**Aligning Strategic Intelligence and Graduate Employability: A Conceptual Review**

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**Abstract**

The purpose of this paper is to present a framework for scholars carrying out reviews of research that meet international standards for publication. Conceptualizing the factors that determine graduate employability and how it relates to strategic intelligence. A set of propositions are presented using three themes namely: strategic intelligence, career counselling and skill gap. This is primarily a conceptual paper focusing on the approach of performing systematic reviews. Nevertheless, the paper builds on a database of previously done research in graduate employability, career development, and strategic intelligence. The paper uses narrative examples from empirical reviews to further explain the parts of the conceptual framework drawing from theoretical frameworks of human capital theory and adaptive theory. The study also alludes to specific findings from previous research to demonstrate general trends in how the framework's main aspects have been used in exemplary reviews. The contribution of this paper is to emphasize the importance of students developing strategic intelligence in order to be employable. It is intended that this conceptual framework would give helpful methodological input in enhancing long-standing efforts in graduate employability, and career development discipline to progress knowledge in a more methodical and coherent manner. The paper reveals that foresight and environmental intelligence are proxies for strategic intelligence and when applied to career counselling, they will result in new capacity outcomes that are more suitable to the energy requirements and other sustainable green technologies via university career counsel partnerships with government and industry. It also revealed that, when a student can predict the direction of their desired industry, he or she can develop the necessary skill sets to be employable after graduation. Finally, it found out that the alignment of strategic intelligence and graduate employability helps in recruitment effectiveness and improves efficiency in the entire career ecosystem processes. Apart from undergraduates, the paper proposes a practical framework for universities, graduates, and industry to help produce employable personnel and entrepreneurs, as well as a set of requirements for maintaining employability in a career ecosystem. The paper contributes to theory by integrating strategic intelligence and graduate employability literature by recognizing shared characteristics of fast and continuous learning, as well as foresight. Thus this paper helps to bridge the gaps in respective research agendas. As a result, this research is unique in that it contributes to the advancement of human capital theory, graduate employability, and strategic intelligence.

**Keywords** Graduate Employability, Strategic Intelligence, Career Counselling, Skill Gap, Education for Sustainable Development

**Paper type** Conceptual paper

**Introduction**

Graduate employability is defined as the ability to obtain a job following graduation (Bessant, 2002), or, as Rothwell and Arnold (2007) concurred, the ability to get the job one wants or keep the job one has. It refers to the extent to which students can apply their skills and knowledge to find work (Tomlinson, 2012). According to Chan and Lin (2015), graduate employability has been a recurring issue in both developed and developing countries over the last 20 years, and it remains critical for graduates as they transition from higher education (HE) to the labour market (Donald *et a*l., 2018, 2019).

Conversely, graduates are graduating from universities by the thousands each year, only to be thrown into an evolving labour market that cannot absorb the majority of them (Mgaiwa, 2021) - the number of students does not correspond to the number of job openings. Mgaiwa found that this recurring problem worsened during the COVID-19 pandemic, which had a massive impact on the global economy, raising the scale of the youth unemployment crisis to an all-time high not seen since the 1980s The uncertainty created by disruptive technologies in our environment has also become a major factor driving unemployment (Walsh, 2018). This has disrupted customer tastes and business processes, which are perceived to disadvantage new graduates due to their expectations before entering the market (Lawrence and Godwin, 2021). For example, the introduction of electronic learning materials in developing-country rural areas is forcing many schools to either evolve or become obsolete. As a result, new graduates are caught in the market disruption and are ill-equipped to take on the hybridized job role, making such opportunities lucrative for only experienced proactive teachers with digital technology competency. Even students with excellent grades have difficulty finding work, which can be attributed to skill gaps (Jackson and Bridgstock, 2021). This supports studies by Oliver, (2015); Nghai, (2019) who claim that disruptions are displacing occupations and altering the market's skill requirements.

