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Artificial Intelligence and Robotics Towards the Evolution of Sustainable Graduate Employability Ecosystem: A Contemporary Perspective for Higher Education Stakeholders in the UAE

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Declaration of authorship

I am the author of this thesis, and the work described therein was carried out by myself personally.

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ABSTRACT

The world has entered an era of an unprecedented technological revolution. Developments in artificial intelligence (AI) and robotics have generated new professions while de-skilling or re-skilling many others. Higher education institutions (HEIs) face the challenge of keeping pace with technological advancement— both in their efforts to prepare students for success in their future careers, as well as in protecting graduates from potential occupational disruptions caused by AI. However, HEIs' traditional business education model is incompatible with the changing nature of the job market. This DBA thesis examines business graduate employability (GE) in light of the emergent role of AI in the United Arab Emirates (UAE). It investigates how HEIs respond to the changing demands of employability stakeholders in the AI era, adopting a more holistic and multi-relational approach to the interaction between employability mechanisms, structures, and stakeholders in the complex GE ecosystem. The study applies stakeholder theory as a theoretical lens to explore the GE phenomena. The research is conducted from a critical realist paradigm, employing a qualitative approach via in-depth interviews. Interviews were conducted with a sample 40 participants comprised of educators, graduates, and employers. The data analysis employed Gioia inductive logic approach to interpretive grounded theory, developing concepts, establishing interrelationships, and building an inductive theoretical model from the data. The study findings indicate that HE response to the digital era in the UAE remains nascent; HEI must rethink the dynamics of the uncertain external environment and its limited internal resources. Furthermore, HEIs should focus on developing a future-oriented and proactive approach to navigating the changing role of HE in the age of AI. This work ultimately proposes a GE ecosystem model developed from the research findings and grounded in stakeholder theory. This model, founded on a more comprehensive understanding of GE, is not only more sustainable – allowing HE to adapt to the stakeholders emerging demands – but adds new employability insights in the context of non-western countries such as the UAE.

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CHAPTER 1: INTRODUCTION

The accelerated rate of globalisation has intensified the demands for higher education institutions (HEIs) to produce employable graduates (Pham and Jackson, 2020a). Technological advancement, in particular, has generated new job and skill requirements (Green et al., 2016; ILO, 2021), inspiring calls from policymakers and economists for increased employee prerequisites (Lauder and Mayhew, 2020). In this sense, graduate employability (GE) has become an increasingly complex issue (Chhinzer and Russo, 2018; Clarke, 2018); HEIs must provide business graduates with the relevant knowledge and competencies to succeed in the rapidly evolving digital landscape (Acemoğlu and Restrepo, 2018; Igew et al., 2020; Ozer and Perc, 2020; Qasim and Kharbat, 2020; Žalėnienė and Pereira, 2021). However, current business education systems and curricula are incompatible with the evolving job market and nature of employment (UN, 2022). It is, therefore, imperative to investigate how business schools can effectively prepare business students to adapt to a perpetually changing work environment.

The dynamic nature of the modern job market warrants a multifaceted approach to employability involving a range of key stakeholders in HE (Thomas and Ambrosini, 2021). Stakeholders have a vested interest in GE and ,as such, demonstrate increasing concern related to HE outcomes (Clarke, 2018). The support and agency of GE stakeholders are essential in ensuring that graduates possess the skills and competencies necessary for success in their occupation (Nwajiuba et al., 2020). However, HE stakeholders have traditionally faced barriers throughout graduates' transition from education to employment (Ashour, 2020). It has become a complex process recognised globally and associated with a high youth unemployment rate (ILO, 2017; Okolie et al., 2020; Suleman, 2018).

HEIs face the challenge of finding dynamic and sustainable mechanisms to support advancement among learners (Heystek and Terhoven, 2015). The interaction between GE social structures and stakeholders' agency triggers generative mechanisms that have the causal power to impact the social world (Hartwig, 2007). It emphasises the causal factors critical for qualifying graduates for the job market, such as political, economic, and educational systems (Cashian, 2017).

In managing the increasing complexity caused by AI, the shared responsibilities of HEIs and key stakeholders are not clearly defined. Further discourse is needed to determine how HEIs and stakeholders can collaborate in preparing graduates to enter a rapidly changing workforce. In addition, the conceptualisation of GE amid uncertainty in – and possible upheavals to – the future of the workplace must be reviewed (Tholen, 2015). This research, conducted in the UAE, explores the mechanisms that comprise the GE social structure and shape employability prospects. This research furthermore explores stakeholders' agency within the GE social structure. By analysing the GE agency-structure relationship, this research aims to propose a GE ecosystem framework that produces improved employability outcomes in the digital age.

1.1 Research Questions

The study attempts to provide insights into GE in the UAE from key stakeholders' perspectives in the era of AI by answering the following research question:

How should business schools respond to the changing demands of stakeholders in the AI-driven world of work to enhance GE?

The overarching research question is divided into two sub-questions.

- What collaborative mechanisms among key stakeholders in HE underpin the social structure of GE in the era of AI?
- To what extent can the agency of key stakeholders in HE contribute to enhancing GE in the era of AI?

1.2 Rationale and Contributions of the Study

The digital age has increased employers' expectations in terms of graduates credentials and skills (Brown and Souto-Otero, 2018). It is ostensibly the responsibility of HEIs to ensure and advance GE in the wake of this change. However, HEIs are unequipped to do this independently, given the structurally contesting socio-economic conditions which govern GE and the job market (Shava and Heystek, 2019). This suggests that employability is a social phenomenon in which stakeholders act and make decisions that either enable or constrain their agency to promote GE (Cashian, 2017; Tholen, 2015). However, GE has traditionally been framed as an individual

phenomenon, an ideology that neglects the underlying structural issues contributing to GE outcomes (Santos, 2020; Tholen and Brown, 2018). As such, there is limited research studying GE stakeholders' agency, highlighting a gap in the literature related to the factors that impact GE (Divan et al., 2019; Hallett, 2012).

Chhinzer and Russo (2018) argued that the complicated nature of employability is compounded by the absence of empirical research that recognises or validates the mechanisms contributing to employability. Thus, there is a need for more research analysing stakeholder agency and structural elements in the employability context (Delva et al., 2021; Pham, 2022). Moreover, as technology continues to advance, a primary problem pertains to the capacity of the educational system to effectively support graduates in this rapidly evolving technological landscape (Brown et al., 2020). However, as the emergence of AI technology in HEIs and business schools is a relatively new phenomenon, only a few studies have examined these advancements (Chen, 2022; Desai, 2023). Further research is needed to explore the intersection of employability and emerging technologies as a contextual factor (Brown et al., 2020).

Employers' perspectives have been problematically absent from GE discourse in the UAE (Griffin and Coelhoso, 2019). Limited studies have applied stakeholders theory to GE (e.g., Nwajiuba et al., 2020; Rook and Sloan, 2021). However, collecting information from key stakeholders, like employers, is essential in understanding how HEIs can best support graduates' transition from education to employment. To compound this issue, there is little literature exploring employability in non-western contexts (Fakunle and Higson, 2021). As such, previous employability studies neglect the contextual and relational nature of employability in collectivist societies (Delva et al., 2021; Forrier et al., 2020).

The aforementioned knowledge gaps have hindered the development of effective policies and interventions to support business graduate employability in the digital age. This study – which explores GE in the context of the UAE – bridges these research gaps by eschewing the traditionally critical, sociological, or technological approaches (e.g., Cook, 2022; Tholen, 2015; Tomlinson, 2017) in favour of a more holistic, culturally-informed method.

The research contributes to the literature on GE by thoroughly analysing stakeholders' agency and the mechanisms constituting the GE social structure and influencing employability. This exploration supports a conceptualisation in which GE is understood as the capacity of stakeholders to act as agents within the GE social structure and enhance GE. In addition, it provides insights into GE outcomes beyond mere employment rate (Khan and Lundgren-Resenterra, 2021; York, 2006).

The research contributes to the competency gap analysis that can inform the development of future talent schemes. By the process of extrapolating stakeholder theory to the GE context – and examining the experiences of key HE stakeholders (educators, employers, and graduates) – this study develops a GE ecosystem model with the capacity to both facilitate graduates' transition to the job market and support the employability development of an adaptable workforce.

1.3 Research Aims

The research aims to provide a broader view of GE, adopting a multi-stakeholder perspective that transcends the employment outcome and skills-based approach currently dominating the literature (Khan and Lundgren-Resenterra, 2021; York, 2006). The study employs AI as contextual framework to explore the GE phenomena. The research examines GE through a holistic and multi-relational lens, considering the interplay between employability mechanisms, structures, and stakeholders' agency. The research seeks to understand how the agency of key stakeholders in HE contributes to business graduates' employability. The study further explores the mechanisms that contribute to improving GE outcomes, such as effective collaboration between GE stakeholders.

The study intends to formulate the interconnection between structure and agency (Tholen, 2010). The research therefore considers both external and individual actions in addressing GE. Gathering data about stakeholders' feedback and experience provides insight into how business schools can respond to the changing demands of employability stakeholders in the era of AI. Ultimately, the overarching purpose of this study is to contribute to the existing knowledge on graduate employment and employability.

1.4 Research Objectives

To meet the research aim identified above, the following objectives have been established:

- Capture key HE stakeholders' views and experiences about the skills and knowledge demands created by the new era of AI.
- Understand key HE stakeholders' perspectives about the changes caused by AI disruption to prepare for HE response to these changes and demands.
- Investigate challenges impacting the transition to the job market for further development of the GE ecosystem model to enhance GE.
- Make recommendations for professional practices that can enable or constrain GE in the new age of AI.

1.5 Underpinning Theory

Stakeholder theory (ST) has attracted increased attention in the wake of the digital transformation era. Researchers have turned to ST as a resource in overcoming the challenges of the fourth industrial revolution (4IR), using the theory as a platform from which to better understand stakeholders' influence on – and demands for – GE in the digital era. ST is an amalgam of strategic management, organisation theory, and business ethics. The theory questions the conventional assumption that profit is management's primary goal (Laplume et al., 2008). ST, rather, is based on the premise that organisations can only succeed when they create value for all their stakeholders (Freeman et al., 2010). Accordingly, the principles of ST must be embraced to address global challenges affecting the world today (Mhlanga and Moloi, 2020). Stakeholders present an array of diverse voices and perspectives; involving all stakeholders in the construction of educational systems is therefore informative and universally beneficial. Accordingly, stakeholder theory was adopted in this study to cultivate a comprehensive understanding of GE challenges and demands in the age of AI.

1.6 Methodology

The research is conducted from a critical realist paradigm which supports the implementation of a single case study methodology and utilises qualitative data collection methods. Critical Realism (Archer et al., 1998) promotes studying the GE process across different layers of reality

(Byers, 2018). Critical realists believe reality exists, whether it is known or unknown (Bhaskar, 1975), and rely on individual views to determine this reality (O'Mahoney, 2014). The critical realism paradigm combines ontological realism and epistemological constructivism (Maxwell, 2018). The ontological assumption underpinning this research is that reality is objective, whereas the knowledge obtained is based on people's cognition. This approach recognises the interaction between stakeholders' agency, surrounding social structures, and causalities of employability (Cashian, 2017; Saunders et al., 2009). It furthermore considers the interaction between different stakeholder groups (employers, educators, and graduates), identifies the mechanisms that affect stakeholders' construction of reality, and assesses how these factors shape GE.

To address these research questions, I, the researcher, collected data pertaining to the lived experiences of the key employability stakeholders, conducting interviews to probe their perspectives and knowledge. Three key categories of stakeholders – educators, employers, and graduates – were involved in the process. The views of policymakers, developed from secondary data and document reviews rather than interviews, were also included to develop a more robust understanding of relevant national strategies, particularly concerning AI.

1.7 Definition of Key Terms

The following key terms will be defined: GE mechanisms and stakeholders' agency. For clarity, the present study used the concepts of GE mechanisms offered by Cashian (2017). The mechanisms are defined as elements of political, economic, and educational systems that include employability enhancements. These elements constitute the employability social structures that possess generative powers of constraints and enablement capacity around agents' actions and responses (Archer, 2003). These structural elements may serve as facilitators or hindrances to employability (Holmes, 2013). It may include various strategies, practices, policies, or interventions that impact employability in the context of the new digital age.

The stakeholders' agency in the study is related to the dynamic nature of stakeholders to change their actions, behaviours, and perspectives over time rather than remaining static representatives restricted to a predefined role within the system (Lyon et al., 2020). It focuses on the ability of

stakeholders to act consciously and rationally in response to a presented circumstance, resulting in an active engagement rather than passivity (Hewson, 2010).

These terms will be further explored in the second and third chapters of this work.

1.8 The Researcher's Motivation

This research has been informed by my extensive experience in the higher education sector and engagement with employers in different industries. I have worked in the fields of employability, career services management, and industry partnership – at both public and private universities in the UAE – for more than 15 years. Through this work, I have acquired substantial knowledge related to both student engagement and career development. However, the challenges of institutions driving accountability of employability merely towards career services (Grey, 2018) have inspired me to investigate the phenomena from an academic perspective.

The literature's current, misguided approach to evaluating GE has additionally inspired this research. Academic institutions tend to inappropriately conflate employability with employment (Cheng et al., 2021). In consequence, GE has traditionally been operationalised as graduate employment rate, despite this measure failing to reflect true employability (Yorke, 2006). By investigating the experiences of key stakeholders, my goal in conducting this study was to determine how education institutions can become more responsive advocates of GE.

Throughout my career, I have dedicated substantial time to reviewing strategies, policies, and systemic matters related to graduates' employability. This experience stimulated my interest and participation as a researcher in developing a GE ecosystem model that guides HE stakeholders in advancing UAE graduates' employability. In conducting this study, I intended to integrate a new discourse into the UAE HE system.

Through this research, I sought to investigate new employability trends, such as AI and talent development, and provide a comprehensive overview of GE in the UAE. The model that this research proposes draws attention to various dimensions, such as employment fit, and highlights the need for systemic attention to a collaborative partnership with HE stakeholders. It furthermore provides insight into how HEIs can promote employability in the new era of AI.

A researcher's perspective is unavoidably rooted in a foundation of personal experiences, background, and biases (Berger, 2015). However, my familiarity with the topic was an asset to this research, enriching both my understanding of the participants' perceptions and my analysis of their lived experiences. That being said, I simultaneously remained mindful to avoid presenting my own experience (Berger, 2015). As a researcher, I recognise my responsibility and position as a social agent involved in the institution's GE management. My commitment is therefore as an interested and subjective researcher rather than as a disconnected actor. This research, conducted in the context of the AI era, has challenged me to reflect on my current ways of working and changed my personal beliefs. I am appreciative of this invaluable opportunity to connect my professional experience in employability with my academic knowledge in the computer science field.

1.9 Thesis Outline

This thesis is organised into six chapters, commencing with this introduction, Chapter one. This chapter is designed to provide the reader with the rationale, objectives, research questions, and the significance of the study.

Chapter Two provides a review of the literature. This chapter entails, firstly, an overview of the employability literature and, secondly, a discussion of the overall AI adoption in the corporate world and business schools. This chapter furthermore reviews the stakeholder theory that has been employed by this research.

Chapter Three describes the philosophy, research design, context, and methodology used in this study. It recognises the key participants included in the study. The data sources are identified, including semi-structured interviews and documents to investigate the GE discourses in the era of AI. It also details the data description, collection process, and data analysis techniques, clarifying validity and reliability.

Chapter Four presents the data collected in the study. It expounds upon the themes emerging from the data. It then explains the data structures constructed by employing Gioia method techniques.

Chapter Five provides a discussion that analyses the abstracted themes generated from the research findings. This chapter then explains the relevance of these themes to the literature and their connection to the research objectives.

Chapter Six, the final chapter of this thesis, discusses the theoretical, practical, and policy-related implications of this study. The chapter concludes by exploring the limitations of the study and areas for future research.

CHAPTER 2: LITERATURE REVIEW

This chapter comprises the following: an overview of the employability literature and a discussion of the overall AI adoption in the labour market, examining the latter's impact on the transformation of the corporate world and business schools. This literature review additionally explores the stakeholder theory employed by this research.

2.1 Employability and Employment

The employability discourse initially emphasised job security – that is, fixed, lifetime employment within a restricted range of opportunities – as an ideal graduate outcome (Higgs et al., 2019). However, recent literature has replaced the idealised notion of job security with employability (Ladeira et al., 2019). The phenomenon of employability has attracted growing attention from the academic community in the context of HE (e.g., Bui et al., 2019; Mursitama et al., 2022; Pham, 2021; Pham and Jackson, 2020b).

Employability is primarily perceived as a measurable economic outcome for graduates and institutions (Fakunle and Higson, 2021). The concept of GE was brought to a larger audience with the initiation of the Graduate Destination Survey (GDS) administered by the Ministry of Education (MOE). The GDS aims to determine the rate of graduates who obtained employment within nine months after graduation (UAEU, 2022). The GDS is regarded as a key performance indicator for HEIs. HEIs are thus motivated to deliver employability in order to improve their performance in the GDS (Cashian, 2017).

However, it should be noted that employment is different from employability. Employment, an indication of educational output, is represented by the number of graduates contracted in the job market. In contrast, employability refers to the quality of educational outcomes and individual achievement (Hou et al., 2021). Employability is also an indicator of the success of the university learning process (Jackson and Bridgstock, 2018). In this context, graduates can be employed but not employable, and vice versa. It should also be noted that employability is different from career readiness. Career readiness is defined as having the skills an individual employer is requesting at the time of a particular opportunity (Wallis, 2021). However, Sachs et al. (2017) explain that it is more beneficial to recognise that students must be both employable

and job-ready to improve their chances of employment. GE necessitates a continuous dialogue about graduates' job readiness and their ability to perform in the labour market (Olo et al., 2021; Tomlinson, 2017b).

2.1.1 Graduates' Transition into the Contemporary Workforce

Graduates' transition from college to the labour market has become a prevalent concern. ILO (2020) describes the transition phase as "… neither a simple process nor an irreversible one". This is due to HE massification and labour market conditions (Hou et al., 2021). Massification of HE promised better chances at macro and micro levels regarding graduates' trajectories (Alves and Tomlinson, 2021). However, this growth did not increase graduate jobs (Artess et al., 2017). Instead, it generates an oversupply of unemployed graduates in the job market.

Poor quality outcomes, such as an oversupply of graduates, indicate systemic flaws in HE worldwide. Unemployment has become a common experience among HE graduates in developed and developing countries (Nghia, 2019). The global youth unemployment rate is 13.6 per cent (ILO, 2020). The Middle East and North Africa (MENA) region has the world's highest youth unemployment rates: 29 per cent in North Africa and 25 per cent in the rest of the region (UNICEF, 2019). Such statistics have urged experts, scientists, and business leaders – such as Bill Gates, Stephen Hawking, and Elon Musk – to alert the world that the new changes in the labour market, if left unchecked, will cause mass unemployment (Walker, 2020; WEF, 2017).

The past decades have witnessed major transformations in labour markets around the world. These changes are owed to globalisation, technological advancement, and shifting industrial and governmental policies (Acemoglu and Restrepo, 2018; Lee and Clarke, 2019; PWC, 2018; Stijepic, 2017; Tholen and Brown, 2018). The metamorphosis of the global labour market has given rise to novel occupations and skill requirements. Given the rapid pace of these developments, worrying disparities exist between employers' expectations and recent graduates' skills (Osmani et al., 2019). The complexity of enhancing GE in HE has raised concerns about the value of graduates' credentials and the negligence of the labour market.

Tholen and Brown (2018) argued that the role of graduate credentials within the job market is overestimated. The multifaceted nature of employability has traditionally been limited to

graduates' abilities and qualifications. The employability skills that are incorporated by many HE programs are either inadequate or irrelevant to graduates' employment process, suggesting that universities are unaware of the GE skills required in the labour market (Hou et al., 2021). Lisá et al. (2019) and Tholen and Brown (2018) argued that insufficient primary skills are one of the most common impediments to post-graduate employment. However, other experts maintain that it is a disconnect in the relationship between HE and the labour market that produces overqualified graduates. Winterton (2019) claims that graduates are overeducated – boasting skills higher than the level expected for an employment offer – but are unable to obtain employment due to the volatile nature of the job market.

Bonnard (2020) argues that the concept of GE has emerged in response to graduates' challenges in accessing the job market. Such challenges include job insecurity, underemployment, and economic volatility (Yang, 2018). Graduates encounter inevitable challenges when transitioning from HEIs to work (Okolie et al., 2020; Suleman, 2018). Several studies have been conducted to explore the obstacles that compromise GE. For example, Uddin (2021) attributed employability challenges to the lack of the following: required skills, quality education, industry partnership, academic qualifications, and a compatible curriculum. Nguyen et al. (2018) and Tran and Nguyen (2018) highlighted culpable factors such as inadequate proficiency in the English language and graduates' motivation to succeed and achieve their career goals.

Additional research has demonstrated issues such as instructors' competence, poor infrastructure support, lack of work placement and opportunities (Mumme and Cameron, 2019; Nwosu and Chukwudi, 2018). However, the challenges caused by the job market can make it more difficult for graduates to find employment. The theory of GE does not adequately address the issues related to labour market congestion (Tholen and Brown, 2018).

In the context of UAE specifically, the literature attributes employability challenges to population demographics, global competition, the duality of the job market, unrealistic expectations for income, language proficiency, gender imbalance, and cultural, religious, and social considerations, in addition to the slow process of changing the curriculum (Ashour, 2020). However, insufficient research has examined these challenges and their multifaceted dimensions. In response to this gap, the current study explores the challenges to UAE GE in a

rapidly evolving technological landscape. Investigating the employment market challenges encountered by stakeholders is crucial to develop a GE model that supports graduates' smooth and successful transition from education to the workforce. The present work can be used as a guide in determining how business schools can effectively address the challenges of changing stakeholders' demands in the context of the overarching research question.

2.1.2 Mechanism Shaping GE Social Structure

The literature defines elements of political, economic, and educational systems as the "mechanisms" that constitute the employability social structure (Cashian, 2017). For instance, students' entry qualifications, degree class, and course-related work placement are identified as generative mechanisms that hinder or promote GE (Cashian, 2017). Adejumo et al. (2021) argued that education is an appreciative mechanism for generating new employment opportunities and promoting sustainable economic development. In this sense, the potential trigger mechanisms include employability enhancements (Cashian, 2017, p.121). These mechanisms can be internal or external factors that prompt GE, such as changes in individual circumstances and job market demands. However, the current pressure on HEIs to enhance graduates' job prospects through the employability imperative overlooks external elements and prioritises neoliberal objectives (Hartmann and Komljenovic, 2021). Therefore, in order to understand both stakeholders' ability to act and their connection to GE, the concept of employability must be explored within a complex social system. This will help identify the factors that either facilitate or hinder graduates' ability to pursue their desired careers (Lundgren-Resenterra and Kahn, 2020).

Transitioning from college to the workplace necessitates navigating employment processes and adhering to industry-specific norms and practices. These factors are part of the larger employability social structure in which students must actively participate. However, although navigating these institutional structures successfully is an essential aspect of employability, it does not fully account for the mechanisms underpinning graduates' successful transition from university to the workplace (Cashian, 2017). Success is not the result of one-time employment; rather, it is the outcome of an interaction between graduates' education attainments and

adaptation to the contextual circumstances surrounding them (Bridgstock and Jackson, 2019; Pham and Jackson, 2020 a, b).

Tholen and Brown (2018) assert that GE skills alone are insufficient for the labour market. This change in how employability is viewed acknowledges that additional limitations or restrictions must be considered (Small et al., 2018). Several scholars have highlighted the importance of examining the role of structure in employability research, observing that structural components may serve as facilitators or hindrances to employability (Holmes, 2013).

The literature has highlighted several GE practices – including, but not limited to, curriculum reform (Özbebek Tunç and Aslan, 2019), lifelong learning (Aoun, 2017), advancements in the relationship between humans and machines (Brown, 2020), and stakeholder partnerships – to help bridge the gap between the labour market and HE teaching methods (Zhai et al., 2021). However, GE studies often concentrate exclusively on individual characteristics of graduates, neglecting the structural factors that shape employability prospects (Hartmann and Komljenovic, 2021). Accordingly, this gap highlights the need for ongoing exploration and redefinition of the signals and mechanisms that determine GE's social structure.

According to Chhinzer and Russo (2018), the complicated nature of employability is compounded by the absence of empirical research that recognises or validates the mechanisms contributing to employability. This lack of empirical investigation warrants consensus among stakeholders regarding the explicit components of employability. While there are increasing calls for collaboration between HEIs and GE stakeholders (Jackson and Bridgstock, 2019; Pham and Jackson, 2020b), additional, evidence-based research is needed to determine effective GE mechanisms to appropriately facilitate this collaboration. Accordingly, this study argues that there is a need to develop a more coherent basis for employability research by first understanding the underlying mechanisms that shape employability outcomes. By investigating these mechanisms, the present study provides a more nuanced and comprehensive understanding of the factors that influence employability outcomes.

However, applying these findings to different contexts can be challenging as the components that affect employability may be culture-specific (Cashian, 2017). There is little research

examining the mechanisms of GE in non-Western contexts (Fakunle and Higson, 2021). More data is needed to understand GE in diverse national contexts (Tholen, 2010). Acknowledging this gap, this study examines GE in the context of the UAE, a non-western country affected by global transformations which have radically altered the landscape of its workforce and labour market (Esposito and Elsholkamy, 2017).

Drawing from the above perspectives, this study will allow for a better understanding of employability through collaborative mechanisms among GE stakeholders, promoting more qualified graduates for the employment market. Analysing the mechanisms that constitute the GE social structure addresses skill gaps, ultimately guiding the delivery of initiatives to enhance GE and improve graduate outcomes.

2.1.3 Sustaining Employability Through Stakeholders' Agency

Onyx and Bullen (2000) define the agency of stakeholders as their power to plan and initiate a sequence of actions. According to Archer (1995), agency depends on an individual's ability to reflect on their circumstances, engage in self-reflection, and meaningfully contemplate their role in society. According to Cashin (2017), employability is a social construct that is influenced by the agency of individual stakeholders. Accordingly, the present study defines stakeholders as individuals or groups who can affect or be affected by achieving an organisation's goals (Freeman, 1984). It focuses on the concept of agency, which refers to the ability of stakeholders to act consciously and rationally in response to a presented circumstance (Hewson, 2010). Stakeholders' agency, as presented in the study, is related to the dynamic nature of stakeholders to change their actions, behaviours, and perspectives over time (Lyon et al., 2020). This exploration supports a conceptualisation in which GE is understood as the capacity of stakeholders to act as agents within the GE social structure in ways that enhance GE.

The dominant view of employability, influenced by human capital theorists, emphasises the roles of individual adaptation and investment in accruing skills and knowledge. Gary Becker's (1964) seminal work on human capital theory argues that human capital, developed through education and training, increases productivity and economic growth. Educated individuals earn more due to their increased productivity, resulting in a growing rate of return from schooling. Similarly, Thijssen et al. (2008) argue that employability is determined by the degree to which

an individual's human capital profile aligns with the requirements of the labour market. This approach draws a clear distinction between structure and agency, positing that any explanation of social or economic phenomena must consider individuals actions before examining the larger systems. According to this perspective, individuals are endowed with the autonomy to operate within the institutional framework of education and employment, carefully evaluating and planning their actions based on the cost-benefit analysis.

These sociological views challenge the notion that individuals are simply products of their social structures and must conform to pre-existing norms and expectations. Instead, they argue that individuals – stakeholders – have agency and can deviate from established practices and norms, especially when faced with problems that call for new solutions. This perspective emphasises the role of agency in shaping social structures and challenging established norms (Whitford, 2002).

There is debate surrounding the ontological standing of agency and structure, primarily concerning which holds causal priority (Tholen, 2015). Several studies are grounded in the assumption that individual actors and structure are independent entities impacting employability separately (Cashian, 2017; Delva et al., 2021; Lundgren-Resenterra and Kahn, 2020. Scholars have attempted to reconcile this dichotomy. Giddens (1984) explained the interaction between structure and agency as the "duality of structure", in which structures reinforce and constrain agents' actions. Similarly, Bourdieu provided insights into the relationship between agency and structure. Through the lens of Bourdieu's habitus, individuals are not inactive recipients of social structures but dynamic agents. Bourdieu adopted the expression habitus to explain an individual's distinctive characteristics, tastes, judgments, or ways of reacting and thinking (Bourdieu and Wacquant, 2013). Habitus helps explain how individuals can exert agency within social structures by understanding how individuals shape and are shaped by their social context. More recently, scholars have embraced a combined “capability-employability” approach, acknowledging how both individual agency and broader societal factors influence employment outcomes (McGrath et al., 2017).

To resolve the challenges related to employability, it is essential to engage a range of key stakeholders within HE. Educating stakeholders on the nature and capacity of their agency could

facilitate more successful involvement (Reed et al., 2009). However, effective stakeholder involvement also depends on understanding the connections between stakeholders' agency and the mechanisms related to GE within the social structure. The dynamic nature of stakeholders' agency means that stakeholders can change their behaviours and perspectives over time rather than remaining static functionaries confined to a predefined role within the system (Lyon et al., 2020).

The extent to which stakeholders can actively adopt sustainable actions and practices in the realm of GE is not well-understood. The agency-structure debate has received inadequate attention in theoretical, empirically based discussions (Tholen, 2015). Furthermore, few studies combine agency and structure elements in the employability context (e.g., Delva et al., 2021; Pham, 2022).

Although many studies discuss the roles and responsibilities of various stakeholders in advancing GE (e.g., Cheng et al., 2021; Nwajiuba et al., 2020; Rook and Sloan, 2021), there is a lack of data analysing how stakeholders exert their agency to influence outcomes related to GE. Thus, this study aims to address these limitations through its empirical examination of GE. Ultimately, the subject work sheds light on the interrelatedness of stakeholders' agency and the employability structure. The study engages with key HE stakeholders, including employers, educators, and graduates, to gain insights into their perspectives on GE.

By studying both stakeholders' agency and their interaction with the GE social structure, it is possible to understand the roles and responsibilities of different stakeholders, identify areas for collaboration and improvement, and ultimately improve the employability outcomes for graduates. This knowledge can also inform policy decisions and program design so as to better support GE. This research has the potential to benefit HE institutions, graduates, and employers by providing a better understanding of how to bridge the gap between HE and the changing job market.

2.1.4 Employability Attributes and Skills

Given the relevance of graduates' personal attributes in determining employment and employability, a substantial body of literature has examined the identification of skills and

attributes employers solicit from graduates. Graduates' traits change over time in response to the needs of industry and society (Bullen and Flavell, 2021).

Employability attributes are developed through graduates' experiences, which comprise both formal teaching and informal learning activities (Tomlinson, 2017). However, it can be described as highly fluid and unclear (Pham and Saito, 2019). Messum et al. (2017) study involved 38 senior managers and 42 recent graduates who rated the importance of 44 employability skills items. They used literature and content analysis for advertisements for graduate positions. Their study found that the most relevant skills defined by employers were mainly generic such as integrity and ethical behaviour, interpersonal skills, collaboration, adaptability and open-mindedness, written communication skills, collaboration, self-awareness, time management, planning, and lifelong learning.

