessary, and progress in their chosen career (Mainga et al. 2022; Wickramasinghe and Perera 2010; Finch et al. 2013; Behle 2020; Romgens et al. 2020; Van Harten et al. 2022). In this study, terms such as generic skills, soft skills, 21st century skills, and employability skills are used interchangeably. There is now a growing realisation that having a degree with good grades and technical knowledge (discipline-specific knowledge) is not enough for new graduates to succeed in today's dynamic labour markets (Pinto and He 2019; Dolce et al. 2020; Tomlinson 2008; Scott and Willison 2021; McArthur et al. 2017). For example, a graduate who has excellent academic grades but has poor interpersonal, teamwork, critical thinking, and communication skills is unlikely to be successful in their first graduate-level job. Graduates need to develop additional soft/generic/employability skills needed to stand out and navigate inevitable challenges associated with transiting from school into the world of work, and to progress in their chosen careers (Succi and Canovi 2020; Suleman 2018; Okolie et al. 2020; Scott and Willison 2021).

Graduate employability is seen as a complex, dynamic, and multidimensional construct that includes both subjective and objective elements (Jackson 2013; De Vos et al. 2021; Finch et al. 2013; Romgens et al. 2020; Suleman 2018). Developing graduate employability is a multipronged endeavour involving multiple stakeholders, such as students, higher education institutions (HEIs), academics, career services, employers, employers' associations, government agencies, NGOs, parents, etc. (Clarke 2018; Sin and Amaral 2017; Presti and Pluviano 2016). Despite this diffused responsibility, however, the literature generally seems to assign responsibility for employability to the individual student in the first instance, and higher education institutions (HEIs) in the second instance (Sin and Neave 2016; Tomlinson 2012; Cheng et al. 2021). Hence, our exploratory research focuses on the views of students.

The views of students on their employability are crucial, as they are the main stakeholders who are directly impacted by their higher education learning experiences (Tymon 2013). There is now significant research which suggest that students often have a blurred understanding of what graduate employability is, what skills are needed by employers for entry-level positions, and how to enhance their career prospects during their studies at university (Amoroso and Burke 2018; Dolce et al. 2020). Students often fail to link their learning experiences at university to future careers (Lock and Kelly 2020; Scott et al. 2019). Consequently, they may not always avail themselves of university-wide opportunities that may exist to enhance their employability profile while studying at university. Garcia-Aracil et al. (2018) argued for the need to explore students' perceptions of their preparedness for transition to the world of work. Ergun and Sesen (2021) took note of the fact that there has been limited empirical research on students' perception of their employabil-

ity. [Andrewartha and Harvey \(2017\)](#) observed that students' views and perceptions have largely been ignored in the employability arena. Academic researchers have not pursued research on students' views with the same vigour as they have done on employers' ([Higdon 2016](#); [Tymon 2013](#)).

There has been very little research done on graduate employability in the Caribbean. Though discussed widely in many public forums, there has been no systematic study of graduate employability. This exploratory study was undertaken to fill this gap. This is the first step on future planned regionwide study on graduate employability.

2. Significance of the Study

There are several reasons why a study on 'employability' of university graduating students is important. First, there has been relatively little systematic research on graduate employability in the Caribbean. Past studies have shown that while the Bahamas has higher-than-the-world average attainment at secondary school education level (i.e., partly due to free education), some indicators of quality education have lagged ([IMF 2018](#)). For example, the average grade for high school graduates was a 'D' in 2016, with only about 5.7% getting a 'C' or above in Maths, English, and a Science subject ([IMF 2018](#)). [ORG Bahamas \(n.d.\)](#) has also observed issues of education quality in the pre-tertiary education sector. Examining employability skills would reveal how pre-tertiary educational deficiencies are addressed at the university level. Employability skills are central to having flexible, adaptive, innovative, and productive workers. Workers with such skills and competencies are key to enabling efficient development of internationally competitive firms that are crucial to economic growth, especially within knowledge-based economies. Second, in some research, Bahamian enterprises have indicated that 'inadequate educated workforce and deficiencies in required skills' was one of the major problems they faced with recruiting new hires ([IMF 2018](#); [Fazio and Pinder 2014](#)). Moreover, lack of 'soft skills' was a major cause of dismissal and turnover among young employees ([Fazio and Pinder 2014](#); [Inter-American Development Bank \(IDB\) 2016](#)). The problem of skills gap, especially soft skills, was also emphasised in a recent study on employers' skill needs ([Robertson 2021](#)). Third, if new Caribbean-based graduates decide to seek employment in other countries (i.e., US, Canada, UK, Australia, etc.), they will need to stand out and have positional advantage in very competitive congested global labour markets. Fourth, research on graduate employability is important for 'regular' updating of degree university programs, to ensure that knowledge and skills embedded in academic courses offered to students are in congruence with skills requirements of current and future employers. As the environment within which companies operate change over time, so will their skill requirements. Fifth, some have argued that the discourse on graduate employability needs to be embedded within the context of the characteristics of the local labour market ([Hossain et al. 2020](#); [Uddin 2021](#)). Employability studies should, therefore, consider the contextual environment of the local labour market. [Fakunle and Higson \(2021\)](#) have highlighted the importance of studies on employability in "non-Western contexts, an area that remains under-researched" (p. 8). [Lam and Tang \(2021\)](#) observed that most of the published work on graduate employment outcomes "do not tell us much about the contextualised processes that 'match' or 'mismatch' graduates' qualifications with 'appropriate' graduate jobs" (p. 14). [Winterton and Turner \(2019\)](#) makes a case for local research on graduate employability that "develop solutions that fit specific cultural, economic and institutional contexts" (p. 536).

Our study attempted to capture the perceptions of graduating business students. The overall objective of the research was to examine business students' perception about their employability skills as they approach graduation. Relative to the views of employers, the perceptions of students on graduate employability are less understood ([Tymon 2013](#); [Higdon 2016](#)). However, students' perceptions are important, as individuals' choice of action are often influenced by their perceptions irrespective of objective realities ([Soares](#)

and Mosquera 2020; Vanhercke et al. 2014). The study contributes to literature by providing insight on graduating students' perception on work-readiness in the Caribbean context.

3. Research Questions

To achieve the above stated research objective, four research questions were developed for the study. The four research questions are:

1. Which employability skills do graduating students perceive as most important when employers are recruiting fresh business graduates for entry-level positions?
2. Which academic, personal management, and teamwork skills are perceived by graduating students as fully developed in new business graduates?
3. Which learning methods do students find most helpful in facilitating the acquisition of relevant knowledge and employability skills by business graduates?
4. Which factors affect perceived employability of new business graduates?

4. Literature Review

4.1. Definition

There is no global consensus on the definition of graduate employability (Clarke 2018; Chhiner and Russo 2018; Kornelakis and Petrakaki 2020; Romgens et al. 2020). This is partly because the topic has attracted researchers from different disciplines, such as management, human resources management, accounting, career studies, vocational and organisational psychology. Definitions of graduate employability has kept evolving in the literature (Scott and Willison 2021; Romgens et al. 2020). For this study, an augmented definition is used. Graduate employability is defined as: A set of knowledge, skills, abilities, behaviours, and attributes that make graduates more likely to get initial employment and be successful in their chosen careers, ultimately empowering them as critical and reflective life-long learners, who are flexible and adaptive throughout their career span, to the benefits of themselves, their employers, the community, and the wider economy (CBI 2011; Knight and Yorke 2003; Harvey 2001; Bridgstock 2009; Weligamage 2009). In the context of globalisation, rapid technological change, and digitisation, the emphasis is on lifelong learning, being critical, reflective, flexible, and adaptive throughout one's career span. Employability is much more than academic knowledge (discipline-specific knowledge); it includes possession of skills, abilities, and behavioural attributes that are congruent with the targeted workplace or profession. There is an understanding that even when entry-level graduates have acceptable levels of technical skills specific to their discipline, they may still fail to perform on the job due to lack of soft or transferable skills (Osmani et al. 2017; Atfield and Purcell 2010; Robinson and Garton 2008). Employability skills such as problem-solving, effective communication, critical thinking, interpersonal skills, and ability to work in a team are very important for entry-level graduates to be effective and efficient on their first job (Finch et al. 2013; Lim et al. 2016).

The traditional career where one joined one company and rose through the hierarchy to the top of the organisation, no longer exist for many graduates (Amoroso and Burke 2018; Bridgstock 2009; De Vos et al. 2021). Traditional careers that used to offer job security in exchange for loyalty to the employer are declining, being replaced with 'employability security'. A large portion of today's work is done in 'projects', which has a contracted start and end dates (Watzlawik and Kullasepp 2016). In addition, new employment arrangements have developed, such as the gig economy, portfolio careers, and virtual and contingent work, which require frequent and radical career transitions (Presti et al. 2019). Today's graduate career trajectories are likely to involve relatively more frequent switching between jobs, employers, and even sectors (Mainga et al. 2022; Sullivan and Ariss 2021). Employability/generic/soft skills enhance career mobility as they are applicable across jobs, professions, sectors, and contexts (Chamorro-Premuzic et al. 2010; Osmani et al. 2019; Sullivan and Ariss 2021). One study suggested that today's graduates will experience as much as 17 job transitions/changes during their career span (ABDC 2017). Career adaptability and ability for lifelong learning is critical in such a dynamic setting. The ability

to continuously acquire new skills as one transit across different job roles becomes more important than 'skills' possessed at any one particular point in one's career span (Tomlinson 2012; Bridgstock 2009; Finch et al. 2016). Due to rapid knowledge obsolescence, the life span of any competences possessed at any one time has declined. As technologies change and companies restructure their processes, job structures and skills requirements will inevitably change over time; hence, the importance of continually enhancing one's employability throughout a career span. In much of the contemporary literature, employability skills are seen to be complementary to discipline-specific knowledge and skills (Pang et al. 2019; Cheng et al. 2021). This study does not explicitly focus on discipline-specific knowledge and skills.

4.2. Employability Skills

The traditional conceptualisation of graduate employability has often focused on acquiring knowledge, skills, attributes, and behaviours that are valued by employers. The literature has identified a list of employability skills expected by employers to be possessed by new graduates. The most common employability skills identified as important to employers include the following: flexibility, critical thinking, time management, willingness to learn (learning skills), oral and written communication skills, problem solving, interpersonal skills, teamwork skills, numeracy, creativity, leadership skills, conflict management, ethical awareness, self-confidence, positive attitudes and behaviours, work experience, enthusiasm and motivation, self-management, working under pressure, independent working, organisation and planning, initiative, ICT literacy, perseverance, and others (Mainga et al. 2022; Chhinzer and Russo 2018; Osmani et al. 2019). Later conceptualization included the importance of psychological, cultural, and social capital (Behle 2020; Tomlinson 2017a; Romgens et al. 2020). Views have shifted from obtaining satisfying work to the adaptive capacity an individual need for obtaining and retaining work during an environment of fast-moving changes (De Vos et al. 2021; Presti et al. 2019). The later conceptualisation includes the need to strengthen self-awareness, self-efficacy, proactivity, career building skills, self-directedness, resilience, adaptability, agility, reflectivity, persistence/grit, social and cultural awareness, emotional intelligence, lifelong learning, growth mindset, and understanding of the labour market, as some of the bedrocks for a sustainable career in precarious, continuously evolving, and turbulent labour markets of the 21st century (Rowe 2019; Van Harten et al. 2022; Masole and van Dyk 2016; Lock and Kelly 2020). What is clear is that employability skills are highly sort after by most employers when recruiting entry-level graduates (Robinson and Garton 2008; Lim et al. 2016; Succi and Canovi 2020). It is important for students to know which of the above listed skills and attributes are prioritised by employers.

Acceleration in digital transformation of work processes is demanding the development of new *additional* soft skills and competences among new graduates. New competences, such as complex-problem solving skills, interdisciplinary and multidisciplinary skills, ability to handle and analyse large data, IT-enabled collaboration of virtual teams, systems thinking, reasoning and ideation, articulation ability, curiosity/imagination, and continuous self-directed active learning, will need to be developed among graduates. Such skills will enable future graduates tackle and solve ill-structured, complex, and interconnected global challenges, such as fighting poverty, climate change, food security, biodiversity, and water scarcity (World Bank 2019; WEF 2020; Sousa and Wilks 2018; Deloitte 2020).

4.3. Empirical Studies

Most studies have found that there is often a discrepancy between the skills, knowledge, behaviours, and attributes university students possessed at graduation, and those that employers were looking for (Ayoubi et al. 2017; Jackson 2012; Osmani et al. 2019; Hossain et al. 2020; Moore and Morton 2017). Several employers across the globe have expressed dissatisfaction with fresh graduates' skillsets relative to industry requirements. The

mismatch between the knowledge graduates acquire at university and skills required by the labour market has been found in studies on the USA, UK, Canada, Australia, Malaysia, Germany and Italy, South Africa, Ghana, Nigeria, Sri Lanka, Portugal, Vietnam, India, China, Bangladesh, and others (Mainga et al. 2022, p. 29). Some studies have found that most employers view fresh university graduates as not 'work-ready' (Osmani et al. 2019; Moore and Morton 2017; Griffiths et al. 2018; Konig and Ribaric 2019). Consequently, universities around the world are under pressure to produce more employable graduates.

Lack of relevant skills among new graduates has partly contributed to graduate unemployment and underemployment in both developed and developing economies (Koys et al. 2019; Mgaiwa 2021; McArthur et al. 2017; Minocha et al. 2018). One study on 28 low-income Asian nations found that only about 13% of university graduates were considered to have the requisite skills and competencies that are required for their jobs (P. Brown et al. 2011; Verma et al. 2018). A survey of employment outcome of over 40,000 accounting and finance graduates in Australia found that only about 55% were in graduate-level jobs, with many graduates in short-term, casual, or part-time work (Jackson 2018; Bennett et al. 2020). In 2015, about 30% of new business graduates in Australia were still unemployed four months after their graduation (Graduate Careers Australia 2015, as in, McArthur et al. 2017). Other Australian studies have found that there has been a decline in full-time employment outcome and a rise in unemployment among business graduates in Australia (Jackson and Edgar 2019; McArthur et al. 2017). In Europe, unemployment among college graduates stood at 50.8% in North Macedonia, 44.7% in Greece, 43.5% in Italy, and 24.6% in Spain (Calvo and Garcia 2021). Moreover, 13 European countries had college graduate unemployment above the desired 18% threshold (Calvo and Garcia 2021). In the UK, about 58% of graduates were in non-graduate or low-skilled jobs (Minocha et al. 2018). One study put the number of graduates in non-graduate jobs to be around 50% for both the UK and US (Lauder and Mayhew 2020). Part of the unemployment and underemployment may be explained by the low rate of job creation relative to the expansion of higher education in respective countries. However, some of it may be due to skill mismatch, especially in situations where job vacancies remain open in the presence of graduate unemployment (Green and Henseke 2021; Cavanagh et al. 2015; Jackson and Edgar 2019; ABDC 2017). 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 up (Succi and Canovi 2020). A study covering 6004 business students at one Australian university found that many students were aware of the difficulties in finding graduate level jobs but lacked knowledge of strategies with which to enhance their employability opportunities (Bennett et al. 2020).