According to a recent study (The labour Market for Recent College Graduates, 2022), 44% of recent graduates are working in jobs that do not require a college diploma. Furthermore, even if they have an employability advantage, 50% of university graduates in developed countries such as the United Kingdom are already reporting significant difficulties in finding work (Mok and Jiang, 2018). Similar to the United States, China generates about 7 million university graduates each year (Xiaohao *et al.,* 2016), however, in 2013 there were about 2 million graduates without jobs (Chan, 2015). Just 25% to 30% of graduates in India and 15.5% of graduates in Spain are unemployed, respectively (Tilak, 2020). Experts anticipate that these figures will continue to increase and result in a long-term economic cicatrix to lifetime incomes, career trajectories, and mental and physical health (Parolin and Wimer, 2020). It will be challenging for already employed individuals to keep their positions, and it will be particularly challenging for recent graduates looking for employment prospects (Jackson and Bridgstock, 2002).

 Consequently, graduate employability can be influenced by a variety of factors, including the type of degree obtained, students' perceived self value, their commitment to personal growth and development, and their career path as it relates to their desired industries and labour market (Donald et al., 2022). To accomplish this, an intelligent system called Strategic Intelligence (SI) is required to guide students in acquiring the necessary skills before graduation. Many jobs were lost during the COVID-19 pandemic, and new job descriptions and remote working styles emerged. This development put additional strain on the labour market (Shahriar *et al.*, 2021). While fewer jobs were available due to the pandemic, graduate employability increased (Mallick and Biswas, 2020), forcing schools and students to develop new skill sets to stand out to employers. Moreover, Thomas *et al.* (2019) claim that climate change has affected several geographies and aspects of life, including work positions (socially economically, and mentally). Graduating students must be creative to land desired professions in these climate-changed places since, even though harsh environmental conditions are progressively displacing people in some areas (Islam and Zhang, 2018; Shahriar, *et al.,* 2021). The discovery that regions with lesser energy consumption have profited favourably from climate change has also helped disclose new assets (Charfeddine and Kahia, 2019). Furthermore, the Brexit issue has left European students who are now enrolled in school in the UK and have the chance of continuing their education in a challenging position (Thomson, 2019). They now require a work permit to work in the UK, unlike before (Portes and Springford, 2023). Students today, more than ever need to be more strategically astute due to the environment's constant change and uncertainties brought on by by-laws, disruptive technology, and natural phenomena. Strategic Intelligence (SI) can be defined as the acquisition, analysis, and dissemination of data pertinent to strategic decision-making (Bensoussan and Fleisher, 2012; Fleisher and Bensoussan, 2015). It is a strategy that is frequently employed by businesses and organizations to assist them to get a competitive edge (Lawrence and Godwin, 2021). Environmental intelligence must have a role in SI for it to be effective.

Environmental intelligence, according to Majid and Khoo (2009), is the extensive gathering, consolidation, integration, analysis, and use of data, information, and the generation of knowledge related to natural and artificial environments. The evolution of an environmental intelligence discipline has been steady over the last fifty years, but it has accelerated in the last 25 years due to the convergence of computer processing power, a greater acceptance of an ecological approach to natural and human-caused environmental problems, and serious natural events. Nonetheless, a concept like SI can be narrowed into a student's life to help the student gain a competitive advantage. This will cause the student to see himself/herself as an entity, system, or organization willing to build the innovation capability required for the labour market through the use of a strategic intelligent system. These capabilities and resources are beneficial to students seeking employment; however, such students may become distracted or overwhelmed as a result of work overload.