Although the extant literature categorised the employability skills in different ways with no unified list, soft skills such as teamwork, communication, and confidence are essential for graduates' success (Prince's Trust, 2017). Desirable attributes also include career readiness skills, technical skills, entrepreneurial skills (Deloitte, 2018), emotional intelligence (Schwab, 2017), social qualifications (Brown and Souto-Otero, 2018), resilience, enthusiasm, and creativity (CBI, 2016; Pearson, 2016). The World Economic Forum (2020) projected that the most desired skills of 2025 will include problem-solving, leadership, collaboration with others, and proficient technology use and development. These studies and surveys demonstrate that employers' so-called "wish lists" are expanding, indicating an increasing number of desired skills and attributes (Barrett, 2019).

A synthesis of the skills identified in the literature reveals the following fundamental employee skills and attributes: digital skills, communication skills, willingness to learn, positive work-related attitude, collaboration, and flexibility. However, it can be argued that students may not be able to develop these skills by graduation. Students are not a homogeneous species; they herald from diverse backgrounds. Simply by the circumstance of uncontrollable factors – such as nationality and socioeconomic status – some students have been privileged with the opportunities and resources to hone the aforementioned skills while others have not (Graham et al., 2019). To help combat these inequities, HE dedicates effort to students' learning and career

preparation. As a result, many studies commend HE's efforts to develop graduate traits beyond the knowledge of the discipline (Oliver and Jorre de St Jorre, 2018).

Myriad frameworks have been proposed to define key employable skills and attributes. For example, the "Learning Compass" framework was designed by OECD in collaboration with academics and policymakers to establish the competencies needed by graduates to navigate the job market (OECD, 2020). Deloitte (2018) also proposed a framework that aligned with the fourth industrial revolution (4IR) attributes to promote workforce preparedness, soft skills, technical skills, and entrepreneurship. The UK government established the Teaching Excellence Framework (TEF) to recognise the quality of teaching and learning in higher education institutions to improve students' skills and knowledge during their studies. The attainment of employable attributes, the main component of student learning outcomes, is one of the three features of the student experience applied in the TEF to measure excellence (DFE, 2017).

However, it is important to note that employability skills vary based on location and culture, making it challenging to define a global set of employability skills and attributes (Pham and Saito, 2019). In the UAE context, the National Qualifications Authority (NQA) identifies the key competencies or generic skills areas demanded in the workplace, including information, communication, organising self, working with others, numeracy, problem solving, and technology (NQA, 2012). These skills, obtained during education, primarily determine the ability of graduates to acquire and retain employment according to the human capital viewpoint (Tomlinson 2010, 2017).

The increasing importance of producing employable graduates in an era of rapid technological advancement – in which the repertoire of in-demand skills is constantly evolving – merits continuous updates to HEI curricula. There is a strong correlation between AI adoption and shifts in the types of skills demanded by employers (Acemoglu et al., 2022). According to a Deloitte report, 71 per cent of adopters say AI has already transformed company job descriptions and essential skills, and 82 per cent assume AI will lead to reasonable or tangible changes in job roles and competencies over the following three years (Hupfer, 2020). The rapid digital transformation has widened the graduate skill gap (Ozer and Suna, 2020). Therefore, keeping abreast of new requirements and skills can help prepare graduates for the job market.

Accordingly, the study intends to capture key HE stakeholders' views and experiences regarding the skill and knowledge demands created by the new era of AI.

2.1.5 Employability and HE Stakeholders

Many recent studies in the literature explore GE from the key stakeholders' perspectives (Pereira et al., 2020; Pham, 2021; Schull et al., 2021; Small et al., 2018; Tran, 2018). All the aforementioned studies suggested that graduates' transition to employment is a challenging phase that necessitates the participation of key stakeholders. Cake et al. (2021) defined employability as "their capacity to sustainably satisfy the optimal balance of all stakeholder expectations in a work context" (p.12). However, the concept of employability is subjective, dependent on HE stakeholders' perception and based on their experiences with or as graduates (Olo et al., 2021). Stakeholders approach HE's role and responsibilities toward GE from different beliefs and perceptions (Nghia et al., 2020).

The following section will explain the HE key stakeholders' perspectives on employability, including educators, employers and students.

2.1.5.1 Higher Education Institutions' Perspectives

HEIs have seemingly shifted from viewing higher education as a social institution to capitalising on higher education as an industry. Langrafe et al. (2020) argued that new aspects of education, such as greater access to more audiences and emerging technologies, have promoted greater openness of HE activities to society. Students access to HE often forced them into insurmountable debt to obtain a degree (Tomlinson, 2017a). This approach indicates that HEIs become a commodity rather than a public good or pursuit of knowledge, which may lead to various concerns among students, especially concerning the value of their credentials (Tomlinson, 2017a). Therefore, HE is required to adjust to meet societal needs (Langrafe et al., 2020). However, HEIs face various pressures from various stakeholders caused by the controversy surrounding the skills gap in the graduate job market (Olo et al., 2021; Osmani et al., 2019). In this context, it was assumed that HEIs would provide support mechanisms to help graduates secure employment opportunities (Jackson and Bridgstock, 2018; Pham and Jackson, 2020b). For instance, HEIs are obliged to define and solidify the employability skills requested

by the job market through curricular and co-curricular programs. These programs are designed to develop fundamental skills such as communication, innovation, planning, teamwork, and entrepreneurial proficiency (Bodolica et al., 2021; Fowlie and Forder, 2020; Jackson and Bridgstock, 2018; Laalo et al., 2019; Lauder at el., 2018; Mok and Qian, 2018; Pham, 2021).

Hains-Wesson and Ji (2020) proposed an internationalisation of the Business curriculum and an interdisciplinary study program that meets industry requirements as means of combating graduate unemployability. Work-based learning has additionally emerged as an opportunity for students to accrue work experience, allowing them to broaden their skillset (Bui, 2019; Matherly and Tillman, 2019; Rook and Sloan; 2021; Tholen and Brown, 2018).

GE is now considered a quintessential measure of HE outcome (Lock, 2019). A high graduate employment rate and the average amount of time it takes graduates to secure employment have become criteria for assessing a university's graduate performance (QS, 2020). HEIs additionally boast high employability rates to attract new prospects. Furthermore, HEIs' employability achievement affects their funding level in some countries (Pereira et al., 2020), such as UK and Australia (DFE, 2017; Pham and Saito, 2019).

Motivated by these factors, policymakers from world organisations and regulatory commissions have formed policies and taken actions to enhance the GE agenda within higher education (Burke and Christie, 2018). For example, the Graduate Outcomes Survey (GOS) in Australia and the Destinations of Leavers from Higher Education (DLHE) in the UK were created to measure full-time graduate employment outcomes at various periods after graduation (Jackson and Bridgstock, 2018). However, despite these efforts, employability is still misunderstood.

While the many skills required by the job market ostensibly must be developed within the academic programs, HEIs cannot take full responsibility in fostering graduate employability. The extant literature supports the perspective that HEIs cannot independently support potential graduates' employability (Jackson and Bridgstock; 2019; Pham and Jackson, 2020b). In order to achieve employability, graduates must acquire various experiences, attitudes, knowledge,

identities, and mindsets outside of their scholarship (Pham and Jackson, 2020a; Tomlinson, 2017b).

2.1.5.2 Employers' Perspective

In today's dynamic and unpredictable global marketplace, in which lifelong employment is often difficult to secure, employers depend on employability to recruit and retain talented employees with up-to-date skillsets. However, employers express their dissatisfaction with graduates, complaining their competencies do not satisfy job market needs (Botes and Sharma, 2017).

Ongoing stakeholder discussions about the poor quality of HE graduates imply a lack of a problem-solving channel in which HEIs can respond to the employers' concerns and job market requirements (Franco et al., 2019; Kalufya and Mwakajinga, 2018). Evidently, this concern is common among employers around the world.

Employers' criticism of graduates' skills, competencies, and learning orientation has been discussed from European and non-European perspectives (Winterton and Turner, 2019). Many scholars in Western countries have surveyed employers to identify employable skills when accepting graduates (McGunagle and Zizka, 2020). Still, employers continue to report discrepancies between their expectations and graduates' skills (McArthur et al., 2017). Pham et al. (2018) attributed this to a disconnection between HE and industry expectations and selection criteria. This exclusively skills-based understanding of GE is founded on the general construction of employability as a set of skills and attributes that lead to employment opportunities (Nghia et al., 2020). To clarify, the skills-based approaches to employability have emerged in literature to focus on learning and development (e.g., Peeters et al., 2019; Pham et al., 2018). This approach indicates competencies and attitudes that contribute to productivity in the job market.

Typically, employers demand that graduates must possess relevant skills, professional maturity, and up-to-date knowledge to prevail in the workplace (Chhinzer and Russo, 2018; Igwe et al., 2022; Nelissen et al., 2017; Plant et al., 2019). As a result, employers have called for HE to produce qualified graduates to meet job market expectations (Clarke, 2018). However, there is

no particular approach that can guarantee graduates' employment. Corresponding with this argument, Pham et al. (2018) posit that a skills-based approach is unsuccessful in securing graduates' jobs upon graduation.

Employers hold a significant investment in GE; employers' potential to compete efficiently and grow their markets globally is related to the education and skills of today's graduates. As such, employers depend on universities to produce graduates that can help them obtain these lucrative outcomes (Kalufya and Mwakajinga, 2018). A review of employability literature reveals that employers seem to have moved toward a skills-based economy in the employment process, seemingly valuing a practical and robust skillset above academic qualifications (Igwe et al., 2022; Pham, 2021). Schull et al. (2021) supported that graduates' life experience is valuable to employers.

The research suggests that HEIs should include employers in the design, delivery, and evaluation of courses (Hassock, 2019; Lysytsia et al., 2019). Jarrar's (2018) study revealed the need for employers to join in dialogue with educational institutions to look into the attributes expected by the employers to provide a clear employment path to graduates.

2.1.5.3 Students' Perspective

In a world of consumerism and competition, in which the most precious product a graduate can market is their education, students are under the impression that pursuing a college degree will result in imminent employment. In this sense, Brown and Souto-Otero (2018) argue that considerable investment has been made in HE degree programmes; graduates expect a return on their investment through employment after graduation. According to QS (2021) reports, HE graduates' salaries indicate the institution's quality. Therefore, GE is among the top factors contributing to students' enrolment in higher education and program choice (Qasim et al., 2021; Tavares, 2017).

As one of the key employability stakeholders, students face pressure to advance their educational qualifications to be more employable and competitive (Mgaiwa, 2021). Typically, students are interested in developing their academic profile. They assume that degree attainment and grades will lead to employment opportunities after graduation (Igwe, 2022; Tran, 2019).

However, according to employability studies, potential graduates in their final year perceive themselves as less employable (Donald et al., 2018). This is most likely because they have cultivated a better understanding of employers' expectations and the competitive nature of the industry during their time in HE. The recent work of Thirunavukarasu et al. (2020) showed that students believe that academic courses produce an in-depth and disciplined education. However, most academic courses do not adequately prepare graduates to satisfy industry expectations. Consequently, they accept the fact that intense competition in the job market impedes employment due to the existence of other graduates with the same qualifications (Tomlinson, 2017). Evidently, the labour market could play a vital role in changing students' and graduates' perceptions about their employability. Melo et al. (2021) explained that job market conditions and the current economic state might significantly change individual perceptions toward career management.

Making informed adjustments to the HE system is an imperative step in enhancing graduates' employability. Identifying the capabilities and resources of graduates that maintain employability are therefore of paramount importance (Pham and Jackson, 2020b). For this reason, many HEIs have created student engagement and development activities at universities to provide a channel for reinforcing employability skills. However, students tend to perceive cocurricular and extracurricular activities as being less important than academic subjects (Tran, 2017). Some students deliberately dismiss these opportunities, overestimating their employability and assuming recruitment. (Jayasingam and Thurasamy, 2018).

In summary, students' perceptions of employability influence their behavioural engagement with university activities (Nghia et al., 2020). In consequence, employability enhancement requires changing students' perception of the value of HE activities delivered outside the classroom, as well as increasing their perceived vulnerability to unemployment (Nghia et al., 2020). According to the QS report (2019), there is a disparity between the skills valued by employers and the skills students perceive as being valued by employers. Students must be aware of employers' expectations and utilise the available activities accordingly. Such awareness, which fosters a more eclectic and desirable skillset, is based on "a metacognitive orientation which is mindful of self, profession, and society" (Bennett, 2019, p.49)

2.1.6 Graduate Employability Beyond Human Capital

The concept of GE is traditionally approached through the perspective of human capital theory, which suggests that education can improve an individual's productivity and promote economic growth (Becker, 1964). In universities, being employable as a graduate means demonstrating certain qualities and skills (Ezeuduji et al., 2022). The primary focus of HEIs is to determine the optimal combination of competencies, attitudes, and personal characteristics that may facilitate graduates' access to employment opportunities (Tomlinson 2010, 2017). This focus on skills reflects the prevailing view of HE as an economic investment that can achieve graduates' success. However, this approach reduces the concept of employability to a more limited interpretation (McQuaid and Lindsay, 2005).

Although many studies indicate that possessing competencies is regarded as conducive to GE, this ideology ignores the adaptability required to accommodate the market's changing demands (Frankham, 2017). Furthermore, this approach to employability cannot justify why individual graduates with more substantial capital may encounter job market difficulties while individual actors who lack basic skills can still be employable (Arthur et al., 2017; Bowman et al., 2017; Wilton, 2011).

This apparent inconsistency is why many studies in the literature – particularly sociological and critical literature – have demonstrated employability within contextual and relational circumstances (Pham and Jackson, 2020b; Tavares, 2017; Tomlinson and Tran, 2020). These alternative perspectives challenge the human capital view of employability by emphasising its contextual and conflictual aspects. Delva et al. (2021) and Forrier et al. (2020) argue that employability research has overlooked the inherently contextual and relational nature of employability; this is particularly problematic in collectivist regions such as the UAE.

Many studies indicate that the recruitment process and students' employability strategies are not solely based on meritocracy but are also influenced by other factors (e.g., Tomlinson, 2008). There has been an increasing focus on the sociological comprehension of graduates' skills and employability, as evidenced by the works of Brown (2000) and Brown et al. (2012).

These perspectives subscribe to the notion that employability is structured by opportunity and inequalities rather than just an individual's human capital (Tholen, 2015). Building on this perspective, Lisá et al. (2019) identified several determinants that contribute to GE, including the state of the job market, situational circumstances, graduates' perspectives, and professional conduct. This aligns with the view that employability is a complex concept influenced by various personal, social, and contextual factors (Chhinzer and Russo, 2018; Clarke, 2018). In this sense, Pham and Jackson (2020b) posit that the employability process is also influenced by macro-level, meso-level, and micro-level factors that interact in shaping the employability of graduates. The macro-level factors include government policies, such as access to scholarship and exchange programs and residency regulations. At the meso level, the graduates' career preferences and employment outcomes are defined by parents' perspectives, institutional programmes, and employers' expectations. At a micro-level, graduates must develop various capital, including human, social, cultural, psychological, and identity, to negotiate their employability in the job market.

Tomlinson (2007) claims that the current discourse on employability, which mainly focuses on human skills and knowledge, overlooks the diverse needs and aspirations of students beyond mere employment. This can cause some students to have misguided beliefs about their employability (Lundgren-Resenterra and Kahn, 2020). Students may incorrectly assume that enhancing their skills and attributes will guarantee better employment prospects. The limitation of this psychological or individual-centric approach to employability downplays the significance of structural and contextual factors (Santos, 2020). As such, this approach underestimates the impact of external factors that are beyond the control of individuals and may therefore provide an incomplete understanding of employability outcomes.

Emphasising an external locus of control like structure, however, restricts students' agency and confines them to the limited possibilities imposed by the job market. In line with this, Holmes (2013) proposed that having generic skills, social class, and cultural capital is insufficient to explain GE, instead arguing that GE is a process of constructing identity whereby graduates must take responsibility for using the available employability tools and present themselves as capable of being employed by potential employers. This approach acknowledges the

significance of career boundaries for GE and highlights the importance of individual negotiations within the graduate social context.

The concept of employability has been placed within a larger context that involves a transformation of universities (Hartmann and Komljenovic, 2021). This view is characterised by a growing emphasis on HEIs to demonstrate their relevance and effectiveness in both the labour market and society. Cashian (2017) argues that a student's broader social context has a greater impact on their employability. Brown's et al. (2020) "new human capital" approach takes a more contextual view of human capital, acknowledging that individuals are shaped by a wide range of contextual elements – such as digital disruption, demographic changes in workforce composition, economic transformation and government policy initiatives – that impact the development and deployment of their skills. The new human capital approach recognises the role of AI and technological advancement in shaping the prospects and challenges of graduates. To expound upon this, digital technology, commonly called technological determinism, exerts a persistent impact that inevitably changes employment levels, job design, and skill requirements (Brown and Keep, 2018).

The rising complexity of modern life and work necessitates greater adaptability and self-awareness, particularly concerning graduates' interactions and positionality (Cook, 2022). Graduates must remain attentive to both employer perspectives and multifaceted social, ecological, and technological factors when preparing to navigate the job market (Cook, 2022). In this context, digitalisation has significantly impacted the world of work. It has posed a plethora of educational challenges, such as a dearth of qualified educators, insufficient equipment, an unappealing curriculum, and low enrolment in STEM and computer-related courses (Brown and Keep, 2018).

The technological advancements boost the employers' demand for more advanced skills demonstrated by graduates. Therefore, employers expect graduates with high levels of HE achievements that confirm their knowledge and competencies (Brown and Souto-Otero, 2018). Simultaneously, technological advancement has boosted employers' demand for graduates with up-to-date knowledge and competencies. Therefore, despite the educational challenges

encountered by HEIs, employers demonstrate a need for graduates with more advanced skillsets (Brown and Souto-Otero, 2018).

As the job market becomes increasingly unpredictable due to AI advancement, graduates are more likely to seek education directly connected to employment to procure a job in the same field (Enders and Naidoo, 2022). As such, a comprehensive understanding of employability outcomes must also consider the influence of technology in the labour market. Accordingly, the increasing importance of producing employable graduates in this era of technological revolution necessitates continually assessing and redefining the factors that contribute to GE (Nateem et al., 2017; Tholen, 2015). However, as the emergence of AI technology in HEIs and business schools is a relatively new phenomenon, only a few research papers examine GE in light of these advancements (Chen, 2022; Desai, 2023). Further research exploring the intersection of technology and employability is needed to develop effective policies and practices that support graduates' adaptation to the labour market. Accordingly, the current study explores GE in relation to AI, examining how business schools can effectively respond to the changing demands of stakeholders in the digital era.

As the study focuses on GE in the context of technological advancement and AI, the following section, Section 2.2, will summarise the present status of AI adoption in both marketplace and business school. It will then compare these conditions to detect any potential gaps. By identifying the differences in the pace and extent of technological adoption in these domains, the study intends to enhance the alignment between HE and the business world, better preparing business graduates to adapt to the demands of the technological era.

2.2 Artificial Intelligence in the Age of Digital Transformation

The world has witnessed tremendous changes through a sequence of industrial revolutions, starting with the entrance of water power and the steam engine, to electric power and, lately, the advent of AI and big data. The steady growth of advanced technologies presents challenges and opportunities to individuals and societies. The societal influence of emerging technologies and the AI revolution is significant (Sestino and Mauro, 2022). It has radicalised the most fundamental aspects of daily life and work, moulding powerful firms and metamorphosising work patterns. Accordingly, concerns have emerged regarding the impact of AI and automation

applications on the labour market; these technological advancements carry the risk of displacing individuals from their jobs and making certain human skills obsolete (OECD, 2019).

AI technology is a significant driver of change in the employment market, and its impact on the workforce will likely continue to grow and evolve (Chrisinger, 2019). As a result, recent graduates may face difficulty in finding employment opportunities, and employers may struggle to find the right talent (Olo et al., 2021). Under these circumstances, skill disparity would be an even more common phenomenon in the job market (Ozer and Suna, 2020). The discrepancies between education and the labour market are in danger of increasing on account of the continuous advancement of AI technologies. This suggests that graduates who comprehend the role of AI technology in shaping the labour market will be better placed to navigate the changing landscape and capitalise on new opportunities as they emerge.

Artificial intelligence (AI) proliferation has occurred across multiple sectors and businesses. However, HEIs have struggled to keep pace. This lack of progress and reform has led to the characterisation of AI in HE as a "sleeping giant" (Wheeler, 2019). HE must take tangible action to catch up with the level of advancement demonstrated by the industry, in effect supplying the job market with skilled professionals.

The present study provides a clear and specific focus by examining changes in the job market through the lens of technological advancement. Such a study in the AI context can serve as a preliminary step in developing a broader exploration of GE, considering the multiple factors contributing to job market changes and, as a result, the career prospects of graduates. Accordingly, the following sections delve into the impact of the widespread adoption of AI on business operations, business schools, employer demands, and employment opportunities.

2.2.1 AI and Employment

Accelerated shifts in advanced technologies have the potential to disrupt job markets worldwide, resulting in unemployment (Korinek and Stiglitz, 2021). In response to these global concerns, many studies investigated the impact of AI on employment. For example, Acemoglu et al. (2022) reported a significant increase in vacancies for AI in organisations, leading to changes in the skills requirements and a drop in employment in some organisations. Huang and Rust’s

(2018) study surmised that AI is a threat to human jobs because it has the potential to substitute humans in performing various service tasks. In addition, Acemoglu and Restrepo (2020) posited that automation technologies would reduce non-AI labour recruitment in various tasks traditionally performed by humans. For example, humans could be replaced by AI in fields such as banking, personnel performance management, and employee recruitment (Ernst and Young, 2018; Hawser, 2019; Nawaz, 2019).

Human replacement by AI is a feasible reality; organisations are often interested in using new technologies in their business processes to boost productivity and reduce labour costs (Acemoglu and Restrepo, 2020). Companies are conscious that machines, unlike people, do not require financial benefits, eventually saving expenses and resulting in increased productivity (Bolton et al., 2018; De Melo et al., 2021). The automation of jobs can substitute workers in simple tasks. It can also balance employment in cognitively-taxing tasks that need creativity and problem-solving (OECD, 2019).

A number of professional reports have researched the impact of AI on employment. For example, PWC in the UK examined over 200,000 jobs in 29 countries to discover the influence of automation. The report projected that by the mid-2030s, 30 per cent of professions in these countries and 44 per cent of labourers with low education are at risk of automation (Hawksworth et al., 2018). Although the number of robots working worldwide is increasing rapidly (World Bank Group, 2019), Russo (2020) reported that the AI revolution would generate 97 million new jobs. However, this new division of labour between humans and machines is projected to disrupt 85 million jobs globally in the next five years. These figures represent medium and large businesses across 15 industries and 26 economies (Russo, 2020).

Although trends indicate that technology will eventually replace human labour, Brown (2019) argues that these claims are exaggerated. That being said, countless people around the world may still lose their jobs not as a direct result of automation, but because of competing organisations that adopt AI and consequently put their organisation out of work. As AI become more proficient at performing high-repetitive assignments, new roles focused on complex jobs with competitive earnings will emerge (Orduña, 2021).

As technological advancement permeates industries, obsolete skills are retired and new skills are introduced (Acemoglu et al., 2022). However, the impact of technological advancement on workers is not so simple. For example, employees with less digitised jobs may be at a lower risk of losing jobs in the short term. However, they are at a higher risk of losing their jobs if they do not advance their skillset as needed to accommodate new technologies (OECD, 2019). Correspondingly, the labour market continues to demand AI talents to enhance business efficiency. The strong demand for AI talents is reflected in job search sites. According to the job searches performed on LinkedIn on January 15, 2020, 64,000 job offers in the US and 23,000 worldwide were posted (Hupfer, 2020). However, the labour market also requires business leaders and management experts who can connect the company's business models and strategy to the requirements for AI technologies (Hupfer, 2020).

According to LinkedIn statistics, almost 400 million workers worldwide will switch professions over the next ten years (Trumbore, 2019). Additionally, Deloitte reports that AI adopters prefer hiring new AI-ready employees with the skills and knowledge required to work effectively with (AI) in the workplace rather than keeping current employees (Hupfer, 2020). As governments accelerate AI planning, the intersection of humanity and technology will change. The next frontier involves employing AI for human development, teaching lifelong learning and continuous adaptation to create more intelligent robots (HAI Stanford University, 2022). Accordingly, organisations differentiate themselves through work and dedication to benefit from AI in learning and development areas for more effective and efficient results (Korinek and Stiglitz, 2021; Ransbotham et al., 2020; Wamba-Taguimdje et al., 2020).

2.2.2 AI's Rapid Evolution in the Business World

There is a growing inclination towards more agile services for AI implementation in business processes— both in the UAE and globally. Today, business leaders are more informed about what AI can achieve (Korolov, 2022). AI can empower organisations to enhance the productivity of operations, enhance the customer experience, and develop products and services (Campbell et al., 2020; PWC, 2019). In addition, AI techniques tend to save labour and resources (Korinek and Stiglitz, 2021). According to the KPMG report "Trends in AI", the subsequent disruption and rise in remote working are driving AI applications to new heights (Chatani et al.,

2021). As a result, AI adoption raised by 15 per cent through 2020 (Chatani et al., 2021). AI adoption aims to serve organisations by producing robust smart solutions that will enhance their companies' value and add new breadth and depth to business functions.

In the 1970s and 1980s, AI was used to develop expert systems from human expertise and then transfer it to a knowledge base (Brock, 2018; Erdani, 2005). It has gradually developed to support pattern recognition, behaviour prediction, and API (application program interface) to make the technology commercially accessible. For example, businesses are currently using intelligent applications and features to automate business functions in the form of APIs. Examples include off-the-shelf AI, Amazon Web Services (AWS), Alexa, Siri, and Google Assistant (Gao et al., 2022; Gulson and Witzenberger, 2022). A multitude of other API applications can be used for text and multimedia analyses of AI systems, extracting meaningful information from documents, websites, videos, images, and GIF (Sharma, 2020). Evidently, the application of AI leads to an intelligent and advanced world. Take, for example, live traffic by Google maps, price estimation of rides by Uber, friends' suggestions on Facebook, email spam filters, online products recommendation, cancer diagnoses, accounts processing, contract digitisation, speech recognition, autonomous vehicles, safety risks mitigation in various industries, and labour shortage solution by automating routine tasks (Forbes, 2022; GAO et al., 2022; Korolov, 2022; Soni et al., 2019). AI is also valuable in stock market analysis, companies' performance forecasts, professional consulting services, translation, content marketing, equipment maintenance, electricity usage management, facial recognition, and generating personalised internet content such as that on TikTok (Colback, 2020).

AI applications are being embraced globally and in different sectors. Many notable companies have recognised the value of applying AI in their operations. For instance, ADNOC, which is based in the UAE and is one of the world's largest oil and gas generators, is leading the adoption of AI by streamlining the way it examines Abu Dhabi's hydrocarbon reservoirs (Wamba-Taguimdje, 2020). Another notable example of effective AI application is Walmart Inc., an American multinational retail corporation that has branches across the globe. Walmart has established a new intelligent retail lab that gathers information about what's happening inside its stores through an effective array of sensors, cameras, and processors (Walmart, 2021). In the UK, the AI application has been utilised by the NHS; five healthcare centres are dedicated to

employing AI's potential in healthcare in London, Glasgow, Leeds, Oxford, and Coventry, respectively (Marr, 2020b). These radical advancements in AI application suggest the world is experiencing the fourth industrial revolution, one in which technology is reducing the boundary between the physical, digital, and biological spheres (Schwab, 2017). Accordingly, the early adoption of AI accelerates advanced innovation and competition. The maturity of AI adoption guides organisations build on the learned skills to scale their business value (Fountaine et al., 2021). The early AI adopters have already created competitive advantages, effectively increasing the gap between themselves and slow implementers (Mckinsey Global Institute, 2017). Examples of early AI adaptors include Amazon, Porsche, Xihelm, Starbucks, and OhmConnect (Forbes, 2022; Morgan, 2018; Ransbotham et al., 2020).

2.2.3 AI and Business Schools

There is a growing potential for AI adoption in business schools. The debate surrounding the use of AI and machine learning as an epistemological kit for business schools is well-documented in the literature (e.g., Leavitt et al., 2020; Moser et al., 2022). Various stakeholders, both nationally and internationally, have highlighted the necessity for business students to acquire a broader skillset in order to secure a career in the business profession (Damerji, 2020).

The adjustments required to facilitate this change transcend complementary pedagogical mechanisms such as online or hybrid learning (Fakunle and Higson, 2021). In light of this, business schools confront unprecedented challenges and several barriers to adopting AI. Stine et al. (2019) argued that the ability of business schools to respond to these changes is constrained by the current curricula and credentials employers demand to remain competitive in the digital era. In addition, the generation gap and differences in AI-driven experience may pose another barrier to business students learning. Concerns such as transparency of algorithms, ethics, privacy, quality of training data, and data protection were also considered barriers to business schools (Stine et al., 2019).Due to the advent of AI, it is predicted that the number of new hires each year could drop by half. This would dramatically change the future hiring model for potential graduates in business fields such as accounting and auditing (Kokina and Davenport, 2017).

AI is integrating new ideas and needs into traditional business methods. For example, Mitra Azizirad, the corporate vice president for AI marketing at Microsoft, and a group of dedicated AI professionals launched Microsoft AI Business School in 2019 to enable business leaders to embrace AI with confidence (Microsoft, 2021). Countless other projects have been conducted by business schools worldwide to meet digital era demands. For example, some initiatives have concentrated on lifelong learning that proposes new business frameworks for business colleges (Lauder, 2020; Stine et al., 2019). In addition, business schools across several continents are allying for the common goal of "pooling resources, knowledge, and expertise while co-developing new pedagogies and collaborating on programs" (Barniville and Hammergren, 2020, p.19).

Business schools have also teamed up with big tech companies to develop novel tools. For example, MIP Politecnico di Milano Graduate School of Business worked with Microsoft to develop FLEXA, a new digital platform powered by Microsoft Azure and AI, allowing students to evaluate their professional skills and present them with personalised content that helps bridge skill gaps between their career objectives and their current studies (Microsoft, 2019). As opposed to the previous computing courses offered in security, networking, application development, and information technology, many schools added AI-related courses to their curriculum. Examples of new subjects in demand include "Digital Transformation," "AI Strategy," "Digital Immersion," "How You Manage in a Technology Environment," "Accounting Analytics," and "Supply Chain Analytics," (Stine et al., 2019, p.36).

Despite the above-mentioned progress, business schools have moved forward with little AI development; only a handful of HEIs have established AI-enabled platforms to provide personalised learning pathways (Microsoft., 2019; Stine et al., 2019). Concerns about the capacity of academics to adjust new material and relay the needed skills and abilities to students may be responsible for this stagnation. "There are not enough faculty who have in-depth training and skills to teach the courses with an AI focus" (Stine et al., 2019, p.27).

In addition, technological subjects are of less importance in some schools. For example, in the UAE, the AI domain has not received concentrated attention from institutions and developers of computing curricula; most students are only required to study one subject that introduces AI

(Halaweh, 2018). However, should these institutions continue to deprioritise AI, graduates with a business major might be unemployable in the future; employers may elect instead to hire computer science graduates with relevant technical skills in AI technology (Qasim and Kharbat, 2020). The plausibility of such trends should galvanise current business education systems to meet the demands of the evolving job market and the changing nature of employment (UN, 2022). Additional research must be conducted to determine how HEIs can protect business students from extinction in a chaotic digital era. Accordingly, the current study explores GE in the context of AI to examine how business schools can best respond to the changing demands of stakeholders in the modern digital era.