4.4. Students' Responsibility

Despite the general acceptance of the importance of employability skills for new graduates' long-term careers, a significant number of undergraduate students do not put effort or utilise all the available opportunities to develop employability skills while at university (Scott et al. 2019; MacDermott and Ortiz 2017; Tymon 2013; Amoroso and Burke 2018; Jackson and Edgar 2019). Some students do not even realise the importance of soft/employability skills (MacDermott and Ortiz 2017). In some cases, students are not aware of the skills required by the labour market (Dolce et al. 2020; Lockett and Feng 2019; Amoroso and Burke 2018). As a result, students tend to both inflate and underestimate their employability skills (Gawrycka et al. 2020; Wallis 2021). A study on Vietnam found that employers were not satisfied with graduates' employability assets during recruitment, and graduating students had poor understanding of the real needs of the labour market (T. T. Tran 2017). For some students, they assume that discipline-specific knowledge equates to skills demanded by employers (Cavanagh et al. 2015; Kovesi and Kalman 2020; Abbas and Sagsan 2020). A study on Chinese students found that college students focus on discipline knowledge, high grades, and prestigious universities at the expense of soft skills and career

planning (Lockett and Feng 2019). To enhance employability, it has been argued that HEIs in China should instil flexibility, adaptability, and critical and reflective thinking among graduates (Abbas and Sagsan 2020). A study in the Czech Republic found that university studies were theory-based and detached from practice (Gawrycka et al. 2020). Lock and Kelly (2020) observed that some Australian students often have limited understanding of how different courses they undertake at university are linked to their chosen careers. Many students have a “poor understanding of the education-employment pathways on which they have embarked” (Lock and Kelly 2020, p. 22). A study done at the University of Leeds (UK) found that students who were not enrolled in any employability enhancing programs were the most uncertain about their future careers and had the least confidence in presenting their skills to employers (Divan and McBurney 2016). Moreover, in some cases, students are not able to articulate the skills they have developed during university studies to recruiters (Mello et al. 2021; Jackson and Edgar 2019). Other factors might also affect students’ employability, including average age of cohorts, low motivation to schoolwork, family background, etc. For example, mature students with some work experiences are likely to be more focused and driven in developing missing employability skills than those who are joining the university straight from high school. Millennials and Generation Z have different views about work and relevancy of different skills than their parents.

University students have a role to play in enhancing their employability. First, they must develop (or be helped to develop) an acute awareness of the importance of employability skills to their future employment prospects (Amoroso and Burke 2018; Lockett and Feng 2019). Second, students must proactively take opportunities afforded to them to acquire employability skills through several channels, such as part-time work, summer internships, industrial tours, campus debates, and effective use of services offered through university career offices, career fairs, etc. (Kornelakis and Petrakaki 2020). Third, they should develop knowledge of what employment opportunities exists in the labour market, and what the entry-level skill requirements are (Lockett and Feng 2019; Pouratashi 2019). Students’ awareness of the skills valued by employers is essential, if they are to derive the maximum benefits from curricular strategies and take proactive efforts in acquiring any missing skills (Garcia-Aracil et al. 2018). Most employers look for graduates who are ‘work-ready’ (Amoroso and Burke 2018). That is, graduates who have a balance between good grades (academic knowledge) and competencies in a wide range of soft skills. Employers are sometimes happy with the technical/discipline-specific knowledge and skills, but not with the soft skills of new graduates (Pang et al. 2019).

4.5. Business Schools, Teaching and Learning Methods

Past literature shows that business schools have been failing students in the way they offer their degree programs, as they focus mostly on developing students’ discipline-specific knowledge and skills (McMurray et al. 2016; Hossain et al. 2020; Lim et al. 2016; Ayoubi et al. 2017; Abbasi et al. 2018). Business schools have been criticised for not serving their stakeholders effectively, as they are seen to be detached from actual managerial practices, too focused on content, and are not preparing students with relevant skills needed to address real-world issues/problems (Thomas and Ambrosini 2021; Longmore et al. 2018). Employers are looking for additional complementary employability skills needed to enhance their firms’ flexibility, adaptability, creativity, agility, innovation, and competitiveness. Consequently, graduates who are work-ready (i.e., have high discipline-specific knowledge and well developed in-demand employability skills) will be more competitive in getting initial employment and progressing in their long-term careers. Employability skills can enhance students’ positional advantage in the labour market, especially in the era of massification/over-supply that has devalued the currency of undergraduate degrees (Pinto and He 2019).

Some literature still observes that, though things are changing, traditional teacher-centred methods such as lecturing still dominate the learning landscape in universities and business education (Budanceva et al. 2016; Mohiuddin et al. 2020; Cameron 2017). However,

some teaching and learning methods used in universities and business schools are seen as not adequate at developing long-term skills, behaviours, and attributes required by today's workplace, such as communication skills, interpersonal skills, teamwork, conflict management, critical thinking, creativity, innovation, self-motivation, self-awareness, self-efficacy, adaptability, proactivity, and lifelong learning (J. Tran 2012; Teng et al. 2019; Virtanen and Tynjala 2019). Traditional teaching and learning often involves lectures, class discussions, memorisation, and regurgitation of theoretical course content during tests and examinations (Uddin 2021; Teng et al. 2019). The focus is on the teacher and what they do (Mesny et al. 2021). In general, the teacher oversees the learning environment, i.e., what is taught and how it is taught. The teacher is the sole source of knowledge, and the focus is on one-way transmission of theoretical and abstract knowledge to the students (Budanceva et al. 2016; Virtanen and Tynjala 2019). Students are largely passive recipients of such knowledge (Teng et al. 2019; Guardia et al. 2021; J. Tran 2012). Their participation in class—if any—is largely determined by the teacher.

Consequently, several educational and employability researchers have argued for the need to complement some of the traditional teaching and learning methods (i.e., lectures, class discussion, tutorials, etc.) with student-centred learning methods and innovative integrative pedagogues. Student-centred learning approaches and innovative integrative pedagogues put the learner at the centre of the learning experience (Avolio et al. 2019). Such approaches encourage action-oriented, experiential, interactive, and collaborative team-based learning (Lorange and Thomas 2016; Farashahi and Tajeddin 2018; Giraud-Carrier et al. 2021). No one teaching method or pedagogical approach is enough to produce the wide range of skills required to prepare students for today's workplace (Virtanen and Tynjala 2019; Anthony and Garner 2016). Students are encouraged to be active participants in the construction of new knowledge and take ownership of their own learning experience (Longmore et al. 2018; Grossman et al. 2016; Mesny et al. 2021). Learning in real-world conditions in collaboration with others is encouraged. The teacher assumes a more facilitating role and is not the sole source of knowledge. Lack of faculty training in new innovative pedagogies, large classes, and faculty's lack of time are often cited as having contributed to the continued use of traditional teaching methods in HEIs, especially in developing country environments (Groves et al. 2018). Consequently, in the absence of training in integrative pedagogies, most academics tend to teach the way they themselves were taught (Yoder et al. 2021; Longmore et al. 2018).

4.6. Perceived Employability

Perceived employability has been defined differently by different authors. Most common definitions express it as a psychological concept that capture individuals' subjective self-assessment and perception of their employment prospects in competitive labour markets, i.e., a belief in the ability to find the right job, retain a job, or obtain a new one if necessary (Van Harten et al. 2022; Vanhercke et al. 2014; Vargas et al. 2018; Calvo and Garcia 2021). Perception is important, as it influences actual behaviour, including self-efficacy, self-esteem, motivation, self-directed job search, perseverance, ambition, locus of control, etc. Following Rothwell et al. (2008), perceived employability is made of four components: (i) the institution attended, i.e., its brand and reputation; (ii) credibility and status of field of study, including demand for individuals with such a qualification; (iii) self-belief, dealing with confidence in the student's abilities and academic performance; and (iv) the external labour market's demand for applicant with qualifications in a particular field. Our analysis omitted the first component—institutional reputation and brand.

5. Research Methodology

We adopted an exploratory descriptive research methodology. The triangular design approach was adopted from Rosenberg et al. (2012) and Wickramasinghe and Perera (2010). In our study, we administered questionnaires to final-year business students (as a proxy for graduates). Atfield and Purcell (2010) and Kenayathulla et al. (2019) also used final-year

students' perceptions as a proxy for graduates. At the time of the survey, most final-year students were a semester away to completing their studies. Issues of first employment would certainly pre-occupy their thoughts at this stage of their degree program.

A questionnaire was developed and put in SurveyMonkey. The questionnaire had seven major sections: demographic data, general employability skills, academic skills, personal management skills, teamwork skills, teaching/learning methods, and perceived employability. The demographic data asked questions about the department in which the student did their studies, what major was followed, gender, whether the student was working or not, whether any of the parents had a degree or not, and the age of the respondent.

The general employability section had a list of important soft skills identified in the literature, including communication skills, problem-solving skills, learning skills, positive attitudes and behaviours, interpersonal skills, teamwork skills, etc. The section on academic skills listed several skills that a students had to rate based on the extent to which they were developed at the point of graduation. The list included skills such as critical and analytical skills, problem-solving using mathematics (numerical skills), ability to apply specialised knowledge from different fields, decision making skills, IT literacy skills, etc. The list of personal management skills included self-confidence, conscientiousness, self-awareness, ability to plan and manage time, accountability, positive attitudes, etc. The teamwork skills section included skills such as the ability to contribute to group problem-solving, plan and make decisions with others and support the outcomes, respect the thoughts and opinions of group members, exercise 'give and take' to achieve group results, team building skills, etc. The section on learning methods included lectures, assignments, tests and quizzes, final exam, group case studies, reflective learning portfolio, university career services, etc. Perceived employability included a number of items that needed to be rated between 1 (strongly disagree) to 5 (strongly agree), such as "I have achieved high grades in my studies", "I regard my academic work as high quality", "I am confident that I will secure graduate-level employment within 6 months after graduation", etc. The different items in the questionnaires were derived from the various literature reviews, especially from [Wickramasinghe and Perera \(2010\)](#), [Bloom and Kitagawa \(1999\)](#), [Finch et al. \(2013\)](#), and [Weligamage \(2009\)](#). Documentary analysis was done on various secondary sources, such as journal papers, books, and articles found in various internet databases.

Convenient sampling was employed. Once the survey was uploaded on SurveyMonkey, a link was provided to fourth-year students. The link and associated information were given to several lecturers teaching fourth-year courses, so that they could inform their respective classes/students about the employability skills survey and provide them with a link to the survey. Some lecturers also sent group emails to students via Microsoft Teams and Moodle. The survey targeted all fourth-year business students. The first three questions filtered potential respondents, so that they provided informed consent, were 18 years or older, and were business students. The total population targeted was 189 fourth-year business students. In total, 90 students filled in the questionnaire. This represented a response rate of 47.6%, which is respectable for survey designs. The data collection was done during two semesters: Spring 2021 and Summer 2021. In other words, the survey was run between January 2021 to June 2021. Data analysis was done using SPSS (V22).

6. Data Analysis

We start our data analysis with demographic analysis of respondents. The sample data characteristics are shown in Table 1. The data were collected from final-year students in the College of Business, which has three departments: Accounting, Banking, and Finance; Computer Information Systems; and Management and Marketing. The students were studying several different majors: Accounting, Banking, and Finance, Computer Information System, Economics, Economics and Finance, Finance, HRM, Marketing, and Management. In total, 24.4% of respondents were male, while 74.4% were female. Moreover, 60% of respondents were working, while 40% were not. In terms of age, 66.7% were between 20–24 years, 21.1%

were between 25–29 years old, 6.7% were between 30–34 years, 3.3% between 35–39%, and 1 student was above 40 years. One student did not provide their age. Most students in our sample—more than 83%—were either Millennials or Generation Z.

Table 1. Demographic data.

Characteristics	Responses	
	No	%
<i>Department</i>		
Accounting, Banking, and Finance	49	54.4
Computer Information Systems	10	11.1
Management and Marketing	28	31.1
Missing	3	3.3
Total	90	100
<i>Major in which students are studying</i>		
Accounting	27	30.0
Banking and Finance	4	4.4
Computer Information System	10	11.1
Economics	3	3.3
Economics and Finance	13	14.4
Finance	2	2.2
HRM	3	3.3
Marketing	4	4.4
Management	22	24.4
Missing	2	2.2
Total	90	100
<i>Sex</i>		
Male	22	24.4
Female	67	74.4
Missing	1	1.1
Total	90	100
<i>Employment status</i>		
Employed	54	60
Not employed	36	40
Total	90	100
<i>If any parent has a first degree</i>		
Yes	29	32.2
No	61	67.8
Total	90	100
<i>Age</i>		
20–24	60	66.7
25–29	19	21.1
30–34	6	6.7
35–39	3	3.3
40+	1	1.1
Missing	1	1.1
Total	90	100

Source: Survey data.

We performed some reliability tests for the six variables used in the study: Employability skills, Academic skills, Personal management skills, Teamwork skills, Learning methods, and Perceived employability. The results are shown in Table 2. Since the Cronbach's alpha coefficients are all above 0.6, all multidimensional variables used in the study presents acceptable internal consistency reliability for an exploratory study in the social sciences (Janssens et al. 2008; Taherdoost 2016; Hair et al. 2012; Straub et al. 2004).

Table 2. Internal consistency reliabilities for scales.

Indicators/Factors	Cronbach's Alpha	No. of Items
Employability skills	0.650	14
Academic skills	0.766	9
Personal management skills	0.833	12
Teamwork skills	0.845	10
Learning methods	0.850	12
Perceived employability	0.843	10

Source: Survey data.

We progress in our data analysis by answering the respective research questions.

7. Relative Importance of Different Employability Skills

The analysis here focuses on research question 1. Table 3 summarises the employability skills perceived by graduating students, as being most important when employers are recruiting fresh graduates for entry-level positions. The question in the questionnaire used to capture the relevant data was: *Which of the following factors do you see as key or most important in securing an initial graduate-level job? (please rank in order of importance, i.e., 1–14 with 1 = most important)*. The study used mean scores to capture which skills are perceived by graduating students as given priorities by employers when recruiting new business graduates. Other research has used mean scores to rank the relative importance of skills (i.e., [Abbasi et al. 2018](#); [Konig and Ribaric 2019](#); [Strong et al. 2020](#); [Lim et al. 2016](#); [Succi and Canovi 2020](#)).