As a result, universities and students should learn how to apply the conservation of resources theory (COR theory), as well as how these resources interact within eco-career. The COR theory, developed by Hobfoll (1988), postulated that human behaviour under stress is driven by a need to defend, conserve, and acquire important resources (Hobfoll, 1988). According to the COR framework, situations where valuable resources are at risk of being lost or have already been lost cause stress (Hobfoll, 1989). This theory contributes to a better understanding of the links between stress and physical health, providing fundamental insights that have guided research on coping with long-term occupational burnout, chronic illness, and the medical consequences of natural disasters (Hobfoll and Lilly, 1993 (cited in Gilbert *et al.,* 2021). Similarly, university students who want to develop graduate employability skills must learn stress management techniques because these skills are investments and when a student stops developing them, they become stressed. This supports the contention made by Hobfoll (1998) and Hobfoll, *et al.* (2018) that people must invest resources to protect against resource loss, recover from losses, and gain resources. Although graduate employability has become one of the fastest-growing research areas in the last decade (Tarique, 2021; Donald *et al.,* 2022), there is still little research on the variables used for graduate employability and their alignment with SI. This conceptual paper examines graduate employability relating to the skill gap, employee turnover, and career counselling.

To bridge this gap and connect SI and graduate employability, we propose three inquiry questions:

1. What effect does strategic intelligence have on career counselling?
2. What effect does strategic intelligence have on the skill gap in graduates?
3. What effect does strategic intelligence have on graduate employability?

**Literature Review**

**Theoretical Framework**

Human Capital Theory (HTC) (Becker 1962; Sicherman and Galor, 1990) and Adaptive Theory (AT) are the theoretical frameworks used in this conceptual paper (Fidan and Balci, 2017). HTC was chosen as a suitable theoretical lens for this paper, with a focus on investing in human capital to improve graduate employability. According to the theory, employability represents how an individual improves his or her desirability in the labour market. Individual attributes such as knowledge, skills, experience, training, abilities, talent, intelligence, and judgement are examples of human capital. In the 18th century, Adam Smith proposed this theory, which was later popularized by Becker (1962). The central argument of HCT is that education and training are investments that increase productivity (Mgaiwa, 2021). According to researches (e.g. Becker, 1962; Sicherman and Galor, 1990; and Varga 2020) quality education can make it easier for a person to find work and build a career; thus, a productive person will earn more and be more employable. As a result, graduates regard career counselling and networking as critical components of the graduate employability development process (Okay-Somerville and Scholarios, 2017). Furthermore, Donald *et al.* (2018) investigated students' perceptions of education and employability, revealing that as they progressed, undergraduates felt more employable from a personal standpoint, but less employable from a market perspective due to the competitive labour market and the cost/benefit conflict of resources. These authors asserted that repayment expectations of university debts, the cost and benefits of higher education (HE), the year of study influence, gender influence, and career advice were opportunities for improving employability.

The adaptive/adaptation theory, also known as the survival theory, is the capacity of an organisation to bend to changes in its current state of affairs and change as necessary (Ram, 2021). The central concepts of adaptive theory paint a vivid picture of the cycle by which individuals or organizations incorporate trend-setting innovation into their work rehearsals (Oki, 2019). Charles Darwin, the most renowned scientist associated with adaptive theory, established a stable fit between living beings and their environment (Byrant and Tunner, 2019). Before Darwin, diverse scientists such as Aristotle, William Parley, and Buffon recognized the way species changed but were unable to explain the changes (Flannelly and Flannelly, 2017; McLaughlin, 2022). According to researchers (e.g. Fidan and Balci 2017); Turner *et al.*, 2019), in adaptive structuration theory and allocation, associations are constantly changing so as to adjust to changing conditions in order to accomplish their various intents and fulfil distinctive applicable partners. As a result, Human Resources (HR) is currently undergoing rapid and intense change as a result of varying demands, shifting workforces, and technology (Jagannathan *et al.,* 2019; Vahdat, 2022). These transformations have altered the ways and manner in which businesses are conducted, shifting from traditional paper-based methods to new methods driven by information and communication technology in both developed and developing countries (Nazir, 2022). This will help to simplify the recruiting process, as well as rejections. Undergraduates must be willing to apply to a variety of organizations, brand and re-brand their resumes, and update their skill sets until they are employed in their desired jobs.