In short, the rise of AI technology has generated new requirements in terms of the skills and competencies stipulated by the labour market. Investigating GE through the AI technology lens is a unique approach as it focuses specifically on the intersection of technology and the job market. It furthermore examines how technology is changing the nature of work and what individuals can do to stay competitive and increase their employability in a rapidly changing technological landscape.

AI progress is often characterised by job losses. Naturally, machines usurping human tasks can wield an adverse impact on employment. However, by producing business leaders capable of grasping the opportunities of AI – developing new skills, techniques, strategies, and worldviews – HEIS can generate a new generation to guide the human-AI relationship and survive the competition in an increasingly digital future (Stine et al., 2019). Such an attitude must be adopted by existing management and new cadres joining the workforce (Stine et al., 2019).

This literature review has illustrated both the rapid transformation of businesses in adopting AI in industries and society and the procrastination of HE in meeting these demands. Thus, the primary problem that arises pertains to the capacity of the educational system to effectively align with the rapidly evolving technological landscape (Brown et al., 2020).

Limited research explores the growing intersection between employability and AI. Thus, there is a need for more integrated and interdisciplinary studies that examine the intersections between employability and AI.

2.3 Stakeholder Theory (ST) and Employability in the Age of AI

Stakeholder theory is a conglomerate of strategic management, organisational theory, and business ethics that questions the conventional assumption that profit is the management's primary concern (Laplume et al., 2008; Phillips et al., 2003). Stakeholder theory is based on the premise that organisations can only succeed when they create value for all their stakeholders (Freeman et al., 2010). ST has highlighted the value of stakeholders' relationships as vital assets of the organisation and essential drivers of development and profitability, a concept described in detail by Freeman (1984) in his book, *Strategic Management: A Stakeholder Approach*.

In the past, shareholders were granted benefits of profits and capital gains in return for their investment in a company. However, this practice has currently been replaced to provide equal value to all stakeholders. ST presents a paradigm shift from business liability to shareholders to responsibility toward all stakeholders (Freeman, 1984; Parmar et al., 2010). Freeman's theory states that a company's true success lies in satisfying all its stakeholders and addressing their needs and interests (Freeman, 1994). His views have guided various organisations' strategic management matters, such as in defining and prioritising stakeholders, understanding their interests and demands, balancing relationships between different stakeholders, and involving stakeholders in organisational activities (Langrafe et al., 2020).

As previously discussed, digital advancements, changing economic conditions, and a global pandemic have altered business rules, relationships, and how humans engage with the world. In light of this, Freudenreich et al. (2020) suggest a change in the perspective of business models as a means of creating an absolute value that improves stakeholders' relationships with similar value exchanges. In this context, ST attempts to present a comprehensive understanding of businesses during disruptions (Freeman et al., 2010).

Therefore, the present study offers a practical opportunity to test the relevance and usefulness of ST in empirical research. The study is based on the ST potential to overcome the challenges – for instance, unemployment – caused by AI and other emerging technologies (Mhlanga and Moloi, 2020). This requires a reimagining of the "traditional picture of the firm," requiring stakeholders to "redraw the picture in a way that accounts for the changes" (Freeman, 1984, p.24). Nankervis et al. (2017) asserted that understanding stakeholders' expectations and

strategy, including shared values, goals, and missions, may solve any emerging problems. Accordingly, this study aims to provide a better understanding of stakeholders' perspectives, construing these insights as a tool by which HEIs can learn to restructure their practices to be more responsive to stakeholder needs.

The interactions between stakeholders in creating value are identified as the theory's essential component (Freeman et al., 2018). In this research, I – the researcher – draw on the work of Freeman (1984), arguing that the engagement of key HE stakeholders plays an instrumental role in enabling GE and, in turn, creates value for all employability stakeholders. ST views value creation as the capacity of an institution to build long-lasting relationships with its stakeholders and ensure they are satisfied with what they offer and receive (Freeman et al., 2004; Freeman et al., 2007). According to this rationale of the ST, the exploration of stakeholders' perceptions of employability trends, challenges, and roles of employability stakeholders help HEIs understand the needs of everyone who has a direct or indirect stake in HE.

Applying stakeholder theory in this study is beneficial to understand stakeholders' views regarding any relevant trends of, or impediments to, GE. Accordingly, the study adopted the broad definition of stakeholders as an individual that "can affect or is affected by the achievement of an organisation's purpose" (Freeman, 1984, p.53). According to ST (Freeman, 1984), model business–stakeholder relationships are defined by trust, mutuality, and commitment. In other words, applying the principles of ST can help lead a successful business in the twenty-first century (Freeman and Ginena, 2015). Mitchell et al. (1997) contributed to ST by determining the principles of who and what matters in stakeholder management. The researchers defined three attributes that act as a base for stakeholder salience: the power of the stakeholder, the urgency of the demand made by the stakeholder, and the legitimacy of the stakeholder requirements. Employing this interpretation, the present study is based on the stakeholders' views who possess the power, legitimacy, and urgency attributes. Educators have the power – based on their quality and efforts – to enhance teaching and learning practices; employers have the resources that support HE's goals of graduating qualified generations; the government has the power based on their ability to regulate the labour market and policies that impact the industry; and students are the most influential stakeholders in HE because other stakeholders serve as facilitators to support their success (Degtjarjova et al., 2018).

According to Freeman (1984), stakeholders have different sources of influence, primarily in the spheres of economics, politics, and voting. Voting influence guides relationships based on a formal foundation for influence, permitting specific categories of stakeholders to exert formal decision authority. The economic impact is embodied in the ability of stakeholders to provide or retain resources. Political influence entitles actors to use their participation and position to impact an institution's decisions (Burrows, 1999).

Accordingly, this puts the key HE stakeholders of this study in a position to vote, as well as to exercise economic and political influences, in the stakeholders' relationships. As such, stakeholders have the potential to influence GE through the rights granted to them in decision-making and participation. The adoption of ST with its relevant components, as explained above, has aided me – the researcher – in understanding the stakeholders' perspectives and experiences. In turn, this has allowed me to, through the present study, to effectively address the research questions and guide the development of a GE ecosystem model.

2.3.1 Employability Stakeholders' Engagement

Many studies argue that business schools have not fulfilled their responsibilities in serving their stakeholders (Thomas, 2021), particularly from the viewpoint of employers (Clarke, 2018). Scholars have argued that this failure is due to HEIs' separation from managerial practice (Ferlie et al., 2010), their absence of engagement with the public (Lybeck, 2019), and their insufficiencies in preparing graduates to manage real-world problems (Nonet et al., 2016). However, other scholars have expressed their concerns about the lack of business school stakeholders' support and engagement (Clarke, 2017; Nankervis et al., 2018; Schneider, 2002; Sulema et al., 2021).

Nankervis et al. (2018) reported that several employers have unrealistic expectations of HEIs to produce employable graduates. As the primary sources of employment demands, employers use their responsibilities and self-interests to determine their skill requirements, mould them into job criteria, and then share them with prospective stakeholders (Finn, 2016). Accordingly, scholars have conducted different studies to effectively identify and prioritise stakeholders in HE (e.g., Huang and Curle, 2021; SIMS and WIGGINS, 2021).

Several conceptual models have been formed to identify appropriate stakeholders and, specifically, to define relevant parameters about their engagement in various circumstances. For instance, Mendelow's stakeholders' model has been employed in stakeholder research as the predominant analytical framework used in both theory and practice (Mendelow, 1991). The model classifies stakeholders based on their level of interest and power in the business and urges organisations to manage their relationships with stakeholders. Nankervis et al. (2018) applied this model in managing the graduate work-readiness challenges faced by all stakeholders.

In addition, Maguad (2018) and Nordberg (2020) discussed stakeholders' perspectives and views about employability and reforming HE; however, there are limited studies that use ST to study GE to understand and outline the roles of the major stakeholders in HE to improve graduates' skills. Rook and Sloan (2021) and Nwajiuba et al. (2020) are the only studies that have applied ST to responsible collaboration and engagement with legitimate employability stakeholders. Rook and Sloan (2021) utilised the ST as a framework to examine work-integrated learning (WIL), graduate attributes (GAs), and employability in the context of the human resource management (HRM) discipline. Nwajiuba et al. (2020) used ST to evaluate the engagement of the major partners in Nigerian HE.

Accordingly, the present study on stakeholders' perspectives and influence on GE provides an appropriate starting point for further exploration of the GE phenomenon.

2.3.2 4IR, AI and Stakeholder Theory

ST has received increasing attention in the fourth industrial revolution (4IR). The fiftieth annual conference of the World Economic Forum (WEF) in Davos 2020 applied stakeholder capitalism as the central theme, focusing on "Stakeholders for a Cohesive and Sustainable World" (Schwab, 2019). This theme suggests that if institutions are urged to incorporate the doctrine of stakeholder capitalism in their businesses, society will be in a better position to achieve sustainable development goals. In line with this, Mhlanga and Moloi's (2020) study revealed that the adoption of ST could enable companies in the 4IR to have 'good capitalism', known as stakeholder capitalism. Their study found that some of the challenges associated with the 4IR that are important to the HE stakeholders, such as AI and loss of jobs, could be solved if companies embrace the principles of the ST.

More recently, stakeholder theorists have turned their attention to ways of creating and disseminating value to stakeholders. Freeman et al. (2020) asserted that businesses must create value for stakeholders to navigate business in the age of AI, where robots perform many tasks. In this vein, industry leaders have also lent their support and commitment to the ST. For instance, in 2020, the business roundtable, a large non-profit association of top CEOs based in Washington, D.C., declared a new statement on the purpose of a corporation approved by 181 (CEOs) pledging to manage their organisations for the benefit of all stakeholders (Whittaker, 2019).

The stakeholder notion has been developed as a standard of business language (Freeman et al., 2020). For instance, in Apple's 2020 Supplier Responsibility Progress Report, Tim Cook (CEO) states, "We put people first in everything we do — and require everyone we work with to do the same — because we want to uphold the highest standards" (p.2). Similarly, SAP, a German enterprise application software, published in its last report that the company's stakeholder engagement and collaboration were profoundly involved in process and service development (SAP, 2020).

2.3.3 Stakeholder Theory and Business School

Driven by technological advancements and digitalisation, business school stakeholders recognise the shift toward emerging technologies, including AI, robotics, and machine learning (La Torre et al., 2021; Rodrigues et al., 2022). In this context, the markets' requirements and competitive nature have emphasised the need for business schools to satisfy their stakeholders (Langrafe et al., 2020). From the perspective of new public management and neo-liberalism, business schools and industries have commonalities in management transformation, such as privatisation, market competition, performance responsibility, service quality, and customer-centred services (Hong, 2019).

However, few studies have addressed stakeholder management in HEIs and business schools (Langrafe et al., 2020). As a result, researchers have taken an interest in contributing to the application and development of ST in HE (e.g., Maguad, 2018; Nwajiuba et al., 2020; and Pop et al., 2020). A substantial body of research supports the notion that stakeholders' management delivers optimal business and financial performance (Ferrero-Ferrero et al., 2018; Freeman et

al., 2020). Empirical studies also substantiate the value of the relationship development between higher education institutions and their stakeholders based on the principles of ST (Falqueto et al., 2020).

Significant evidence suggests a positive relationship between exercising the principles explored in the stakeholder management literature and institutions' financial performance across various industries (Miller et al., 2017; Zhao et al., 2021). ST has been used to explain the influence of stakeholders in HE strategic planning and the value of the relationship toward sustainable development (e.g., Falqueto et al., 2020). In addition, several researchers in HE have identified ST as being the leading catalyst of change in HEIs (e.g., Brusca et al., 2018; Vargas et al., 2019). ST has been applied in many studies related to program development (e.g., Al-Sharafi and Rubai'ey, 2020; Miller et al., 2017). ST has additionally been implemented in business school classrooms to produce creative solutions and teach business subjects from a more holistic view (e.g., Freeman et al., 2019; Painter et al., 2021). Evidently, researchers in HE continue to explore ST in new contexts and perspectives.

In summary, ST is based on the premise that organisations can only succeed when they create value for all their stakeholders. Therefore, involving the stakeholders in designing educational systems beyond HEIs can convey diverse voices and perspectives while benefiting all parties. Although improving GE is a concern for many HE stakeholders (O'Leary, 2017), limited studies have applied the theory in the context of graduates' employability. In addition, HE systems have traditionally been criticised for producing underqualified graduates. However, universities alone cannot create value for all GE stakeholders, given the constant changes in society and the labour market due to AI and advanced technologies. The research suggests that HEIs cannot independently prepare potential graduates for employability (Jackson and Bridgstock, 2019; Pham and Jackson, 2020b). Therefore, there is a need for more research applying ST to HE to better understand the contribution of stakeholders in GE. In order to address this gap, this study applies ST to GE in light of AI developments. The research questions are directly related to the ST so as to gain insight into stakeholders' perspectives concerning GE in the digital age.

CHAPTER 3: RESEARCH METHODS AND METHODOLOGY

This chapter describes the context, philosophy, research design, and methodology adopted in this study to answer the main research question: *How should business schools respond to the changing demands of stakeholders in the AI-driven labour market to enhance GE?*

The chapter commences with a discussion of the research philosophy and paradigm, followed by a review of the research methodology. This chapter furthermore describes the key participants included in the present study, identifying data sources and processes – including semi-structured interviews and documents – to investigate the GE discourse in the era of AI. Data analysis techniques are also discussed, followed by a clarification of research validity and reliability considerations. A conceptualisation of the research design and methodology is demonstrated in Figure 3.1.

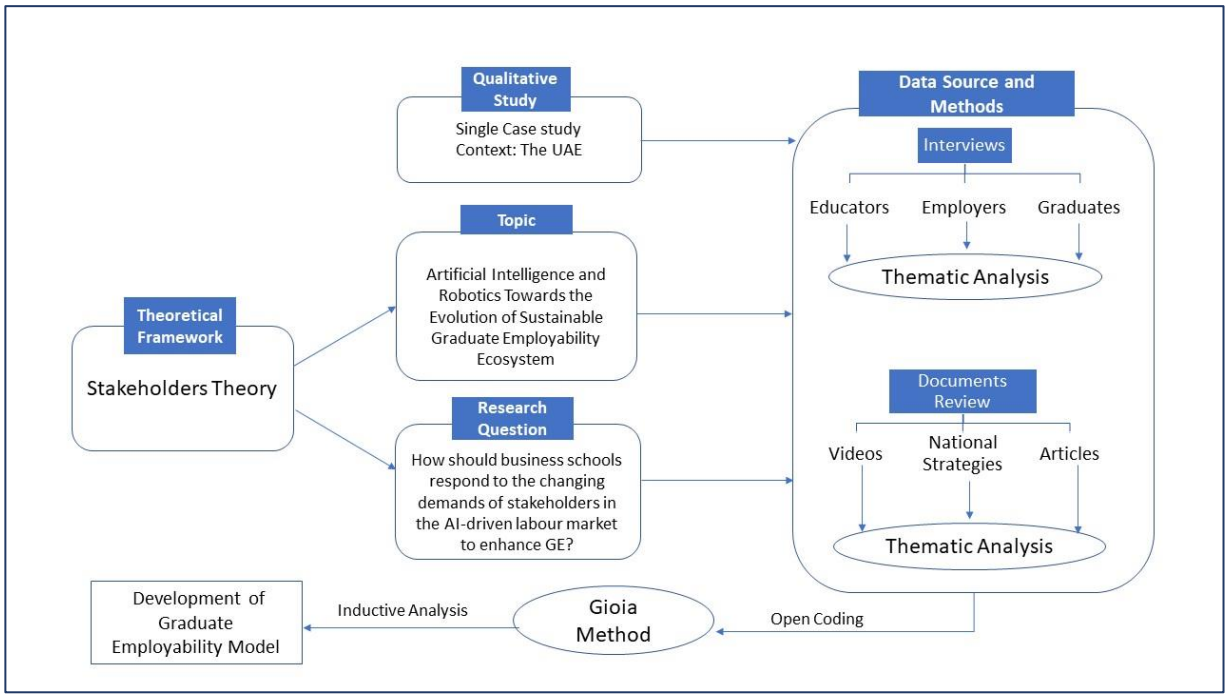

Figure 3.1: Research Design

3.1 The Research Context of the UAE

Individual cultural and regional factors shape GE (Tavares, 2017). However, there is little literature exploring employability in a region-specific context, particularly in non-Western countries. The present study aims to understand the employability phenomenon in the context of the UAE. In response to Fakunle and Higson's (2021) call for more research investigating employability in non-Western contexts, this research aims to add new employability insights within the context of non-Western countries.

Scholars and educators continue to debate the role of HE in addressing employers' needs, producing lifelong learners, and striking a balance in fulfilling both of the aforementioned roles (Yoong et al., 2017). The interpretation of education as an instrument of social advancement has been widely adopted (Chakraborty et al., 2018). The responsibilities of HEIs have recently been amended to include the enhancement of students' employability. The Ministry of Human Resources and Emiratisation (MOHRE) has, in turn, intervened to fortify the UAE national workforce in both the private and public sectors. MOHRE has partnered with the Ministry of Education to develop initiatives that enhance graduates' employability. For example, the government commenced NAFIS program in collaboration between public and private sector stakeholders to increase the employment of local talent in the private sector. Under NAFIS, the UAE will spend up to AED 24 billion (USD 6.53 billion) to employ 75,000 Emiratis in the private sector over 2021-2025. The UAE's citizens will be offered incentives to choose employment in the private sector (U.AE, 2022a).

Another example that corroborates the notion of employability is the Tawteen 360 forum, which was created as a platform for Emiratis to network with employers— especially those in the private sector (MOHRE, 2018). Still, the quality of HE in the UAE is questionable. According to a global survey of youth and employers, 40 per cent of employers stated a lack of skills was the leading cause for entry-level job vacancies, while 60 per cent said that new graduates were not sufficiently ready for the world of work. However, counterintuitive to these statistics, the UAE continues to offer a robust employment landscape, boasting millions of job opportunities available to the UAE youth (British Council, 2018).

While the literature has examined employers' perceptions about graduates' required competencies from a global standpoint, there is limited research evaluating employers' perceptions in the UAE (Hassock, 2019; Jarrar, 2018). Most of the employability research conducted in the UAE region focuses on student perception (Abdulla Al Ghurair Foundation, 2018; Belwal et al., 2017; Coelhoso and Griffine, 2019) or observes employment through the lens of Emiratisation policy (Aljanahi, 2017; Al-Waqfi and Forstenlechner, 2014; Daleure, 2017; Elbanna, 2021; Forstenlechner et al., 2012; Ryan, 2016). Recent studies conducted by Coelhoso and Griffine (2019), Hassock (2019, and Jarrar (2018) suggest employers must engage in dialogue with HEIs to align with employer expectations and consequently bridge the skills gap.

Employability skills for business students have been studied both generally and in the Middle East context (Osmani et al., 2017; Qasim and Kharbat, 2020; Stine et al., 2019). This indicates that employability is a global concern. Various stakeholders, both nationally and internationally, have expressed a demand for business students to acquire a broader set of employability skills (Damerji, 2020). However, despite these calls, little progress has been made in facilitating this change (Qasim and Kharbat, 2020; Stine et al., 2019). In correspondence with Coelhoso and Griffine's (2019) work studying the skills gap for graduates, there is a need for continuous collaboration between academics and industry professionals to effectively address this gap. Defects in the existing teaching-learning approaches of HEIs require urgent interference from all stakeholders in the country (Nair, 2017). As such, the present study includes the perspectives of diverse stakeholders.

Developing a more comprehensive understanding of the impact of technological advancement on educational practices and functions is necessary to prepare graduates for the fourth industrial revolution job market. As such, there is a need for research that explores the demands of the job market through the lived experiences of the key stakeholders; studies of this nature would generate data that can help HEIs successfully prepare graduates to navigate the labour market in the AI era. If left unresolved, as Aoun (2017) claims, the problem will expand, affecting graduates' employability and career trajectories. However, there are no known studies that have considered UAE GE with respect to stakeholder influence and AI technology.

3.2 Research Philosophy

At the heart of research philosophy lies specific assumptions about how the world and knowledge are contemplated, how reality can be examined, how knowledge can be acquired, and what methods should be utilised to do this (Creswell and Clark, 2017). This study is interested in understanding HE stakeholder perspectives, assessing stakeholders' influence on GE, and determining what this means in shaping a holistic approach to GE in the era of AI.

The present study aims to develop interventions that enhance business graduates' employability from professional and empirical insights. To achieve this objective, it is essential to first determine causal power (mechanisms) that enable or constrain GE and its interaction with social structures. Therefore, this study falls within the critical realist paradigm, rooted in realist ontology and subjective epistemology. In the following sections, I will explain how the choice of the critical realist paradigm has influenced the design of this research. I will then define some key critical realist concepts used in this study.

3.3 The Critical Realist Paradigm

Critical realism appeared in the 1970s and 1980s via the work of Ram Roy Bhaskar, an English philosopher (Fletcher, 2017). It was further developed by Sayer (1992) and Archer (1995). A trademark of the critical realism paradigm is its combination of ontological realism with epistemological constructivism (Maxwell, 2018). The ontology and epistemology will be highlighted in the next sections. In light of this, the conceptualisation of employability using critical realism (Cashian, 2017) has been defined as "an original and potentially very insightful way of understanding employability" (Tomlinson, 2017, p.29). Kahn (2017) has indicated the importance of critical realist arguments in HE research.

Because this study solicits the perspectives of key HE stakeholders in guiding researchers' and professionals' development of employability programs and curricula, it fundamentally involves a critical realism approach. By applying critical realism to employability studies, this research responds to Frederiksen and Kringelum's (2020) pleas to create an intermediate bridge between critical realist philosophical inquiries and practical application.

As explained in the preceding literature review, GE is a broad concept (Divan et al., 2019; Hallett, 2012). Employability encompasses aspects beyond HE, such as job market needs, economic conditions, technological advances, national strategies, and the effects of the global pandemic. As such, knowledge about GE is limited by the ability of people to understand the representation of a more profound reality (Fletcher, 2017). This view departs from both positivism and constructivism, placing this study in the middle of the objectivist/subjectivist continuum. However, it should be noted that although this research considers the subjectivity of stakeholders' views and experiences in GE, it does not mean that these stakeholders have the same experience or level of control over it. For example, companies' experiences with – and practices for – hiring new business graduates are varied; graduates have different learning experiences, and educators have different teaching and learning environments, resulting in diverse perceptions. "Frameworks of thinking, modes of analysis, ways of seeing things, habits of thought, dispositions of every kind, motivating concerns, interests, values, and so forth, are affected by our life paths and socio-cultural situations" (Lawson, 2003, p.162).

The following section expounds upon the ontological and epistemological beliefs that underpin this research and that have guided the analysis of the data. It furthermore reviews the research methodology and methods employed to collect the data.

3.3.1 Ontology

Critical realists propose an ontological perspective, positing that reality exists independent of the human experience and cognitive awareness (Letourneau and Allen, 2006). Critical realism ontology is stratified into three overlapping domains: empirical, actual, and real (Bhaskar, 1978). The empirical domain is the domain level at which individuals perceive events and create experiences (Fletcher, 2017). In contrast, at the actual domain level, there is no representation of human experience. In this sense, the actual domain level may be perceived differently by observers (Danermark et al., 2002). The real domain, alternatively, contains social and physical structures and the mechanisms that originate from them (Wynn et al., 2020). As such, this philosophy is based on an interplay between social structures and mechanisms (Saunders et al., 2009).

Social structures are an ongoing institutional relationship between social positions and actions existing at different levels of analysis. The latter limits the actor's ability to create a difference (Reed, 1997). In this study, each participant fits into a stakeholder group that is categorised as an underlying social structure. The institution to which the participant belongs is also categorised as a social structure, as each association holds its diverse views, values, and priorities. A generative mechanism refers to the defining, fundamental actions and events of a system (Bunge, 2004) Generative mechanisms can be understood indirectly; they function only through the interpretation of the experiences in the empirical domain (Blom, 2011). Examples of generative mechanisms include the hiring processes of workplaces, as well as the internship and career-preparedness process in HE.

Applying a critical realist approach, this research intends to determine whether stakeholders' influence acts as a trigger mechanism that enables GE. Accordingly, the employability literature suggests that there is a lack of empirical evidence highlighting the mechanisms of GE (Kember, 2009). Further research is needed to investigate these mechanisms in a broader employability ecosystem that transcends the skills-based approach and simple employment outcome.

This study aims to understand and interpret the HE stakeholders' experiences of reality in the empirical domain. As a result, using the critical realist perspective enables the identification of mechanisms and components that guide the development of the GE ecosystem model in the business school context. Such mechanisms are viewed as tendencies rather than a constant confluence between events (Bhaskar, 1993). This view opposes that of the many employability studies defending an ongoing association between skills, personal traits, and employment outcomes (McQuaid and Lindsay, 2005; Tomlinson, 2017).

The foundational elements of the GE ecosystem model have emerged from interactions between education, work, technology, and partnership. These elements represent the principles of the United Nations (UN) sustainable development goals (SDGs), in particular, goals 4, 8, 9, and 17 (UN, 2022). SDG Four seeks to ensure inclusive and quality education, equipping individuals with the knowledge and skills required to participate fully in society. SDG Eight promotes sustainable economic growth and decent work. SDG Nine seeks to build resilient infrastructure, sustainable industrialisation, and foster innovation. Finally, SDG 17 strives to strengthen global

partnerships for sustainable development and the need for collaboration to achieve other goals. In light of this, the realist approach – as applied to GE in the domains of education, employment, partnership, and technology – suggest employability is not merely the context of education and employment but, more significantly, the set of conditions that enables or suppresses the phenomena (Brown, 2008).

As previously explained, the study explores the HE-labour market skills gap in the context of the fourth industrial revolution (4IR). Figure 3.2 provides further insight into the critical realism ideology guiding this research. The changing nature of the workplace has generated new jobs and skill requirements; this event is experienced in the empirical domain. However, these changes resulted in graduates' skill inadequacies (Acemoğlu and Restrepo, 2018; Ozer and Perc, 2020). Consequently, graduates lack the workplace skills required by employers (real domain); this creates challenges for businesses in finding the right talent and for graduates in securing employment. The obstacles encountered by businesses and HEIs in responding to this shift are experienced in the empirical domain. This experience was borne out of the businesses' actions in adopting emerging technologies in various industries and the AI-powered hiring process (actual domain).

Policymakers have established an AI national strategy to guide businesses and HEIs to rethink their dynamics and evaluate the potential opportunities presented by AI (actions). However, HE's slow adaptation to these changes – compounded by the rapid technological progress outside academia (action) – will exacerbate the skills mismatch between graduates and market demands (Acemoğlu and Restrepo, 2018; Ozer and Perc, 2020) acting as a constraining structure to graduates' employability (real domain). This indicates that the underlying structure can constrain or enable agents' actions to interact with the social structure (Ackroyd and Fleetwood, 2000). Given that social structure is reproduced through the observed actions and experience of individual agents (Bhaskar, 1978), HE stakeholders are key catalysts in interpreting and responding to the employability social structure.

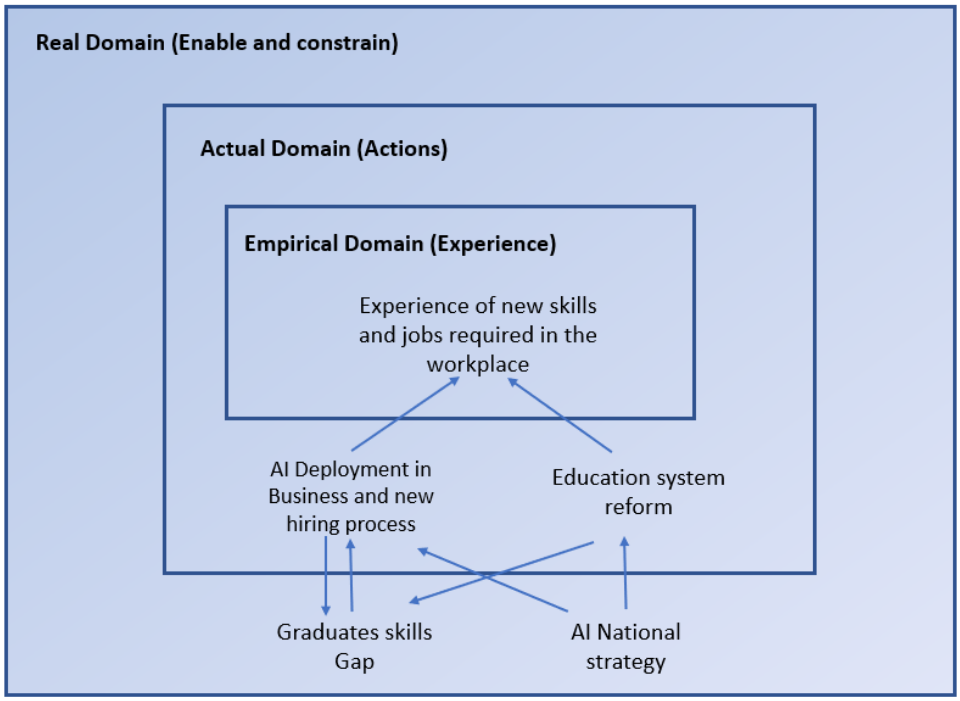

Figure 3.2: Critical realism rational

The present study, heeding the direction charted by Cashian (2017), acknowledges that the existing employability discourse lacks a solid conceptual foundation. Accordingly, the layered domains of reality – as proposed by critical realism – are essential to this research, providing a better understanding of the generative employability components necessary to build a sustainable GE ecosystem model.

This approach solicited business and management scholars' perspectives as a means of supporting the change over time, a concept that refers to the idea that reality is not stagnant but continuously evolving and developing (Eriksson and Kovalainen, 2008; Mclachlan and Garcia, 2015). The study examines the impact of emerging technologies on the GE stakeholders' perspectives (Acemoglu and Restrepo, 2020; De Melo et al., 2021; Korinek and Stiglitz, 2021; Stine et al., 2019). The technological revolution has radicalised the job market and the nature of work, minimising the efficacy of HEIs in preparing the future workforce. Therefore, the present study aims to provide all stakeholders with an insight into the GE challenges, practices, and trends, as well as to develop possible methods to provide graduates with employable skills in a volatile job market. The patterns extracted from the data will be presented by critical realism as

demi-regularities, which can be identified by qualitative coding data generated from interviews (Fletcher, 2017). The findings section will further explain these concepts relative to the data.

3.3.2 Epistemology

Given the purpose of this study, to create an employability ecosystem framework, there is a need for an epistemology that emphasises theory development (Bhaskar, 1978). As such, the epistemology employed in this study is drawn from the critical realist paradigm (Bhaskar, 1975). This research aims to socially construct knowledge by understanding participants' perspectives and lived experiences, which brings this research closer to constructivist views (Cohen and Manion, 1994; Girod-Séville and Perret, 2001).