Following [Wickramasinghe and Perera \(2010\)](#), we analysed the first four most important skills used by employers when recruiting fresh business graduates for entry-level jobs. [Konig and Ribaric \(2019\)](#) also zeroed on the first four important skills in parts of their analysis. We first analyse all the respondents together, before analysing the results based on individual departments. As shown in Table 3, communication skills, learning skills, positive attitudes and behaviours, and problem-solving skills were ranked by graduating students as the top four most important employability skills sought after by employers. Adaptability skills (ranked 8th) were considered moderately important, with pre-graduation work experience (ranked 11th), leaderships skills (ranked 12th), resilience (13th), and working with diversity (ranked 14th) ranking relatively low in importance when employers are recruiting new graduates for entry-level positions. The mean difference across the various employability skills was significant ($F = 28.45, p < 0.0000$). This means that students ranked the relative importance of at least two employability skill types differently.

When we compare the views of students from the three departments, the results in the overall ranking does not seem to change much between the three departments: *Accounting, Banking, and Finance; Computer information systems; and Management and marketing*. The results are shown on the right side of Table 3. Students from the three departments all selected the same three skills to be among the first four important employability skills: communication skills, positive attitudes and behaviours, and problem-solving skills. Again, leadership skills, resilience, and working with diversity are ranked by graduating students as among the relatively least important skills considered for entry-level positions.

We used one-way ANOVA to determine whether the 'mean' scores of the importance given to each employability skill was significantly different across the three departments. The results show that there were no significant differences in the way the students from the three departments ranked the various employability skills. This suggest that students from the different departments, on average, had similar perceptions about the relative importance of individual skills when employers are recruiting new graduates for entry-level positions.

Table 3. Employability skills.

Skill Type	Totals			Accounting, Banking, and Finance			Computer Information Systems			Management and Marketing			One Way ANOVA	
	Mean **	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	F	Sig *
Communication skills	7.3647	3.5418	1	7.6042	2.9661	1	7.2222	4.2655	3	6.8800	4.4283	1	0.336	0.715
Learning skills	6.9176	3.7866	2	7.2500	3.8288	2	8.0000	2.8723	1	5.6800	3.9657	5	1.877	0.160
Positive attitudes and behaviours	6.8235	3.4716	3	7.0851	3.4693	3	6.3333	4.5000	4	6.4231	3.0747	2	0.393	0.676
Problem-solving skills	6.1395	3.7138	4	6.0426	3.5750	4	7.4444	3.3582	2	5.8148	4.1790	4	0.657	0.521
Interpersonal skills	5.7738	3.1788	5	5.3830	3.0967	6	5.8889	3.3333	5	6.2000	3.4157	3	0.544	0.583
Time management skills	5.4878	2.3054	6	5.4255	2.3933	5	5.1250	1.9594	6	5.6667	2.457	6	0.176	0.839
Teamwork skills	4.7765	3.0331	7	4.5745	3.1674	8	4.0000	2.2111	8	5.3600	3.2113	7	0.859	0.428
Adaptability skills	4.6667	2.7826	8	5.1042	2.9118	7	2.7500	2.1213	10	4.5200	2.6789	8	2.530	0.086
Self-management skills	3.5765	3.1258	9	3.0638	2.6898	11	5.0000	3.6209	7	3.7600	3.5033	11	1.755	0.180
Networking	3.3182	5.0527	10	3.3265	5.0555	10	2.1111	5.1828	13	4.1852	5.1294	9	0.6060	0.548
Pre-graduation work experience	3.2697	4.9354	11	3.3469	5.0603	9	2.2000	4.2111	12	3.9630	5.1177	10	0.463	0.631
Leadership skills	2.5233	3.3245	12	2.4792	3.3326	12	1.3333	2.8284	14	2.7308	3.2687	12	0.623	0.539
Resilience	1.8706	3.6345	13	1.6667	3.6398	13	3.5556	3.7786	9	2.0000	3.6515	13	1.011	0.368
Working with Diversity	1.3256	3.4315	14	1.6458	3.5996	14	2.3000	4.6200	11	0.4000	2.5981	14	1.486	0.232
One way ANOVA	F = 28.45, p < 0.0000 ***													

Source: Survey data (N = 82). * The mean difference is significant at the 0.05 level. ** Based on your perception as a graduating student, which of the following factors do you see as key or most important in securing an initial graduate-level job? (please rank in order of importance, i.e., 1–14, with 1 = most important). Scores were reversed scored out of 12, so that larger mean score represent the most important. *** The mean difference is significant at the 0.001 level.

8. Extent to Which Academic, Personal Management, and Teamwork Skills Are Fully Developed in Students at Graduation

The analysis here is in relation to research question 2. The three groups of students were asked to rate the extent to which different academic, personal management, and teamwork skills were perceived to be fully developed in new business graduates. Taking the lead from previous research, employability skills were disaggregated into three sub-constructs; *Academic Skills*, *Personal Management skills*, and *Teamwork skills* (Abas and Imam 2016; Ramirez and Bautista 2021; Conference Board of Canada 2013; Castillo 2014; Abas-Mastura et al. 2013). The respective groups of respondents were asked: *Which of the following skills do you perceive as fully developed in you, now that you have completed your degree program? (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)*. A higher mean score tends towards the 'strongly agree' with the extent to which a particular skill was fully developed in business students at the time of graduation. The results are shown in Tables 4–6.

Looking at the results given in Table 4, we can see that students 'agreed' that all the academic skills were fully developed in graduates at the time of graduation. Their mean scores for all the academic skills were all above 3.5, and therefore, could be rounded to 4 (4 = agree). In general, they agreed that critical and analytical thinking skills, business communication skills, continuous life-long learning, and competence in specialised subject area (major) were developed to a great extent in new business graduates at the time of recruitment. IT literacy skills and problem-solving skills involving mathematics (numerical skills) were rated the least developed academic skills by graduating students. However, the scores were still falling within the 'agree' part of the 5-point Likert scale. IT literacy and numerical skills are all considered key skills that are needed by the 21st century labour force. The mean difference across the different academic skills is not significant ($F = 0.559$, $p = 0.812$). The different 'mean scores' seems to be cluttered too close together, suggesting no statistical difference in ranking across the different skill types. In effect, we cannot say a lot about the relative rankings of the different skill types. The relative ranking in Table 4 may be true in the population or could have occurred by chance.

When we examine the mean scores for all the academic skills across the three departments, we can see that none fell in the 4.5–5 'mean' score range, which represented 'strongly agree' on whether specific skills were fully developed at the time of graduation (5 = strongly agree). This suggest that students from the three departments agreed that all academic skills were fully developed in graduating students, but that there was room for improvement in the level of academic skills students possessed at graduation. To determine if the mean scores given by students in three departments 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 group of respondents rated the various academic skills. This suggest that the students from the three departments had similar perceptions about the extent to which different academic skills were fully developed in business studies students at the time of graduation.

Table 4. Academic skills.

Skill Type	Totals			Accounting, Banking, and Finance			Computer Information Systems			Management and Marketing			One Way ANOVA	
	Mean **	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	F	Sig *
Critical and analytical thinking skills	4.1233	0.7984	1	4.0500	0.8756	1	3.7500	0.4629	4	4.3478	0.7141	1	1.979	0.146
Communication skills (i.e., understand, speak and write effectively for business purposes—business communication)	4.0411	0.8570	2	3.9500	0.8756	4	4.1250	0.9910	2	4.1304	0.8149	4	0.371	0.692
Awareness of the importance of continuous life-long learning	4.0411	0.9195	2	4.0000	1.0127	2	3.6250	0.7440	5	4.2174	0.7952	2	1.268	0.288
Competence in specialised subject area (i.e., your major)	4.0274	0.6661	3	3.9750	0.6597	3	3.7500	0.7071	4	4.1739	0.6503	3	1.378	0.259
Ability to apply specialised knowledge from various fields (i.e., organisational behaviour, marketing, management science, strategic management, etc.)	3.9726	0.7813	4	3.9000	0.8412	6	3.7500	0.8864	4	4.1739	0.6503	3	1.234	0.297
Academic Performance (i.e., passing exams, GPA)	3.9452	0.7798	5	3.9000	0.6718	6	4.0000	0.9258	3	3.9565	0.9283	6	0.073	0.930
Decision-making skills	3.9315	0.7697	6	3.8500	0.6998	7	3.6250	0.9161	5	4.1739	0.7777	3	2.104	0.130
IT literacy skills (i.e., use of computer technology, programs and information systems effectively)	3.9178	0.8621	7	3.7500	0.8697	8	4.5000	0.5345	1	4.0000	0.8528	5	2.858	0.064
Problem-solving skills involving mathematics (i.e., numeracy skills)	3.9178	0.8621	7	3.9250	0.7642	5	4.0000	1.0690	3	3.8261	0.9841	7	0.150	0.861
One way ANOVA	F = 0.559, p = 0.812													

Source: Survey data (N = 71). * The mean difference is significant at the 0.05 level. ** Which of the following skills do you perceive as fully developed in you, now that you have completed your degree program? (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).

Table 5. Personal management skills.

Skill Type	Totals			Accounting, Banking, and Finance			Computer Information Systems			Management and Marketing			One Way ANOVA	
	Mean **	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	F	Sig *
Self-reliant (i.e., work independently with minimal supervision)	4.4583	0.7108	1	4.5250	0.7157	1	4.2857	0.9512	2	4.3913	0.6564	2	0.470	0.627
Honesty, integrity, and personal ethics	4.3521	0.6990	2	4.3000	0.7232	3	4.2857	0.7559	2	4.4091	0.6661	1	0.186	0.831
Perseverance	4.2394	0.8696	3	4.3846	0.7819	2	3.5714	1.2724	5	4.1739	0.8341	6	2.763	0.070
Recognition and respect for diversity and individual differences	4.2222	0.6965	4	4.2250	0.6597	4	3.8571	0.8997	4	4.2609	0.6887	4	0.969	0.385
Accountability (i.e., responsible for your actions and the actions of your group, etc.)	4.2222	0.8429	4	4.1250	0.8825	5	4.5714	0.5345	1	4.3478	0.7141	3	1.210	0.305
Self-awareness (i.e., aware of strengths, weaknesses, etc.)	4.1389	0.7563	5	4.1000	0.7779	6	4.2857	0.7559	2	4.1739	0.7168	6	0.208	0.812
Conscientious (i.e., task-focused, self-motivated, etc.)	4.0972	0.7901	6	4.0250	0.8317	7	4.2857	0.4880	2	4.0870	0.7928	7	0.328	0.722
Positive attitude (i.e., 'can do' approach, show initiative, etc.)	4.0417	0.8125	7	4.0000	0.9058	9	4.0000	0.5774	3	4.0870	0.7332	7	0.085	0.918
Proactive (i.e., takes initiative)	4.0000	0.7872	8	4.0500	0.7828	8	3.5714	0.7868	5	4.0000	0.7977	8	1.104	0.337
Self-confidence	3.9167	0.8005	9	3.8500	0.8930	11	4.0000	0.5774	3	3.9565	0.7057	9	0.185	0.831
Creativity and innovative thinking skills (i.e., ability to identify and suggest new ideas)	3.8889	0.8317	10	3.9250	0.8286	10	3.5714	0.7868	5	3.8696	0.8689	10	0.530	0.591
Ability to plan and manage time	3.8611	1.0113	11	3.7500	1.0316	12	3.1429	1.2150	6	4.2174	0.7952	5	3.649	0.031
One way ANOVA	F = 3.991, p < 0.0000 ***													

Source: Survey data (N = 70). * The mean difference is significant at the 0.05 level. ** Which of the following skills do you perceive as fully developed in you, now that you have completed your degree program? (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). *** The mean difference is significant at the 0.001 level.

Table 6. Teamwork skills.

Skill Type	Totals		Accounting, Banking, and Finance			Computer Information Systems			Management and Marketing			One Way ANOVA		
	Mean **	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	F	Sig *
Respect the thoughts and opinions of group members	4.3973	0.6612	1	4.4000	0.5905	2	4.6250	0.5176	2	4.2609	0.8100	4	0.935	0.398
Contribute to group problem-solving	4.3836	0.6153	2	4.4000	0.6718	2	4.2500	0.4629	4	4.3913	0.5830	1	0.197	0.822
Ability to take responsibility of assigned tasks by the group	4.3699	0.6771	3	4.3000	0.6869	3	4.7500	0.4629	1	4.3478	0.7141	3	1.488	0.233
Plan and make decisions with others and support the outcomes	4.3472	0.6089	4	4.4103	0.5486	1	4.3750	0.5176	3	4.2174	0.7359	5	0.727	0.487
Leadership ability (i.e., can lead when appropriate)	4.2500	0.7459	5	4.2000	0.7232	4	4.0000	0.7559	5	4.3636	0.7895	2	0.761	0.471
Exercise 'give and take' to achieve group results	4.1667	0.8558	6	4.1500	0.8336	5	4.0000	1.3093	5	4.1818	0.7327	6	0.132	0.876
Team building skills	4.0137	0.7545	7	4.1000	0.7089	6	4.2500	0.7071	4	3.7391	0.8100	10	2.233	0.115
Mobilise the group for high performance	3.9306	0.7567	8	4.0000	0.7161	7	3.8750	0.8345	6	3.7727	0.8125	9	0.646	0.527
Ability to resolve and manage conflicts	3.9041	0.7847	9	3.7750	0.7675	9	4.3750	0.5176	3	3.9130	0.8482	7	2.025	0.140
Seek a team approach where appropriate (i.e., as opposed to a 'go it alone' approach)	3.8356	0.8977	10	3.8250	0.8439	8	3.6250	1.4079	7	3.8261	0.7777	8	0.176	0.839
One way ANOVA	F = 6.531, p < 0.0000 ***													

Source: Survey data (N = 70). * The mean difference is significant at the 0.05 level. ** Which of the following skills do you perceive as fully developed in you, now that you have completed your degree program? (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). *** The mean difference is significant at the 0.001 level.

For Personal management skills, the results are given in Table 5. Students rated self-reliant (i.e., work independently with minimal supervision); honesty, integrity, and personal ethics; perseverance; recognition and respect for diversity and individual differences; and accountability (i.e., responsible for your actions and the actions of your group, etc.) to be the most five developed personal management skills in new business graduates. The last two skills were tied at the rank of 4. Graduating students perceived creativity and innovative thinking skills (i.e., ability to identify and suggest new ideas), and 'ability to plan and manage time', to be the least developed personal management skill among new business graduates. However, the mean scores were still falling within the 'agree' point on the 5-point Likert scale. When we examine the mean scores for all the personal management skills across the three departments, we can see that none fell in the 4.5–5 mean score range, which represented 'strongly agree' on the Likert scale. In other words, none of the graduating students from the three departments 'strongly agreed' that the various personal management skills were fully developed in business graduates at the time of graduation. This suggests that students from all the three departments saw room for improvement in the level of personal management skills students possessed at graduation. The mean difference across the 12 personal management skills was significant ($F = 3.991$, $p < 0.0000$). This means that students ranked the relative importance of at least two skill types differently.