**Conceptual theme**

***Theme 1: Strategic intelligence***

Helfat and Peteraf (2015) explained strategic intelligence (SI) as the ability to look outwardly, focusing on understanding and anticipating others, particularly competitors - which includes collecting, analysing, and disseminating environmental data on the organization's strategy. These environmental data could be organization's rules, financial affairs, taxes, political and economic scope, and human resource categories (Chukuigwe, 2022). In other words, SI considers and analyses an organization's emotional, social, political, and economic behaviour. This is supported by Chand, Kumar, and Mittal (2019), who explain that emotional intelligence partially mediates the relationship between employability skills and employer satisfaction in recruiting new graduates; meaning any source of intelligence can be used to improve the issues surrounding graduate employability, but SI is the ability to know what plan of action and information to use. According to Ezenwa *et al.*  (2018), SI can be assessed using the following criteria: strategic vision, human and social resources, and the organization's economic and political issues. Organizations must have a cognitive environment and a decision-making system in place to filter out irrelevant information to have such intelligence (Sinnaiah *et al.,* 2023). As a result, before such intelligence, an intended goal must be established to aid comprehension and goal achievement planning. This will include determining and carrying out plans and activities (Boamah *et al.,* 2022) predicting expected situations and current and future organizational performance will necessitate foresight and environmental information.

The determination and execution of plans and activities is the second component of strategic planning (George, Walker and Monster, 2019). This component specifies how the organization's plans and activities are to be carried out (Limani *et al*., 2019). The third step in strategic planning is to forecast the organization's future situations and performance (Idrees *et al.,* 2019). According to George *et al.,* (2019), when a situation in an organization is predicted, the organization's future performance can be predicted. They stated that strategic planning could be especially beneficial in making organizations more effective and that poorly funded strategic processes frequently resulted in undesirable and unpredictable outcomes. Lastly, the final component of the strategic planning process is the use of approaches to achieve goals, which is regarded as the final step in the strategic planning process and produces the necessary information/intelligence for an organization to become innovative (Bryson and George, 2020). As a result, SI is a blend of foresight (Lawrence *et al.,* 2020) and environmental intelligence (Lawrence and Poi, 2021). So, we present below propositions (P1), that graduates who predict possible industrial outcomes and trends are more likely to prepare for job opportunities than those who do not.

*P1 .* (Foresight): Graduates who project possible outcomes of where industries and trends are heading are more likely to be prepared for job opportunities than those who do not predict the future.

Foresight is defined as a set of practices, methods, tools, and techniques that assist organizations in actively exploring, shaping, and managing the future, which makes strategic intelligence easy (Järvenpää *et al.,* 2020). Crews (2020) defined foresight as the ability to see or predict what will happen in the future and then take appropriate action. Understanding key drivers of change, possible future projections, and the implications of change on specific businesses, projects, or contexts are all part of this (Colli *et al.,* 2019). As a result, Lawrence *et al*. (2020) saw corporate foresight as a means of gaining a competitive advantage. Foresight activities are not intended to accurately predict the future (He *et al.*, 2022). Rather, they enable practitioners to explore plausible futures informed by current trends and trajectories as well as emergent signals of change - assisting career counsellors and students in making informed career decisions. Foresight is a set of practices that enables organizations and individuals to achieve superior market positions in the future (Rohrbeck and Kum, 2018). Foresight can also be viewed as a means of achieving competitive advantages, or, in this case, proper labour market positioning. Foresight employs a wide range of methods, from creative to evidence-based, and from expert-based to highly interactive or participatory (Lawrence *et al.,* 2020). Individuals and organizations, for example, can predict events and outcomes using wildcards, modeling, bibliometrics, road mapping, and prototyping (Kohler, 2021). Due to the dynamic nature of organizations, Haarhaus and Liening (2020) discussed the importance of environmental scanning in predicting outcomes, they concluded that environmental scanning was necessary as it produced detailed information need to help environmental sustainability and growth. Hence, we present the proposition (P2), that individuals that analyse their environments are more productive than those who do not.