However, critical realism examines the participants perceptions to cultivate deeper insights into a reality that exists beyond these views (Healy and Perry, 2000). As such, the critical realist approach to research is essentially inductive; interpretations emerge throughout the data collection based on the participants' shared experiences. However, the present study additionally refers to the extant literature to develop a comprehensive understanding of the findings, resulting in an analysis both embodied in the existing employability discourse and validating a novel conceptualisation of employability.

In contrast to both positivist and constructivist research approaches, critical realism reveals the knowledge of the social world by defining the broad generative mechanisms (Bhaskar, 1999). Alternatively, positivism generally labours under the assumption that information is accrued through models and relations between variables. In this ideology, the position of researchers is to provide illustrations of data via measurable and empirically generalisable mechanisms (Cascio, 2012). Constructivism, however, challenges the objectivity of positivism, positing instead that knowledge is generated from individuals' subjective minds in different situations (Sekaran et al., 2013).

In recognising the subjectivity of humans' perception of the world around them, critical realism assumes that the social world can be understood by identifying underlying social structures and mechanisms of the social world (Bryman and Bell, 2007). Critical realism perceives the social world as being a fundamentally open system in which unpredictable events may emerge

(Bhaskar et al., 2017). By adopting a critical realist perspective, several aspects of GE, including social and economic factors, emerge in the social structure to provide a broader perspective that transcends the skills-based approach currently dominating the literature (Khan and Lundgren-Resenterra, 2021; York, 2006). According to Brown (2008), social systems are inherently open systems whereby multiple causal mechanisms and trends may interact simultaneously.

3.3.3 Agency and Structure

This section outlines structure and agency as viewed within critical realism. As explained in the preceding literature review, there is a lack of integrative studies addressing agency and structure in the employability domain. Critical realism presents a theoretical lens to examine the complexity of interactions between stakeholder agency, surrounding social structures, and the causalities of employability (Cashian, 2017). In light of this, the present research relies on Archer's (2000, 2003) framework rooted in the critical realist paradigm. This framework suggests a constant dialectic relationship exists between structure and agency, whereby agents use their influence to act in any given social situation (Archer, 2003).

The present research acknowledges that stakeholders interact with each other and the employability structure. This research expounds upon the effects of structure on agency. As such, it highlights the structural components that possess generative powers of constraints and enablement capacity regarding agents' actions and responses (Archer, 2003). Understanding human agency in enabling GE cannot be achieved without first understanding employability structure components and, in turn, how they affect agents. Accordingly, the HE stakeholders that inhabit the employability structure have the capacity to consciously reflect upon and adapt to the changing situations (Archer, 2003; Archer et al., 1998). This study investigates these components with the ultimate objective of establishing an employability model that supports and promotes the agency of the HE stakeholders.

3.4 Research Approach and Methodology

The epistemological and ontological orientation of the researcher provides a foundation upon which the research design has been constructed. The research design, in turn, provides a framework through which data is solicited and interpreted to answer the research questions

(Bryman and Bell, 2007). The present study – driven by the overarching research question, *How should business schools respond to the changing demands of stakeholders in the AI-driven world of work to enhance GE? – ,* which is guided by my interest in further understanding the intangible concepts of GE from a critical realist position. In this respect, the philosophy of critical realism provides flexibility in terms of the research approach. Furthermore, it fosters an objective and social worldview (Fletcher, 2017).

This research employs qualitative research methods. Qualitative research acts as an interactive model (Maxwell, 2016) in which a greater latitude of research methods and data collection approaches can be utilised (Yin, 2016). In qualitative research, the researcher's role is to gain access to the views and reflections of the research participants. The qualitative approach is necessary to effectively address the research questions posed by the present study. Stakeholders' personal interests, views, and the value of the stakeholders' relationship are embedded in GE, as well as in the practices and strategic planning of HEIs (Langrafe et al., 2020). For these reasons, a qualitative research approach, which allows for an in-depth synthesis of human experiences, was selected for this study (Blumberg et al., 2008; Gehman et al., 2018).

The aforementioned research philosophies have informed its methodology (Mclachlan and Garcia, 2015). Corresponding with the critical realist paradigm, the single case study methodology was applied in the present study. This methodology will be discussed before exploring the details of the data collection and sampling. As the study aims not to generalise – but rather to achieve an in-depth understanding of the complexities of UAE GE in the age of AI – a qualitative case study format was selected. The essence of the research design relies on the single-case study approach.

This study is an intensive single-case study, using inductive logic as its scientific approach. Yin describes a case study as an "empirical method that investigates a contemporary phenomenon (the "case") in depth and within its real-world context" (Yin, 2018, p.15). A single case can be one person, a group of people, an institution, a region, or a country (Kriukow, 2021).

Although GE is a growing global phenomenon, there is no "one-size-fits-all" approach. Thus, GE should take various cultural and regional contexts into account. The UAE is unique due to

the dynamic nature and rapid development of the country, as well as its recent economic growth. This case study in the UAE uses primary data and then delves into the secondary data findings to examine GE in the age of AI phenomena.

The intent of the case study can be defined as exploratory, descriptive, or explanatory (Yin, 2018). This study is mainly exploratory and descriptive. An exploratory study utilises open-ended questions to discover knowledge and gain wisdom about a specific topic (Saunders et al., 2016). Constructivists often develop explicit and accurate depictions of their case study analysis (Ridder et al., 2014). The overarching research inquiry necessitates a deep exploration of HE stakeholders' perceptions in the UAE. This study aims to understand key stakeholders' perceptions of GE to determine how stakeholders can proactively respond to persistent changes in the modern job market. The practical purpose of this study is to develop "results and theories that are understandable and experientially credible both to the institutional actors being studied and to others" (Bolster, 1983, p.296).

3.5 Data Collection Methods

3.5.1 Semi-Structured Interviews

In this study, data was generated from the interview method and then analysed to detect general themes (Creswell and Creswell, 2018). Interviews were employed as a data collection method to compare and contrast the participants' experiences (Rowley, 2012). Interviews are a primary means of obtaining rich and subjective data (Yin, 2018) as an essential aspect of qualitative research is enabling the participants to express their views (Creswell, 2013).

In the present study, the interview questions were informal and semi-structured. Semi-structured interviews are a common method in qualitative research as they allow for the less-restricted expression of participants (Gioia et al., 2012). Participants were invited to the semi-structured interview (see Appendix) to describe their perspectives on GE, emphasising the emerging influence of AI on employers and universities.

A series of interview questions elicited interviewees' experiences and recommendations. For example, the following questions were asked: 1) Do you use any AI applications in your

company; 2) In which departments of the company are AI projects used;3) Have you heard about the UAE national strategy for AI; and 4)How can business graduates stay relevant and employable in the era of AI and rapid technological advancements?

These interview questions were designed to explore a range of topics connected with the research objectives, including AI adoption and awareness of AI national strategy; employability perspective; employability skills and competencies; graduate employment and transition to the job market; learning approach in the digital age; and collaboration between stakeholders. From these topics, three different themes were generated. These themes are presented in the next chapter.

Semi-structured interviewing allows the researcher to acquire relevant information so that concepts and models can be derived from the data (Bell et al., 2018). The adoption of semi-structured interviews permits the researcher to explore more details by asking respondents to elaborate or further clarify the response (Gray, 2017).

The interview questions were relevant to the research questions and remained connected throughout the data collection process. The flexibility of the semi-structured interviews allowed the researcher to modify the interview questions during the data collection (Glaser and Strauss, 1967). The interview questions were adjusted when the participants' answers indicated that they did not understand the question, allowing the researcher to ask clarifying questions.

3.5.2 Developing the Interview Guide

An interview guide was used to cluster into groups the questions that deal with related issues (Gray, 2017). Three interview guides were guided by the research questions (see Appendix). They were developed for HE stakeholders: educators, employers, and graduates. The interview question guide was formed using a rigorous approach that allowed validation and connection to existing knowledge on the topic, as well as extensive data collection. The researcher has followed Bell et al's. (2018) approach in developing the interview guide as " a brief list of memory prompts of areas to be covered in the interview" (p.439). The thesis supervisors reviewed the first draft and provided thorough feedback on the interview questions, which allowed for the transition to the second step of the interview process.

The interview questions were initially devised by subtracting ideas from the literature review that were guided by the research questions and aims. As the researcher, my 15-year experience in higher education employability programs was instrumental, allowing for an easy generation of practical research questions relevant to each stakeholder. The interview guide covered similar questions for all participants. However, the interviewees' responses could vary from one to the other (Qu and Dumay, 2011). With the flexibility of semi-structured interviews, more questions were added organically based on the participants' type, tenure, expertise, current role, time constraints, and interest in the topic. The feedback received from employers and academics also inspired a few additional interview guide questions for students that related to their interests and choice of the program.

3.5.3 Pilot Interviews

Pilot interviews were conducted with three individuals representing each stakeholder category, graduates, educators and employers, to investigate the appropriateness of the interview questions. Their feedback is shown in Table 3.1.

Table 3.1: Pilot Interviews

Pilot interview	Feedback	Adjustment
P32	The participant suggested adding a question regarding the role of faculty members, proposing further inquiry into the quality of their contributions to GE and students' appreciation of these contributions.	The question has been added to the graduates' interview questions.
P18	"All questions were important, interesting and focused"	No adjustment was required
P6	"Some of the questions are directly in line with what the Ministry of Human Resources and Emiratisation asked as well"	No adjustment was required

I explained to the participants that they were members of the pilot interviews and that I would value their feedback at the end of the interview. After conducting the interview, the researcher thanked the participants and asked for their feedback on the type of questions asked.

A thoughtfully designed pilot interview has the potential to improve the quality of the research and help recognise the flaws that can be modified (Malmqvist et al., 2019). The exploration of a new phenomenon, such as GE in the AI era, requires the use of instruments that are well-tested to ensure the integrity of the data (Bassey, 1999). Pilot studies test the interview guide, offering insight into the comprehensibility of the interview questions and participants' ability to competently answer them. The pilot phase was critical in improving the interview process in the following ways:

- By acting as a time test, reduced the time allocated for the interview from 60 minutes to 30 minutes which was adjusted in the invitation letter;
- ensured that the introductory questions build the interview rapport; and
- provided an opportunity to practice active listening techniques during the interview to engage the interviewee and elicit higher-quality responses from the participants.

3.5.4 Email Interview

E-mail interviews were offered in lieu of face-to-face or virtual interviews; this option accommodated working professionals who preferred to respond to the interview questions via email. E-mail interviews, contrary to live interviews, allow participants to reply to the questions at their convenience (Gibson, 2014). Meho (2006) suggests that the e-mail interview method may produce better quality data than face-to-face interviews; this can be attributed to the fact that participants have relatively more time to contemplate the questions and provide thoughtful responses. This method was selected by – and used with – only two participants, both of whom indicated they appreciated the practicality of the e-mail interview (Fritz and Vandermause, 2018).

The e-mail interview method is regarded as an effective method of data collection. Hawkins (2018) argues that the asynchronous nature of the interview can provide more time for the participants to provide in-depth answers. However, in this study, the answers provided were

short compared to those recorded in the face-to-face interviews. Of course, this may be attributed to the semi-structured and extemporaneous nature of the face-to-face interviews, which encouraged the participants to verbalise their experiences in greater depth.

3.6 Participants

3.6.1 The Interview Sample

The present study employed purposeful criterion sampling techniques to recruit participants (Patton, 2002). Specifically, purposive sampling was used to enlist educators, industry professionals, and recent business graduates. The participants were evaluated according to the provided criteria and were asked to share their expertise and knowledge to produce data for this research. The participants for this project were targeted from business school disciplines in the UAE, irrespective of their institutions.

The participants were chosen following the criteria provided below. HE key stakeholders are selected for interview if they:

- Are recently working in one of the seven UAE emirates.
- Employers have a minimum of 5 years of experience and in senior roles or consultancy services.
- Employers have to be directly involved with HEIs in terms of GE activities.
- Educators (deans, faculty, employability professionals) to assume teaching or learning responsibilities and duties in the business schools in the UAE covering relevant majors i.e., accounting, finance, HR, Marketing, economics and supply chain.
- Students graduated from business school in or after 2020.
- The key stakeholders in HE is involved in the development of skills and employability practices, including educators, employers and graduates.

These criteria targeted a population of three HE key stakeholders involved in GE experience: representatives from industries who are currently involved in GE activities, educators, and graduates from HEIs. These stakeholders are represented in Table 3.2.

Table 3.2 Research Participants

	Description	Number	Identifier	Gender	Nationality	Years of Experience	Expertise	Position
Employers	Employers who have a minimum of five years of experience and are in senior roles or consultancy services and are involved in graduates' programs and hiring.	15 Employers	P1	Male	Indian	25 Years	Investment Banking Neuroscience	Board member Founder
			P2	Female	Lebanon	24 Years	Talent Management	Senior Director HRM Value Advisory
			P3	Male	Lebanon	5years	Management Consultant for AI	Management Consultant for AI
			P4	Male	Turkey	22 Years	AI, Learning Technologies	Digital Academy & Business Development Manager
			P5	Male	Egypt	12 Years	Technology Services	Chief Technology Officer,
			P6	Male	USA	22 years	Talent Acquisition/ Mobilization/ Learning and Development	Senior Manager Talent Acquisition and Learning & Development
			P7	Male	India	14 Years	Talent Acquisition & Manpower Planning	Human Capital Manager
			P8	Male	British	31 years	Digitalisation and Smart Cities	Advisor
			P9	Male	Lebanon	31 years	Healthcare technologies	CEO
			P10	Male	Kazakhstan	11 Years	AI and Machine Learning	Head of AI and Machine Learning
			P11	Female	Jordan	18 Years	Youth Employment	Managing Director
			P12	Male	Egypt	23 Years	Talent Management and Career Development	Specialist in Career Development
			P13	Male	Germany	27 Years	Human Resources	Senior Vice President Human Resources
			P14	Female	South Africa	22 Years	Human Identity, Skills, AI - eLearning	Founder
			P15	Male	Pakistan	13 Year	Human Resources	HR Director

Educators	The faculty members who teach in the business school, have been in the profession for more than five years, and do not have management responsibilities.	9 Faculty members	P16	Male	Pakistan	14 years	Operation, Supply chains and Logistics Management	Assistant Professor
			P17	Female	Pakistan	16 Years	Management	Assistant Professor in Management
			P18	Male	Greece	27 Years	Finance, economics, Mathematics	Professor of Finance
			P19	Male	Australia	23 Years	Marketing	Professor Marketing
			P24	Male	Greece	13 Years	Management	Associate Professor of Management
			P25	Male	India	15 Years	Economics	Assistant Professor of Economics
			P27	Male	Lebanon	19 Years	Human Resource Management	Associate Professor of HR
			P29	Male	Pakistan	19 Years	Accounting	Professor of Accounting
			P30	Male	Nigeria	12 Years	Human Resource Management	Professor of HR
	These participants represent the deans of the business schools who design and approve the college activities and strategies for GE	3 Academic leadership/Deans	P21	Male	Pakistan	25 Years	HR and Organisational Development and leadership	Dean of Business
			P23	Male	Argentina	16 Years	Strategic management	Dean of Business
			P26	Female	USA	20Years	Social Policy and Business Administration	Dean of Business
	The employability professionals who hold a senior management role for the career centres who are responsible for graduates' employment, and who have been in the profession for more than five years.	3 Employability Professionals	P20	Male	UK	15 Years	Careers and Employability	Advisor of Career and Employability
			P22	Female	UK	14 Years	Careers and Employability	Advisor of Career and Employability
			P28	Female	Hungary	11 Years	Talent development	Manager-Career Services

Graduates	Graduates from business schools including 2020-2021 cohorts onwards.	10 Graduates	P31	Male	Egypt	Unemployed	Accounting	NA
			P32	Female	UAE	Unemployed	Finance	NA
			P33	Female	UAE	Employed	Entrepreneurship	Intern
			P34	Female	UAE	Unemployed	Finance	NA
			P35	Male	UAE	Further studies	Marketing	NA
			P36	Male	Egypt	Internship	Accounting	Intern
			P37	Male	Pakistan	Unemployed	International Business	NA
			P38	Male	Pakistan	Unemployed	Economics	NA
			P39	Male	UAE	Employed	Business Administration	NA
			P40	Female	Philippine	Employed	Business Administration	Investor Relations
Government	Involvement in the job market research with employers and AI strategy development.	2 Representatives	P41	Female	Jordan	14 Years	Strategy & Policy	Consultant
			P42	Male	UK	20 Years	Strategy &Labour Market	Advisor

Participants' profiles were reviewed on LinkedIn to ensure they met the criteria mentioned above. In addition, academics from the my university were not invited to participate in the study to avoid any possible conflict of interest. After an agreement was made with each participant about their availability, a calendar invite was sent to their email to confirm their participation.

During the recruitment process, care was taken to ensure a representative sample across gender and different nationalities. The participants who took part in this research are referenced through their participant IDs, as specified in Table 3.2.

3.6.2 Data Description

A total of 42 participants were interviewed in the study. This sample was comprised of 15 educators (including three career advisors, three deans, and nine faculty members), 15 employers, two government advisors, and 10 graduates. In terms of gender, males assumed the

majority of the participant pool, making up 71 per cent of the total sample. The educators, employers, and government representatives in this sample, on average, held more than ten years of experience in their respective fields. Interviews with government representatives were included to develop a clearer understanding to AI national strategy and its connection with HEIs.

Regarding the contextual setting of the study, all participants are based in the UAE. However, most of them demonstrate relevant experience in multiple geographical areas. Participants from various organisations were approached to attract an abundance of diverse perspectives and assertions. The research participants, as stated above, were purposefully chosen to represent diversity in industries and sectors across the UAE.

3.6.3 Graduate Sample

The present research seeks to understand graduates' perceptions of employability. It also aims to understand graduates' views regarding their institutions' role in fostering personal and professional development during their study and the value of HE in enhancing their employability. This study targeted new graduates of three to 12 months. The selected students were graduates of 2021 (eight students) and 2020 (two students). This criterion was set based on new graduates' salient experience of transitioning to the workplace and connecting their skills and learning to the market demands.

Attainment of new graduates was a cumbersome recruitment process relative to the educator and employer groups. Initially, interviews were planned to be conducted with students in their senior year. However, all the senior-year candidates approached showed no interest in participation, lamenting they had no knowledge or experience to contribute to the project. As such, new graduates were recruited.

The graduates included in the sample either majored or minored in business studies. All the graduates who participated in the interview studied on a full-time basis. The majority of the graduates were unemployed after graduation. Their employment status was identified during the interview. The characteristics of the graduate sample are represented in Table 3.2. Participants from the graduate sample represented seven different universities, including the business programs studied as per Figure 3.2. The snowball sampling method was employed to generate

referrals from the participants (employers, educators, and graduates) interviewed in the study (Blumberg et al., 2008). Educators connected the researcher with former students while graduates also referred their friends. The entire spectrum of business school majors was represented by graduate participants in this sample, as presented in Figure 3.3.

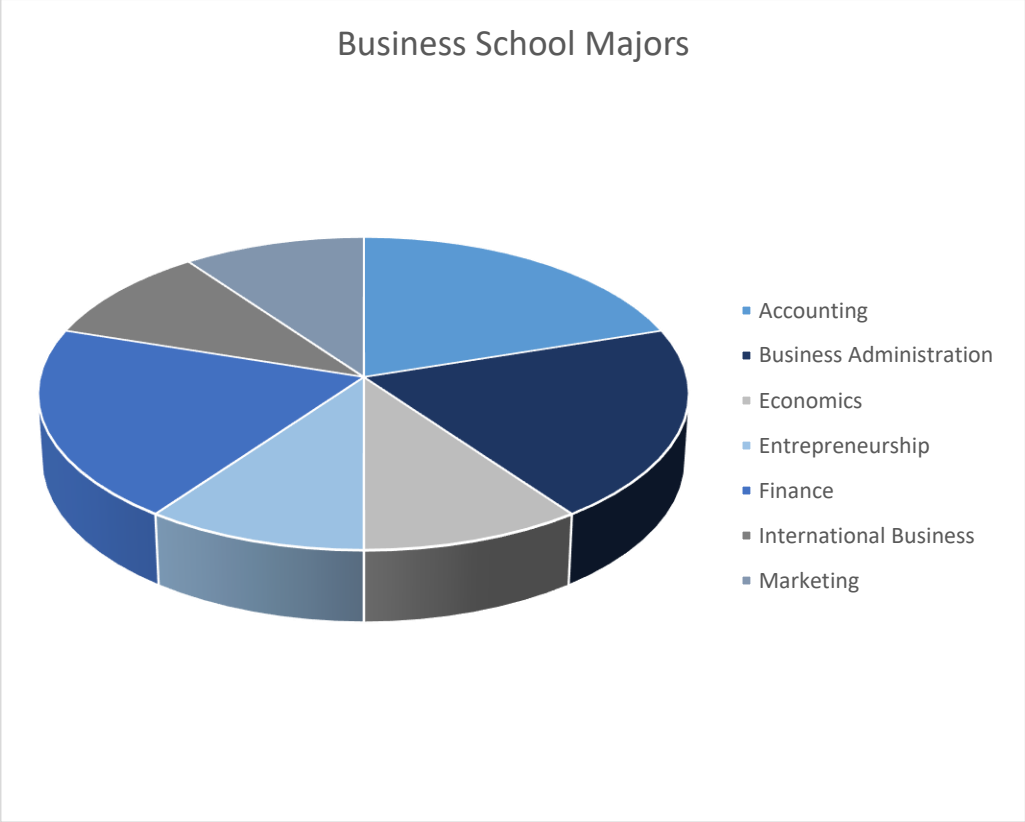

Figure 3.3: Business School Majors for Graduates

3.6.4 Educator Sample Demographics

The educator sample is characterised into three major categories: academics, deans, and employability professionals. As mentioned earlier, the job market shift to hiring computer science graduates with relevant technical skills in AI may pose a threat to the employability of business graduates (Qasim and Kharbat, 2020). Therefore, the study focuses on business disciplines to discuss educators perspectives about the employability of business graduates (Walker and Black, 2000).

As academics are at the centre of the employability process, professors were recruited for this study based on their experience in teaching at a business school. Deans were also included in this study because their experience of managing a college provides detailed insight into employability and naturally includes the perspectives of other faculty members. In addition, deans offer a strategic perspective regarding GE enhancement; they are the line managers of the business faculty members, playing a crucial role in decision-making and exercising senior university leadership. Lastly, employability professionals were included within the sample as they function as a link between the senior management of the university, academics, employers, and graduates.

Some participants were identified based on the local universities' website information rather than through LinkedIn profiles. Participants from the educator sample represented nine different universities, as shown in Table 3.2.

3.6.5 Employers Sample

Reaching out to employers to participate in this research was the most facile process compared to the recruitment of the educator and graduate groups. Employers demonstrated visible interest in the topic of discussion. Because I have worked in employability team management for more than 15 years, I am able to identify employer networks that can provide germane knowledge and insights (Schutt, 2006). Employers were selected in this sample on account of their senior and strategic position in representing a set of views about GE knowledge and their relevance to the study. The study implored the expertise of employers in the fields of AI, employability, HR and talent acquisition, as indicated in Table 3.2.

The search for employers began by searching and reviewing relevant profiles on LinkedIn, such as employers who presented at industry advisory boards of HEIs. Employers whose LinkedIn activities represent their participation in the internship programs of the universities were also reviewed. Because the UAE attracts companies from all over the world, the employer sample represents national, global, and multinational companies.

While the UAE is dedicated to enhancing Emirati participation in the private sector, as previously stated (UAE, 2022), the demand for highly skilled graduates nevertheless persists

across all sectors. Therefore, the employer sample includes the three different sectors, including public, private, and non-profit companies, but with higher participation from the private sector.

3.7 Data Collection Process

3.7.1 Scheduling and Undertaking Interviews

The study focuses on the experience of 42 participants, including 15 employers, 15 academics, 10 graduates, and two government officials. However, more than 200 potential participants were invited to participate in this study. All members were asked to participate in the study using various contact methods, including email, LinkedIn, and career and alumni events. There was a 20 per cent response rate, resulting in an overall sample of 42 participants (N=42).

The invitation letter presented the title and aim of the study. It confirmed that the research project had received ethical approval from the School of Management at the University of Bath, UK, and included the estimated interview duration of 30 minutes. It also highlighted its commitment to participant anonymity throughout the research process. Participants were given a chance to choose a convenient time and medium for the interview. Due to the COVID-19 pandemic conditions, the participants preferred to conduct the interview virtually. All interviews – with the exception of the two e-mail interviews – were conducted on Microsoft Teams to comply with the current COVID-19 regulations and pandemic protocols. The letter also emphasised voluntary participation, indicating that the participants were under no obligation to answer any questions with which they were uncomfortable. The letter also informed participants that the interview would be recorded.

Interview participants confirmed their interest in participating via e-mail, accepting the calendar invite sent from my University of Bath email. Most of the interviews were conducted after participants' work hours or during weekends; these times were requested by some participants due to their busy schedules. Some participants requested to review the interview questions prior to the interview. As such, I provided them with written questions before the discussion. Because many participants are not native English speakers, this preparation helped to prevent potential language barriers that may have occurred in an extemporaneous setting.

All the interviews lasted between 30 and 60 minutes. At the beginning of the interview, I welcomed the participants and thanked them for their cooperation to put them at ease. I debriefed them on my research topic and encouraged them to ask any questions for further clarification. This step was imperative in building a good rapport with the interview participants and facilitating seamless, open discussion (Jacob and Furgerson, 2012). Before the recording, I reminded the participants of their rights as explained in the invitation letter.

As the interviews were conducted using a digital recording feature, all participants consented to be recorded (video and audio) for the duration of the interview. As the event organiser, I began the interview recording while continuously monitoring the recording and transcription functionality throughout the interview duration. I employed active listening to obtain and generate rich data (Lavee and Itzchakov, 2021; Prout et al., 2020). I analysed the content of participants' responses to identify emerging themes regarding GE and AI. I effectively answered the participants' questions during the interview to clarify any confusion (Hawamdeh and Raigangar, 2014).

All of the primary data was collected over nearly three months, from August 2021 to the end of November 2021. Because August marks the beginning of the new academic year, it is typically a busy month for universities. Therefore, the interviews conducted during this month were mainly with the employers. The interviews were conducted following ethical standards and good practices (Bell et al., 2019). Ultimately, the research interviews produced rich, qualitative data in the format of recordings and transcripts.

3.7.2 Transcription

The initial stage of data analysis entailed penetrating transcripts. The Microsoft Teams transcription feature provided live transcription during organised meetings and saved these transcriptions for post-meeting review. This software optimised the data analysis process, allowing me to attend to participants' feedback, effectively manage the flow of the meeting, and maintain eye contact with the participants. At the end of the meeting, the transcript was downloaded as a Word document and saved along with the digital recording for each participant.

According to the guidelines proposed by Sutton and Austin (2015), the researcher must engage in the transcription process in the following ways: transcribing the recording verbatim; reading the transcript while playing to the audio for revision purposes; anonymising the transcript; inserting notes where appropriate; and applying punctuation and any other grammatical annotations to the transcript.

In this study, interview dialogue was taken from the denaturalised transcription. Therefore, some organic speech elements – such as stutters, pauses, and involuntary vocalisation – have been excluded (Oliver et al., 2005). In addition, the researcher eliminated repetitions that did not add to the meaning, made conjunctions as needed to ensure fully constructed sentences, and displayed the text in a readable version. Following Azevedo et al. (2017), the data transcription was guided by the research objectives and data analysis method. An identification system for the interviewer and interviewee was created, and each transcript was associated with its recording file. The researcher created backup copies of the recordings and transcripts on different storage devices, including a laptop, hard disk, and one drive.

There are specific challenges faced by the digital transcription phase associated with speech recognition. The research sample is diverse, including participants with different accents or inflexions. However, some participants' verbalisation generated mistakes in the transcription that required manual correction and additional reviews of the recording. Furthermore, on some occasions, technical difficulties were experienced (Johnson and Christensen, 2014). For instance, the connection with the participant was sometimes lost during the recording. Moreover, the challenge of contextual situations, such as background noise, interference, or other sounds (Bailey, 2008), affected the quality of the initial transcription and required manual intervention. However, the time and effort invested to transcribe the interviews with fidelity allowed me to become more familiar with the data.

3.7.3 Document Review

Document analysis was used to supplement the primary data collection. Qualitative document analysis is a systematic approach to interpreting data, generating new knowledge, and simulating meaning (Bowen, 2009; Ruggiano and Perry, 2019). In this study, secondary data included documents, national strategies, press articles, and videos. This secondary data

functions as a vital part of the overall thematic analysis. Document analysis is a suitable approach to generate findings that can be both objectively analysed and combined with data collected from other sources (Cardno, 2018). In this approach, an emphasis is placed on the quality of documents rather than the quantity (Bowen, 2009).

Many senior leaders from industry and academia were invited to participate in the data collection. However, the response rate was low, resulting in a limited representation of senior leaders (vice-chancellors, provosts, and deans) in the sample. Therefore, the researcher collected the data from an existing collection of relevant open resources, such as panel discussion videos of senior HEI leaders from 2021 to 2022. As such, secondary data was assessed to integrate the senior leadership perspectives in the analysis, supplementing the results generated from the interview stage. This provided a rich set of data spanning different stakeholders. In addition, the secondary data featured novel perspectives from the training providers who connect industries and universities through their platforms.

The data collected was examined, transcribed, and then imported, along with the other documents in NVivo, for coding and analysis. Transcriptions of the public videos were generated through the YouTube transcription feature. However, it is important to note that the researcher is responsible for ensuring the accuracy of the transcript. Therefore, before using NVivo, I proofread the transcripts. This was also done to identify additional themes meriting further analysis. Table 3.3 lists the documents identified for analysis.