We again use one-way ANOVA results to examine the mean scores across the three groups of students from different departments, to see if there are any significant differences in their perceptions. For personal management skills, there were significant difference in the mean scores given by the three groups on 'ability to plan and manage time' ($F = 3.649$, $p = 0.031$). This means that there was a statistical difference in the perceptions of the three groups of students with respect to the extent to which this skill was fully developed in graduating students. However, the post hoc test could not identify where the difference lay. From the mean value, it seems the difference is between mean scores given by 'management & marketing' students ($m = 4.2174$) and Computer information systems students ($m = 3.1429$). It is this combination that gave the greatest mean difference. The mean scores on the perceptions of the three groups of students were not significantly different on the other 11 personal management skills. This suggests similarities in perceptions between the three groups of students, on the extent to which these 11 personal management skills were fully developed among graduating students.

In Table 6, we examine the extent to which teamwork skills were perceived to be fully developed in graduating students. The students agreed that respecting the thoughts and opinions of group members, contributing to group problem-solving, ability to take responsibility of assigned tasks by the group, and 'plan and make decisions with others and support the outcomes, were the four fully developed in new business graduates. All the three groups of students 'agreed' that the various teamwork skills were fully developed to some extent in graduating students. According to students, the 'ability to resolve and manage conflicts' and seeking a team approach where appropriate (i.e., as opposed to a 'go it alone' approach), were the least two developed teamwork skills among graduating students. Again, we can see that none of the mean scores fell in the 4.5–5 mean score range, which represented 'strongly agree'. This suggests that students saw room for improvement in the extent to which teamwork skills were fully developed in business students at the time of graduation. The ranking of the various teamwork skills was statistically different across the 10 different skill types ($F = 6.531$, $p < 0.0000$). This means that students ranked the relative importance of at least two skill types differently.

We again used one-way ANOVA to determine if there are significant differences in the mean scores given to each skill by the three groups of students. The results show that there were no significant differences in the way the three groups of students rated the extent to which different teamwork skills were developed among graduating students. This suggests that the three groups of students had similar perceptions about the extent to

which different teamwork skills were fully developed in business studies students at the time of graduation.

9. Teaching Methods and Pedagogy Approaches

The analysis here relates to research question 3. Students were asked: 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 important, i.e., 1–12, with 1 = most important). A higher mean score is associated with ‘most helpful’ method. The results are shown in Table 7. The results suggest a combination of lecture-centric teaching methods (i.e., lectures and assignments) and methods that encourage students’ experiential learning and interactive engagement in their own learning (i.e., pre-graduation employment, internship/Industry job placements, group case studies, industry/company guest speakers making presentations to students at the university, etc.). However, university career services and ‘job fairs and workshops’ were perceived as of relatively low importance in helping students develop employability skills. It is possible that industrial tours are not fully used due to their relative costs. The ranking of the various teamwork skills was statistically different across the 10 different skill types ($F = 7.785, p < 0.0000$). This means that students ranked the relative importance of at least two learning method types differently. Traditional assessments used to measure learning, such as tests, quizzes, and final examinations were seen as a relatively poor medium for building employability skills, probably partly because they are not interactive in nature and not routed in real workplace environments.

Table 7. Learning methods used to acquire employability skills (students’ perspectives).

Learning Methods	Mean *	Std. Deviation
Lectures	7.7761	3.5025
Assignments	6.6567	3.2732
Pre-graduation employment (i.e., work experience prior to graduation)	6.5821	3.6230
Internship/Industry job placements	5.8657	3.9539
Group Case Studies	5.6618	2.5836
Industry/Company guest speakers making presentations to students at the University	5.4179	3.4030
Reading materials when preparing for the final examination	5.3939	3.2671
Tests and quizzes	5.1791	3.2424
University Career services	4.7143	2.7670
Writing a “Reflective” Learning Portfolio (i.e., reflecting and writing about knowledge, skills, and capabilities acquired during a course, etc.)	4.5970	3.3442
Job fairs and workshops	4.5942	4.1985
Industry tours	4.0000	2.6912
One way ANOVA	F = 7.785, p < 0.0000 ***	

Source: Survey data (N = 66). * 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 important, i.e., 1–12, with 1 = most important). The scores were reverse scored out of 12, so that the larger mean values represent the most important. *** The mean difference is significant at the 0.001 level.

10. Factors Impacting on Perceived Employability

The analysis here relates to research question 4, that attempted to examine the effect of different factors on perceived employability. Our examinations of *perceived employability* are shown in Table 8. The results suggest that students had more confidence in their possessed skills in relation to the skills requirements of the labour market. Students seems to agree that their skills and abilities, ability of their degree to lead to a specific career, quality of academic work, high grades, and confidence to secure a graduate-level jobs were all fully developed as they approached their graduation. However, the state of the labour market had a

‘dragging effect’ on the chances of getting into a graduate level job. The last three indicators (i.e., labour demand for graduates at the present time, number of job opportunities in my chosen field, relative availability of job vacancies in the geographical area) were all scored ‘neutral’ on the 5-point Likert scale. This may partly be due to the effect of COVID-19 on global, national, and local economies, and consequently, labour markets. The larger point to make from this result is that graduate employability is affected not only by possession of in-demand technical and employability skills, but also by the state of the local labour market. The ranking of the various indicators for perceived employability was statistically different across the 10 different dimensions ($F = 11.040, p < 0.0000$). This means that students ranked the relative importance of at least two indicators/dimensions differently.

Table 8. Perceived employability.

Perceived Employability	Mean *	SD
The skills and abilities that I possess are what employers are looking for	4.0000	0.8975
I am confident that I will secure graduate-level employment within 6 months after graduation	3.8630	1.1219
My degree is seen as leading to a specific career that is generally perceived as highly desirable	3.8219	0.9331
I regard my academic work as high quality	3.7945	0.8158
I am confident of securing a graduate level job in my chosen field	3.7534	1.0643
I have achieved high grades in my studies	3.6712	0.8174
People in the career I am aiming for, are in high demand in the labour market	3.6438	1.0189
There is generally a strong demand for graduates at the present time	3.2740	1.1088
I can easily find out job opportunities in my chosen field	2.9863	1.0865
There are plenty of job vacancies in the geographical area where I am looking	2.8493	1.1386
One way ANOVA	F = 11.04, p < 0.0000 ***	

Source: Survey data (N = 73). * Which of the following skills do you perceive as fully developed in you, now that you have completed your degree program? (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). *** The mean difference is significant at the 0.001 level.

11. Discussion

11.1. Important Employability Skills

Graduating business students ranked communication skills, learning skills, positive attitudes and behaviours, and problem-solving skills as the top four most important employability skills that employers seek when recruiting new graduates for entry-level positions. Except for ‘learning skills’, the other three skills tend to be cited among the top demanded employability skills in the literature (Abbasi et al. 2018; Hossain et al. 2020; Osmani et al. 2019; Strong et al. 2020). Learning skills are very important for 21st century careers. Of the top 15 skills projected for 2025, ‘active learning and learning strategies’ were the second most important skill, just behind ‘analytical thinking and innovation’ (WEF 2020). Whittemore (2018) also identified learning-to-learn as the second most important soft skill in the face of a “vortex of uncertainty, ambiguity and volatility” (p. 4) due to unprecedented rapid technological changes and transformational forces brought about by globalisation. Positive attitudes and behaviours represent the growing importance of attributes and dispositions in graduate level employment. The CBI (2019) report observes that wider behaviours, dispositions, and attributes (i.e., positive attitudes, aptitude for work, self-directedness, flexibility, adaptability, career ownership, etc.) are a clear priority for employers when recruiting university, college, and school leavers—far ahead of degree classification or university attended. Some of the attitudes, behaviours, attributes, and dispositions expected in new graduates include proactivity, initiative, enthusiastic participation, willingness to learn, ability to work independently, flexibility, being responsible

and professional, self-confidence, resilience, and ambition (Caballero et al. 2020; Donald et al. 2019; Lisa et al. 2019; Tomlinson 2017b). Business students should prioritise the development of the abovementioned four skills, without necessarily neglecting the development of the other employability skills. Employers are looking for graduates with well-developed communication skills, with an aptitude for lifelong learning, have positive attitudes and behaviours, and are problem-solvers. For all the employability skills studied here, there was alignment in perceptions of their relative importance between the three groups of students in the three departments.

Pre-graduation work experience was ranked relatively low in importance, even though some literature suggests that employers view it as important in promoting work readiness (McMurray et al. 2016; Finch et al. 2013; Andrews and Higson 2008). It is possible that pre-graduation employment may not be aligned to graduate level jobs (i.e., it is short term and driven by the need to pay bills instead of alignment with future careers). Leadership skills were ranked even lower in importance. Some studies suggest that employers do not emphasise these skills when recruiting new graduates. Most graduates are not expected to assume leadership positions immediately after graduation (Succi and Canovi 2020; Strong et al. 2020). Resilience is increasing in importance, as the workplace becomes more complex with the use of advanced technology, becomes more demanding, faces rapid change, and experiences more competitive pressures. Changes in the workplace have increased the importance of psychological resources. Work intensity, stress, long working hours, multitasking, complex restructuring, work redesign, and increased competitive pressures have placed more demands on workers. Resilience is important to be able to survive in such demanding and dynamic working environments.

11.2. Academic, Personal Management, and Teamwork Skills

We discuss the results to research question 2. The study examined the extent to which different academic, personal management, and teamwork skills were perceived to be fully developed in new business graduates.

11.2.1. Academic Skills

There is indication that students were satisfied with the level of academic skills possessed by them as they near graduation. These skills are foundational, a base on which to acquire further skills, knowledge, behaviours, and attributes as new graduates progress in their initial employment. The mean scores given to all the academic skills by students were around 'agree' (4 = agree), with regard to how fully developed these skills were in them at the time of graduation (Table 4). The results may suggest that students were, on average, happy with the level of academic skills that may have a more direct link with technical-/discipline-specific knowledge. The result seems to be in line with some past findings that suggest that employers may sometimes be satisfied with graduates' discipline-specific knowledge, but still observe that the level of soft skills are below what the labour market expects (Mello et al. 2021; Abbasi et al. 2018; Monteiro et al. 2021). However, a degree qualification with good grades in mainly discipline-specific knowledge is no longer sufficient for career success in today's labour markets (Tomlinson 2008; Succi and Canovi 2020; Okolie et al. 2020; Hossain et al. 2020). It must also be noted that none of the academic skills were scored 'strongly agree' (5 = strongly agree) by students. Consequently, there is room for continuous improvement.

There was no statistical difference in perceptions of each academic skill type across the three student groups in the three departments. This means that the perceptions of the three groups of students were similar on the rating of the extent to which academic skills are fully developed in them at the point of graduation. Unlike all the other skills studied in this paper, the difference in scores across the nine different types of academic skills was not significant ($F = 0.559, p = 0.812$), suggesting that students probably gave themselves high scores across any indicators classified as 'academic skills'. Several studies have found

that students do overestimate their academic capabilities and competencies (Wallis 2021; McArthur et al. 2017; Koys et al. 2019).

11.2.2. Personal Management Skills

Personal management skills are skills, attributes, and behaviours that offer the greatest possibility for achievement and growth in the workplace and careers (Conference Board of Canada 2013). This includes demonstrating positive attitudes and behaviours, being responsible, and being adaptable. Personal characteristics, attitudes, attributes, and dispositions are becoming important in 21st century careers (CBI 2019). The most fully developed personal management skill is self-reliance (i.e., ability to work independently). Most students do a lot of independent work (i.e., individual assignments, reading, etc.) during their undergraduate studies. It is, therefore, not surprising that ability to work independently is viewed as one of the most developed personal management skills. The result support the view that employers prefer graduates who can work both in teams, as well as being independent thinkers and problem-solvers. The second most developed personal management skill—honesty, integrity, and personal ethics—represents the growing importance of business ethics since the 2008 global financial crisis. Perseverance is the third most developed personal management skill. Conceptually, perseverance represents attributes, such as persistent effort, attention, focus, and commitment towards useful long-term goals, irrespective of challenges and difficulties encountered along the way (Datu 2021; Lucas and Hanson 2016). Similarly, the SRI International (2018) sees perseverance as representing a “continuation of a goal-oriented action in spite of obstacles, difficulties, or discouragement” (p. 27). Completing a business degree is challenging, partly because students do a diverse set of courses. Perseverance is particularly important for students who take full time studies in addition to other multiple responsibilities (i.e., work, family, extracurricular activities, etc.). In fourth position is personal accountability (i.e., responsibility for your actions and the actions of your group). One area of concern may be the perceived relative low development of ‘creativity and innovative thinking skills’ (i.e., rated 10th) in graduating business students. However, the mean score could still be rounded upward to ‘agree’ (4 = agree) on the Likert scale.

The differences between the three student groups on the extent to which different personal management skills were perceived to be fully developed in them, is only significant for ‘ability to plan and manage time’. Universities are self-regulating environments in which planning and managing time is critically important to achieving academic performance goals. Effective time management skills have been associated with self-regulating learning, academic achievement, lower student anxiety and stress, increased creativity, self-efficacy, and student satisfaction (Ghiasvand et al. 2017; Rathnayake 2021; Donnelly et al. 2019; Wolters and Brady 2021). The significant difference in ‘mean’ scores is probably between ‘management and marketing’ versus ‘Computer information systems’ students. A study in the US that examined the time management practices and skills of accounting, business, and information systems majors found that there was a significant difference between female and male students (Powell et al. 2020). Female students, in general, had better time management skills than male students. That reflected in the difference in the development of time management skills across majors, dependent on whether the degree programs’ enrolment was dominated by male or female students. Time management skills and practices were lower in programs that tended to be dominated by male students (i.e., computer information systems or computer sciences) (Powell et al. 2020). In fact, of all the personal management skills shown in Table 5, ‘ability to plan and manage time’ was the only skill-type which had a mean score of ‘neutral’ (3 = neutral), scored by computer information systems students. Discussion with a senior academic in computer information systems department confirmed that the final year enrolment was nearly evenly divided between male and female students. This is a deviation from typical enrolments in other business programs at the institution, where female students dominate gender compositions. In other words, even though male students are evenly enrolled in the computer information

system degree, it still represents a high percentage compared to other business programs where female enrolment dominates. This may partly explain the lower development of time management skills in computer information systems (i.e., mainly due to relatively high enrolment of male students) relative to enrolment in management and marketing degree program.