*P2.* (Environmental Intelligence): Individuals that analyse their environments are more productive than those who do not.

Environmental intelligence can also be defined as the massive collection, accumulation, integration, analysis, dissemination, and use of data, information, and knowledge related to the natural and man-made environment (Majid and Khoo, 2009; Lawrence and Poi, 2021). The advancement towards an environmental intelligence discipline has gained grounds as a result of natural and human-caused environmental problems (ranging from massive hurricanes, tsunamis, and the COVID-19 pandemic) - which results in disruption from the norm, opportunities, and threats (Akkermans, Richardson and Kraimer, 2020). This supports Salomone and Stanley's (1981) early claims that chance alone was insufficient due to the complex interplay between an external event and an internal psychological process. Career shocks were defined by Akkermans *et al.* (2018) as *‘a disruptive and extraordinary event that is, to some extent, caused by factors outside the focal individual's control and that triggers a deliberate thought process concerning one's career’* (P.4). For example, during the 2011 New Zealand earthquake, some people maintained their status quo, while others were motivated to change careers as a result of dissatisfaction (Wordsworth and Nilakant, 2021), which was seen as a positive move. Career shocks can be deduced to cause changes in solid cultures and social identities, which can pose threats to foundational practices and beliefs (Donald et al., 2018). Competencies, in any case, will lead to career success and employability (Blokker *et al.*, 2019). These authors discovered that career shocks, along with career success and abilities, play an important role in young professionals' early career development. According to Seibert *et al*. (2013), young professionals who developed high levels of competencies reported higher levels of perceived employability. Furthermore, according to Akkermans *et al.* (2021), career shocks have become an increasingly important part of contemporary career learning. According to their explanation, career shocks are influenced by employees' opinions of their organization's human resource policies, which may have a favourable or bad impact on them and may also affect their propensity to work for that organization again in the future.

The environmental intelligence discipline has developed since it embraced a systems-based understanding of the world by emphasizing the interdependencies between and among human and natural activities to manage crises, career shocks, and potential disruptions. Environmental intelligence, according to Barati *et al*. (2020), is the capacity for calculation, analysis, and presumption that enables individuals to establish an organic and immediate relationship between their small-scale actions. As well, the significant and subtle environmental effects that will unquestionably and immediately have an impact on the entire society, the entire environment, and ultimately every individual member of the society. Environmental intelligence includes physical and social intelligence, which is the knowledge required to increase people's well-being and organizational productivity (Garg and Gera, 2020), which is a useful tool (environmental intelligence) for forecasting (Brandtner, and Mates, 2021). This type of intelligence allows individuals to approach the workplace thoughtfully, ensuring team support and performance that revolves around the physiology of the team (Lawrence and Poi, 2021). According to Majid and Khoo (2009), organizations that implemented physical intelligence saw double-digit revenue growth, a 12.5% increase in the commercial success of their deals, increased operating efficiency, customer satisfaction, and employee satisfaction scores, and enhanced innovation. Social intelligence, conversely, is the ability to think, understand, manage, and act appropriately in social human relationships. According to Goleman (2006), social intelligence is concerned with the best interests of others; thus, it extends beyond purely selfish motives.

Social intelligence is the ability to understand others and act rationally and emotionally in interpersonal relationships (Herzig, Lorini and Pearce, 2019). This was also affirmed in Albrecht (2009), expatiating, social intelligence as the power to read and get along with people; Sharma (2020) and Garg *et al.*, (2021) explained that this ability goes beyond just basic interactions but, also being able to become empathetic to others. . Because collaboration is a necessary skill for employment and career success (Sheppard, 2019), social intelligence is a necessary ability for undergraduates to function effectively in any social setting (Bonesso *et al.,* 2019). The ability to recognize, comprehend, and act on emotional information about others is what leads to effective performance (Papoutsi *et al.,* 2019; Supramaniam and Singaravelloo, 2021).