Table 3.3: Documents for analysis

Document	Identifier	Reason of Inclusion	Authors
UAE National Strategy for AI 2031	D1	The investment in talent is one of the main drivers of the UAE national agendas. Attracting and training talent for future jobs enabled by AI as one of the main objectives of the strategy	U.AE, 2022
The AI Gap: Time for the	D2	The global integration of AI will have a potential impact on businesses in the	BCG, 2018

Middle East to Take It Seriously		Middle East and UAE if they do not become early adopters..	
The National Employment Strategy 2031	D3	The digital era will impact the jobs currently held by Emiratis. The strategy aims to increase Emirati participation in the areas of AI and digital transactions.	U.AE, 2018
New Advanced skills strategy	D4	The strategy targets students in universities and new higher education graduates.	U.AE, 2018
What will Employability Mean in the Digital Age	D5	This resource presents views from employers and senior leaders at a panel discussion.	THE, 2021
UAE's Fourth Industrial Revolution Strategy	D6	The strategy focuses on a number of key fields. Some of them entail innovative education and AI.	U.AE, 2017
Future Skills Supporting the UAE's Future Workforce	D7	AI technologies characterise a wide range of new professions in the very future.	British Council, 2018
Arab Digital Economy Strategy	D8	This resource includes the perspectives of countries that have pioneered in their digital transformation.	CEFRS and EFESO, 2019
How Embedding In-Demand Skills Can Help UAE Graduates	D9	This resource includes the perspectives of senior leaders, offering training to boost graduates' employability through curriculum revamp.	THE, 2021
Why Human Skills are Key to Student Employability _	D10	This resource provides insight into the voices of senior leadership in HEIs at a panel discussion.	THE, 2021

Times Higher Education (THE)			
2nd Annual INNCUVATION FORUM 2022	D11	This resource includes perspectives from academia, industry, and government on HE trends.	HCT,2022
ADSW Future Skills 2030 report	D12	This resource offers an explanation of the dynamics of job market change including job creation and erosion.	ADSW, 2019
UAE Centennial 2071	D13	This resource reviews UAE's vision of bolstering future generations' career readiness and identifies excellent education as the main pillar of this vision..	U.AE, 2021
National Strategy for Higher Education 2030	D14	The national strategy for higher education in the UAE highlights the role of HEIs in developing an innovative and high-quality educational system in both academic and professional tracks, ultimately contributing to supporting the knowledge economy.	U.AE, 2017
UAE National Innovation Strategy	D15	This resource construes education as an innovation priority sector that promotes environments with technology infrastructure.	PMO, 2015
First Rate Education System	D16	Offers a review of UAE's agenda focus on establishing smart systems in universities as a base of learning and research.	UAE Government,2018
The National Youth Strategy	D17	The strategy looks at education transition with a focus on youth voice and recommendation.	UAE Government, 2021

Quality Education	D18	It is a strategic priority to utilise a smart system that prepares students to enter the workforce.	MOE,2021
Closing the Skills Gap in MENA Region	D19	This includes a panel discussion about the path to enhancing GE.	THE, 2022
The Importance of Emiratisation in Building a Nation	D20	This reviews Emiratisation programs and initiatives.	ADMG Academy, 2022

3.8 Data Analysis

The data was qualitatively synthesised with a focus on participants' views. The study generates a large volume of text data that requires a logical process to understand and examine. As explained by Creswell (2015), "Text data are dense data, and it takes a long time to go through them and make sense of them" (p.152). Fundamentally, this study adopts an open-minded, Gioia approach, refraining from making preconceptions about the nature of data or relationships that will emerge (Gehman et al., 2018). The data analysis process of this research is based on interpretative logic (Gioia et al., 2012). Furthermore, it employs an overarching thematic analysis to examine the qualitative data originating from interviews, policy documents, press articles, or any other kind of text (Van den Bulck et al., 2019). Thematic analysis is often understood as belonging to the phenomenological or experiential qualitative research traditions (Braun and Clarke, 2021, p.39). Thematic analysis aligns with these traditions by determining and analysing themes from the data that capture the research participants' experiences and perspectives.

The data was initially coded via open coding to define categories based on properties and dimensions (Strauss and Corbin, 1998). The generated codes were then grouped into concepts, themes were subsequently recognised, and aggregate dimensions were ultimately determined (Braun and Clarke, 2006). Braun and Clarke's (2006) six-step guide was utilised in the present study as a thematic analysis basis upon which to extract information and patterns from the data. The six steps used in this study are demonstrated in Figure 3.4.

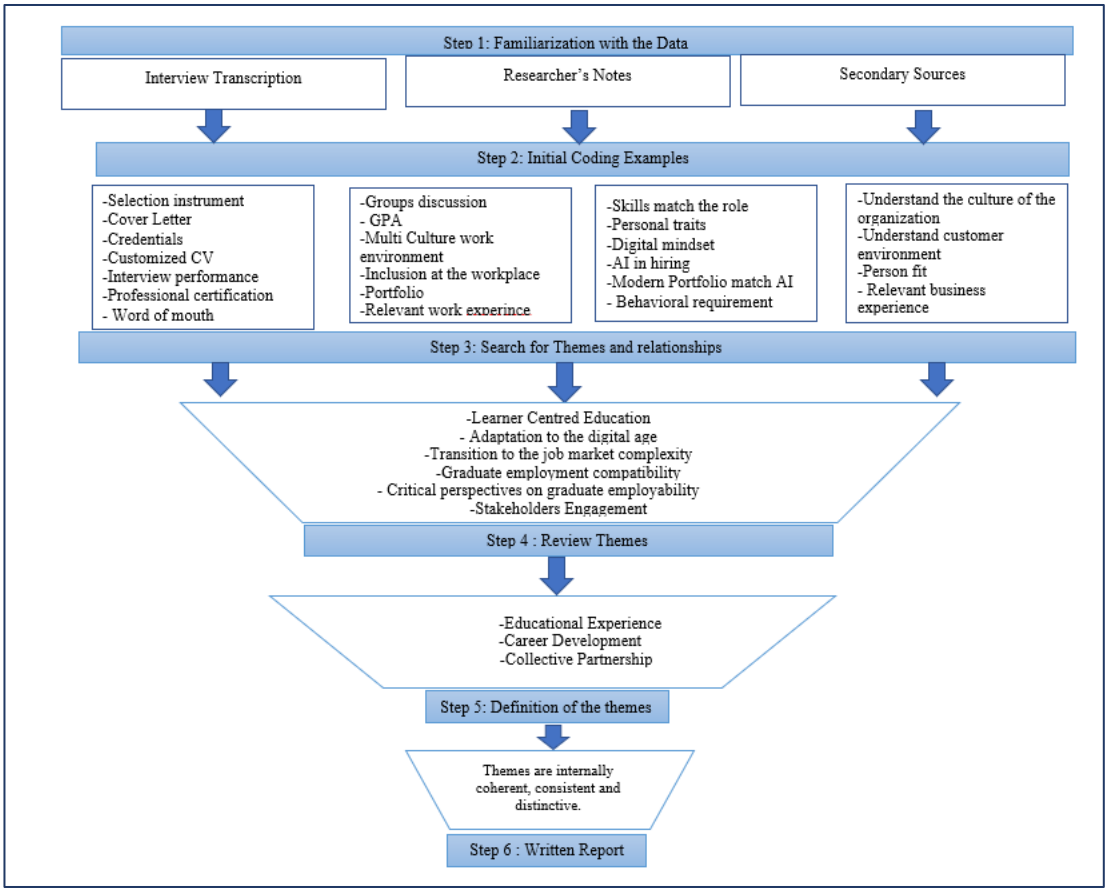

Figure 3.4: Braun and Clarke's (2006) six steps

Coding allowed the researcher to minimise the considerable amount of qualitative data into a manageable form handled easily by the data analysis software (Elliott, 2018).

The analysis stage was primarily inductive, meaning that codes were first linked to concepts, and themes were subsequently developed (Glaser and Strauss, 2017). I was guided by the relevant literature throughout the analysis stages to better understand the findings (Faber et al., 2019), referring to previous employability studies that were conducted in relation to the agentic perspectives (e.g., Forrier et al., 2020; Pham, 2021).

During the first stage of this research, interview transcripts and secondary documents were read to engender familiarity with the data. Next, the data was imported in text format and coded in NVivo release 1.5.1, a type of computer-assisted qualitative data analysis software (CAQDAS) (Faber et al., 2019). The NVivo software allowed for a more organised approach to data analysis

(Soliman and Khan, 2004), thereby enriching the data with greater comprehensibility (Trigueros-Cervantes et al., 2018). Accordingly, data extracts were labelled with relevant codes. This aided in navigating and retrieving pertinent quotes (Faber et al., 2019).

However, 488 coded nodes were initially generated in which the data were examined, and themes were identified. Given the volume of nodes, a data minimisation strategy was implemented. Following Gioia et al. (2012), the next step involved organising the nodes into first-level categories. This iterative technique is often required to reposition some first-order descriptions under the second-order description or the aggregate dimension. First-order themes are based on the participant's responses, while second-order themes represent the higher-level concepts that emerge from data analysis. Organisational decisions were based on a thorough review of the data; multiple codes were combined to create themes that inform the research questions (Kiger and Varpio, 2020). For example, as shown in Figure 3.4, many initial codes, such as the cover letter, credentials, customised CV, interview performance, professional certification, and word of mouth, were produced from the data, which formed the first-order code job role. It was combined with other first-order codes, including organisational culture fit, relevant work experience, and selection fit, to construct the second-order theme of employment compatibility. More details are provided in Chapter Four.

In the next analysis step, an iterative search process was performed between first-order categories, ultimately grouping these categories into distinct second-order categories. For example, the data generated different first-order codes such as cognitive abilities, learning agility, emotional intelligence, social capital, AI literacy, and business acumen, which collectively formed the second-order theme of skills and competencies.

The final step of the analysis involved an examination of the second-order themes to cultivate overarching themes (Braun and Clarke, 2006). Here, themes of significance included critical perspectives on GE, adaptation to the digital age, stakeholders' partnership, and transition to the job market complexity. These concepts will be explored in the next chapter.

The in-depth analysis of the present study was fundamental in developing data structures and identifying interrelationships. The second-order themes are represented in a working table to

articulate the building block of the model, ensure the content validity of the coding, and present a visual representation of the emerging interrelations among concepts (Ravasi, 2021).

As the study examines GE in the complex age of AI, many themes beyond the employability outcome emerged from the data. The researcher analysed the data after the completion of the data collection process, using inductive analysis to identify themes and aggregate dimensions following Gioia's method of grounded theory (Gehman et al., 2018).

3.8.1 Gioia Method

According to Gioia et al. (2012), researchers are knowledgeable agents who can construct concepts and relations from data analysis, evidencing the real experiences of the participants while also scientifically and systematically interpreting this evidence (Gioia et al., 2012, p.17). Similarly, the researcher does not allow his/her/their professional background to interfere with the participants' views and experiences about the research topic.

The present study is founded on the grounded theory method and, as such, takes a systematic approach to inquiry (Charmaz, 2017). Gioia's method is employed for concept development and for building an inductive theoretical model grounded in the data (Gehman et al., 2018). By employing the Gioia method, the present research has devised a practice-based model that evaluates graduates' employability in the age of AI from the lens of key stakeholder perspectives. Corley and Gioia (2011) define a theory as a view generated by identifying the interrelationships that reveal how and why a phenomenon occurs. Gioia's method is founded on systematic conceptual and analytical discipline, ultimately supporting credible interpretations of data and resulting in conclusions that are plausible and defensible (Gioia, 2012, p.15).

According to ST, every stakeholder has a stake hold in HE but different needs for the HE system. Therefore, the efficacy of a GE model depends on the complementarity of stakeholders' roles. The present study proposes a model that can enhance GE in the age of AI. This will be discussed in greater detail in the findings and discussion sections of this work.

In the next chapter, a thorough analysis of each aggregate dimension will be discussed by respectively examining second-order themes. The researcher will demonstrate the first-order categories and explanatory quotes in each second-order thematic extract.

3.9 Validity and Reliability

Validity and reliability are concepts employed to assess the quality of the research. The strategies adopted in this study are derived from the ontological, epistemological, and methodological aspects of the critical realist paradigm (Healy and Perry, 2000). Validity refers to the accuracy of data collection and analysis (Sangasuban, 2011). In the present study, the primary data was obtained from participants' experiences and perspectives. However, the qualitative and subjective nature of the data may compromise the validity of the research. Qualitative research often depends on a small sample, which may limit the validity of the findings. To combat this, diversity was prioritised during the recruitment phase to ensure that different HE stakeholders' perspectives and experiences were represented (Sangasubana, 2011). As previously mentioned, the interview questions were semi-structured and open-ended, providing ample opportunity for participants to relay their experiences (Lewis and Ritchie, 2003). Another technique adopted in the study is the "thick description;" this involves extrapolating general ideas – gleaned from participants' direct quotes – in the context of the study (Creswell and Poth, 2018).

The variety of data produced through document reviews and semi-structured interviews, along with several participants' perspectives, reflects the theoretical framework that underpins this study (Bazeleya and Jackson, 2013) to enhance the validity of the data. Different theoretical perspectives were used to interpret the data including ST, the theory of credentialism (Brown, 2018), AI job replacement theory (Huang and Rust, 2018), constructivist learning theory (Struyf et al., 2019), integrated learning theory (Claxton et al., 1996), SBTC (Lauder at el., 2018), and the fit theory (Edwards, 1991).

In unpacking the meaning of reliability, Rose and Johnson (2020) refer to the soundness of the research resources and the appropriateness of the methods utilised in the qualitative data. Reliability measures methodological procedures' consistency over time and across applications (Miles, Huberman, and Saldana 2014). As such, reliability suggests that if other scholars

conducted the interviews and the document analysis in the same context as the present study, they would achieve the same results. However, critical realism posits that viewpoints vary over time, change within diverse settings, and are based on various, changeable structures (Eriksson and Kovalainen, 2008). Unlike replicated experiment conditions, the case study context is also changing (Yin, 2018). Therefore, care has been taken to ensure that other researchers can reproduce this study; the approaches and actions applied throughout the research have been thoroughly documented.

3.10 Ethics

All research conducted in connection with the University of Bath must be conducted ethically (University of Bath, 2017). Following the University's code of good practice in research integrity, I have completed the "Concordat to Support Research Integrity" training to ensure compliance with University of Bath ethical standards. This training is based on the core elements of research integrity, including "honesty, rigour, transparency, and the care and respect of all participants" (University of Bath, 2012, p.1).

I have completed the EIRA form, which includes information about all research activities. Furthermore, I secured the approval of the University of Bath's UK research committee in the UK prior to conducting the proposed research. Several ethical issues must be considered in the process of qualitative research (Seidman, 2006). Ethical standards include details surrounding the ethical treatment of research participants, how the study is processed, and how the data acquired is utilised (Bryman and Bell, 2007).

All participants were provided with an explanation of the study objectives and a consent form. By signing the consent form, participants permitted data to be used and acknowledged their right to withdraw from the research at any time without penalty (Creswell and Poth, 2018). Anonymity was secured for all participants. The names of each participant's institution and company contained in this research were given an identifier to protect the identity of all participants. In addition, the researcher advised the participants to review the transcript to validate the accuracy of the data and information.

An essential ethical consideration for the study concerned capturing the participants' feedback and views with fidelity. This entailed recording the interviews as a reference for accurate transcription. It is crucial to carefully record semi-structured interviews as part of ethical research practice (Genzuk, 2003). Furthermore, I carried out all the research interviews, data collection, and analysis independently to ensure the accuracy of the data.

As an educator work within HE fields, it is essential to consider the possibilities of conflict of interest and bias (Bell and Bryman, 2007). As a precaution, participants from my current institution were not recruited. In addition, during the interview, I was mindful not to impose my own experience and opinions, listening in an open and non-reactive manner to avoid influencing participants' responses.

Data protection and storage arrangement were additional ethical considerations in this study. Responsible data protection was performed to maintain participant confidentiality (Bryman and Bell, 2007). The interview recordings and transcripts were stored on a computer storage system owned by the University of Bath and backed up by the university IT team. Another copy was saved on an external hard drive. The third copy was stored in an encrypted folder on my laptop. Standard and NVivo backups were completed regularly, and routine checks were conducted to ensure that the files were still functional.

In summary, this study aims to understand the influence of HE key stakeholders in enhancing GE by investigating central concepts and components that contribute to the development of an employability ecosystem. This chapter has detailed the philosophy underpinning the research, explored the research methodology, and justified the design used to achieve the research goals. A single-case study methodology was employed through the lens of a critical realist paradigm, and a qualitative approach and inductive logic were utilised to analyse the data. Data was collected via both semi-structured interviews with stakeholders and a document review. This chapter furthermore summarises the standards followed to ensure validity and reliability, culminating in an overview of the study's ethical considerations. Overall, this study was executed according to the University of Bath's ethical code of conduct and, as such, with integrity.

CHAPTER 4: FINDINGS

This chapter presents the findings of this study which are structured around the analysis of stakeholders' perspectives on GE in the era of AI. To recap, the main question being explored is: *How should business schools respond to the changing demands of stakeholders in the AI-driven world of work to enhance GE?* The overarching research question is divided into two sub-questions:

- What collaborative mechanisms among key stakeholders in HE underpin the social structure of GE in the era of AI?
- To what extent can the agency of key stakeholders in HE contribute to enhancing GE in the era of AI?

The findings presented in this chapter help to answer each of the research questions by evaluating the mechanisms of graduates' employability as well as the interplay between stakeholders' agency and GE structure. The chapter assumes a systematic analysis approach (Grimble et al., 1994) to holistically present the current landscape and stakeholders' views. The conclusions developed from these findings, which consider stakeholders' stakes in the employability ecosystem, could aid the development of the GE model and guide policymakers in shaping employability strategy in the UAE.

With that in mind, the chapter presents the findings from the stakeholders' views of GE in various aggregate dimensions. These dimensions are identified as overarching concepts demonstrating patterns and connections in the data. The themes emerging from the data are examined, and patterns of confluence and differences are identified. This data analysis produced three different themes, Educational Experience, Career Development and Collective Partnership, as shown in Figure 4.1. This chapter moreover construes data in relation to the overarching research inquiry (Kiger and Varpio, 2020).

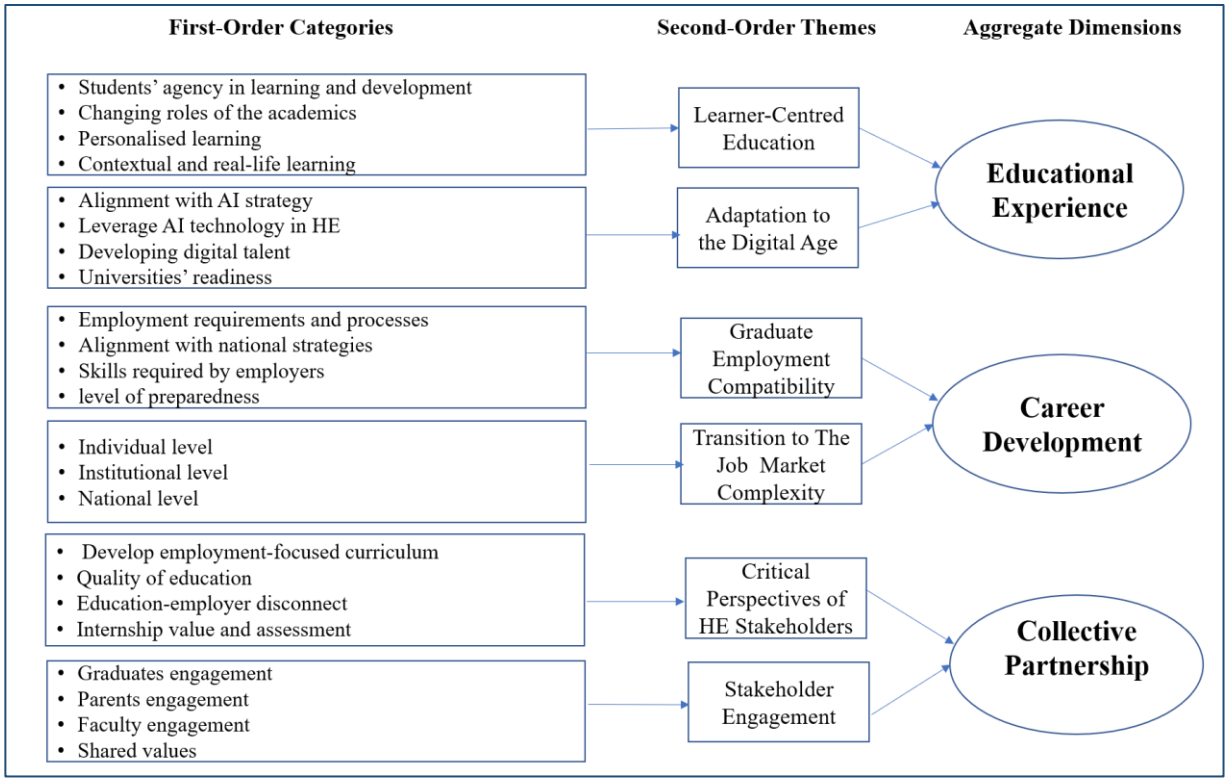

Figure 4.1: Summary of Themes

4.1 Educational Experience

Chapter Two of this thesis identified various factors affecting skills gaps, market demands, and, in turn, GE. It also explored overall AI adoption and its impact on education and employment. The rapid transformation of businesses in adopting AI in industries and society is surpassing that of education in terms of speed and scope. This discrepancies in the implementation may lead to a mismatch between the skills that graduates have and the skills that are in demand in the job market. Ultimately, findings from the literature review suggested a need for a variety of learning solutions and resources to maintain business graduate employability. This will be highlighted in the next section.

As explained in Chapter Three, a data minimisation strategy was implemented in the present study due to the substantial amount of qualitative data. As such, an initial word frequency query was generated to assist in identifying possible themes and the most common words, as shown

in Figure 4.2. Results indicated a prominent focus on the following aspects of GE: education, skills, curriculum, learning, and industry collaboration.

Figure 4.2: Word cloud for aspects related to graduate employability

Educational experience emerged as the first aggregate theme, as shown in Figure 4.1. The second-order themes are: (i) Learner centred education, (ii) The adaptation to the digital age. These findings will be explained in further detail in this chapter. Representative data is captured in Tables 4.1 and 4.2 below.

4.1.1 Learner-Centred Education

Learner-centred education aims to produce autonomous and independent learners (Jones, 2007) by focusing on skills and practices that foster lifelong learning and cognitive development (Young and Paterson, 2007). The learner-centred education process is inspired by constructivist learning theory, in which learners construct meaning for themselves based on their prior experiences (Struyf et al., 2019). The literature presents multiple meanings of learner-centred

education. For instance, Schweisfurth (2013) defined learner-centred education as a pedagogical approach that offers learners – and demands from them –active control over the content and process of learning. In this respect, the content of what is learned and the method by which it is taught are therefore shaped by learners' needs, capacities, and interests (Schweisfurth, 2013, p.20). A recent study by Bremner (2021), however, suggested that various stakeholders may embrace a flexible system based on the aspects most suitable to their specific needs and circumstances. This approach indicates that learners come from diverse backgrounds and have unique learning styles that entail embracing a flexible learning system.

Table 4.1 shows the quotes and first-order categories used to develop this second-order theme.

Table 4.1: Dimensions, Themes, Categories, and Data – Learner-Centred Education

Second-order theme	First-order categories	Illustrative quotes
Learner-Centred Education	**Students' Agency in Learning and Development**	"(Regarding) personal development, you're constantly learning as you grow older, so I don't think I would attribute (this to) any connection with the university. I think it will just happen in general" (Graduate-P34).
		"Someone who's much more agile, who can see what learning needs to happen, who takes control of it themselves. Who is proactive in the sorts of things they look to learn. I think it's lifelong learning" (Government Advisor- P42)
		"It's important to instil the mindset of continuous learning and lifelong learning with the students from the onset because

		learning does not stop when they graduate" (Employer-P2).
	Changing Roles of the Academics	"(There is) this shift from the agency of educators to the agency of learners when it comes to utilization of their knowledge or recognition of their knowledge from the industry point of view" (Educator-D11).
		"(In) higher education we shouldn't be talking pedagogy; we should be talking andragogy. Just terminology, right? Pedagogy is how you teach children. Andragogy is how you teach adults. So I assume our youth our 17 and 18 years old are actually at the border of moving into adulthood" (Educator-D10).
		"Educators should be collaborators in learning as opposed to instructors. They too need to be seeking new knowledge. They need to constantly be acquiring new skills alongside their students to keep up and to keep abreast. Otherwise, how are they going to take their students in this very fast-paced VUCA world?" (Educator-D10).
	Personalised Learning	"Coursera is helping with this whole idea of personalised learning. (I) also want to say, when you look at it from the other side, it is very useful, but also I think the role of educators is now being redefined; educators now should be collaborators in learning as opposed to instructors" (Educator-D10).

		"Develop a leading dynamic and intelligent augmented learning experience to improve education outcomes and meet the new requirements of the Fourth Industrial Revolution to focus on advanced sciences and technologies" (D6).
		"(Students) prefer indirect learning. They don't like direct (learning) if you put all of them in a classroom – or maybe even during the COVID in a virtual session – and just start to give a presentation. They don't like this kind of training; they always prefer (for you) to give them access to a library, (to) give them the objective of the learning, and (to) let them look for this information by themselves. If they have any questions, they (can) come back to the facilitator or the subject matter expert to get more details about the subject. This is one of the advantages of the (fact) that candidates like to learn" (Employer-P12).
	Contextual and Real-Life Learning	"Rather than just cramming everything into one senior project and then trying to build the necessary skills there, I think we just learned what to do and did it along the way. Whether it was an accounting course (or) whether it was a corporate communication course, there were always projects rather than just (tests)" (Graduate-P32).
		"The (learning methods to employ) in the classroom would be outcome-based

		learning, project-based learning, problem-solving, and problem-based learning. (Learning should also be) multi-disciplinary, with groups coming together to solve a project, for instance, or (to) solve a problem. Even if you have an industry project that you have a team of students working on, you'd want students from different backgrounds in different disciplines to come together to actually solve that problem" (Educator-D10).
		"All of our programmes have work experience and work-integrated learning embedded so that the students get to actually practice what they're learning in the labs and classrooms" (Educator-D9).

Learner-centred education directs learners to exercise agency in their learning. The need for a transition toward more learner-centred practices has been exacerbated by the accelerated change in the workplace landscape. This transformation requires a shift in the HEIs' learning culture to maintain student/graduate relevancy. There is a realisation among the senior leadership of the HEIs that *"universities must rethink their culture to facilitate skills-based training." D10*

The new realities of HE have a significant role in enhancing GE. In this capacity, HEIs are expected to direct students to take ownership of their own learning journey.

> *Adaptation and learning skills will be increasingly important as workers will need to take charge of their learning journey (D12 as cited in ADSW Future Skills 2030 Report, 2019)*

Although HEIs' roles are instrumental in supporting and facilitating GE, students are responsible for actively developing their employability skills. The new realities of HE are necessities to

guide students to own their learning journey. The recent employability studies are shifting the focus to agentic perspectives (e.g., Forrier et al., 2020; Pham, 2021). HE leaders in the present study argued that students must have agency over their personal and professional development.

In the wake of the AI age, academics and students have been required to adapt their teaching and learning methods, respectively, to encourage self-directed learning. Self-directed learning provides opportunities to develop lifelong learning skills within educational settings (Blaschke, 2021). To lastingly enhance students' skills over their lifetime – and in the future marketplace – HEIs must promote lifelong learning:

> *Lifelong learning (is) where the students can learn how to get what they need and how to identify it when they go (into) the marketplace. I mean, you give them the skills while they are in school, but they will use (them) while they are in the job market (Educator-D19 in a panel discussion about the path to employable graduates).*

The academics interviewed in the present study believed a paradigm shift in thinking – based on the promotion of self-actualisation and lifelong learning – was necessary to adequately prepare the new workforce.

> *It is a culture, it is an approach, it is a mindset… so (there) is really a little bit of a paradigm shift here (in) thinking about how we prepare our students. That approach filters down the methods that you use if you're taking a transformative learning approach (Educator-D10).*

The data analysis demonstrates a link between the skills gained through learning delivery in the institution and GE. Employer-P2 stated, *"It's important to instil the mindset of continuous learning and lifelong learning with the students from the onset because learning does not stop when they graduate"*.

Academics believe that the learning delivery should be aligned with the andragogy method. Andragogy is the art and science that supports adult learning (Knowles, 1984). Adult learners need different learning and teaching approaches that vary from pedagogical learning methods.

It requires less intervention and course structuring from educators, inspiring more student autonomy (Blaschke, 2021).

> *You don't use pedagogy, for instance; you use andragogy. Pedagogy is where the learner is actually dependent on the facilitator (or) the instructor. Andragogy (is) self-directed. It's about self-actualisation. It's about the students directing and owning their learning (Educator-D10).*

However, transferring knowledge to the new generation is more complex than simply teaching them to be users of applications; as indicated by Educator-P18, *"We have to give them knowledge about how to develop their own applications, not give them the knowledge of how to use this mouse."*

Since this study mainly focuses on graduates' employability for recent and potential graduates, it is reasonable to define the study as being oriented toward Generation Z. Generation Z is the most recent generation to join the job market as members were born between 1996 to 2010. They are described as the generation of digital natives (Leslie et al., 2021). While graduates from this generation are often portrayed as being less involved in the workplace (Barna, 2018), it was indicated by the participants that they are tech-savvy. They have already been exposed to new technologies through their mobile phones, as stated by Educator-P21. Therefore, online education providers report that universities are growing in technology-based learning.

> *Universities these days are growing in blended learning. Blended learning (is) here to stay. (There) are now universities – not only in emerging or developed countries, (but) also in the emerging world – (that are) expanding their online teaching and learning capacities. D5 (Panel discussion on students' employability)*

Findings indicate a realisation of the changing role of the faculty members amid the commitment made by HEIs to GE. In the age of AI, learning requires faculty as mentors, coaches, and facilitators of learning. Brown (2020) described their new roles as being agents of change. Academics believe the transformation in faculty roles requires an agency shift from educators to learners to build a new learning culture: *"(There is) this shift from the agency of educators to*

the agency of learners when it comes to utilisation of their knowledge or recognition of their knowledge from the industry point of view" (D11).

These changes imply that both educators and learners understand their new roles. Therefore, an academic's role requires them to operate with adaptability and flexibility to respond to the fast-paced environment and continuous changes in institutions and organisations. Educator-P28 stated, *"We will never have the capacity to move at the pace with (the) industry."*

Educator-P26, who had an adaptable view, demonstrated that openness to change and flexibility are essential components to faculty members' positions, permitting academics to adapt their education practices and content to respond to changing industry needs.

The educators' views on learning delivery indicated the need for learners to have a variety of labour market-oriented learning approaches, enabling students to relate to real-life examples and applications. Educator-P21 stated:

> *In my opinion, (it) should be (a) multidisciplinary kind of thing, (meaning) that they should have little bit of AI, a little bit of big data, a little bit of business data, a little bit of HR analytics, (a) little bit of corporate initiatives, (a) little bit about business ups and downs (and) what's happening, (a) little bit about the media trends and all that, (and an overall) versatile style (Educator-P21).*

Employers value applied knowledge in a real-life setting; therefore, they critically assess graduates' intellectual approach and awareness in specific areas. Employer-P15 mentioned:

> *I want them to pick up one topic. We give them a couple of topics, and (then) we tell (them to) pick up one topic and just talk about it. We want to see their intellectual approach (to) certain topics. Let's (take) for example, the Expo 2020, (which) is very famous. I mean, this is the brand for the UAE, specifically for Dubai. So, we will ask someone, "What is your understanding (of) Expo 2020?" We want to see how much they are into the real life (Employer-P-21).*

This indicates the importance of contextual learning in representing students' abilities and

professional development. The notion of personalised learning, which assumes that students have different needs and abilities, was discussed among participants. This indicates that the "one-size-fits-all" learning approach is not suitable for modern learners. Furthermore, the participants suggested leveraging emerging technologies as an accessible learning solution to facilitate personalised learning for different learners' styles.

> *When we talk about personalised learning, fundamentally, it is about tailoring. You (should) know the lesson and the materials to be able to accommodate each and every student, their learning styles, their preferences, their strengths and weaknesses. Now, in a class of 40 or 60 or 80, that's literally impossible for one educator or instructor to do that. They could probably divide them into groups; pre-technology, this is how personalised learning was done. But now with these sophisticated tools and the educational technology that's around, personalised learning has become so much more accessible (D10).*

Educator-P23 was vocal about the current learning delivery and criticised the standardisation of education, instead suggesting a personalised approach to customise the learning content for individual students:

> *I am completely against standardisation and stand against making everyone the same. We are not the same; we are different (Educator-P23)*

Similarly, Employer-P12 emphasised the need to provide students with the necessary resources while indirectly guiding them through the learning objectives:

> *They always prefer (for you) to give them access to a library, (to) give them the objective of the learning, and (to) let them look for this information by themselves. If they have any questions, they (can) come back to the facilitator or the subject matter expert to get more detail about the subject. This is one of the advantages of the (fact) that candidates like to learn (Employer-P12).*

However, educators mentioned that universities could not provide students with everything required to lead successful lives and careers. Therefore, they suggested providing them with an enabling environment that can facilitate students' capacities for learning and development.