11.2.3. Teamwork Skills

Most employees today spend an increasing amount of time working in work groups, teams, and projects. About 95% of U.S workers are said to work in more than one team (Center for Creative Leadership 2015). The increased technological complexities of problems that companies must solve have meant that workers must develop good teamwork skills to be effective. Students agreed that all the teamwork skills were well developed at the time of graduation. All the teamwork skills were rated close to 4 on the 5-point Likert scale (4 = agree).

Teamwork skills are important in collaborating with others, working with people from different backgrounds, developing cooperative work relationships, contributing to team discussions, and enhances an awareness of productive interdependence with others (Osmani et al. 2015, 2017; Kornelakis and Petrakaki 2020). In general, “employers today are looking for workers who get along well with other people, who are able to work as part of a team, who are dependable and reliable, who are eager to learn and who have good written and oral communication” (Kenayathulla et al. 2019, p. 100).

A poll by the Association of American Colleges and Universities (AACU) in 2009 found that 71% of employers wanted increased teamwork and interpersonal skills in new graduates (Hughes and Jones 2011). An annual Job Outlook Survey by the NACE (2015) found that teamwork skills were one of the two most important demanded skills by employers. A NACE (2012) survey found that nearly 80% of employers surveyed indicated the importance of ability to work in a team as a highly desired attribute for new recruits. The *Job Outlook 2017 Survey* by NACE found that about 78% of survey respondents indicated that teamwork was their top non-technical skill required in graduating students (Marasi 2019). Several benefits have been identified with teamwork, including efficient work, better decision making, enhanced critical thinking and problem-solving capacity, knowledge sharing, better collaboration and communication, self-monitoring, improved creativity and innovation, increased individual and team learning, flexibility among the workforce, networks, stronger focus on common organisational goals, improved motivation and engagement, social support among workers, trust and psychological safety, self-efficacy, better conflict management, accountability, high synergy and positive interdependence, and stronger working relationships among team members (Alghamdi and Bach 2018; Hogan and Young 2020; Betta 2016; Manegold et al. 2020). In addition, work teams are better positioned to solve complex, poorly defined, cross-disciplinary problems, as well as manage unexpected situations (Hogan and Young 2020). The demand for teamwork skill in the workplace translates into high demand for the same skills in university graduates. There is growing expectations that HEIs should focus on developing such highly demanded skill in graduates. In fact, working in student teams is central to learning and job readiness in most business schools (Betta 2016). However, employers are still complaining that new graduates do not have fully developed teamwork skills (King and King 2021). Part of the problem is the challenges of applying effective teamwork pedagogies in HEIs (Wilson et al. 2018). Merely putting students to work in group assignments and team projects does not produce all the teamwork skills that employers are looking for in new graduates.

Ability to resolve and manage conflicts is very important, but was ranked relatively low. However, the mean rating could still be rounded upward to ‘agree’ on the 5-point Likert scale (4 = agree). There were no significant differences between the three groups of students in the three departments, on their perceptions about the extent to which the different teamwork skills were fully developed in them at the time of graduation.

12. Learning Methods

The surveyed graduating students perceived lectures and assignments as the two most important learning methods used to acquire employability skills. The two learning methods are largely teacher driven. A study by [Mohiuddin et al. \(2020\)](#) surveyed the literature on teaching methods used in higher education institutions, with a focus on four disciplines: Arts and Humanities, Medical Education, Science and Engineering, and Social Sciences. Their study found that over 110 teaching methods are used in higher education institutions across the globe. However, it was only lecturing that was common to all the above four disciplines covered in the study. Lecturing is a time-honoured method that has been used to transmit concepts, theories, and technical knowledge to students in HEIs for a very long time ([Mohiuddin et al. 2020](#); [Virtanen and Tynjala 2019](#)). A study of learning designs and teaching methods in six Australian universities found that a broad range were being employed, but there was still a bias towards traditional discipline stereo-type methods (i.e., lectures, in-class discussion, etc.) ([Cameron 2017](#)). However, one of the major limitations of lectures is that they do not automatically promote student active participation in their own learning nor enhance self-directed learning, experiential learning, or critical reflexivity in large classes ([Budanceva et al. 2016](#); [Virtanen and Tynjala 2019](#)). In most studies where students compare the effectiveness of lecturing to other teaching/learning methods (i.e., case methods, flipped classrooms, presentations, problem-based learning, group projects, journal articles, skill video, digital media, etc.), lectures tend to perform relatively poor compared to what are described as student-centred learning approaches. [Farashahi and Tajeddin \(2018\)](#) compared students' perceptions on the relative effectiveness of three common teaching methods—simulation, case study, and lectures—in developing problem-solving skills, interpersonal skills, and self-awareness. They found that simulation and case study were similar but more effective than lectures in developing problem-solving skills. Regarding developing interpersonal skills and self-awareness, their order of effectiveness was simulation, case study, and lectures, respectively. [Osmani et al. \(2018\)](#) did an experiment in which they combined traditional teaching methods (i.e., lecturers, textbook, case-study workshops) with flipped classrooms, presentations, problem-based learning, and collaborative learning. They found that classroom-based teaching and learning techniques used on MIS degree programs were failing to develop graduate skills, such as time management, critical thinking, and ability to conduct research. [Virtanen and Tynjala \(2019\)](#) also found that traditional university teaching methods (i.e., lecturing, reading, and working alone) were negatively related to the learning of generic skills, such as problem solving, creativity, ability to operate in new situations, and solving occupational problems. It is, therefore, important for faculty to realise the relative strengths and weaknesses of traditional teaching methods.

The overall picture from our results, however, is much more optimistic. Most graduating students perceived a combination of lectures, assignments, and collaborative dialogic student-centred learning techniques as important in facilitating their acquisition of employability skills. The finding is in line with most current literature that advocate for integrating different teaching methods and pedagogies needed to develop a wide variety of employability skills ([Farashahi and Tajeddin 2018](#); [Virtanen and Tynjala 2019](#); [Longmore et al. 2018](#); [Osmani et al. 2018](#)).

The fact that careers services were not too prominent in students' acquisition of employability skills is both a concern but not surprising. Studies have shown that a good portion of students have traditionally not used voluntary career services within universities. A national survey of more than 30,000 U.S. college and university students found that about 40% of students had not used any of the career services available online or in person ([Gallup Inc. 2017](#)). A survey by [Chin et al. \(2018\)](#) found that about 29% of surveyed students were unaware of career services, and consequently, had never sought any help from such university centres. A survey of 258 undergraduate psychology students at one UK university psychology department found lower level of engagement with career services ([Bradley et al. 2021](#)). Less than 50% of surveyed students had attended any career

services event. Students' low engagement with career services has also been observed in other studies, especially if students have to use such services on a voluntary basis (Donald et al. 2019; Jackson and Edgar 2019). Such low engagement often results in late career exploration by some students (Monteiro et al. 2021). Moreover, students who need career services the most (i.e., students from low social-economic status, as well as minority, rural, and disabled students) tend not to use careers services more frequently due to lack of time, as well as work and other commitments (Andrewartha and Harvey 2017; Amoroso and Burke 2018; Jackson and Edgar 2019). However, those students who engage with the careers services often find them *helpful* with their traditional roles (i.e., help with CV preparation, application letters, interview preparations, career counselling, job search, processing of internships, and arranging job fairs) (Conroy et al. 2020; Chin et al. 2018). Recent efforts by universities to focus on raising graduate employability as a university objective has seen expanded profile of career services in most HEIs. Their mandate has also gone beyond helping students with smoothing school-to-work transitions, to helping students develop a variety of competencies they will need to pursue successful long-term careers in more dynamic labour markets. With the expanded new mission, career services staff members are now involved in providing evidence-based research on the evolution of labour markets in different industries, providing career building and management skills to students, building multipurpose partnerships with employers and other stakeholders, and teaching embedded career-related education in courses offered jointly by academic staff in schools/faculties/departments (J. L. Brown et al. 2019).

Further research is needed to understand why career services, job fairs, and workshops were not seen by graduating students as being prominent in facilitating the enhancement of their employability skills. For example, is it possible that students see activities and programs offered by university career services as no more than places where employers are looking for new graduate employees? Are students seeing career services as a place for expanding their social and psychological capital or enhancing their understanding of the labour market? In addition, students are often focused on assessed activities. If some activities offered by the career services are seen as optional, then the uptake from students who are time-starved will be low. Capacities of careers services—in terms of staff/student ratios—may also need to be examined.

13. Perceived Employability at Graduation

From our results, we can see that students agreed that they had confidence in their academic performance, and the fact that their skills and abilities were to a certain extent fully developed at graduation. They also agreed that their respective qualifications had credibility and are demanded in their specific fields. However, the labour market's demand for new graduates had a negative impact on their employability. The three indicators used to capture graduate labour market demand (i.e., the last three items in Table 8) where all scored 'neutral' on the 5-point Likert scale. This may partly be due to the impact of COVID-19, which has depressed global economic activities at the time of the study. Nevertheless, our results emphasise the reality that graduate employability is partially affected by external factors that are not related to the students' knowledge, skills, abilities, and attributes.

A study that surveyed students in Turkish universities in Istanbul found that the external labour market demand had the greatest impact on perceived employability, ahead of generic skills, academic performance, personal factors, and work experience (Ergun and Sesen 2021). A similar study examined perceived employability of undergraduate students at a South African university. The study found that surveyed students were confident of their internal employability (i.e., their skills, knowledge, and abilities), but were less confident about finding employment opportunities in the external labour market (Botha 2021). This was partly explained by the aftermath of the global economic crisis that started in 2008 and compounded by the impact of COVID-19. The two factors, in addition to other macroeconomic factors, had a negative effect on graduate-level job creation in South

Africa. In addition, job creation lagged the number of graduates being produced by the whole university system in the country, resulting in over-supply and stiff competition in the graduate labour market—especially for those graduates who did not have work experience. The main takeaway from the above results is that graduate employability can be affected by external factors that are outside the control of the university system (Behle 2020).

14. Limitations

Larger sample sizes could be used in future research, by including final-year students from more than two semesters. This research could be replicated at other HEIs/colleges/faculties/departments in the Caribbean and elsewhere. Future research could include other factors that affect graduate employability but were not explicitly covered in this study (i.e., issues of balancing labour demand/supply, cultural/social/psychological capitals, extra-curricular activities, impact of discipline specific knowledge, institutional branding, company recruitment policies, role of personal factors, impact of the state of the local and global economy, etc.). While it is important to examine students' perceptions, studies have shown that students—especially Millennials and Generation Z—tend to overstate their capabilities. Hence, there is a need to do follow-up surveys on employers' views on graduate employability. A more realistic picture may be developed when students' views are triangulated with the views of employers. Future research should, therefore, conduct follow-up surveys on employers' views on graduate employability in the Caribbean.

15. Implications for Theory and Practice

Based on the above analyses and discussion, the following empirical/theoretical implications are outlined:

- i. In addition to the usual list of most important employability skills frequently cited in past research—communication skills, positive attitudes and behaviours, and problem-solving—Millennials and Generation Z students are aware of the critical importance of 'learning skills' for recruitment to entry-level positions. In an era of fast-paced technological change, rapid knowledge obsolescence, and shortened lifespan of job skills, learning agility and proactive lifelong learning are critical to long-term graduate employability. Change is the only constant. Past learning is not a perfect predictor of future success. "What you know doesn't matter as much as your ability to learn new things and apply that learning to new scenarios and environments" (Morgan 2014, as cited in, Richardson et al. 2020, p. 5). Our results support past findings that suggest that these new generational cohorts of workers value career development prospects the most, when selecting an employer, which may have implications for recruitment and retention strategies of organisations (Egerova et al. 2021). They are more willing to move on quickly if their career development, good working environment, and other needs they care about are not met (Benitez-Marquez et al. 2022). In general, developing a passion and ability for self-regulated, self-directed lifelong learning is critical to lifelong employability. Being able to continuously learn throughout one's career span is also foundational to the development or acquisition of all other soft/generic skills.
- ii. Graduating business students tended to have a high view of their competences on various dimensions of academic skills at the point of graduation. Graduating students seem to partially link graduate employability to developed skills that have a more direct link to program content knowledge or discipline-specific knowledge. HEIs' approach to developing students' soft skills must take this perspective into consideration. It is probably more effective to develop some of the employability skills if they are embedded into the curriculum.
- iii. While business students were satisfied with the level of personal management skills they had developed by the time of graduation, there seems to be some room for improving their level of 'creativity and innovative skills'. However, the development of such skills is complex, and requires much more than business students'

exposure to creativity and innovation techniques or formulaic approaches (Sosa and Kayrouz 2020). These skills will increasingly become more important and play a crucial role in sustaining students' employability in the future world of work. Equally important, the demand for such skills is less susceptible to substitution by current and future automation and Artificial Intelligence (AI).

- iv. If university career services are offered to students on a voluntary basis, they often attract low engagement among students, especially from time-starved students, who in most cases might need such services much more (i.e., low social economic status, minorities, women, rural students, and disabled students). Depending on the situation of each individual institution, HEIs may need to consider global trends where career services profile has been raised within institutions, in line with increased institutional focus on graduate employability. Career services are increasingly being co-located in colleges, faculties, schools, or departments. They work alongside academics to embed and co-deliver career development training within semi-compulsory modules. Moreover, their mission has been expanded to address issues associated with long-term graduate employability (i.e., undertake research on evolution of labour markets in different sectors and industries, build multidimensional partnerships with various relevant stakeholders, offer career building and management skills, etc.) (J. L. Brown et al. 2019). In cases where HEIs expanded the mission of career services, their capabilities to effectively meet expanded mission may need to be looked at, including manning levels relative to the student population.
- v. A combination of traditional teaching methods (i.e., lectures, class discussion, reading and working alone, etc.) and student-centred learning methods and innovative pedagogies are needed to develop a wide range of in-demand employability skills in graduates. However, studies in Australia, Europe, Canada, and the USA suggests that significant staff training is needed to achieve optimal effectiveness in a mix of innovative pedagogies, and to develop the 'right' portfolio of learning methods more tailored to different disciplines (Hora et al. 2015; Lorange and Thomas 2016).
- vi. The study confirms the role of external factors—labour market demand—in influencing *perceived employability*. Regarding long-term graduate employability, HEIs are just one of the many contributors, though very important ones. A more holistic approach to developing graduate employability will need the contributions of other stakeholders (i.e., employers, government, alumni, industry associations, parents, etc.) and consideration of other none 'skill-based' factors.

The following are implications for managerial practices for organisations. They are divided into three groups; pre-graduation, graduation, and post-graduation.