***Graduate Employability***

The definition of employability has changed over time, moving from the 20th-century relationship between education and labour markets (Boden and Nedeva, 2010) to the 21st-century relationship between personal skills and knowledge and the likelihood of finding employment (Lees, 2002; Boden and Nedeva, 2010). The idea of graduate employability has changed over time, and researchers are currently working to clearly describe the disparities between graduates' and graduate employers' needs (Donald *et al*., 2018). This seems to be due to the employability construct ignoring how social institutions like gender, racism, social class, and disability interact with employment chances (McGinn and Oh, 2017). Similarly, graduate employability has become a central issue driving the mission of Higher Education (HE), as a result of ongoing criticism that graduates are not adequately prepared for professional roles (Small *et al.,* 2018). As a result, HE has made numerous efforts and continues to thrive to address this challenge (Abelha *et al.,* 2020).

***Theme 2: Career Counselling***

*P3.* (Career eco-system): A successful collaboration between higher education, the government, and industry will produce graduates who perform well and have the qualifications that employers are looking for.

*P4.* (Education for Sustainable Development): Career counselling centred on Education for Sustainable Development produces better employees who have a sustainable environment mindset.

Graduate employability in the context of higher education (HE) encompasses more than just finding employment (Herbert *et al.*, 2020). According to Buheji and Buheji (2020), graduates are more likely to find jobs and succeed in their preferred career roles if they possess a particular set of accomplishments, abilities, and understandings. They added that the graduates, workforce, community, and economy will all benefit from this. This is consistent with Römgens *et al*. (2020) assertion that students develop effective performance in the labour market by developing their knowledge, competence, and qualities. According to Abelha *et al.* (2020), a strong sense of innovation and collaboration practices in higher education is critical for graduate employability and competence development around the world. Graduates will fully comprehend their job choices through career counselling (Hoang and Huy, 2021). Career counselling is substantially backed up by Bolton-King (2022), who claims that Counselling is an efficient method for fostering undergraduate employability skills and greatly raising students' self-efficacy in interpersonal and communication abilities. This is comparable to the argument made by Okolie *et al.* (2020), who support Career Training Mentorship (CTM) as a way to improve students' clarity regarding their professional objectives, career interests, personal development plans, and employability. They proposed that all higher education institutions in Nigeria set up CTM centres to give students the chance to obtain high-quality career guidance, coaching, and mentorship services while attending classes. As Aliu and Aigbavboa (2021) found, university and industry collaborations will increase graduate employability, these mentorship programs should be coupled with industry experience and collaborative activities. Also, the inclusion of Education for Sustainable Development (ESD) in all counselling programs for students and professionals would strengthen students' perceptions of the world, their community, and the kinds of professions that are needed (Lawrence *et al*., 2023 Besides, many jobs that are evolving at this time are centered on the need to reduce carbon footprints. Knowledge in green jobs that require less use of fossil fuel will enhance the chance of gaining employment in the future since most machines drive by coal and crude oil are being phased out. Sustainable Development Goals (SDGs) were established to maintain the advancements made in sustainable development and to stop the further deterioration of the natural systems that sustain life (Lawrence, 2018). Education for Sustainable Development is the incorporation of the SDGs into higher education through which universities teach SDGS, conduct research, and ensure SDG action compliance in their university environments (Zamora-Polo and Sánchez-Martn, 2019; Fernández, and Castillo-Eguskitza, 2021). As a result of the clarity surrounding future job roles as they relate to sustainable development, universities, and career mentors will easily collaborate with the government, policy-makers, and industry heads in preparing students for employable roles.

***Theme 3: Skill Gap***

*P5.* (Volunteering): Graduates who volunteer will quickly acquire the skills they need and find work.