> *We can't give them everything they need. I think what we do need to do is provide them with an environment in which they can explore (and) discover other kinds of things that they want to know (D9).*

The present study found that an enabling environment plays a significant role in fostering educators' cooperation, eliciting their support in the development of a modern curriculum that integrates new topics such as AI, as suggested by Educator-P30:

> *We need to be given (a) conducive, enabling environment so that we can integrate the team, develop the curricula, and integrate (AI and Machine Learning)) two things into the existing curricula (Educator-P30).*

Inspired by the UAE Centennial 2071 program "*Building Emirati values and ethics for the future generations" (D13 as cited in U.AE, 2021)*, educators emphasised the need to provide learners with a value-based environment that develops their social skills for life:

> *(We need) habits that we can inculcate in our programming (and into) the ethos (of) the university system where young people are developing. A lot of that development is expected from (the) milieu the university provides, and it's a social experiment, really. I would call it moulded (in regard to the) things that are really going to matter over time, like integrity, telling the truth, (and) being punctual (D5).*

4.1.2 Adaptation to the Digital Age

Both adaptation and maladaptation to the digital age have been witnessed in different sectors and industries, demonstrating the polarising influence of AI on different business operations and educational interventions (Davies et al., 2021). In addition, in the aftermath of the Covid-19 pandemic, the world has experienced unprecedented technological connection. The pandemic accelerated digital transformation and forced HEIs and industries to redesign their dynamics to

respond to these changes. In light of this, the next second-order theme is ‘adaptation to the digital age,’ as summarised in Figure 4.1. These findings will be further elucidated in this chapter. All representative data is captured in Table 4.2.

Table 4.2: Dimensions, Themes, Categories, and Data- Adaptation to the Digital Age

Second-order theme	First-order categories	Illustrative quotes
Adaptation to the Digital Age	Alignment with AI Strategy	“So, I think we are now between evangelising and early adoption. But I don't see it taking long because AI is really coming to save lives, and I don't think anyone would resist that, at least in our domain” (Employer-P9).
		“AI is important because it's hitting different industries at different points in time. So, think about manufacturing… how much automation and robotics and technology (are at play) there. Think about telecommunication— how the telco companies are shifting from the traditional, just phone services and broadband services, to become lifestyle providers; they provide anything from shopping to financial services” (Employer-P2)
		“Well, at the management level, they are very aware (of AI) and really eager to start having some AI projects, (to) start having the AI technology (help) them in achieving their day-to-day tasks, which – to my understanding – is very good, especially when it comes to the governmental entities. They are really doing great in Dubai and in UAE; they are trying to

		align with the AI strategy of the country" (Employer-P3).
		"As (far as) I know, all governments are now involved in that project. In UAE, there are some plans I don't know exactly, however, and I'm not involved because I cannot reach (a) high (enough) level to learn how the rulers they are. We're thinking about that" (Educator-P18).
		"I know that it is high on the agenda for the UAE because, as I mentioned, we have received guidance from the Ministry that we need to integrate more AI. So I am aware of this, yes" (Educator-P26).
		"But, of course, it's something that aligns completely with the strategy of the government of incorporating more and more AI in our daily activities and processes" (Educator-P23).
	Leverage AI technology in HE	"Obviously, (HEIs will be) using a lot more AI systems in teaching and learning. So yes, I think it's having a dramatic effect on all areas of the university moving forward" (Educator-P22)
		"Technology can play a role in shaping three types of skills needed in the modern economy, which include a) cognitive and foundational skills (e.g., literacy, numeracy, and higher-order cognitive skills), b) social and behavioural skills, and c) technical and technological skills developed through postsecondary schooling or training or acquired on the job, as well as skills related to specific occupations (for example, engineer, IT specialist)" (D8).

		"In the next three years, we have a full plan to start the conception and implementation of AI in decision-making and learning activities in the university as a whole" (Educator-P23).
	Developing Digital Talent	"It aspires to empower the nation to drive local innovation by developing innovative national talents and capabilities in science, technology, engineering, mathematics, and entrepreneurship while equipping individuals with 21st-century skills" (D15).
		"Currently, students need to be prepared for industry 4.0 demands and more equipped for dealing with digitised workplaces where they would come across with machines as their co-workers" (Educator-P17).
		"I think all graduates at the university need to be aware of the developments within AI and how that really links in all different fields of study" (Educator-P22).
	Universities Readiness	"The current challenges (are) about the continuous advancement in technology whereby everything is going to be digitalised. That is the only thing constituting a challenge to our graduates nowadays— not only graduates, (but) everybody. Like what happened last year— (the) issue of (the) (COVID-19) pandemic. Not everyone (was) prepared for it. It's made everything go virtual" (Educator-P30).
		"The pandemic definitely affected it, because I believe universities (weren't) ready to go (to)

		online learning. So it affected my journey (as a) bachelor student" (Graduate-P35).
		"I suppose because of COVID that the time for education to undergo changes has been forced upon us at a kind of great pace, and I think that puts a lot of faculty members in uncomfortable positions, having to move from face-to-face to suddenly being online. That's a totally different and new way of learning, and to expect everyone to shift to that and be totally comfortable was a really big change" (D10).

As AI powers digital transformations, businesses are experiencing transformational changes to achieve a competitive edge globally. Digital transformation traverses the borders between organisations and systems, enabling the combination of various digital solutions (Meyendorf et al., 2021). In this context, businesses are increasingly implementing AI across different industries. As stated by Employer-P2, "*AI is important because it's hitting different industries at different points in time."* However, not all companies are ready to deploy AI. There are different measures for AI readiness, as advised by Employer-P3, an AI expert, *"It's categorised into four different categories, so there is digital transformation, there is data governance, there is the AI readiness, and (there is) the AI strategy."*

The interview results with the participants revealed a growing optimism about AI roles and the level of adoption that will transform the way people live and interact. Employer-P9 advised:

> *I think we are now between evangelising and early adoption. But I don't see it taking long because AI is really coming to save lives and I don't think anyone would resist that, you know at least in our domain (Employer-P9).*

The employers who participated in this project illustrated an array of AI uses in businesses, including business provisions and operations, recruitment processes, decision-making, medical services, and speech recognition. Employer-P10 stated, *"We built AI and machine learning (ML) models in house, and we actually embed them into our operations and into our businesses."*

AI technologies and robotics have been integrated into customer services to enhance efficiency and customer experience. Employer-P13 mentioned:

> *If we look into operations using robotics, (we are) looking into the whole customer experience customer journey, with more self-services, health checks, and online services. So AI is something that we have many pockets at the moment, (something) where we are exploring opportunities (Employer-P13).*

The impact of AI applications in resourcing talents and hiring practices was widely acknowledged by participants. Companies have been compelled to turn to AI in their hiring process to filter the high volume of applications. Similarly, employability services at HEIs have already applied this approach to improving students' CVs. Educator-P20 mentioned:

> *There are systems that are built around AI to review CVs, so I think every career centre should have that, and that means that every student should leave university with a CV that's 120 per cent formatted and presented with feedback (Educator-P20).*

Another participant mentioned using an AI-empowered portal to support students and graduates in career advising and planning. Educator-P28 mentioned, "*As a department, we have the career portal; there (are) some AI-facilitated (features) so that students see different jobs based on their interests"*.

The findings provided insights into the participants' perspectives on the relationship between technological advances and GE. As advised by Educator-P17, "*AI needs to be added further for increasing employability."*

AI has had a profound impact across several industries, including the education sector. Indeed, AI has already been applied to some aspects of teaching and learning. Educator-P22 stated:

> *So obviously (we are) using a lot more AI systems in teaching and learning. So, yes, I think it's having a dramatic effect on all areas of the university moving forward (Educator-P22).*

AI is expected to play a vital role in the future planning of HE. Senior leaders from HEIs shared their plans to integrate AI (into) learning activities. Educator-P23 specified:

> *In the next three years, we have a full plan to start the conception and implementation of AI in decision-making and learning activities in the university as a whole (Educator-P23).*

Embracing AI and big data promises considerable advantages in delivering effective learning approaches such as personalised learning:

> *New technologies should make learning more effective. Virtual and augmented reality could radically improve professional training. Big data offers the chance for more personalised education. Platforms make it easier to connect people of differing levels of knowledge, allowing peer-to-peer teaching and mentoring (D7).*

AI's potential to change the way students acquire the demanded skills has also been identified in the Arab digital economy strategy:

> *Technology can play a role in shaping three types of skills needed in the modern economy, which include a) cognitive and foundational skills (e.g., literacy, numeracy, and higher-order cognitive skills), b) social and behavioural skills, and c) technical and technological skills developed through postsecondary schooling or training or acquired on the job, as well as skills related to specific occupations (for example, engineer, IT specialist) (D8).*

The Participants highlighted the use of AI in HE in various areas, including teaching and learning, research areas, and employability services. Educator-P23 mentioned, *"In the next*

three years, we have a full plan to start the conception and implementation of AI in decision making and learning activities in the university as a whole."

Other participants discussed the integration of AI content in HR and MBA courses. Educator-P17 mentioned*, "I would be adding AI content into the HRD course of MBA."* As such, AI has revolutionised the domain of academic research. One participant stated, *"Our institution has started an AI research centre recently*" (*P17).* In light of this development, Educator-P16 has shared his current research on studying the impact of AI on the job market, explaining, *"What data I have collected so far and what I have found so far (indicates) that there's a lot (being) replaced with automation (and) robotics (in the industry)."*

A new scientific AI infrastructure has been embraced to train the new generation about AI and to encourage the culture of entrepreneurship via technology business incubation. Educator-P20 stated:

> *There's currently a 4IR zone and area being built; that's where the kind of strategy and the direction is going, and that's where there will be a lot of courses delivered that will incorporate AI. (This is) where businesses will be incubated (Educator-P20).*

The use of AI at HEIs seems to be preliminary, as stated by Educator-P26, *"It is still very modest at this point."* Another participant also confirmed that the alignment with AI is still not observed in their institutions. Educator-P16 speculated, "*I'm pretty sure in other universities (that) not much is happening in terms of making sure that the students are sufficiently equipped with all the pertinent knowledge on AI."* However, participants' responses reveal that the most application of AI is mainly in teaching and learning, as shown in Figure 4.3.

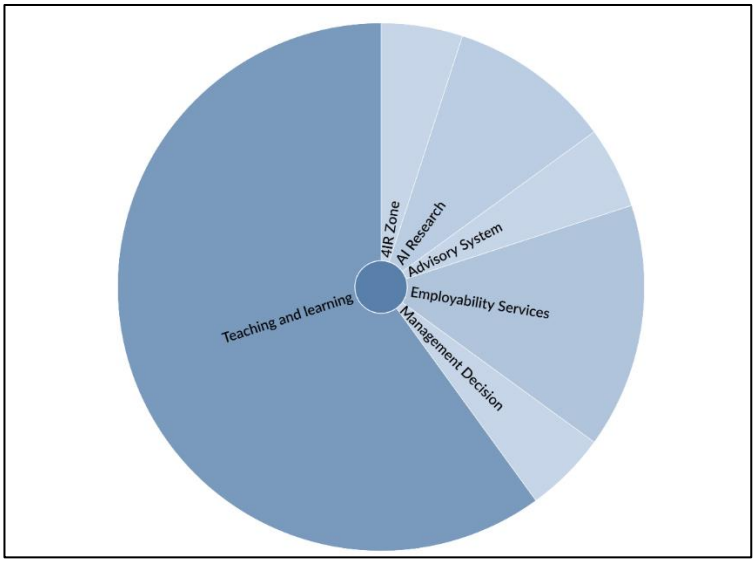

Figure 4.3: Use of AI in HEIs

The impact of AI applications in developing talents is recognised among participants. Therefore, graduates need to grasp the challenges of the job market and be prepared in many aspects. Employer-P12 mentioned, *"Vacancies have become limited to those who have some unique skills— those who are actually able to use different kinds of technologies, AI, and all these tools."* The participants also emphasised the need to integrate AI into the field of studies. Employer-P12 also stated:

> *I believe that the university's role is to build communication with different kinds of businesses to understand the skills that they are looking for (and) to ensure (they are) embedding these skills and competencies within their curriculum in advance and to prepare the graduates to meet the requirements in different organisations (Employer-P12).*

Given the importance of local development in the UAE, the national innovation strategy focuses on empowering youth with the recent technological advancements that meet the demands of the 21st century.

> *The NIS focuses on developing individuals and entrepreneurs who exemplify a spirit of innovation. It aspires to empower the nation to drive local innovation by developing*

> *innovative national talents and capabilities in science, technology, engineering, mathematics and entrepreneurship while equipping individuals with 21st-century skills (D15).*

The pandemic has undoubtedly disrupted educational experiences worldwide. This manifested in the physical closures of institutions as a precautionary measure to protect students and staff from infection, necessitating an abrupt shift to virtual learning. As such, the pandemic cast aspersions on HEIs' readiness to embrace virtual learning. Most participants mentioned that their institutions were not prepared for this detour. Graduate-P35 stated, *"The pandemic definitely affected it because I believe universities weren't ready to go for online learning. So it affected my journey (as a) bachelor student."* Many institutions offered an online learning mode of study before COVID-19 to promote educational accessibility. However, they still struggled to achieve a timely transition to fully remote education during the pandemic. This situation was perceived by the graduates as chaotic. Graduate-P38 mentioned:

> *We also had the disadvantage that, (in) my last two years of university, we were online because of COVID, so we couldn't take advantage of a lot of it. I don't blame anyone for this, but when the transition to online happened, it was very chaotic (Graduate-P38).*

4.1.3 Views Among Stakeholders: A Comparative Analysis

The data analysis of educators' perspectives highlighted the notion that personal development happens continuously throughout graduates' learning journeys. Educators regarded themselves as collaborators in the learning process rather than instructors. They emphasised the importance of multi-disciplinary studies to allow students to solve real-world problems, including industry projects. In addition, they emphasised the importance of work-integrated learning as an effective teaching method to prepare students for the workforce. Educators acknowledged the importance of promoting a fair, competitive environment that allows graduates to compete for the best job. Furthermore, they demonstrated a consciousness of the unintended 'hidden curriculum' in academic and social environments. The hidden curriculum conveyed a precise depiction of the modern workplace aligned with neoliberal thinking, an ideology that emphasises individuals' responsibility to aspire to perform and develop in their careers (Nudelman, 2020). As such,

educators strive to cultivate a positive and respectful learning environment that prepares students for the workplace.

Educators furthermore emphasised that developing a well-rounded education requires adaptation to the digital age. They acknowledged the government's efforts in incorporating AI into various industries, including education. They recognised that AI and advanced technologies affect education, presenting opportunities and challenges to the education domain, particularly in terms of GE. This has inspired many faculty members to adapt to new ways of teaching and learning. Overall, educators advised graduates to be aware of the developments in AI and how they impact various fields of study in the digital age.

Employers expounded upon the importance of instilling a lifelong-learning mindset in students. They favour indirect learning approaches – not direct activity in which the learner receives information without actively engaging – in a classroom or virtual setting. Many employers indicated a predilection for education that, for instance, provides students with access to a library, supplies them with learning objectives, and ultimately encourages their independent search for information. Prior to hiring decision, employers also prioritised evaluating candidates' understanding of the business context and behaviour in which their work fits into the company's overall strategy and goals.

Additionally, employers identified that existing employees may need to be trained in order to adapt to new technologies like AI in the job role. Employers' discussion focused mostly on AI technology's increasing importance and relevance in various industries. Data analysis highlighted how the pandemic has accelerated technology adoption in the workplace, resulting in novel benefits and challenges. It further indicated the need for individuals and organisations to adapt to these changes and stay informed about developments in the market, leveraging the benefits of AI for competitive advantage. Finally, the data analysis underscored the importance of effectively addressing the challenges brought about by technological changes to maintain a positive employee experience and organisational culture. Addressing these challenges can increase workplace efficiency while keeping employees relevant in the changing job market.

Graduate participants emphasised the importance of project-based learning in preparing students to enter the workforce. They highlighted an existing need for HEIs to cultivate advanced skills, combining technical skills with business concepts. These views construe lifelong learning, practical application of knowledge, and self-directed learning as crucial components of successful learning experiences. Furthermore, these perspectives reflect the changing nature of the employment market, in which individuals must continually update their skills and knowledge to remain competitive. Graduates' perspectives suggested that, while universities may be slow to adopt new technologies such as AI and blockchain, students must have a basic understanding of their applications in business. Graduates furthermore emphasised the importance of adaptability in the face of new technologies and suggested that universities should encourage this trait in their students through workshops and courses. There was a consensus among graduate participants that – by preparing students with a solid foundation in AI and related technologies – HEIs can provide an educational experience that better equips graduates to navigate the rapidly changing business landscape.

In summary, participants universally acknowledged that combining different learning approaches is essential for graduates' development in and adaptation to the digital age. The variety of priorities and suggestions among the stakeholder categories – employers, educators, and graduates – in preparing graduates for the evolving job market underscores the complex nature of adapting to the digital era. These discrepancies indicate that there is no universal solution to addressing GE concerns in a rapidly changing business landscape. Instead, GE enhancement requires a multi-dimensional approach considering different stakeholders' varying needs and perspectives.

4.2 Career Development

The study findings highlight graduates' career development as a valuable way to improve job prospects, increasing their chances of demonstrating employment-compatible skills and making a successful transition to the job market. The participants' data generated career development as the second aggregated theme, as shown in Figure 4.1. The second-order themes are: (i) Graduate employment compatibility (ii) Transition to the job market complexity. These findings will be explained below and representative data is captured in tables 4.3 and 4.4.

These findings will be explained further in this chapter. The representative data are listed in Tables 4.3 and 4.4.

4.2.1 Graduate Employment Compatibility

Employment compatibility in the era of AI represents different aspects of fit – beyond essential skills, work experience, and cultural fit – required to perform a job. In applying the positional conflict theory in employability, Brown et al. (2003) stated that individuals can be employable but not employed. Therefore, a bachelor's degree does not necessarily provide guaranteed access to managerial roles (Brown and Lauder, 2017). Instead, there is increased positional competition for a limited number of job openings (Wright and Mulvey, 2021). The positional advantage in the job market does not depend entirely on a HE degree but rather on the relative competitiveness of the graduates looking for jobs (Wright and Mulvey, 2021). Accordingly, graduates encounter an 'opportunity trap' in which "if all adopt the same tactics nobody gets ahead. But if one does not play the game, there is little chance of winning" (Brown, 2003 p. 142).

The second-order themes relate to graduate employment compatibility, providing a broader picture of employment compatibility beyond the job requirements. The data structure is summarised in Figure 4.1. These findings will be explained in further detail in this chapter. The representative data is captured in Table 4.3.

Table 4.3: Dimensions, Themes, Categories, and Data- Graduate Employment Compatibility

Second-order theme	First-order categories	Illustrative quotes
Graduate Employment Compatibility	Employment Requirements and Processes	"Depending on the position (and) depending on the role, priorities have changed" (Employer-P10).

		"It's mainly role-based, so we do not just hire blindly; we know which roles we have vacant, and then we want to recruit for those roles. There are specific requirements and behavioural requirements for all external recruitment and even for internal promotions" (Employer-P13)
		"You have to (put it) the simple way of their key performance indicators (KPIS), (in which) you will explain the job role and let them reflect and take the ownership from the beginning. Don't make it (about a) pay check; they will be excited in the beginning, but that excitement will go away in a few months, and then they will get more bored in the job and there will be no excitement" (Employer-P15).
		"They need to really have the same values and really be comfortable with each other. So, for us, that's important" (Employer-P11).
		"(They must) understand the customer environment, the company environment, and (how to) quickly build their network. For me, everything else can be taught. In the sense that you focus on the attitude, does that person fit from a cultural perspective?" (Employer-P2).
		"I would say (there is an) emphasis (on) the importance of internship programs and getting experience before they even graduate" (Employer-P10).
		"Their relevant business experience is the internship, all similar stuff which helps them to

		understand their business in a better way and also (practice for) their jobs" (Employer-P4).
		"They need to be placed within businesses to learn on the job because the changes happen so rapidly that higher education cannot keep up with it. The costs would be unaffordable. For example, (this could be through) apprenticeships, internships, or where there are studying at the same time. In higher education they're learning the theoretical, they're learning the skill set… But on the job, they're going to see what is really like, and they're going to get the true experience" (Employer-P6).
		"We all really pretty much rely on screening and, to be honest, the cover letter is very important for us; a personalised cover letter shows that this person actually knows what the organisation is. What is the job function and how their skills are related? So, for us, it is more important than the CV itself. If someone actually puts their time and effort into working on the cover letter, that really describes how they are the best candidate for the job" (Employer-P11).
		"If you are assessing somebody for the position of a teacher, you would know if this person does not really have the aptitude for being a teacher, So it is not just an elimination or selection rejection instrument, it also tells us what they're good at" (Employer-P1).
		"We have our own assessment (and) internal tools for HR to make sure that they are up-to-

		speed in terms of the expected minimal set of operational skills" (Employer-P5)
	Alignment with National Strategies	"(The) national agenda is coming to be internationalised (and) globalised. Therefore, we need to work hand-to-hand as well to serve as a society to provide help with the national agenda. (We) will help to achieve the government's role and purpose. So we, as a university, (are a) support facility to the government" (D10).
		"I think the projects have the 50 (project of the 50 agenda in the UAE). So, there's a level they've put in place, a levelling-up. I mean, this is not skills related. This is just more to do with the externalities of the labour market, but they put in place some funding to sort of equalise salaries in the private sector with the public sector, and I think that's a good step"(Government Advisor- P42).
		"Our company is, in general, part of the entire activity at the national level. We also introduced congenital aptitude sensing back in 2015; then on the investment side (and) investment banking side, which is my business, I was able to introduce (a) cognitive era in strategic nanoscale investing. So what we are doing is very much aligned with the national strategy" (Employer-P1).
		"In the UAE, it has always (been) a race on one side between government and private response, and there's also (been) a government and the

		private joint initiatives, so I see them really running mostly in parallel" (Employer-P9).
		"Graduates (think that) when they come here, (because) it's a government agency, it's a little bit (of) easy work in the government, civil service, whatever. No, not here. So, they very quickly understand, this is different. This is actually essentially a private sector. Frankly, it's the same kind of pace. In fact, (when a) close colleague of mine left here after working in the organisation with me, (they) left to go and work in a consultancy (in the) private sector" (Employer-P8).
		"I know, and I've been there at the career fairs, and I've heard the professors emphasise salaries, benefits, working hours, government, private sector. But when I sit down with graduates, on average, it's always the first (question) that comes out— the working hours, the salary expectation, and how long it takes to become a manager" (Employer-P6).
	Skills Required by Employers	"As in neuroscience, every human possesses unique attributes with respect to their cognitive ability or intellectual ability. Just like fingerprints and retinas, they're also unique with respect to their intellectual ability; we call it (the) area of specific affinity" (Employer-P1).
		"We need to have people who are really switched-on in the sense that they are quick learners" (Employer-P2).

		"In the way they describe their thinking, you'll get an idea about their way of thinking. Is it a logical rationale? Wait, does it take into account emotion? Because obviously a lot of decisions are done with emotional content. It's not like they're not; they are. But then, how do you take that into account so you know to what extent that person takes into account?" (Employer-P8).
		"(Prospective candidates should) build more connections with different workplaces to provide better opportunities" (Graduate-P33).
		"Graduates need to have skills in two areas. The two areas are AI and machine learning" (Educator-P30).
		"(When) we are looking at the nature of the job we are doing, (candidates) need to have business acumen. So for my job (this entails) AI and similar topics. If we are looking for an auditor, (we need someone with) consultant (experience) and (experience with) taxes" (Employer-P4).
	Level of Preparedness	"We've got some interns at the moment, and they do not have the most basic skills. The UAE is a very ambitious place, and there is a lot of talk about advanced skills: advanced problem solving, critical thinking, some of the advanced IT skills, or the more scientific skills. Those seem to be the skills that are often talked about in the discourse. But, actually, there are also some very basic skills that I feel as though graduates are not getting up" (Government Advisor- P42).

		"40% of employers said lack of skills was the main reason for entry-level job vacancies, while 60% said that new graduates were not adequately prepared for the world of work" (D7 - British Council, 2018)
		"The lack of cooperation has created this skills gap; we need cooperation with industry to work shoulder-to-shoulder so that students have the skills they need" (D10).

This section collates the findings on factors that enhance graduate employment. These aspects are demonstrated here as graduate employment compatibility to understand the broader picture of employers' requirements that guide employment decision-making

Person–job fit is described as the degree of alignment between an individual and a job (Wong and Tetrick, 2017). Employers highlighted that employers hire graduates they believe will fit the job role requirements in terms of knowledge and technical skills. Employer-P1 mentioned:

> *Well, that depends on the role we are hiring for. For example, if we are hiring a human resource professional, we would want to see what kind of task management software they are well-versed (in) or (that) they can proficiently use (the HRMIS software). So, (regarding the) kinds of things we seek, it (does) really depend on the role we are hiring (Employer-P1).*

The participants indicated that the hiring process requires effective workforce planning to develop the requirements for the vacancy. In light of this, employers assess graduates' behaviour in particular work situations. Employer-P13 stated:

> *It's mainly role-based, so we do not just hire blindly; we know which roles we have vacant, and then we want to recruit for those roles. There are specific requirements and behavioural requirements for all external recruitment and even for internal promotions (Employer-P13).*

Educators showed a shared understanding of employers' needs to hire the best-fit candidate for the available job role. Educator-P20 mentioned:

> *I think employers have a very predefined understanding of what they expect a graduate to have to match their needs, and I think a certain amount also has to be done by the employer to make sure that the graduates can fit into their work (Educator-P20).*

The other aspect of employment fit is related to the workplace environment and cultural fit. Person–environment fit represents the compatibility between individuals and specific organisational environments (Bretz and Judge, 1994). In the present study, employers emphasised that the value and cultural fit assessment determines graduates' success in obtaining and maintaining employment opportunities. Employer-P12 mentioned:

> *If (they) are not able to meet the requirements or deal with their colleagues or understand the culture of the organisation, they will face difficulty in actually performing their job. (Employer-P12).*

Employers mentioned that the hiring decision is also determined by relevant work experience, which should be acquired before graduation. Employer-P11 stated, "*(Employers) emphasis the importance of internship programs and of students getting experience before they even graduate."*

Many graduates expressed an understanding of employers' requirements regarding work experience and, in turn, felt compelled to pursue many internships before graduation to enhance their employment prospects. Graduate-P36 mentioned:

> *How many experiences did they touch on during their studies? How many practical skills do they have? So I would side with the Academy; (it is the) practical skills (and) technical skills that they possess as a graduate that can give them cutting edge. So, it's the experience (Graduate-P36).*

However, some graduate participants criticised the employers' high demand for relevant work experience. They believe it is an unrealistic requirement for new graduates.

But how can employers expect fresh graduates to have one or two years' worth of experience when no one in the market is willing to give a student in university the chance to work? It's only internships, and if you want to even just tie it to this region in the UAE, specifically, we don't live in a country where, let's say at the age of 16 years, working is (possible). Some other countries provide that, but, otherwise, (the) concept of a university student working – or someone younger – is not there. I think employers kind of need to also relook at their requirements, come back to a bit of reality, and match it up (Graduate-P40).

These high demands add to the complexity of graduates' transition to the market as explained in the previous section.

Employers indicated a need for practical hiring tools to recruit the right candidates for their company. In light of this, employers use a series of assessment and psychometrics tools to ensure prospective employees meet the required skills for the job role. Employer-P6 mentioned:

When they are applying for the job, (they must) participate in a series of psychometrics (and) online sector metrics. They can take these online assessments at home, at school, online – or using their mobile or their laptop or their desktop – and the results are then evaluated by the talent acquisition or recruitment team (Employer-P6).

Although these tools are used to select the ideal candidate for a particular position, they can also guide the employer in determining if the candidate better suits other jobs within the organisation. As stated by Employer-P1:

If you are assessing somebody for the position of a teacher, you would know if this person does not really have the aptitude for being a teacher, So it is not just an elimination or selection instrument, it also tells us where what they're good at (Employer-P1).

There is an association between the skills demands of a job and a candidate's job fit. According to the fit theory, the person-job fit refers to the suitability between the capabilities of the individual and the demands of the job (Edwards, 1991). As stated in the literature review, AI is becoming a significant game-changer in the global economy. Therefore, the rapidly

transforming business world needs a workforce with a digital mindset. The workforce must embrace emerging technologies and understand technology's impact on the world of work. Educator-P20 mentioned:

> *For students across all disciplines to be aware of the impact that this intelligence is going to have on the world of work going forward, it is going to be game-changing. It is going to really change how business is done (and) also how projects and initiatives are prioritised (Educator-P20).*

Employers indicated that business graduates with the AI knowledge and skills to benefit the business would stand out from other candidates in the hiring process. Employer-P4 stated:

> *Definitely part of hiring, computer skills are highly essential at our time for any kind of business. So for our company, being able to use some other digital tools like AI is also important. AI is just another tool that we use to do our business, so being familiar with the concepts of AI, using cases of AI, and knowing different implementations of AI is an important skill because it is allowing our employees to do their jobs more efficiently (and) effectively (Employer-P4).*

Employer-P6 shared the same understanding about the need for tech-savvy graduates, emphasising a need for candidates who can benefit the organisation in this capacity and take advantage of the available job market opportunities:

> *That person, if he's really savvy enough and we feel (he has a) know-how in AI, will be ready for us. There could be a gem that we need to bring on board. Through that gem, we're going to be able to exploit certain opportunities in the market that – on our own – we could not have (Employer-P6).*

The impact of AI applications in resourcing talents and hiring practices was recognised among employers of the present study. Therefore, they advised that graduates must grasp the challenges of the job market and be prepared in many respects, demonstrating knowledge about employers' recruitment processes and practices. Educator-P22 raised concerns about students' and graduates' awareness of certain facets of recruitment, including the recently adopted AI

recruitment tools:

> *We need to make sure they're prepared for working in a different environment. (Not only) because of AI (and) technological advances, but also (because) the process of getting a job can be very (AI-focused) now for a lot of companies. getting a job can be very AI now for a lot of companies" (Educator-P22).*

However, graduates in the present study appeared to recognise AI's impact in changing the hiring process and its effectiveness in helping the business provide accurate employment decisions. Graduate-P36 mentioned:

> *If we think about the process of recruitment and how AI actually enhances the process of selection or the preciseness of candidates' election, (it has) added to the to the human resources process of employment. Outside of that, (it has) also (helped) businesses (make) more precise and more accurate decisions when it comes to forecasting or preparing or budgeting or planning (Graduate-P36).*

The speed of technology is shortening the life of technical skills, warranting regular updates to the latter. Therefore, soft skills will always be demanded. As articulated by the senior leadership of HEIs*, "(It is) good... to work together as human beings. Machines (lack) cognitive skills, but we as humans need to have these cognitive skills" (D10).*

Most educators define an employable graduate as someone who possesses soft skills. Soft skills shape an individual's personality and interpersonal abilities and complement the knowledge and technical skills in a particular field (Schulz, 2008). Soft skills appear to be the skills most valued by participants in this project. Participants mentioned various soft skills as being essential for GE, such as career management, leadership, management, and interpersonal skills. However, they view cognitive abilities, learning agility, emotional intelligence, and social capital as job skills that stand the test of time.