- i. Managers in organisations or industry need to be involved in the development of employability skills of business students long before they reach the time for graduation. This can be done proactively through visits to universities as guest speakers, part-time lecturers, and serving on university industry advisory panels. This may require various forms of partnerships with HEIs. During these encounters with business students, future employers can outline their prioritised skills they are looking for when employing fresh graduates. Different employers are likely to have slightly different emphasis on which skills are relatively important. This may help students correct any wrong perceptions they might have about employers' skill demands.
- ii. At graduation, future employers need to be cognisant of expectations of graduating students, especially those of Millennials and Generation Z. In reference to this study, that means paying attention to providing learning and career development opportunities as these cohorts join the workforce. Providing such opportunities could be part of the retention strategies. The fact that Millennials and Generation Z students value 'learning skills' means that organisations can use this as fertile ground when they recruit them as new workers, and support both their career

- development and organisational learning. Organisational learning, in turn, could have a positive impact on long-term competitiveness.
- iii. Once employed, these new graduate recruits will still need continued support as they embark on long and turbulent career journeys. As they climb the various leadership ladders across different companies, employers, and sectors, their discipline specific knowledge will increasingly become less important. Their generic/soft skills will increasingly become more important. At the top of organisations, soft skills are the most important, even in high-tech companies. Efforts need to be made by employers to facilitate the development of different types of soft skills. Millennials and Generation Z will increasingly become the dominant group in the workforce in twenty or more years from now.

16. Conclusions

The paper points out the importance of capturing students' views about their employability at the time of graduation. Such student insight—even with its flaws—can be one of the many inputs when HEIs are developing an institutional policy on graduate employability. The perceptions that learning skills are the second most important employability skills used by employers when recruiting graduates for entry-level positions is supported by recent research. Learning does not stop at undergraduate graduation. Learning to learn, willingness to learn, learning mindset, growth mindset, lifelong learning, active learning, learning agility, self-regulated learning, and self-directed learning are just some of the many terms used to capture the need to continuously learn, adapt, and grow throughout one's career span. Learning skills (as well as other soft skills) promote mobility across jobs and sectors in dynamic labour markets and is the only way to guarantee one's long-term employability in the face of continuous restructuring and automation of jobs. Not all relevant soft skills can be developed in the classroom or at the university. Some of the soft skills required to manage volatile labour markets will be developed and refined long after the student has left university. All students—including those who might hate or are tired of school—need to be encouraged to develop a passion and drive for continuous skilling, reskilling, and upskilling throughout their career span. Long-term employability is much more than just in-demand skill acquisition; it is about being able to flexibly adapt and proactively remain relevant in dynamic and evolving labour markets.

A combination of traditional teaching and student-centred learning methods and integrative innovative pedagogies are needed to develop a wide spectrum of soft skills needed by graduates to succeed in the workplace. It is up to each faculty/college/school/department to determine the 'right' portfolio of learning methods necessary to develop a targeted mix of soft skills appropriate for each discipline. The literature suggests learning methods that promote active learning, experimentation, real-world problem-solving, project- and team-based collaborative learning, reflexivity, and constructivist and dialogic approaches are more likely to be effective in developing soft skills relevant to the workplace. Efforts should also be made to ensure that the learning experiences are operating at the intersection of theory and practice. Achieving such aspirations is not a short-term objective. It requires experimentation, incremental innovation, organisational learning, and embarking on a continuous improvement journey with no destination. Developing graduate employability is a complex undertaking requiring multiple approaches and inputs from various stakeholders (i.e., students, employers, governments, employer associations, alumni, parents, etc.). At an institutional level, the contribution of career services in coordination with schools/faculties/departments will increasingly play a pivotal role in helping HEIs focus their effort on enhancing graduate employability. Other factors and contributions towards enhancing graduate employability that are outside the control of HEIs need to be addressed. Our study confirms that the strength of labour market demand does affect students' perceived employability.

At a conceptual level, students' perceptions must be included as one of the 'partners' in the co-construction of HEIs policy on graduate employability. Students' role in higher

education has evolved from being passive recipients of content knowledge, to ‘market consumers’, to being active partners in their own learning and knowledge construction. Not all students’ perceptions will be in line with workplace reality or what employers expects, but such information is still an important and relevant data point.

It is important to emphasise that major technological advances in Artificial intelligence (AI), advanced robotics, 5G technologies, Internet of Things (IoT), Big data analytics, bioengineering, nano technology, virtual and augmented reality, mobile and cloud-based data processing, machine learning, and Blockchain (to name a few) will have a revolutionary impact on how work is restructured and the future demand for skills, including in the developing world. The changes to job structures and skill requirements will have a wide-ranging impact on graduate employability. As a result, universities should not only be focusing on offering educational programs that ensure work-ready graduates, but must also be developing *future-ready* graduates. Higher education systems both in the developed and developing world will need to be reimaged to meet the demands of complex, dynamic, and continuously evolving labour markets.

Author Contributions: Conceptualization, W.M., M.B.M.-B. and S.A.Q.; methodology, W.M. and M.B.M.-B.; software, W.M. and M.B.M.-B.; validation, W.M., M.B.M.-B. and R.M.; formal analysis, W.M.; investigation, W.M., M.B.M.-B. and S.A.Q.; resources, W.M. and M.B.M.-B.; data curation, W.M., M.B.M.-B. and S.A.Q.; writing—original draft preparation, W.M. and R.M.; writing—review and editing, W.M., M.B.M.-B. and R.M.; visualization, W.M., M.B.M.-B. and R.M.; supervision, W.M. and M.B.M.-B.; project administration, W.M. and M.B.M.-B.; funding acquisition, None. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The University of The Bahamas IRB approved the study. The IRB number 202110 granted the ethics approval associated with the study on 24 June 2021.

Informed Consent Statement: The respondents to the online survey had to provide informed consent before they could access the online survey. They could not access the survey without informed consent.

Data Availability Statement: The data is available from the corresponding author upon request and upon fulfilling confidentiality requirements.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Abas, Maripaz C., and Ombra A. Imam. 2016. Graduates’ Competence on Employability Skills and Job Performance. *International Journal of Evaluation and Research in Education* 5: 119–25. [CrossRef]
- Abas-Mastura, Maripaz, Ombra A. Imam, and Shuki Osman. 2013. Employability Skills and Task Performance of Employees in Government Sector. *International Journal of Humanities and Social Science* 3: 150–62.
- Abbas, Jawad, and Mustafa Sagsan. 2020. Identification of key employability attributes and evaluation of university graduates’ performance: Investment development and validation. *Higher Education, Skills and Work-Based Learning* 10: 449–66. [CrossRef]
- Abbasi, Farhad Khurshid, Amjad Ali, and Naila Bibi. 2018. Analysis of skill gap for business graduates: Managerial perspective from banking industry. *Education + Training* 60: 354–67. [CrossRef]
- Alghamdi, Abdulmajeed, and Christian Bach. 2018. Developing Teamwork at Workplace. *International Journal of Business and Management Invention* 7: 28–40.
- Amoroso, Lisa M., and Molly Burke. 2018. Developing career-ready business students: Three curriculum models. *Journal of Education for Business* 93: 420–29. [CrossRef]
- Andrewartha, Lisa, and Andrew Harvey. 2017. Student voice and influence on employability in Australian higher education. *Journal of Teaching and Learning for Graduate Employability* 8: 202–14. [CrossRef]
- Andrews, Jane, and Helen Higson. 2008. Graduate Employability, ‘Soft Skills’ Versus ‘Hard’ Business Knowledge: A European Study. *Higher Education in Europe* 33: 411–22. [CrossRef]
- Anthony, Suzanne, and Benjamin Garner. 2016. Teaching Soft Skills to Business Students: An Analysis of Multiple Pedagogical Methods. *Business and Professional Communication Quarterly* 79: 360–70. [CrossRef]
- Atfield, Gaby, and Kate Purcell. 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. Coventry: University of Warwick.

- Australian Business Deans Council (ABDC). 2017. *Skilling Business Graduates for an Uncertain Future*. Deakin: Australia Business Deans Council.
- Avolio, Beatrice E., Jorge B. Benzaquen, and Carolina Pretell. 2019. Global Challenges for Business Education and the New Educational Agenda: Graduate Attributes and Teaching Methods. *e-Journal of Business Education & Scholarship of Teaching* 13: 80–99.
- Ayoubi, Rami M., Kahla Alzarif, and Bayan Khalifa. 2017. The employability skills of business graduates in Syria: Do policy makers and employers speak the same language? *Education + Training* 59: 61–75. [CrossRef]
- Behle, Heike. 2020. Students' and graduates' employability. A framework to classify and measure employability gain. *Policy Reviews in Higher Education* 4: 105–30. [CrossRef]
- Benitez-Marquez, Maria Dolores, Eva Maria Sanchez-Teba, Guillermo Bermudez-Gonzalez, and Emma Sofia Nunez-Rydman. 2022. Generation Z within the Workforce and in the Workplace: A Bibliometric Analysis. *Frontiers in Psychology* 12: 736820. [CrossRef] [PubMed]
- Bennett, Dawn. 2018. *Embedding EmployABILITY Thinking across Higher Education*. Canberra: Australian Government Department of Education and Training. Available online: <https://developingemployability.edu.au/wp-content/uploads/2018/10/Developing-EmployABILITY-final-fellowship-report.pdf> (accessed on 4 March 2020).
- Bennett, Dawn, Elizabeth Knight, Colin Jevons, and Subramaniam Ananthram. 2020. Business students' thinking about their studies and future careers. *Perspectives: Policy and Practice in Higher Education* 24: 96–101. [CrossRef]
- Betta, Michela. 2016. Self and others in team-based learning: Acquiring teamwork skills for business. *Journal of Education for Business* 91: 69–74. [CrossRef]
- Bloom, Michael R., and Kurtis G. Kitagawa. 1999. *Understanding Employability Skills, 257–299 Report*. Ottawa: The Conference Board of Canada.
- Botha, Doret. 2021. Self-perceived employability among undergraduate students at a South African university. *SA Journal of Human Resource Management* 19: a1685. [CrossRef]
- Bradley, Alex, Martyn Quigley, and Kate Bailey. 2021. How well are students engaging with the careers services at university? *Studies in Higher Education* 46: 663–76. [CrossRef]
- Bridgstock, Ruth. 2009. The graduate attributes we're overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development* 28: 31–44.
- Brown, Jason L., Michael Healy, Tessa McCredie, and Peter McIlveen. 2019. Career services in Australian higher education: Aligning the training of practitioners to contemporary practice. *Journal of Higher Education Policy and Management* 41: 518–33. [CrossRef]
- Brown, Phillip, Hugh Lauder, and David Aston. 2011. *The Global Auction: The Broken Promises of Education, Jobs and Incomes*. Oxford: Oxford University Press.
- Budanceva, Jelena, Zane Veidenberga, Jelena Titko, and Jekaterina Bierne. 2016. *Business and Management Students Perception of Teaching Methods, Whither Our Economies—2016*. Vilnius: Mykolas Romeris University.
- Caballero, Gloria, Paula Alvarez-Gonzalez, and Maria Jesus Lopez-Miguens. 2020. How to promote the employability capital of university students? Developing and validating scales. *Studies in Higher Education* 45: 2634–52. [CrossRef]
- Calvo, Juan Carlos Ayala, and Guadalupe Manzano Garcia. 2021. The influence of psychological capital on graduates' perception of employability: The mediating role of employability skills. *Higher Education Research & Development* 40: 293–308.
- Cameron, Leanne. 2017. How learning designs, teaching methods and activities differ by discipline in Australian universities. *Journal of Learning Design* 10: 69–84. [CrossRef]
- Campbell, Mathew, Berni Cooper, Caroline Rueckert, and Judith Smith. 2019. Reimagining student employability: A case study of policy and practice transformation. *Journal of Higher Education Policy and Management* 41: 500–17. [CrossRef]
- Campbell, Throy Alexander. 2018. A phenomenological study of business graduates' employment experiences in a changing economy. *Journal for Labour Market Research* 52: 1–10. [CrossRef] [PubMed]
- Castillo, Romer C. 2014. Employability Skills of Graduating Business and Accounting Students of Batangas State University. *International Journal of Sciences: Basic and Applied Research* 13: 303–15.
- Cavanagh, Jillian, Mary Burston, Amie Southcombe, and Tim Bartram. 2015. Contributing to graduate-centered understanding of work readiness: An exploratory study of Australian undergraduate students' perceptions of their employability. *International Journal of Management Education* 13: 278–88.
- Center for Creative Leadership. 2015. The State of Teams. Available online: <https://cclinnovation.org/wp-content/uploads/2020/03/stateofteams.pdf> (accessed on 7 April 2021).
- Chamorro-Premuzic, Tomas, Adriane Arteché, Andrew J. Bremner, Corina Greven, and Adrian Furnham. 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: 221–41. [CrossRef]
- Cheng, Ming, Olalekan Adekola, JoClarisse Albia, and Sanfa Cai. 2021. Employability in higher education: A review of key stakeholders' perspectives. *Higher Education Evaluation and Development* 16: 16–31. [CrossRef]
- Chhinzer, Nita, and Anna Maria Russo. 2018. An exploration of employer perceptions of graduate student employability. *Education + Training* 60: 104–20. [CrossRef]
- Chin, Mun Yuk, Chelsea A. Blackburn Cohen, and Matthew T. Hora. 2018. *The Role of Career Services Programs and Sociocultural Factors in Student Career Development*. WCER Working Paper No. 2018-8. Madison: University of Wisconsin-Madison.