*P6.* (Fast Learning Ability): Graduates who learn quickly, are more productive, and have a high retention value.

Similarly, a collaboration between the government, universities, and industry will provide insights into employee turnover and the current and future skills gap (for undergraduate development and industry skills). This will improve career sustainability for graduates and graduate employers within the career ecosystems (Baruch and Rousseau, 2019) - graduates will seek employability and work-life balance, while employers will seek competitive advantage and human capital utilization (Donald, *et al*., 2020). Graduates are exposed to the organizational culture, and staff turnover, which are relevant to their career decision (Holston-Okae and Mushi, 2018; Dwesini, 2019). This will help the student gain commercial acumen, understand how the industry works, and what skills they need to be productive in such an industry (Al Hinai *et al.,* 2020). According to Bhatnagar (2021), in addition to technical abilities and skills, students should strive to develop soft skills such as emotional intelligence, communication, critical thinking, problem-solving skills, and interpersonal skills, all of which are highly valued for employability, particularly communication skills (Nabulsi *et al.,* 2021). In terms of the career ecosystem, an understanding of the skill gaps will provide useful feedback on deficient skill areas, particularly for curriculum review, development, and training (Ayodele et al., 2020).

Furthermore, continuing education is critical for graduate employability and labour market relevance (Van der Heijden *et al.*, 2016; Donald *et al.*, 2019). Students need to have the ability to learn things quickly to be easily employable (on campus and off campus). Towers *et al*. (2020) emphasized the importance of fostering entrepreneurial capacity in undergraduates, stating that the job market is becoming increasingly competitive, and universities will need to foster career-ready graduates with entrepreneurial acumen in social science (e.g. retail, business management, and accounting) and science (e.g. pharmacy, architecture, and engineering). To decrease the impact of unemployment, graduates should be ready to launch their firms, which will necessitate ongoing learning - continuous learning (structured and unstructured). Giancaspro and Manuti (2021) indicated that student volunteering provides an opportunity to understand one's propensity, allowing for more effective study or work choices in the future. Volunteering is strongly linked to increased employability (Fee and Gray, 2022).

**Conceptual Model**

The three themes and the six propositions that have been covered thus far in connection to graduate employability are summarized in Figure.1 to provide a systematic overview of this conceptual paper. By illustrating the interwoven and interdependent elements and functions that the career eco-system (students, universities, governments, and industry) play to attain graduate employability, the picture also aids in capturing the framework of strategic intelligence and graduate employability. Students, employers, university administrators, government officials, and business leaders are therefore most likely to be interested in Figure.1. The figure provides a platform for real-world application and empirical testing, maximizing this paper's potential impact on a larger audience.

Education for Sustainable Development

Environmental Intelligence

Foresightedness

Fast Learning / Continous Learning ability

Industry and Government Partnership

Volunteering

P1

P2

P4

P3

P6

P5

**A Conceptual Framework on Strategic intelligence and Graduate Employability**

Figure 1. *Source: Conceptualized by the Researchers (2023)*

**Conclusions: Inquiry Questions 1-3**

The inquiry questions below are provided to explain and confirm the propositions above.

Inquiry Question 1: What effect does strategic intelligence have on career counselling?

Foresight and environmental intelligence are proxies for strategic intelligence (Lawrence and Poi, 2021), and when applied to career counselling, they will result in education for sustainable development via university career counsel partnerships with government and industry (Looy *et al.,* 2003; Okolie, 2020). Foresight will expose students to the future needs and direction of the industry, providing ample time for networking and capacity building (Shanmugam *et al.,* 2019; Ead *et al.*, 2021). Environmental intelligence will also aid in the collection of data required for ESD Cebrian *et al.,* 2020).

Inquiry Question 2: What effect does strategic intelligence have on the skill gap in graduates?