In the present study, cognitive abilities were regarded as the most sought-after skill in the job market. Cognitive abilities allow graduates to demonstrate their potential to contribute successfully to the success of their prospective employers. As suggested by the participants,

cognitive abilities are considered the most attractive employability skills to employers. Educator- P22 noted*, "Problem-solving (and) analytical skills are very high on an employer's agenda."*

Emerging technologies such as AI enable the cognitive abilities underlying teaching math and statistics skills in the business school; as suggested by Educator-P18, "W*hat is needed is a high skilful person in mathematics (and) statistics."* In addition, discussions with the participants revealed a demand for cognitive flexibility in terms of learning agility, personal and professional development, and adaptability. As suggested by Educator-P23:

> *The capacity to learn, unlearn, and relearn whatever is required is timeless, because whenever I will need to learn in the future, I know how to learn it. Now I (have) to unlearn what I learned before, so I will learn how to unlearn things (Educator-P23).*

This indicates that university degrees are not the only factor in improving employability skills. Participants have associated the employability of business graduates with personal and professional development. Educator-P29 suggested a continuous upgrading exercise adopted by graduates through training and conference to learn about new topics, including emerging technologies.

> *If the students (earn a) degree and they (earn a) professional qualification and they continue to engage with their professional body, they will also learn the use of analysing data like big analytics, big data and AI. So, there (are) always trainings and conferences organised by professional bodies. So, I think that would be the way to learn and stay employable or improve employability (Educator-P29).*

Similarly, Employer-P2 advised, "*Continuous learning and continuous development are key for anyone to stay relevant, even seniors or juniors."*

Some employers associated the hiring decision of business graduates with their emotional intelligence skills. Employer-P15 asserted, *"In reality, at work, they need not be emotionally driven; they need to (engage in) evidence-based discussion, research-based discussion."* Employer-P11 similarly stated:

> *If you're hiring a business graduate to work (in the) HR department, someone to manage programs, or a program associate or anything, then you will need someone with good communication skills and some other people skills. Emotional intelligence (is important) for everyone (Employer-P11).*

Many participants reported a link between graduates' social capital and employability. Social capital is associated with the network an actor has access to, such as influential business contacts (Davies et al., 2021). Access to these resources advances the individual's position in the job market (Brown, 2000). Networking is suggested by Participants Employer-P2, Educator-P21, Educator-P22, Educator-P28, and Graduate-P32 as a key skill to produce employment opportunities. Employer-P2 stated,

> *There (is) importance (in) soft skills and preparing the students for the world of work, where they have to collaborate, where they have to connect, (and) where diversity and inclusion is a very key topic (Employer-P2).*

Some graduates interpreted students' membership in clubs and organisations as enhancing their social capital and improving networking skills. Graduate-P40 stated,

> *Education adds on when you become ready; I think that's what made me ready to be able to communicate right, to be able to stand in front of stakeholders (and) bosses, and be able to do a presentation, to be able to meet someone in the middle of the classroom and be like, "Hi, my name is so and so." Just those tiny things. Because of all the external stuff, I had (an) intrinsic thing where I wanted to join other community platforms. I want to be involved in other organisations to build myself up (and) gain a network (Graduate-P40).*

However, Educators and senior leaders agree that soft skills – such as emotional intelligence, creativity and adaptability – are difficult to teach and assess. Educator-P22 stated that acquiring transferable skills within the classroom is *"not always doable.*" In agreement, another educator explained:

Soft skills I prefer (to) always call human capability skills, because when you hear the word 'soft skills,' it (ostensibly) means (they are) easier to deliver (or more) easy to assess than the hard skills. But, in reality, the soft skills are harder to implement it and (harder) to assess (D10).

The training providers included in the present study indicated that, in response to high demand, universities are exploring ways to integrate AI skills into their curricula.

Data from the platform's 87 million learners showed skills in cybersecurity, data analytics, and AI were in high demand... Universities were exploring (pairing) their core degree offering with courses in those skills required across industries (D9).

All participants realised that AI is changing the business landscape and evolving the language of business. Therefore, they suggested that AI literacy is essential in enhancing graduates' employment. Graduate-P40 mentioned:

Right now in society, AI is a big thing. It's a hot topic. All companies, whether small or big, whether you're talking about a start-up or something that was established for 30 years, they're incorporating AI, right? So, when you have the knowledge of AI, it's always the language, right? When you go into an interview or you're talking to someone from the company, you're speaking that language (Graduate-P40).

Employers mentioned that business graduates, while not necessarily required to learn coding skills, must at least know how to apply AI in the business context to succeed in the digital work landscape. Employer-P8 explained:

A business person will not need to be an expert; they just need to know the business lay of the land, business issues regarding AI, ethics, privacy and so on. That will limit or at least constrain any AI. But (they can learn) how to code Watson or do natural language processing or (how to) use Python or R. Now it's more about the business aspect of things, and there is a landscape to the AI business which is not complex. They just need to know it, and that's fairly quick to learn. Then they should be able to contribute to that landscape (Employer-P8).

From employers' interviews emerged the notion that business technical competencies are a critical component in the hiring decision. Employers believe that graduates who can demonstrate these skills are more employable. Educator-P28 stated, *"Whenever there is a business grad and they have good technical skills, they are going to become way more employable."* Employer participants highlighted that they expect graduates to demonstrate business acumen and understanding of the company's business. Employer-P4 mentioned:

> *(When) we are looking at the nature of the job we are doing, (candidates) need to have business acumen. So for my job (this entails) AI and similar topics. If we are looking for an auditor, (we need someone with) consultant (experience) and (experience with) taxes (Employer-P4).*

Furthermore, employers are searching for graduates who demonstrate the proficiency to transform and reengineer the company's business. Employer-P11 stated:

> *It's thinking about business as engineering. (Consider) the way that engineers, for example, look at things; business graduates should have (these) kind of logical skills and be able to re-engineer businesses in a really transformative way (Employer-P11).*

4.2.2 Transition to the Job Market Complexity

Employability is formed at different levels (macro, meso, and micro); the complexity of employability results from differences in stakeholders' expectations and experiences at these three levels (Pham and Jackson, 2020b). The transition from college to the job market, in which the supply and demand of jobs is salient, is a critical time for graduates. It is characterised by a high degree of complexity on many levels (individual, institutional and national). The second-order dimension refers to the transition to the job market complexity. The data structure is summarised in Figure 4.1. These findings are explained in further detail in this chapter. The representative data is captured in Table 4.4.

Many external drivers – including the pandemic, the economic situation, and changes in national policies – have caused severe disruption to the job market. As a result, graduate transition into employment has become increasingly complex. As reported by several participants, some of the

job market complexity stems from individual, institutional and national aspects. These findings will be explained in the following section.

Table 4.4: Dimensions, Themes, Categories, and Data- Transition to the Job Market Complexity

Second-order theme	First-order categories	Illustrative quotes
Transition to the job market complexity	**Individual Level**	"So, it's not like you graduate and then you're (ready); students are scared. They're (in) this new big world. It's like a wolf that's going to attack them— because they've never may be interacted with the CEO or interacted with the head of HR. (This) shouldn't be the case" (Graduate-P40)
		"The expectation (of) a fresh job in terms of the job role itself or the salaries is something that impacts the employers to rethink" (Employer-P7)
		"This is from my personal experience: students can be lazy too. So, all these things are offered, and your professors and everyone in university emphasises how this is important, but then, at the time, you're thinking, 'I still have two years to graduate." (Graduate-P38).
		"(We should know) how to humble ourselves and how to elevate ourselves according to situations. I'm saying humble because, as a female, I do see a lot of attitude around" (Graduate-P32).

	Institutional Level	"(Employers) will require more from the job applicants and graduates because the technology keeps advancing year in (and) year out. We demand more from the students or job applicants or graduates who will be looking for a job sooner or later" (Educator- P30).
		"I feel that companies are not that open to hiring someone who might be just a fresh graduate. They would always require something more that we are not informed (about) up front" (Graduate-P37).
		"We're missing a sort of spoke in the wheel because we're not giving a 360 feedback" (Educator-P22).
		"I think it's a little bit more strict now. It's more rigid. So, it makes things a little bit more difficult for us to be hired. It's good from the other perspective where the employer gets exactly what they want. But yes, I'm not sure how to feel about it right now" (Graduate-P34)
		"They have to decide (if) they want to make money or (if) they want (to) make education" (Educator-P24).
		"So, there's a communication gap, and they need to talk together, sit together, (and) come (to) the table. Perhaps academic leadership can reach out to (the) industry and talk about the latest changes happening. (It) might be (that the) industry is not communicating the changes properly with the academics. Something like that" (Educator-P16).
	National level	"Their challenge is (in that) they need to have kind of change in the mindset. (They) need to

		have a balance between the government and also the private sector" (Employer-P12)
		"The Ministry of Education in the UAE has requested a set of curricular reforms" (Educator-P26).
		"Unfortunately, now it's not clear. I don't know if the universities will stay as they are today. I mean, perhaps we will see (a) completely new university in the future. Perhaps universities from big companies like Amazon; Amazon is working on this project, to run (on) their own. This is okay because, as I understand, they will give more skills" (Educator-P24).

In a climate of job market segmentation and skill-biased technological change, previous educational psychology studies have recognised the mixture of emotions experienced by students (Pekrun et al., 2002). In this context, some of the job market transition complications as reported by the participants, were related to graduates' negative emotions. There is precognisant anxiety and fear among graduates surrounding their transition to the job market. Employer-P4 stated:

> *(For the) students I mentor, it creates some level of anxiety and ambiguity towards their graduation, so it is not clear where they will head. Also, they have some level of fear (about) their competitors (Employer-P4).*

Some graduates reported that they find it challenging to deal with the fear of job application rejection as it invokes their insecurities. Graduate-P34 mentioned:

> *Not challenges, but mainly insecurities. I think impostor syndrome is something that comes up frequently in my conversations with friends. You know, rejections and things like that (Graduate-P34).*

Similarly, Graduate-P31 recounted:

> *Something made me nervous two days (ago). I sent (an) application to some company, and (the employer) sent me a thank you for (my) application (that also said I would) not fit with the job. So it makes me angry. And then what do I do? (Graduate-P31)*

Another impediment to successful job market transition concerns graduates' preferences and expectations. As discussed earlier, although the public sector lacks the capacity to sustain more graduates, graduates generally prefer to work in the public sector. It was reported that 78 per cent of nationals are employed in the federal and local government (U.AE, 2021). According to Employer-P12, "*Fresh graduates (are) always looking for government jobs because maybe they feel it is more relaxed."* However, as indicated by Employer-P6, *"The (raised) expectations of the graduates...is making it difficult to select the right graduates for the right opportunities."*

In this context, participants are aware of the trends impacting the graduates' employability. Educator-P20 recognised this issue and viewed it as a struggle for the private sector to fill vacant positions. This issue is considered a barrier to the national strategy, which will be discussed in the national level section. Educator-P22, on the other hand, raised an important point about the different requirements between the public and private sectors regarding their needs, stating, *"I think (in) understanding the labour market, you know the difference between working for a private sector organisation and the government sector organisation."*

As indicated by participants, the preference for employment in the public sector often derives from the parents' influence on the graduates' careers choice; therefore, there is a primary consideration of the role of HEIs in guiding graduates and parents about the benefits and careers in the private sector. Educator-P22 mentioned, *"It's not just about educating the student or graduate; sometimes it's about educating the parent that the job market."* Graduate-P38 additionally commented:

> *Initially, I was not supposed to attend business school. That was a decision that was made with my family before I started university because I had other interests like engineering and stuff like that. But when I did start university, the focus from my family itself was more to go towards business… I also understand that this sometimes comes from their family*

backgrounds. Perhaps (students') parents can be too strict, and they want them to do a specific thing. But at the end of the day, people need to be less scared of trying different things (Graduate-P38).

As such, the graduates' transition to the job market is a comprehensive process that starts from home and relies on HE to improve students' capabilities. Employer-P5 stated:

I would say this highly depends on the upbringing of the student themselves, (from the) supporting environment that (they have) around (them) and from family to teachers and faculty to even peers, so there's a lot of stuff that it can improve. (It can) act as a catalyst to the students themselves (Employer-P5).

All participants discussed that a degree alone is insufficient. Academic achievement must be combined with desirable personality traits for candidates to secure employment. In the present study, educators showed disdain for graduates with a high sense of entitlement. Educator-P28 stated, *"We do what we can, but we are not here to mould personalities. We are going to give them feedback, but I can tell them 10 times, 'Don't be entitled.' They will still be entitled."* The youth entitlement stereotype seemed to be embodied in educators' feedback about graduates. The participants also highlighted the issue of academic entitlement. While the academic performance of the new generations is declining – as stated by Educator-P23, "*they do not want to think"* – many students expect undeservedly high marks as an automatic outcome of the learning journey. As indicated by Educator-P25, educators must put a stop to this phenomenon; *"Teaching them the importance of not being obsessed with grades as the be-all and end-all of their learning."*

Participants mentioned additional personal characteristics conducive to graduate employability, including creativity (Employer-P14, Educator-P26), handling pressure (Educator-P16, Graduate-P38), humbleness (Educator-P28), passion (Employer-P13, Educator-P18), resilience (Employer-P6, Educator-P23), and a positive attitude (Employer-P6, Educator-P20).

Other hindrances to GE were related to employers. The continuous changes in the job market have influenced the employers' demands and expectations of graduates. Therefore, Educators P18, P20, P22, P23, P24, and P28 speculated that employers may need to rethink their often

unrealistic expectations for recent graduates. A second point raised by one of the career advisors highlighted the problematic lack of feedback received from employers during the recruitment process; precluding candidates from the opportunity to improve their employability skills accordingly. As detailed by Educator-P22:

> *Employers don't really give much feedback to graduates if they're not successful (in an) interview. Or, (if) they send an application, they don't hear anything. And I think the employers in the UAE need to start responding to graduates and giving them feedback, (saying what they) did well at the interview (and what they) didn't do well (and why) because that's how people learn (Educator-P22).*

Graduate participants also remarked on this gap, claiming, for example, "*They're doing interviews and no one's contacting them after that, absolutely no one" (Graduate-P38).* Graduate-P36 added, *"Usually most of the rejection emails are (from) do not reply emails."* However, employer participants responded that the lack of personal feedback is due to the high number of applications. As stated by Employer-P10:

> *We try as much as possible; it's not always trivial (and) we usually have quite a high number of applicants for one position. Sometimes you find yourself (in a position) where you have multiple people and all of them are good (Employer-P10).*

Employers instead called attention to the common lack of guidance and attention given to graduates after they are hired, indicating that this deprivation of feedback may discourage new hires and prompt them to leave the organisation. Employer-P2 mentioned:

> *I find that this generation craves feedback, craves coaching and connection with others. If they come to a team that is not so prepared or so welcome to give them the time, the guidance, (and) the attention, then they might be discouraged and leave. (They may) either leave to another team internally or leave to outside the organisation. Again, it depends (on) where the student is coming from* (*Employer-P2).*

Ultimately, there are many logical reasons employers do not provide feedback to rejected candidates or new hires. For instance, they might be overburdened by the number of applications

or time limitations. However, this predicament illustrates conflicting directions between HEIs and employers as key stakeholders. In response, graduates suggested that employers should be more transparent and honest during the hiring process. Graduate-P38 mentioned:

> *I think employers, first of all, need to be very transparent; I see a lot of students, people that I've graduated with are going out and they're doing interviews, but no one contacted them afterwards (Graduate-P38).*

Employers' communication with graduates was furthermore criticised; graduates complained that rejection emails are mainly automated and do not provide an option to reply and receive feedback. Graduate-P36 mentioned:

> *I haven't thought about coming back to the recruiter who rejected me to ask him why I was rejected. Although the feedback might be very important, I believe that the situation is out of my hands and their hands as well (Graduate-P36).*

The impact of AI is apparent in the hiring process, according to the experiences of graduates in the present study. The graduates indicated that such a new process is rigid and impedes GE. Graduate-P36 mentioned:

> *I will tell you, I mentioned some of those skills in my CV and applied (for) this job and I still got the rejection letters. Not because I'm bad; I have the skills, but AI is looking for some practical words in your CV (or) resume and is judging you differently. (If) you don't understand, you might get rejected for some reason that you don't know. So, in my situation, many times I feel like I am very over-qualified for this job and still get rejected (Graduate-P36).*

On the contrary, the employers reported that candidates are now more aware of the AI-powered recruitment process and adjust their CVs accordingly. As a result, employers combine other recruitment tools to hire the right candidate. As advised by Employer-P12:

> *Having used AI specifically for screening CV, it is good, but it is not the only way to select candidates. (As with) any technology, you also see the other solutions. Some employees*

understand (AI) and know the keywords that we are looking for, and then they put it everywhere in (their) CV. (Then) we find that once we meet them, they actually don't have the capabilities. So it is good for filtering (and for generating a) short list of employees(Employer-P12).

GE is a priority for almost all HEIs, as collectively indicated by the participants. However, it requires additional support from senior management. Some of the employability challenges reported by the participants are related to senior management. For example, universities' individual departments tend to function independently, compromising alignment with the overall priorities of the university, including graduates' employability and success. Therefore, allowing HEIs departments to operate in a silo was perceived as an impediment to GE. As mentioned by Educator-P26, *"This is the challenge of academia."*

Participants suggested that graduates' employability is threatened by universities' focus on for-profit education, which impacts the quality of graduates' experience during their studies. Educator- P24 mentioned, *"If you want to offer a first-class experience, you cannot do it by using the seats from the economy class."*

As discussed earlier, two-thirds of the HE student population in UAE is enrolled in mostly for-profit private HEIs, such as international branch campuses (IBC), Emirate-based and semi-government HEIs, and other international collaborative partners (QAA, 2017). This indicates that the growth of for-profit universities could hurt the quality of graduates' experiences.

One faculty member, P16, voiced concern about the lack of research culture in the UAE region. It is understood that building a research culture requires clear direction from the institution's management and effective communication from the senior leadership. However, faculty member P16 raised the issue of the communication gap between senior leadership and stakeholders; educators, HEIs, and other key stakeholders are often excluded from conversations regarding market needs and updates. Participant leaders, such as Educator-P26, expressed their sense of responsibility in improving the communication with stakeholders to promote engagement:

We forget about the external world. It (was) very important that from day one I was the

only dean who actually went and visited them in their offices, each one of my 15 board members. I took the initiative (and) went to visit them one by one, and they said this (was) the first time somebody (came) to visit and create (a) positive dynamic. It was the most involved (anyone had been) (Educator-P26).

As leaders play such a crucial role in HEIs, leadership could impact the development and reform of employability delivery and practices. However, Educator-P29 views the new leadership's emphasis on GE as a way to legitimise the changes that the new leadership will implement:

This is always there – and has been there for many years – in the sense I talked about. I mean, it's kind of legitimisation thing to bring a change in the organisation (of) every education institute. So I don't believe that it is truly (for) that reason (that) they bring about that change. There can be other (reasons) also, but this is used as a pretext or as an excuse for making changes in the organisation (Educator-P29).

In the present study, educators suggested that GE enhancement can be achieved by embracing educator adaptability, responsibility, and agency. Participants emphasised the need for additional academic leadership roles to support this vision; this includes hiring qualified faculty members in the business school who can lend knowledge of both business and new technological advances, provide professional development to faculty members, interact with industries, offer a supportive environment, and involve faculty engagement in decision making related to GE.

The participants reported GE challenges regarding the national employment context and the education system. They furthermore expressed uncertainty about future skills and jobs, which are at the crux of graduate employability. Workforce diversity in the UAE comes at a price of highly segmented labour markets, which impede employment in the private sector. This phenomenon was explained by Government Advisor-P42

*I think the labour market is heavily segmented; it's changing, but it's changing quite slowly, you know. I can trace the proportion of Emiratis going to the private sector, for example. So it is changing, and I think you know it could change more quickly (*Government Advisor-P42)

Similarly, Educator-P22 remarked:

> *Obviously, that's bearing in mind that (many) students in UAE do not want to work in private industry, so a lot of private companies struggle to actually sometimes fill their positions. It's a difficult one (Educator-P22).*

Employers from the private sector shared their experience of training local talent only for them to later join the public sector. Employer-P15 commented:

> *In the last three years, we have hired around maybe 42 graduates. Out of these 42, we have extended the job offer (of) full-time (employment) to 15 graduates; the rest of them want to be into some other sectors. Maybe they prefer to go into the government sector. They will transfer into a situation where maybe the challenges are a bit less (formidable) rather than (go) into the private sector (Employer-P15).*

In order to solve this issue, employers suggested provoking a change in graduates' mindsets regarding working in the private sector. Employer-P12 advised*, "They need to have (this) kind of change in (their) mindset. They need to have a balance between the government and also the private sector."*

The educator participants viewed changing the curriculum content as another challenge to employability. In changing curricula, educators are somewhat limited by the educational authorities' approvals and the lengthy bureaucratic procedures. Educator-P18 stated, "*It needs time – years –and it needs approvals from the national accreditation systems or the international accreditation system."* Educator-P29 remarked on this process: "*Bureaucratic approvals… there are so many approval processes that are required if you want to bring any improvement in curriculum or any learning activity."* Educator-P21 also mentioned:

> *So, we have this plan, and in the new curriculum in 2022, we have to actually request a ministry for launching these new programs. So, at our business college, we are 100 per cent sure we have things 50 to 60 per cent done to launch the new programs (Educator-P21).*

Participants referred to the AACSB as the international accreditation standard for the College of Business. Educaor-P24 supports *"the new standards based on students' competencies*." However, Educator-P23 had different views, perceiving these new standards as *"too traditional."* Overall, participants indicated that the labour market and the government should provide the requirements for future skills and jobs so that HEIs can, in turn, direct their efforts toward producing graduates with relevant labour market skills:

> *I'd say in terms of making students employable, the university would look more towards the job market, see what jobs are in demand, and kind of fine-tune their degrees or what they teach in a way that caters to those jobs. So the main aim (of) the university is to prepare you for the job market, but, at the same time, I feel that they should also prepare you for jobs which are really in demand— not just prepare you for the degree that you want but for the jobs that (are) out there (Graduate-P37).*

Another source indicated:

> *The labour market requirements and the government should be really clarified; we will need these types of skills in the future. So higher education will do partnerships with other institutions outside, or maybe they will have their own. (Perhaps) they will start their own research, I don't know. I mean, it's their call, but there is a market for graduates (that is) announced by the government; we have (particular labour market) needs" (Government Consultant-P41).*

As previously discussed, big tech companies have established their universities, such as AI Business School, training programs and learning resources as stated in Chapter Two. Tech companies' role in determining labour market skills and affecting education is substantial and undeniable. However, the influence of big tech in higher education has inspired concerns about the future in faculty members. Participant P24 indicated that the potential of establishing new universities by tech companies complicates GE and threatens its enhancement. Educator-P29 mentioned:

There is a lot of uncertainty, and we don't know what's happening. What's going to happen? Then we are facing a broader issue which is uncertainty. So, if things are uncertain and you don't know what is going to happen, then you cannot really improve things (Educator-P29).

4.2.3 Views Among Stakeholders: A Comparative Analysis

Educators' perspectives highlight the changing nature of job requirements and recruitment processes. They suggest that a mix of cultural fit and relevant skills are more necessary to employability than academic credentials. Additionally, the increasing use of AI in recruitment requires students to demonstrate some level of technological savviness just to enter the current workforce. An analysis of participants' perspectives suggested that traditional academic qualifications are becoming less critical, instead emphasising the increasing importance of adaptability and practical skills in employability.

According to the employers interviewed in this project, the hiring process is role-based, and candidates are selected based on their qualifications and behaviour. Employers prioritise attitude, personality, and cultural fit. In addition, they value internships and on-the-job experience over an academic degree. Employers rely on screening tools such as personalised cover letters and internal assessments to evaluate candidates' skills and operational competence. While AI is considered a valuable tool for screening, it is not the sole method for selection; employers also manually look for candidates with technical skills and a diligent work ethic. As indicated by the present study, employers are most interested in candidates who utilise their degrees as a platform for additional learning. Ultimately, an employer's decision to hire a candidate is influenced by various factors beyond their credentials.

Graduates' perspectives stress the importance of grade point average (GPA) and experience in facilitating a successful transition to the job market. While an exemplary GPA may be a requirement for specific graduate programs or positions, it is not the sole determining factor for employment. In the recruitment process, employers often use GPA as an initial filter. However, they then focus on the applicant's experience and achievements outside academic requirements. This view suggests that having a well-rounded profile that includes extracurricular activities, internships, and other relevant experiences is crucial for standing out in the job market.

The differences between the perspectives are primarily related to the stakeholders' perceived value of different factors in the hiring process. The employers' perspective prioritises behavioural requirements, cultural fit, and on-the-job experience over education credentials. Similarly, educators suggest practical skills and adaptability are essential for employability, acknowledging that traditional academic qualifications have become less important. In contrast, graduates' perspectives highlight the importance of GPA and relevant experience in employment.

At the individual level (micro), the job market transition in the UAE presents challenges for employers, graduates, and educators. Employers are plagued by discrepancies between graduates' skill sets and job requirements. Alternatively, graduates individual difficulties include a fear of rejection and pressure from family. Educators pointed to challenges in promoting a growth mindset and sense of personal responsibility – both critical to employability – in graduates.

Educators, graduates, and employers experience different concerns and challenges at the institutional level (meso). Educators must adapt curricula to keep up with technological advancements and collaborate with industry leaders to share best practices. Graduates face challenges such as a lack of communication and feedback from potential employers. Their employment also may be hindered by the employers' use of AI in candidate screening. Employers also highlight the limitations of using AI in selecting candidates and emphasise the importance of human recruiters.

At the national level (macro), educators' challenges are centred around finding students willing to work at private companies. The challenges involved changing the curriculum and launching new programs aligned with the national job market. Employers' challenges at this level involve balancing employment between the government and private sector and, furthermore, clarifying specific skill and qualification requirements for the labour market. For graduates, challenges include the limited opportunities for gaining experience and the impact of COVID-19 on the job market. Addressing the difficulties faced by all three stakeholders warrants collaboration, adaptability, and realistic expectations.

4.3 Collective Partnership

This section expounds upon the employability discourse to better understand the perspectives of GE stakeholders. The third aggregate dimension includes collective partnership. The data structure is summarised in Figure 4.1. The second-order themes are: (i) Critical Perspectives of HE Stakeholders, (ii) Stakeholders' Engagement.

These findings will be explained below. The representative data is captured in Tables 4.5 and 4.6.

4.3.1 Critical Perspectives of HE Stakeholders

Table 4.5: Dimensions, Themes, Categories, and Data - Critical Perspectives of HE Stakeholders

Second-order theme	First-order categories	Illustrative quotes
Critical Perspectives of HE Stakeholders	Develop Employment Focused Curriculum	"In my view, there needs to be a complete overhaul of the curriculum that really makes it very much integrated. You know, we're here to prepare (students) for employment" (Educator-P20).
		"I think (at) our university, we've made quite major changes to the curriculum and also to our department; we've brought in a new career management system that has AI functionality at the university" (Educator-P22).
		"Higher education can enhance student employability through innovative design and modes of learning that help students develop the interpersonal skills required of them in employment" (D10).

		"I cannot stop hearing in every single conference that I attend nationally (or) internationally (that) there's a skill gap between the private sector and the public sector and academia because what we teach is not what we need" (Educator-P23).
	Quality of Education	"The quality of education falls behind across the whole region, and this applies not just to higher education, but to the whole education system. It is important to look at it as a system because ultimately everything is connected" (D19).
		"HEIs should emphasise student learning and developing/honing their skill sets (rather) than obsessing over grades" (Educator-P25).
	Education-Employer Disconnect	"(There is) a mismatch with employers who don't seem to be able to access students with those sorts of qualifications, so there are all sorts of disconnects where the labour market is not really working. The ability to acquire the skills is an essential part of it, but it won't guarantee employment, unfortunately" (Government Advisor- P42).
		"(I do not know) why they are not communicating the needs of the market with the higher education institutions" (Educator-P16).
	Internship Value and Assessment	" I've always heavily emphasised the importance of the internship and I still believe 8 weeks is not enough" (Employer-P6).
		"a lot of the student simply do not, get any kind of work experience until very late on in the in their degrees" (Government advisor-P42).
		"Companies should be providing a learning

		environment where they're willing to take in interns and shape them" (Graduate-P40).

There was a consensus among participants regarding the need of HEIs to reform the curriculum in partnership with industries. By incorporating employers' input, this collaboration would strengthen the curriculum, adding practical content that meets the demands of the labour market. The participants reiterated the importance of this collaboration through the data to enhance GE. Employer-P2 stated:

> *There is a need (for) collaboration between business and academia so that information feeds back into a better alignment between the curriculum and the skills and things that are needed when the student graduates.*

The participants indicated that academic institutions are still teaching outdated curricula, a potential cause of graduates' unemployment. They also emphasised the need to integrate emerging skills into the curriculum. Government Consultant-P41 stated:

> *We're talking about new technology, and with new technology comes new skills and new requirements. (But) we are still teaching our kids the same exact curriculum, (so) then they go and (cannot) meet the job requirements.*

The alignment process to integrate new skills into the curriculum has already been launched in most educators' participants' institutions. However, the process was perceived as less organised and still requires more improvements. Educator-P24 stated*, "We have to restructure our courses, syllabus, and our programs. We do that (already), but it's in an aggressive and not organised way."* In addition, Educator-P19 and Educator-P25 assumed that such improvement should be linked to industry projects and developed more effectively within a practical and competitive environment. Educator-P30 further emphasised the need for the incorporation of practical content into the curriculum advising, *"I think maybe there is a need for in improving (and) including more content which is related to practice."* As discussed in Chapter Two, the signs of automation and emerging technologies growth are visible in the job market. Therefore,

Educator-P26 suggested the need to align the curriculum with this shift by offering relevant academic programs:

> *Of course, every year we have a major change across our programs, across our curriculum, and we have lots of new innovations that we're introducing in accounting and finance… Fintech, for example.*

Some participants referenced a Ministry of Higher Education study that was conducted in 2017 as an effort to identify in-demand majors with the intention of guiding students to pursue higher education in the UAE. Government Advisor- P42 stated,

> *We also publish something for better or for worse, that's called "Majors in Demand". That is something that has undergone quite a bit of development over the last couple of years. The idea (is) to identify specific subjects and anticipate what's coming down the line. What are the kinds of subjects that cycle three students might study that will be in demand in future? This is based on student projections and the results of destination surveys*.