- Clarke, Marilyn. 2018. Rethinking graduate employability: The role of capital, individual attributes and context. *Studies in Higher Education* 43: 1923–37. [CrossRef]
- Confederation of British Industry (CBI). 2011. *Building for Grow Business: Business Priorities for Education and Skills—Education and Skills Survey 2011*. London: CBI.
- Confederation of British Industry (CBI). 2019. *Education and Learning for the Modern World: CBI/Pearson Education and Skills Survey Report 2019*. London: CBI/Pearson.
- Conference Board of Canada. 2013. Employability Skills 2000+, the Conference Board of Canada. Available online: <https://www.conferenceboard.ca/edu/employability-skills.aspx> (accessed on 24 October 2020).
- Conroy, Jessica C., Karen E. Stamm, Rory A. Pfund, Peggy Christidis, Robin Hailstorks, and John C. Norcross. 2020. Career Assistance from Psychology Programs and Career Services: Who Is Preparing Psychology Students? *Teaching of Psychology* 49: 1–9. [CrossRef]
- Datu, Jesus Alfonso D. 2021. Beyond Passion and Perseverance: Review and Future Research Initiatives on the Science of Grit. *Frontiers in Psychology* 11: 545526. [CrossRef] [PubMed]
- De Vos, Ans, Sofie Jacobs, and Marijke Verbruggen. 2021. Career transitions and Employability. *Journal of Vocational Behavior* 126: 103475. [CrossRef]
- Deloitte. 2020. *The Upskilling Imperative: Building a Future-Ready Workforce for the AL Age*. Toronto: Deloitte Development LLC.
- Divan, Aysha, and Stephanie McBurney. 2016. Understanding how students manage their employability. *New Directions in the Teaching of Physical Sciences* 11: 1–10. [CrossRef]
- Dolce, Valentina, Federica Emanuel, Maurizio Cisi, and Chiara Ghislieri. 2020. The soft skills of accounting graduates: Perceptions versus expectations. *Accounting Education* 29: 57–76. [CrossRef]
- Donald, William E., Yehuda Baruch, and Melanie Ashleigh. 2019. The undergraduate self-perception of employability: Human capital, careers advice, and career ownership. *Studies in Higher Education* 44: 559–614. [CrossRef]
- Donnelly, David P., Stacy E. Kovar, and Dann G. Fisher. 2019. The Mediating Effects of Time Management on Accounting Students' Perception of Time Pressure, Satisfaction with the Major, and Academic performance. *Journal of Accounting and Finance* 19: 46–59. [CrossRef]
- Egerova, Dana, Jiri Kutlak, and Ludvik Eger. 2021. Millennial Job Seekers' Expectations: How do companies respond? *Economics & Sociology* 14: 46–60.
- Erdsiek, Daniel. 2017. *Dynamics of Overqualification: Evidence from the Early Career of Graduates, Discussion Paper No. 17-020*. Mannheim: ZEW—Centre for European Economic Research.
- Ergun, Meric, and Harun Sesen. 2021. A Comprehensive study on university students' perceived employability: Comparative effects of Personal and Contextual Factors. *SAGE Open* 11: 21582440211036105. [CrossRef]
- Fakunle, Omolabake, and Helen Higson. 2021. Interrogating theoretical and empirical approaches to employability in different global regions. *Higher Education Quarterly* 75: 525–34. [CrossRef]
- Farashahi, Mehdi, and Mahdi Tajeddin. 2018. Effectiveness of teaching methods in business education: A comparison study on the learning outcomes of lectures, case studies and simulations. *The International Journal of Management Education* 16: 131–42. [CrossRef]
- Fazio, Maria Victoria, and Etoile Pinder. 2014. *In Pursuit of Employable Skills: Understanding Employers' Demands*. Washington, DC: Inter-American Development Bank (IDB).
- Finch, David J., Leah K. Hamilton, Riley Baldwin, and Mark Zehner. 2013. An exploratory study of factors affecting undergraduate employability. *Education + Training* 55: 681–704. [CrossRef]
- Finch, David J., Melanie Peacock, Nadege Levallet, and William Foster. 2016. A dynamic capabilities view of employability: Exploring the drivers of competitive advantage for university graduates. *Education + Training* 58: 61–81. [CrossRef]
- Gallup Inc. 2017. Crisis of Confidence: Current College Students Do Not Feel Prepared for the Workforce. Strada-Gallup 2017 College Student Survey. Available online: <https://news.gallup.com/reports/225161/2017-strada-gallup-college-student-survey.aspx?thank-you-report-form=1> (accessed on 16 May 2020).
- Garcia-Aracil, Adela, Silvia Monteiro, and Leandro S. Almeida. 2018. Students' perceptions of their preparedness for transition to work after graduation. *Active Learning in Higher Education* 22: 49–62. [CrossRef]
- Gawrycka, Malgorzata, Justyna Kujawska, and Michal T. Tomczak. 2020. Competencies of graduates as future labour market participants—Preliminary study. *Economic Research—Ekonomika Istrazivanja* 33: 1095–107. [CrossRef]
- Ghiasvand, Arezoo M., Manijeh Naderi, Mansoureh Z. Tafreshi, Farzane Ahmadi, and Meimanat Hosseini. 2017. Relationship between time management skills and anxiety and academic motivation of nursing students in Tehran. *Electronic Physician* 9: 3678–84. [CrossRef]
- Giraud-Carrier, Francois C., Stanley E. Fawcett, and Amydee M. Fawcett. 2021. SPARRING: A deliberate practice pedagogy for business. *Decision Sciences Journal of Innovative Education* 19: 229–40. [CrossRef]
- Green, Francis, and Golo Henseke. 2021. Europe's evolving graduate labour markets: Supply, demand, underemployment and pay. *Journal for Labour Market Research* 55: 1–13. [CrossRef]
- Griffiths, David A., Margaret Inman, Harriet Rojas, and Kent Williams. 2018. Transitioning student identity and sense of place: Future possibilities for assessment and development of student employability skills. *Studies in Higher Education* 43: 891–913. [CrossRef]
- Grossman, Thomas A., Vijay Mehrotra, and Mouwafac Sidaoui. 2016. A Student-Centered Approach to the Business Management Science Course. *Inform: Transactions on Education* 16: 42–53. [CrossRef]

- Groves, Catherine J., Gabrielle D. Orbaek White, Fuangfa Panya, and Jim Stewart. 2018. Can business schools increase student employability by embedding action learning into undergraduate management education? An account of practice. *Action Learning: Research and Practice* 15: 258–66. [\[CrossRef\]](#)
- Guardia, Lourdes, Federica Mancini, Pedro Jacobetty, and Marcelo Maina. 2021. Graduates' employability skills in East Africa. *Journal of Teaching and Learning for Graduate Employability* 12: 169–84. [\[CrossRef\]](#)
- Hair, Joe F., Marko Sarstedt, Christian M. Ringle, and Jeannette A. Mena. 2012. An assessment of the use of partial least squares structural equation modelling in marketing research. *Journal of Academy of Marketing Sciences* 40: 414–33. [\[CrossRef\]](#)
- Harvey, Lee. 2001. Defining and measuring employability. *Quality in Higher Education* 7: 97–109. [\[CrossRef\]](#)
- Higdon, Rachel Delta. 2016. Employability: The missing voice: How student and graduate views could be used to develop future higher education policy and inform curricula. *Power and Education* 18: 176–95. [\[CrossRef\]](#)
- Hogan, Mair, and Karen Young. 2020. Designing Group Assignments to Develop Groupwork Skills. *Journal of Information Systems Education* 32: 274–82.
- Hora, Mathew T., Ross J. Benbow, Amanda K. Oleson, and Yimin Wang. 2015. *A Different Take on the 'Skills Gap': Why Cultivating Diverse Competencies Is Essential for Success in the 21st Century Economy*. WISCAPE Policy Brief. Madison: University of Wisconsin-Madison, Wisconsin Center for the Advancement of Postsecondary Education (WISCAPE).
- Hossain, Md Moazzem, Manzurul Alam, Mohammed Alamgir, and Amirus Salat. 2020. Factor affecting business graduates' employability—Empirical evidence using partial least squares (PLS). *Education + Training* 62: 292–310. [\[CrossRef\]](#)
- Hughes, Richard L., and Steven K. Jones. 2011. Developing and assessing college student teamwork skills. *New Directions for Institutional Research* 2011: 53–64. [\[CrossRef\]](#)
- IMF. 2018. *The Bahamas; Selected Issues*. IMF Country Report No. 18/119. Washington, DC: International Monetary Fund.
- Inter-American Development Bank (IDB). 2016. *The Bahamas: Skills for Current and Future Skills*. Washington, DC: IDB.
- Jackson, Denise A., and Susan Edgar. 2019. Encouraging students to draw on work experiences when articulating achievements and capabilities to enhance employability. *Australian Journal of Career Development* 28: 39–50. [\[CrossRef\]](#)
- Jackson, Denise. 2012. Business undergraduates' perceptions of their capabilities in employability skills: Implication for industry and higher education. *Industry and Higher Education* 26: 345–56. [\[CrossRef\]](#)
- Jackson, Denise. 2013. Student Perceptions of the Importance of Employability Skill Provision in Business Undergraduate Programs. *Journal of Education for Business* 88: 271–79. [\[CrossRef\]](#)
- Jackson, Denise. 2018. Accounting and Finance Graduate Employment Outcomes: Underemployment, Self-Employment and Managing Diversity. *Australian Accounting Review* 30: 193–205. [\[CrossRef\]](#)
- Janssens, Wim, Katrien Wijnen, Patrick De Pelsmacker, and Patrick Van Kenhove. 2008. *Marketing Research with SPSS*. Essex: Pearson Education Limited.
- Kenayathulla, Husaina Banu, Nor Aziah Ahmad, and Abdul Rahman Idris. 2019. Gaps between competence and importance of employability skills: Evidence from Malaysia. *Higher Education Evaluation and Development* 13: 97–112. [\[CrossRef\]](#)
- King, Alexander Z., and Harold King. 2021. Developing Team Skills in Accounting Students: A complete Curriculum. *Journal of Higher Education Theory and Practice* 21: 116–42.
- Knight, Peter T., and Mantz Yorke. 2003. Employability and good learning in higher education. *Teaching in Higher Education* 8: 3–16. [\[CrossRef\]](#)
- Konig, Ljerka Sedlan, and Helga Maskarin Ribaric. 2019. Is there a mismatch between employers' and University teachers' perceptions on Graduate employability in Croatia? *Journal of Contemporary Management Issues* 24: 87–102.
- Kornelakis, Andreas, and Dimitra Petrakaki. 2020. Embedding employability skills in UK higher education: Between digitization and marketization. *Industry & Higher Education* 34: 290–97.
- Kovesi, Klara, and Aniko Kalman. 2020. How to manage the study-to-work transition? A comparative study of Hungarian and French graduate engineering students' perception of their employability. *European Journal of Engineering Education* 45: 516–33. [\[CrossRef\]](#)
- Koys, Daniel J., Kenneth R. Thompson, William Marty Martin, and Phil Lewis. 2019. Build it and they will come: Designing management curricula to meet career needs. *Journal of Education for Business* 94: 503–11. [\[CrossRef\]](#)
- Lam, Beatrice Oi-Yeung, and Hei-hang Hayes Tang. 2021. Making Sense of 'Graduate Employability' in Hong Kong: A Contextualized Analysis of Experience and Interpretations of Graduates of Self-Financing Higher Education Institutions. *Journal of Education and Work* 34: 14–28. [\[CrossRef\]](#)
- Lauder, Hugh, and Ken Mayhew. 2020. Higher education and the labour market: An introduction. *Oxford Review of Education* 46: 1–9. [\[CrossRef\]](#)
- Lim, Yet-Mee, Teck Heang Lee, Ching Seng Yap, and Chui Ching Ling. 2016. Employability skills, personal qualities, and early employment problems of entry-level auditors: Perspectives from employers, lecturers, auditors, and students. *Journal of Education for Business* 91: 185–92. [\[CrossRef\]](#)
- Lisa, Elana, Katarina Hannelova, and Denisa Newman. 2019. Comparison between employers' and students' expectations in respect of employability skills of university graduates. *International Journal of Work-Integrated Learning* 20: 71–82.
- Lock, Edward, and Kate Kelly. 2020. Ignorance is risk: An exploratory investigation of Australian higher education students' perceptions of their education–employment pathways. *Journal of Teaching and Learning for Graduate Employability* 11: 22–36. [\[CrossRef\]](#)
- Lockett, Martin, and Xuan Feng. 2019. Chinese graduates: The employability disconnect. *EFMD Global Focus* 13: 22–27.

- Longmore, AnneLisa, Ginger Grant, and Golnaz Golnaraghi. 2018. Closing the 21st-Century Knowledge Gap: Reconceptualizing Teaching and Learning to Transform Business Education. *Journal of Transformative Education* 16: 197–219. [CrossRef]
- Lorange, Peter, and Howard Thomas. 2016. Pedagogical advances in business models at business schools—In the age of networks. *Journal of Management Development* 35: 889–900. [CrossRef]
- Lucas, Bill, and Janet Hanson. 2016. *Learning to Be Employable: Practical Lessons from Research into Developing Character*. Technical Report. London: Centre for Real-World Learning, University of Winchester.
- MacDermott, Catherine, and Lorelei Ortiz. 2017. Beyond the Business Communication Course: A Historical Perspective of the Where, Why, and How of Soft Skills Development and Job Readiness for Business Graduates. *The IUP Journal of Soft Skills* XI: 7–24.
- Mainga, Wise, Reuben M. Daniel, and Luis Alamil. 2022. Perceptions of Employability Skills of Undergraduate Business Students in a Developing Country: An Exploratory Study. *Higher Learning Research Communications* 12: 28–63. [CrossRef]
- Manegold, Jennifer G., Bryan S. Schaffer, Eric Arseneau, and Sandra K. Kauanui. 2020. Social innovation and poster presentations: Service-learning for business students in a team-based course. *Journal of Education for Business* 95: 469–75. [CrossRef]
- Marasi, Shelly. 2019. Team Building: Developing Teamwork Skills in College Students Using Experiential Activities in a Classroom Setting. *Organization Management Journal* 16: 324–37. [CrossRef]
- Masole, Lindiwe, and Gideon van Dyk. 2016. Factors influencing work readiness of graduates: An exploratory study. *Journal of Psychology in Africa* 26: 70–73. [CrossRef]
- McArthur, Ellen, Krzysztof Kubacki, Bo Pang, and Alcaraz Alcaraz. 2017. The Employers' view of "Work-Ready" Graduates: A Study of Advertisements for Marketing Jobs in Australia. *Journal of Marketing Education* 39: 82–93. [CrossRef]
- McMurray, Stephen, Mathew Dutton, Ronald McQuaid, and Alec Richard. 2016. Employer demand from business graduates. *Education + Training* 58: 112–32. [CrossRef]
- Mello, Luciane V., Tunde Varga-Atkins, and Steve W. Edwards. 2021. A structured reflective process supports student awareness of employability skills development in a science placement module. *FEBS Open Bio* 11: 1524–36. [CrossRef]
- Mesny, Anne, David Pastoriza Rivas, and Serge Poisson-de Haro. 2021. Business School Professors' Teaching Approaches and how they change. *Academy of Management Learning & Education* 20: 50–72.
- Mgaiwa, Samson John. 2021. Fostering Graduate Employability: Rethinking Tanzania's University Practices. *SAGE Open* 11: 21582440211006709. [CrossRef]
- Minocha, Sonal, Dean Hristov, and Samantha Leaby-Harland. 2018. Developing future-ready global workforce: A case study from a leading UK university. *The International Journal of Management Education* 16: 245–55. [CrossRef]
- Mohiuddin, Khalid, Mohammad Aminul Islam, Mansoor Sharif, Shakila Nur, Md. Shahrear Talukder, and Mohammed A. Alghobiri. 2020. Enumeration of Potential Teaching Methods in Higher Education: A Cross-Disciplinary Study. *Education Research International* 2020: 8870412. [CrossRef]
- Monteiro, Silvia, Leandro Almeida, and Adela Garcia-Aracil. 2021. "It's a very different world": Work transition and employability of Higher Education graduates. *Higher Education, Skills and Work-Based Learning* 11: 164–81. [CrossRef]
- Moore, Tim, and Janne Morton. 2017. The myth of Job readiness? Written communication, employability, and the 'skills gap' in higher education. *Studies in Higher Education* 42: 591–609. [CrossRef]
- National Association of Colleges and Employers (NACE). 2012. *Job Outlook 2013*. Bethlehem: National Association of Colleges and Employers.
- National Association of Colleges and Employers (NACE). 2015. *Job Outlook 2016*. Bethlehem: National Association of Colleges and Employers.
- OECD. 2018. *Skills for Jobs*. Paris: OECD Publishing. Available online: https://www.oecdskillsforjobsdatabase.org/data/Skills%20Sfj_PDF%20for%20WEBSITE%20final.pdf (accessed on 17 January 2021).
- Okolie, Ugochukwu Chinonso, Paul Agu Igwe, Hyginus Emeka Nwosu, Beatrice Chinyere Eneje, and Sunday Mlanga. 2020. Enhancing graduate employability: Why do higher education institutions have problems with teaching generic skills? *Policy Futures in Education* 18: 294–313. [CrossRef]
- ORG Bahamas. n.d. *The Effect Failed Education Has on Society, Business & the Development of the Bahamas*. Position Paper. Bahamas: Organization for Responsible Governance.
- Osmani, Mohamad, Nitham M. Hindi, and Vishanth Weerakkody. 2018. Developing Employability Skills in Information System Graduates: Traditional vs Innovative Teaching Methods. *International Journal of Information and Communication Technology Education* 14: 1–13. [CrossRef]
- Osmani, Mohamad, Vishanth Weerakkody, Nitham M. Hindi, Rajab Al-Esmail, Tillal Eldabi, Kawaljeet Kapoor, and Zahir Irani. 2015. Identifying the trends and impact of graduate attributes on employability: A literature review. *Tertiary Education and Management* 21: 367–79. [CrossRef]
- Osmani, Mohamad, Vishanth Weerakkody, and Nitham M. Hindi. 2017. Graduate attributes in higher education: Examining academics' perception in the Middle East. *Journal of Education for Business* 92: 53–64. [CrossRef]
- Osmani, Mohamad, Vishanth Weerakkody, Nitham Hindi, and Tillal Eldabi. 2019. Graduate employability skills: A review of literature against market demand. *Journal of Education for Business* 94: 423–32. [CrossRef]
- Osseiran, Ghia. 2020. Higher education massification and the changing graduate labour market in the Spanish retail banking industry: A case study. *Oxford Review of Education* 46: 63–78. [CrossRef]