In this paper, strategic intelligence can be viewed through foresight and environmental intelligence. When a student can predict the direction of their desired industry, he or she can develop the necessary skill sets to be employable after graduation (Hernandez-de-Menendez *et al.,* 2020). Due to a lack of experience, such students may not be able to obtain high-paying jobs, but they may be able to obtain volunteer or intern positions. Volunteering jobs will give undergraduates opportunities to gain experience in their desired industry (Jackson and Bridgstock, 2021). Furthermore, the ability for undergraduates to understand the university environment, as it relates to job recruitments will assist in building their innovation capabilities, which in turn will make them fast learners (Iranmanesh *et al,* 2021), because they can grasp the entire career eco-system’s algorithm and how it works. This demonstrates to recruiters that the graduate is self-motivated, determined, and decisive in their career development (Zaheer *et al.,* 2021).

Inquiry Question 3: What effect does strategic intelligence have on the graduate employability?

The ability to have strategic information required to push one's ambition after university is critical (Teubner and Stockhinger, 2020; Iivari *et al.,* 2020), and foresight will help students take ownership of their careers as they strive for work-life balance (Baruch, 2001; Donald *et al.,* 2019). This is because a sustainable career is built through time, and only a focused student can go through the dynamic process (De Vos and Van der Heijden, 2017b). As a result, the process will provide employees with the opportunity to learn and relearn what works in order to achieve employment sustainability. Prior to this, it is advantageous for such an individual to develop this skill set during their college years, in order to build capacity and thick skin towards change, information gathering, and decision-making. Similarly, teamwork and awareness of the academic environment will boost graduates' capacity to recognize and use resources, making them more appealing to recruiters and business executives and employable. (Lawrence and Poi, 2015; Baruch, 2015)

**Theoretical and practical contribution**

*Theoretical contribution*

Despite the existence of papers on strategic intelligence, graduate employability is discussed separately. There is, however, little research on how undergraduates might position themselves to acquire a competitive edge using these notions together. The conceptual model (Figure 1) and the three inquiry questions explain the relationship between strategic intelligence and employability as well as the steps students must take to achieve, so emphasizing the requirements of graduates, employers, and universities. This fills the aforementioned gap in the research by improving how we conceptualize strategic intelligence and graduate employability.

The framework also emphasizes the interdependence and connections between the responsibilities played by undergraduates, universities, business, and other stakeholders. By recognising shared ideas of life-long learning and sustainable employability (Ghosal *et al.,* 1999), career management literature (Arthure *et al.,* 1989; Gunz and Peiperl, 2007) are connected. According to Inkson and King (2011), these two streams are frequently developed concurrently; as a result, this work aids in bridging the two research objectives. Finally, we set the groundwork for establishing strategic intelligence as a crucial component of graduate and general employability.

*Practical contribution*

This conceptual paper provides managerial advice on how undergraduates might become employable from an early class through strategic information, as requested by Keikha and Hadadi (2016), Goodman and Tredway (2016), and Steurer (2022). Additionally, Dardiri (2016) referred to counselling implications as well as advice on developing innovative habits for a long-lasting profession.

In order to address problems with an entrepreneurial attitude even when they work in organizations, undergraduates need to know how to deal with job concerns (Van van Heijden *et al.,* 2016). Students should take responsibility for their own careers in order to get a job and maintain sustainability in a cut-throat economy. In addition, lifelong learning must continue via graduates' participation in the labour market as it starts in school and continues through higher education (Donald *et al.,* 2019).

**Future Research**

Future works might expand on the ideas we put forth, keep looking at how strategic intelligence and graduate employability interact with one another, and study the career ecosystem. It will also identify further cooperative tactics to improve employability and examine the impact of Artificial Intelligence (A.I.) on finding and selecting the best candidate for a position, as it relates to the employability of graduates from the viewpoints of organizations and recruiters. Finally, future study should investigate how far universities can allow A.I to influence talent management and student performance in terms of strategic intelligence for graduate employability.

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