- Pang, Elvy, Michael Wong, C. H. Leung, and John Coombes. 2019. Competencies for fresh graduates' success at work: Perspectives of employers. *Industry & Higher Education* 33: 55–65.
- Pennington, Alison, and Jim Stanford. 2019. *The Future of Work for Australian Graduates: The Changing Landscape of University-Employment Transitions in Australia*. The Centre for Future Work. Canberra: Australia Institute.
- Pereira, Elisabeth T., Madalena Vilas-Boas, and Catia F. C. Rebelo. 2020. University curricula and employability: The stakeholders' views for a future agenda. *Industry & Higher Education* 34: 321–29.
- Pinto, Luisa H., and Kena He. 2019. 'In the eyes of the beholder': The influence of academic performance and extracurricular activities on the perceived employability of Chinese business graduates. *Asia Pacific Journal of Human Resource* 57: 503–27. [CrossRef]
- Pouratashi, Mahtab. 2019. Higher education and activities to improve students' employability skills. *Journal of Education for Business* 94: 433–39. [CrossRef]
- Powell, Jason W., Lily J. Pharris, and Marcia M. Hardy. 2020. A Comparison of time management skills among accounting, business, and information systems students by age and gender. *Issues in Information Systems* 21: 1–10.
- Presti, Alessandro Lo, and Sara Pluviano. 2016. Looking for a route in turbulent waters: Employability as a compass for career success. *Organizational Psychology Review* 6: 192–211. [CrossRef]
- Presti, Alessandro Lo, Emanuela Ingusci, Maria Elana Magrin, Amelia Manuti, and Fabrizio Scrima. 2019. Employability as a compass for career success: Development and initial validation of a new multidimensional measure. *International Journal of Training and Development* 23: 253–348. [CrossRef]
- PwC. 2018. *Workforce of the Future: The Competing Forces Shaping 2030*. Washington, DC: PwC.
- Ramirez, Mary H. L., and Dean S. C. Bautista. 2021. Employability Skills, Personal Attributes, Cultural Adaptation, and Economic Mobility of Medical Technologist in Taif Saudi Arabia Based Medical Laboratory. *International Journal of Arts Humanities and Social Sciences Studies* 6: 9–24.
- Rathnayake, Shaini R. M. T. 2021. The Relationship Between Time Management and Academic Performance: A Study on Sri Lankan Undergraduates. *The IUP Journal of Management Research* 20: 49–65.
- Richardson, Ronny, Max North, Sarah M. North, and David Garofalo. 2020. Business Students' Perception of Critical and Marketable Skills in Thriving Job Security. *International Management Review* 16: 5–21.
- Robertson, Robert W. 2021. Bridging the Skill Gap in the Bahamas: Perceptions. *i-Manager's Journal of Management* 15: 7–17. [CrossRef]
- Robinson, Shane J., and Bryan L. Garton. 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: 96–105. [CrossRef]
- Romgens, Inge, Remi Scoupe, and Simon Beusaert. 2020. Unravelling the concept of employability, bringing together research on employability in higher education and the workplace. *Studies in Higher Education* 45: 2588–603. [CrossRef]
- Rosenberg, Stuart, Ronald Heimler, and Elsa-Sofia Morote. 2012. Basic Employability skills: A triangular design approach. *Education + Training* 54: 7–20. [CrossRef]
- Rothwell, Andrew, Ian Herbert, and Frances Rothwell. 2008. Self-perceived employability: Construction and initial validation of a scale for university students. *Journal of Vocational Behaviour* 73: 1–12. [CrossRef]
- Rowe, Lisa. 2019. Educating for the modern world: A report review. *Journal of Work-Applied Management* 11: 5–16. [CrossRef]
- Scott, Fraser J., and Debra Willison. 2021. Students' reflections on an employability skills provision. *Journal of Further and Higher Education* 45: 1118–33. [CrossRef]
- Scott, Fraser J., Pauline Connell, Linda A. Thomson, and Debra Willison. 2019. Empowering students by enhancing their employability skills. *Journal of Further and Higher Education* 43: 692–707. [CrossRef]
- Sin, Cristina, and Alberto Amaral. 2017. Academics' and employers' perceptions about responsibilities for employability and their initiatives towards its development. *Higher Education* 73: 97–111. [CrossRef]
- Sin, Cristina, and Guy Neave. 2016. Employability deconstructed: Perceptions of Bologna stakeholders. *Studies in Higher Education* 41: 1447–62. [CrossRef]
- Soares, Maria Eduarda, and Pilar Mosquera. 2020. Linking development of skills and perceptions of employability: The case of Erasmus students. *Economic Research-Ekonomska Istrazivanja* 33: 2769–86. [CrossRef]
- Sosa, Ricardo, and David Kayrouz. 2020. Creativity in graduate business education: Constructive dimensions and connections. *Innovations in Education and Teaching International* 57: 484–95. [CrossRef]
- Sousa, Maria Jose, and Daniela Wilks. 2018. Sustainable Skills for the World of Work in the Digital Age. *Systems Research and Behavioral Science* 35: 399–405. [CrossRef]
- SRI International. 2018. *Promoting Grit, Tenacity, and Perseverance: Critical Factors for Success in the 21st Century*. Menlo Park: SRI International. Available online: <https://www.sri.com/work/publications/promoting-grit-tenacity-and-perseverance-critical-factors-success-21st-century> (accessed on 26 October 2021).
- Straub, Detmar, Marie-Claude Boudreau, and David Gefen. 2004. Validation Guidelines for IS Positivist Research. *Communications of the Association for Information Systems* 13: 24. [CrossRef]
- Strong, Mark H., Gary J. Burkholder, Emily G. Solberg, Amy Stellmack, William D. Presson, and Jean-Bernard Seitz. 2020. Development and Validation of a Global Competency Framework for Preparing New Graduates for Early Career Professional Roles. *Higher Learning Research Communications* 10: 67–115. [CrossRef]
- Succi, Chiara, and Magali Canovi. 2020. Soft skills to enhance graduate employability: Comparing students and employers' perceptions. *Studies in Higher Education* 45: 1834–47. [CrossRef]

- Suleman, Fatima. 2018. The employability skills of higher education graduates: Insights into conceptual frameworks and methodological options. *Higher Education* 76: 263–78. [CrossRef]
- Sullivan, Sherry E., and Akram Al Ariss. 2021. Making sense of different perspectives on career transitions: A review and agenda for future research. *Human Resource Management Review* 3: 1–17. [CrossRef]
- Taherdoost, Hamed. 2016. Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research. *International Journal of Academic Research in Management* 5: 28–36. [CrossRef]
- Teng, Weili, Chenwei Ma, Saeed Pahlevansharif, and Jason James Turner. 2019. Graduate readiness for the employment market of the 4th industrial revolution: The development of soft employability skills. *Education + Training* 61: 590–604. [CrossRef]
- Thomas, Lisa, and Veronique Ambrosini. 2021. The future role of the business school: A value cocreation perspective. *Academy of Management Learning & Education* 20: 249–69.
- Tomlinson, Michael. 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: 49–61. [CrossRef]
- Tomlinson, Michael. 2012. Graduate Employability: A review of Conceptual and Empirical Themes. *Higher Education Policy* 25: 407–31. [CrossRef]
- Tomlinson, Michael. 2017a. Forms of graduate capital and their relationship to graduate employability. *Education + Training* 59: 338–52. [CrossRef]
- Tomlinson, Michael. 2017b. Introduction: Graduate Employability in Context: Charting a Complex, Contested and MultiFaceted Policy and Research Field. In *Graduate Employability in Context: Theory, Research and Debate*. Edited by Tomlinson Michael and Leonard Holmes. London: Palgrave Macmillan.
- Tran, June. 2012. Vietnamese higher education and the issue of enhancing graduate employability. *Journal of Teaching and Learning for Graduate Employability* 3: 2–16. [CrossRef]
- Tran, Thi Tuyet. 2017. The Loose University-Industry connection and the students' misconception about their employability. *Asia Pacific Journal of Contemporary Education and Communication Technology* 3: 137–46.
- Tymon, Alex. 2013. The student perspective on employability. *Studies in Higher Education* 38: 841–56. [CrossRef]
- Uddin, Mahi. 2021. Addressing employability challenges of business graduates in Bangladesh: Evidence from an emerging economy perspective. *Australian Journal of Career Development* 30: 83–94. [CrossRef]
- Van Harten, Jasmijn, Nele de Cuyper, Eva Knies, and Anneleen Forrier. 2022. Taking the temperature of employability research: A systematic review of interrelationships across and within conceptual strands. *European Journal of Work and Organizational Psychology* 31: 145–59. [CrossRef]
- Vanhercke, Dorien, Nele De Cuyper, Ellen Peeters, and Hans De Witte. 2014. Defining perceived employability: A psychological approach. *Personnel Review* 43: 592–605. [CrossRef]
- Vargas, Reyes, Maria Immaculada Sanchez-Queija, Andrew Rothwell, and Agueda Parra. 2018. Self-perceived employability in Spain. *Education + Training* 60: 226–37. [CrossRef]
- Verma, Prikshat, Alan Nankervis, Soegeng Priyono, Noorziah Moh'd Saleh, Julia Connell, and John Burgess. 2018. Graduate work-readiness challenges in the Asia-Pacific region and the role of HRM. *Equality, Diversity and Inclusion: An International Journal* 37: 121–37. [CrossRef]
- Virtanen, Anne, and Paivi Tynjala. 2019. Factors explaining the learning of generic skills: A study of university students' experiences. *Teaching in Higher Education* 24: 880–94. [CrossRef]
- Wallis, Richard. 2021. Career readiness: Developing graduate employability capitals in aspiring media workers. *Journal of Education and Work* 34: 533–43. [CrossRef]
- Watzlawik, Meike, and Katrin Kullasepp. 2016. Career as Affective Journey: How Constant Flux Challenges the Search for Career Pathways and Counselling. *Integrative Psychological & Behavioral Science* 50: 492–506.
- Weligamage, S. S. 2009. Graduates' Employability Skills: Evidence from Literature review, Sub Theme A—Enhancing Employability through Quality Assurance—ASAIHL. Available online: <http://mit.kln.ac.lk/uokr/ASAIHL/SubThemeA8.pdf> (accessed on 15 August 2019).
- Whittemore, Simon T. 2018. *Transversal Competencies Essential for Future Proofing the Workforce*. White Paper. Milano: Skilla. Amicucci Formazione. Available online: http://www.togetherhr.com/wp-content/uploads/2019/03/TRANSVERSAL_COMPETENCIES_ESSENTIAL_FUTURE_WORKFORCE.pdf (accessed on 5 January 2021).
- Wickramasinghe, Vathsala, and Lasantha Perera. 2010. Graduates', university lecturers', and employers' perceptions towards employability skills. *Education + Training* 52: 226–44. [CrossRef]
- Wilson, Laura, Susie Ho, and Rowan H. Brookes. 2018. Student perceptions of teamwork within assessment tasks in undergraduate science degrees. *Assessment & Evaluation in Higher Education* 43: 786–99.
- Winterton, Jonathan, and Jason J. Turner. 2019. Preparing graduates for work readiness: An overview and agenda. *Education + Training* 61: 536–51. [CrossRef]
- Wolters, Christopher A., and Anna C. Brady. 2021. College Students' Time Management: A Self-Regulated Learning Perspective. *Educational Psychology Review* 33: 1319–51. [CrossRef]
- World Bank. 2019. *The Changing Nature of Work*. Washington, DC: The World Bank Group.
- World Economic Forum (WEF). 2016. *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*. Geneva: World Economic Forum.

World Economic Forum (WEF). 2020. *The Future of Jobs Report 2020*. Geneva: World Economic Forum.

Yoder, Ryan J., Donna Bobbitt-Zeher, and Vanessa Sawicki. 2021. Understanding the Use of Student-Centered Teaching Methods in Undergraduate Chemistry Course. *Research in Science Education* 51: S845–S63. [[CrossRef](#)]