The results revealed that Engineering specialisations ranked first in terms of employment opportunities, followed by business administration, medical sciences, and information technology respectively, as measured by the number of those who secured employment compared to the number of overall graduates (UAE, 2021). However, new trends indicate that employers shift focus from education to skills, as highlighted by the participants. Government Advisor- P42 remarked, *"I think there is a need (for) a shift toward a focus on skills and away from majors. Maybe that will take time."*

AI skills were highlighted by the participants as one of the most important emerging skills to be introduced into the curriculum. Employer-P18 recommended integrating AI in teaching and learning, stating, *"I would suggest introducing courses, changing the curriculum, and introducing courses in finance. I'm talking about finance in financial technology— AI even for non-programmers."* On the other hand, participants valued the integration of professional certification qualifications aligned with an

academic program, as advised by participants Educator-P16 and Educator-P21. Employer-P1 similarly asserted:

> *I suggested there should be a micro-credentialing mechanism in the higher education institutions to foster the know-how (of) AI applications in whatever disciplines.*

Educator-P29 additionally stated, "*Of course, they need to encourage our students to get the professional accounting qualification if they want to become professional accountants."*

All participants lauded the ability of career services to support students with internships, employability skills, and career advice. However, career services are typically voluntary; the benefits of these services require students' wilful commitment. Therefore, Educator-P22 suggested introducing a mandatory career and employability curriculum:

> *I would like to see a careers and employability learning curriculum. So you don't just come to university and study (your) academic qualification, you also have a requirement each year to actually commit to employability learning (and) experience.*

As discussed earlier, the skills gap between future demands and the relevance of the current educational offerings continues to widen, a phenomenon compounded by rapid technological advancement. While these discrepancies are a global concern, participants viewed the problem as being more acute in the Arab region. This perspective attributed the quality of education in the UAE as intensifying this disconnect from the labour market demands.

> *The quality of education falls behind across the whole region, and this applies not just to higher education but to the whole education system. It is important to look at it as a system because ultimately everything is connected (D19).*

Universities, employers, and graduates recognise the urgency of effective collaboration between industry and academia in bridging this gap. The secondary data analysis indicated that this gap has been caused by the lack of collaboration between academia and industry:

The lack of collaboration between the industry and the university put us in a situation (in which) we have a skills gap, and this is why (we) always need to have these collaborations—from the design of the curriculum to the internship program, to the work placement program, to the industry experts, to the university… I need our students to get involved in a real project with the industry experts (D10).

Employer participants highlighted that universities should be proactive in accelerating their efforts, assuming a primary role in establishing this collaboration with different industries. By taking these actions, HEIs can develop a better understanding of labour market skill requirements and insights from both sides. As Employer-P15 stated:

I think (of) most importance is the responsibility of those institutes (in) how they collaborate in their last year of graduation with different companies; they need to make sure that they introduce different representatives from different communities (and) from different industries, (having them) come down to their college where they can tell (students and educators) about what is happening.

The above quote indicates that employers view HEIs as critical players in developing and producing employable graduates. However, academic participants conversely emphasised the need for more commitment from the industry in establishing this relationship. Educator-P21 stated:

We need help from the industry, so we use our contacts. The industry never comes to us. They are not interested. We are more interested (in going) to the industry and (telling) them (to) please help us (Educator-P21).

Employers often interact with students in their senior year through on-campus recruitment activities. As commented by Educator-P21, "*Interview them, please, before they finish their degree."*

The interviews with the participants demonstrated that an internship can encompass various forms, such as work placement, industry projects, work-based learning, and real work

experience. Work experience was viewed as the most valuable technical skill by the participants. Participants additionally agreed there is a need to overhaul its delivery.

Firstly, the value of internships in the student learning experience was recognised by some participants as a way to boost graduates' employability, Educator-P28 reflected:

> *I suppose the more young adults – like university students – are exposed to the workplace, the more experience they are going to have (and the) more employable they will get (Educator-P28).*

According to Graduate-36:

> *I believe (we) should close this gap or tighten this gap between the graduation and the first job as much as possible by (adding as many) internships as possible in the fields where the students work (Graduate-36).*

However, concern about the value of internship as a relevant work experience was also raised by the educators. Internship lacks exposure to the challenges of the work environment that could be useful to students' and graduates' employability. The participants' views suggest that there may be limitations to the tasks and responsibilities assigned to students during their internship. This implies the need for realistic expectations and well-designed learning objectives for the internship program that treat students as full-time employees Throughout their training.:

> *(There is) value (in) internships. (The) world of work is moving (to) become more challenge-based. (In an internship), an employer gives a student a challenge or challenges a group of students— a challenge that they can work on and come up with a solution. So it's a real-life challenge that they're trying to solve, and then they assign a team member to work with the group of students to actually solve the challenge (Educator-P20).*

This view was also supported by employers and graduates who advocated for providing the interns with enabling environments to help students develop their skills, knowledge, and professional networks and, in turn, sharing their feedback with their universities. Employer-P5 stated:

We should have a full fast set program that enables the intern to really see and discover and reflect, and, because we are going to be doing an honest, good job, we will be reflecting that feedback to the educational establishment, and that's a win for me. So that's where we start to bridge this gap (Employer-P5).

Secondly, in order to achieve graduates' career success, educators suggested that the internship should be relevant to the major of study for the graduate, which is not always applicable*:*

Unfortunately, we don't have so much success because it is very difficult for another graduate student in their fourth year to have all these qualifications. So they are employed in investment management, capital allocation, or in accounting, but not in risk management yet (Educator-P18).

Thirdly, work placement requires preparation to ensure that students are workplace-ready before sending them to intern with employers. Educator-P20 emphasised the importance of a prerequisite, employability program in effective internship preparation:

Delivering employability programs for students – and they would not yet have anything that is AI-focused – is basically preparing students for the breadth of the world of work.....I'm making it a compulsory part of the internship module (Educator-P20).

Educator-P18 indicated that the proper preparation for the internship might lead to a full-time opportunity, *stating, "I know from the career office in our university that many of our internships (result in interns) getting a job at the company they (interned) for."*

While participants valued internships as a powerful component of employability delivery, they reported concerns about the lack of internships, lamenting that internship opportunities are generally limited to senior students. As mentioned by Employer-P6:

Generally, the staff that we recruit to work within our marketing department are required to have a minimum (of) three years of work experience working in certain specific areas. It's difficult to just share with you what specific technical experience or skill sets they

need to have. That's why I've always heavily emphasised the importance of the internship, and I still believe eight weeks is not enough (Employer-P6).

Government Advisor- P42 argued that students should be eligible for an internship in the early stages of their learning journey instead of waiting until the final year, stating, *"A lot of the students simply do not get any kind of work experience until very late on in their degrees."*

4.3.2 Stakeholders Engagement

Table 4.6: Dimensions, Themes, Categories, and Data - Stakeholders Engagement

Second-order theme	First-order categories	Illustrative quotes
Stakeholders Engagement	Graduates' Engagement	"I can say the university has equipped us as students to have those soft skills and to know how to engage" (Graduate-P32).
		"Generally, to have someone to talk to and kind of observe myself and pick myself apart and see how (and why) I'm doing things (has) allowed me to know myself better. (It has) allowed me also to know what I want and what I don't want in my life. So I am grateful that the university had a counsellor on hand" (Graduate-P34).
		"I was lucky enough to know people in advising. In the School of Business administration, we have a separate office for just advising students; we have our senior advisor, assistant senior advisor, and then usually we have two to three students that are hired to basically help with advising, and I was lucky enough to know people there, so I had a

		reference to end up getting a job. I thought that was very important" (Graduate-P38).
	Parents' Engagement	"We also understand that the greatest influences (on) our children are the parents and the family members that are trying to guide and to help. So, rather than trying to go against that, embrace it. It is part of the culture, and it is part of (how) we get here in the UAE. In this culture, the majority of our values come from family" (Employer-P6).
		"Obviously, parents have a huge impact on the employer destination where a graduate might work, so it's not just about educating the student or graduate; sometimes it's about educating the parent that the job market is not like it was 20 years ago" (Employer-P22).
	Faculty Engagement	"I think the faculty members are at the heart of this process, and they have a key role because they are in touch with the students. They are the ones who deliver the teaching. They are the ones who will lead the extracurricular activities, so their engagement is key. No one person can do this alone. Not the dean. Nobody. Creating this culture within the college and through faculty is key, and what I have noticed is that once the faculty understand what you are trying to do, they appreciate it and they get excited. So they get it. They understand how important it is. Once it starts moving, everybody wants to jump on board and join the effort" (Educator-P26).
		"(There is a) lack of a faculty engagement in the decisions; I think these are things that the higher

		education institutions should consider if they really want to achieve employability of students or (be regarded as) high quality" (Educator-P29).
	Shared Values	"Our business school has a relationship with the industry because it is not only the theoretical aspects, but the practical aspects of what we teach students, (that) are very important" (Educator-P30).
		"We're kind of working on some new partnerships to implement programs, not artificial intelligence per se, but for the drops in ICT in general, including programming and software engineering and some other jobs. So, we're working on some partnerships to provide these kinds of trainings to youth" (Employer-P1).
		"I think there needs to be more merging of responsibilities; academics and professional staff have to become a part of this whole employability responsibility" (Educator-P20)

Stakeholder engagement is a central theme in ST (Bellantuono et al., 2016). Accordingly, the participants indicated that successful collaboration with the stakeholders requires engaging and managing relationships. It is arguable that students are the most important stakeholders for HEIs (Degtjarjova et al., 2018). Therefore, participants recognised the need to build and maintain relationships with graduates to receive feedback and understand their needs. These perspectives can guide institutions in improving their programs:

> *(We must build) relationships with graduates, understand their needs, and continuously have this feedback loop to adjust and improve their programs. (This) will prepare their students for the business for the best life possible (Employer-P4).*

Given the importance of youth as key stakeholder in the UAE, the government has made significant strides to ensure youth engagement. Recognising the importance of including the youth voice, the UAE government appointed a young minister aged 22 years (U.AE, 2022b). This role brings together young professionals from various backgrounds to represent youth affairs to the government. It focuses on ensuring the voice of youth is strategically positioned to lead youth into the future in all facets of UAE government and life, guaranteeing that all ministries and decision-makers are incorporating youth needs into the policies they create.

> *The UAE Government designed many policies to make the youth take part in every sector and at all levels of governance and decision-making, to infuse them into the national strategy as key stakeholders and actors in the country's development (D17).*

Participants realised the role of graduates' families in influencing students' choices and thus their employment prospects. Therefore, there is a primary consideration of the part of HEIs in guiding not only graduates but also their parents about the benefits of graduates assuming roles in the private sector. Educator-P22 mentioned:

> *Obviously, parents have a huge impact on the employer destination where a graduate might work, so it's not just about educating the student or graduate; sometimes it's about educating the parent that the job market is not like it was 20 years ago (Educator-P22).*

Participants acknowledged the cultural influence of family involvement in students' career and employment choices. Therefore, they suggested enhancing parents' engagement in HE to prepare the students for life and work. Employer-P6 stated:

> *I think that in (the future) we should include the family more because they are already involved. In higher education, we're trying to develop adults; what higher education has been designed globally to do is to prepare our children to enter the adult phase in order to be independent (Employer-P6).*

The senior leadership of HEIs realised that successful collaboration requires active listening. Understanding stakeholders' perspectives is imperative to address their needs and develop genuine collaboration. As indicated in D11,"*First and foremost, I think kind of to tie this all*

back together (is) genuinely listening. Really, genuinely collaborating is the key for all three sides of this sector." Academics raised concern about the lack of faculty engagement in the decisions that trickled from the top-down approach. This issue posed a difficulty in delivering employability:

> *Faculty is a very important stakeholder, and they should be part of all the changes taking place. They should be engaged in this process. Usually (what) happens is that most of the decisions in this region are made at a higher level; they just are implemented, and there is less input from the stakeholders who are really operating at 4:00, who are directly providing education to the students" (Educator-P29).*

This indicates the need to widen academic engagement in the delivery of employability. Educator-P26 viewed the role of faculty members as a critical component in leading a successful collaboration for employability delivery, stating, *"They are the ones who will lead on the extracurricular activities so their engagement is key."*

The participants recognised stakeholders' roles in assisting HEIs to redesign curriculum, experiential learning, and extracurricular activities relative to students' needs. Therefore, a critical objective for HE should be to foster a mutual partnership between academic institutions and all stakeholders at various levels: local, national, and international. There was a consensus among participants regarding the importance of HEIs' partnership with stakeholders in enhancing GE. Educator-P26 mentioned:

> *I would say that they need to really work closely together; it is in the best interest of universities and industry that we have students better prepared to enter the job market because they will have students who are more ready, who can integrate more easily and add value (Educator-P26).*

The secondary data analysis supported this approach:

> *Schools and universities will play a bigger role in promoting innovation by collaborating with top global academic institutions to introduce new specialised*

> *educational materials while launching innovation challenges and recognising national innovators (D15).*

The study participants emphasised the importance of partnerships between academia and industry during the pandemic in response to unprecedented challenges. Drawing on the experiences and practices implemented during COVID-19, participants expressed the pandemic's implications on HE stakeholders' relationships. For example, the sense of collaboration fostered by the pandemic was one of the acknowledged values:

> *The collaboration, which was basically a challenge earlier, was a little bit less challenging during the pandemic. One thing we notice (is) that the pandemic has compelled the people to come together (D9).*

Overall, the participants recognised employability *as a* joint responsibility value between HE and the industry. Educator-P16 mentioned, *"The responsibility goes with industry as well. (I do not know) why they are not communicating the needs of the market with the higher education institutions."* Some participants believe that enabling GE requires academics and professional staff to be responsible for preparing students for the world of work. Educator-P20 stated, *"I think there needs to be more merging of responsibilities; academics and professional staff have to become part of this whole employability responsibility."* In line with this, the participants suggested the need to design a creative curriculum that provides relevant and appropriate education accommodating both learners' needs and the demands of the stakeholders.

The findings indicate the need to incorporate creativity and innovation as essential values for HE. However, innovation in HE and curriculum depends on the willingness of academic staff to embrace and adapt to their changing roles. Furthermore, the changing roles of HEIs require providing training to the academic workforce with respect to the institutional priority of GE.

Participants indicated that the lack of a digital mindset is an impediment to embracing new technological advancement in HE. Educator-P16 stated, "*When you talk about AI and the technological advancements, one thing I'm sure (of) is that we don't have that type of mindset."*

Other participants supported this argument by referring to HE faculty members' resistance to change in adopting emerging technologies. Educator-P24 commented, *"There is a huge resistance – not from the students but from faculty – to adopt this technology-oriented technique."*

As further AI advancement is inevitable, participants highlighted HEIs' stagnancy in embracing technology as a paramount concern. Educator-P16 stated:

> *We have an absolutely critical role to play at this stage. First thing, if you are doing research on AI, and your experience and research suggest that there's a lot of stuff happening (with) AI in the industry, then we really need (to view) this (as) an alarming situation for higher education institutions (Educator-P16).*

While many participants remarked on the benefits of technology in the context of GE, other participants raised concerns about the potentially detrimental impact of technological advancement on higher education. The data analysis suggested a sense of overall uncertainty about the future of HE in regard to big tech companies, who have established their own universities, training programs, and learning resources. Educator-P29 mentioned, *"There is a lot of uncertainty, and we don't know what's happening. What's going to happen? So we are facing a broader issue which is uncertainty."*

Participants indicated the need for academics to take further advantage of technology. Faculty's personal attitudes toward technology influence their chosen pedagogical techniques and curriculum; to effectively prepare students to navigate the labour market in an era of unprecedented technological advancement, educators must embrace these changes. As stated by Educator-P27*, "In my opinion, this is based on the mentality of faculty members… how we can develop skills and how to prepare students for the (labour market)."* Therefore, the participants recognise that an adaptable approach and flexibility – for educators, employers, and graduates – mitigates uncertainty about the future of HE. Educator-P26 mentioned:

> *(We need an) openness to embrace change because we are living in a very dynamic, fast-paced environment, and we have to be ready to recognise that our curriculum and what we do can quickly become obsolete. We really need to have (an) open mind*

and enough flexibility to (move) in another direction, to get on a new topic, to get a new competition going (Educator-P26).

While most participants emphasised HEIs' role in supporting students' employability, some educators indicated it would be more effective for HEIs to focus on other areas of student development, such as in creating value-based environments that develop their moral values and social skills:

(We need) habits that we can inculcate in our programming (and into) the ethos (of) the university system where young people are developing. A lot of that development is expected from (the) milieu the university provides, and it's a social experiment, really. I would call it moulded (in regard to the) things that are really going to matter over time, like integrity, telling the truth, (and) being punctual (D5).

This value-based environment concept suggests the ethical obligation of HEIs to support students' employability and lifelong learning. In line with this, the research findings indicate that the conventional HE assessment does not meet the digital age requirements. The conventional assessment typically involves students' evaluation through standardised tests. This traditional assessment method has been criticised for constraining students from engaging with the business conditions' complex realities (Nwosu and Chukwudi, 2018). This indicates that the traditional assessment method failed to advance skills demanded by employers in the modern workforce. On the contrary, the AI era requires skills such as creativity and innovation which are difficult to measure through traditional assessment methods. Therefore, the HE assessment should fit real-life circumstances; new learning assessments should be designed to develop students' intelligence and skillsets beyond the formal aspects of education. As criticised in D9, *"I think most academic administrators focus on the formal aspect of education, trying to fill the days and the hours of our students with instructions."*

The secondary data analysis emphasised the implications of emerging technologies in offering personalised learning that responds to students' abilities and needs:

> *With this whole idea of personalised learning, when you look at it from the other side it is very useful. But also I think the role of educators is now being redefined; educators now should be collaborators in learning as opposed to instructors (D10).*

The data analysis indicated the need for HE to commit to the diverse values required in achieving graduates' employability mission. This includes: adaptability, creativity and innovation, shared responsibility, partnership, ethics, faculty members' growth mindset, and human intelligence reassessment. The embodiment of these values within HE integrates students' and graduates' robust development beyond the conventional approach, thus supporting graduates' employability. In line with this, academic and strategic leadership is required in restructuring HEIs to be conducive to GE. Educator-P26 stated, *"I think the university really needs leadership and clarity and strategic thinking at the leadership level and then you need to rally support."* Similarly, D8 attested, *"Strong leadership is required from (the) industry, along with the active participation of government, researchers, entrepreneurs, and financiers. This is crucial for digitizing."*

4.3.3 Views Among Stakeholders: A comparative Analysis

Expanding upon the preceding discourse, this section provides an overview of the distinct perspectives held by every stakeholder group. Educators in the present study emphasised the need to incorporate relevant skills into the curriculum to form a more cohesive approach to education, thereby equipping students for the workforce and satisfying job market needs. They furthermore highlighted the value of focused skill updates and subskill development in helping students thrive in their future careers. Educators strive to address the skills gap by developing an academic approach that enables students to overcome the educational system's challenges and limitations. While educator participants questioned the value of internships and criticised industry demands for high-quality internships, they recognised the importance of effective communication and collaboration between students, educators, and industry professionals in ensuring that internships deliver a valuable and meaningful learning experience.

In the same way, employers underscore the need for collaboration between academic institutions and the job market to ensure that graduates have the required skills and knowledge to meet labour market demands, consequently bridging the deficits between education and employment.

They emphasise the importance of organisations in facilitating skill development and providing guidance and support to individuals. This includes upskilling existing employees to keep up with the rapidly changing demands of the job market. Employers discussed the need for an education system that balances advanced and basic skills to address the current skills gap. Employers also criticised the limited opportunities for students to accrue practical experience, calling for structured programs that help students gain relevant experience and develop valuable skills in the job market.

Graduate participants emphasised integrating relevant skills into the curriculum. In their view, such integration is necessary to provide students with the skills and knowledge demanded by the job market. Graduates focused on their responsibility to actively seek out opportunities for career development, such as through networking and continuing education. Graduates face many challenges and limitations in the education system that impact their ability to acquire the skills and knowledge they need to enhance their employability. Graduates' perspectives underscored the importance of experiential learning via internships and work experience. This can provide valuable learning experiences and help bridge the gap between education and employment.

The three perspectives of educators, employers, and graduates identify common, critical issues related to GE. These barriers must be addressed to promote students' and universities' future development. However, there are variations in the proposed approaches of stakeholders in addressing these critical GE issues.

4.4 GE Stakeholders Agency

GE stakeholders' understanding is shaped and influenced by their interaction with each other and the employability components. For instance, the interaction between graduates and emergency technology can potentially strengthen GE; for instance, should a graduate develop a mastery of these emerging technologies, a proficiency highly sought by employers, they will be more employable; according to D8, *"Acquiring basic digital skills will empower citizens to seize opportunities presented by technology and digitisation."* Another example is the educators' interaction in providing career guidance. In the present study, this interaction was recognised as an employability component empowering graduates to make informed career decisions at an

early stage to achieve success. Therefore, the interaction with the new realities of GE guides HE and industries in improving their programs to enhance GE. As stated by Employer-P4:

> *(We must build) relationships with graduates, understand their needs, and continuously have this feedback loop to adjust and improve their programs. (This) will prepare their students for the business for the best life possible (Employer-P4).*

The data analysis further identified the influence of policymakers in enabling GE. Policymakers seek to enable employability by *"creating new economic, educational, and social opportunities for citizens, governments, and businesses"* (D1). In addition, policymakers influence other stakeholders by enabling AI systems that create value for society. This phenomenon was indicated in the AI national strategy*; "The UAE Government will play a direct role in designing and enabling AI systems that create the most value for society*" (D1).

This view is also supported by the participants who emphasised the role of both policymakers and strategy in enabling technology in daily services and activities, including HE. As indicated by Educator-P23, *"It aligns completely with the strategy of the government of incorporating more and more AI in our daily activities and processes*." In addition, the policymakers facilitate the partnership components of GE, such as the public-private partnership: *"In pursuit of its Emiratisation goals, the UAE Government has created an environment conducive to public-private partnerships*" (*D20).*

Policymakers encourage HEIs to take innovation to new heights by embedding a culture of innovation in their programs and systems. This aligns with the national innovation strategy (D15), which recognises innovation as a cornerstone of social and economic development and emphasises education as an innovation priority. In addition, the policymakers' and industries' interaction informs and directs the HE efforts towards producing graduates with relevant labour market needs. As described by Government Consultant-P41:

> *The labour market requirements and the government should be really clarified; we will need these types of skills in the future. So higher education will do some a partnership with other institutions outside, or maybe they will have their own. (Perhaps) they will start their own research, I don't know. I mean, it's their call, but there is a market for their*

graduates (that is) announced by the government; we have (particular labour market) needs" (Government Consultant-P41).

The data analysis also identified the potential benefits of introducing an AI network to facilitate GE stakeholders' collaboration. According to the AI national strategy, the third objective is developing a fertile ecosystem for AI; this requires trusted partners in order to automate products and services. An AI network provides an easily accessible platform for collaboration between researchers, industry experts, and policy experts from across the UAE. The government can play a crucial role in establishing stakeholder access to the network, data, and funding.

In summary, the chapter has presented the perspectives of key GE stakeholders in order to explore the GE phenomenon in the age of AI. The next chapter will discuss the findings in light of the available literature and connect them to the purpose of the research. The following chapter also discusses theoretical, practical, and policy-related implications.

CHAPTER 5: DISCUSSION

This chapter discusses and analyses the abstract themes generated from the research findings. Simultaneously, it connects findings with the research goals, exploring the results in relation to each research sub-question.

5.1 GE Social Structure and Mechanisms

Following the critical realist paradigm, the interactions between social structures and mechanisms guided how the participants viewed employability reality. Accordingly, the subjective perspectives of the HE stakeholders included in the present study generated a more comprehensive representation of the GE components. The GE social structure contains the GE mechanisms, which represent the factors essential for the graduates to successfully transition to the employment market. The study findings highlighted the mechanisms underpinning the GE social structure from the key stakeholders' perspectives, which will be discussed in the subsequent sections.

The first research sub-question is: *What collaborative mechanisms among key stakeholders in HE underpin the social structure of GE in the era of AI?* The present study explored possible trigger mechanisms enhancing graduates' employability and employment prospects. As discussed in the literature review, the GDS – a key performance indicator for HEIs – focus resulted in GE research that primarily centred on the factors aimed at improving the employment rate (Cashian, 2017). GE studies with the objective of enhancing an institution's GDS are narrowly-focused and minimal (Cashian, 2013; Mason et al., 2009). This view of measuring employability via employment rate presents a limited definition of employability (Bridgstock and Jackson 2019; Pham and Jackson, 2020 a, b). By contrast, studying GE from the critical realist perspective transcends a definitive description of employability (Cashian, 2017). It requires viewing GE as a social phenomenon, warranting deeper investigation and analysis to illuminate reality (Lewis, 2009). Consequently, embracing a critical realist stance offers a more practical approach to examining the GE mechanisms and the fundamental research question. These mechanisms are at the heart of the employability social structure.

From a critical realist standpoint, the study provides an interpretation of employability more robust than employment outcome. The present research provides evidence – through the stakeholders' perspectives – that enhancing generative mechanisms have the potential to contribute and improve GE. Accordingly, the participants' experiences were collected in the empirical domain, in which the aspects of the employability social structure were identified. The study findings highlight essential elements of the employability social structure based on key GE stakeholders' perspectives. Figure 5.1 provides a visualisation of the key mechanisms of the employability social structure. Emerging themes included the transition from college to the workplace, employment matching, employability critical views, stakeholder partnership, self-determined learning, and adaption to the digital age (Cashian, 2017; Fearon et al., 2020; Hora, 2020; Nabulsi et al., 2021; Nwajiuba et al., 2020; Rotatori et al., 2021).

Corresponding with the critical realist view, the present research is concerned not just with identifying the elements of the social structure but also exploring the relationships between the mechanisms of the underlying GE social structure, as well as the possible influence these may have on the actions of HE stakeholders as agents (Cashian, 2017). Accordingly, the research examines the GE mechanisms relationships and their influence on graduates' success in transitioning to employment.

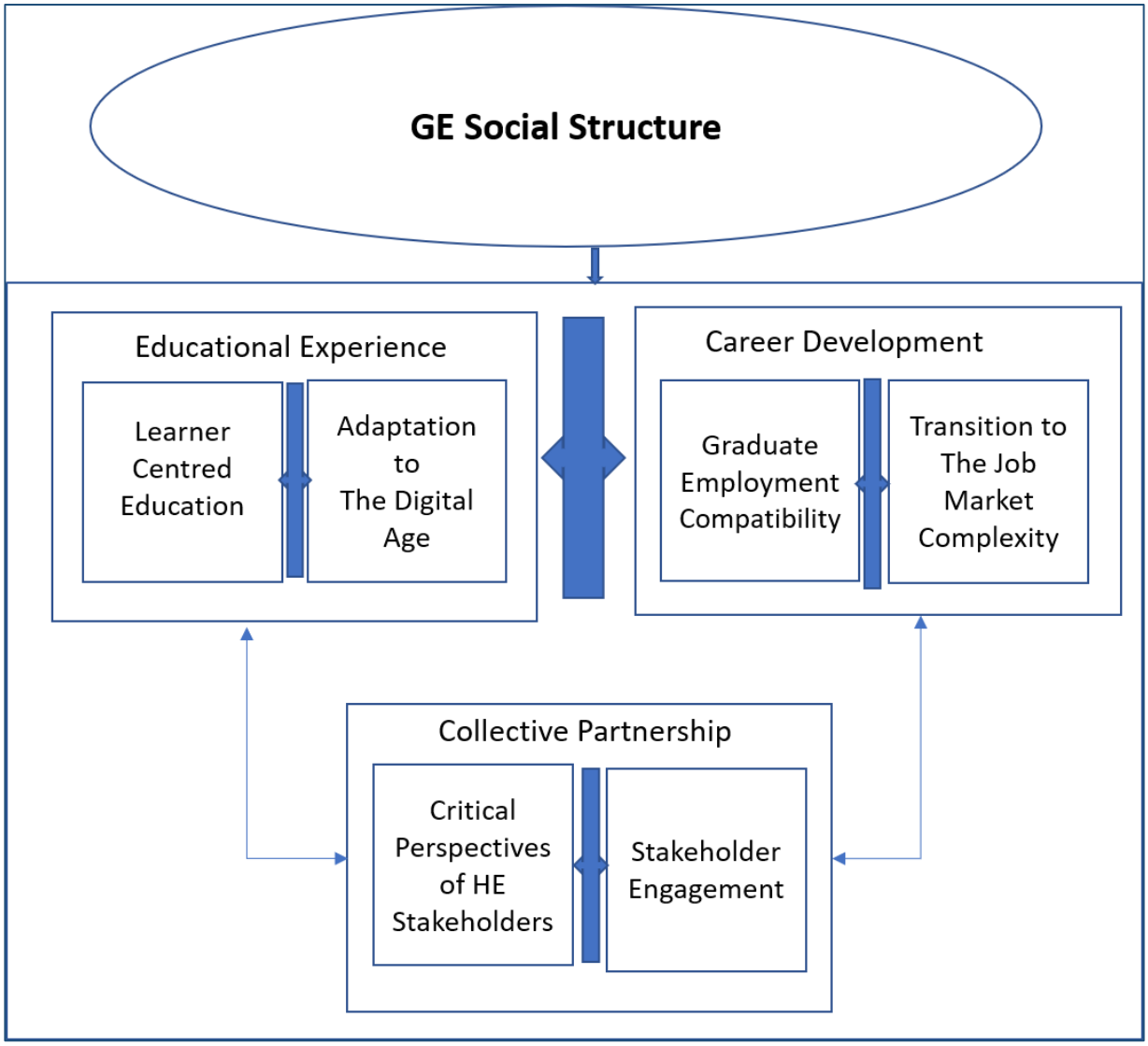

Figure 5.1: Mechanisms Shaping GE Social Structure

5.1.1 Educational Experience

GE is generally conceptualised in terms of the capacity of individual students to fit the vacant employment positions (Khan and Lundgren-Resenterra, 2020). It is furthermore framed as a set of skills and knowledge that increases the possibility of graduates gaining and maintaining employment throughout their careers (York, 2006). Both depictions have been expressed as the purpose of HE (Bridgstock, 2009). In light of this, HEIs are progressively viewed as valuable investments for personal, professional, and economic growth. However, the existing education

system has been criticised as an overly structured approach that precludes students from individually engaging with the labour market's complex realities (Nwosu and Chukwudi, 2018). In consequence, graduates have limited opportunities to gain exposure in the industry. This leaves graduates disadvantaged in terms of practical experience when they ultimately enter the job market. Therefore, a lack of relevant skills and inadequate preparation for the world of work are identified as the main obstacles to graduates securing entry-level jobs.

The critical realist stance regards employability as a dedicated, learner-oriented process, indicating that GE enhancements should be devised and incorporated around educational programs (Cashian, 2017). In light of this, the study's findings suggest a complete overhaul of the current curriculum, in turn supporting the integration of a micro-credentialing mechanism to foster students' proficiency. In addition, emphasis has been placed on developing a more collective approach between academic and non-academic activities that involve industry-relevant projects and assignments to help graduates obtain the skills valued by employers. These proposals indicate that job site practices cannot be imitated with fidelity in the academic environment (Mutch, 1998). As such, there is a need to involve all GE stakeholders in both curricula and internship revamps to effectively address the skills gap and support the principles of andragogy as highlighted in section 4.1.1. Accordingly, HE can better prepare students for career success and support their learning objectives.

From the stakeholder theory stance, the educational experience must integrate GE stakeholders as an indispensable element of learning by aligning education with real-world needs and values (Khan and Lundgren-Resenterra, 2021). This will help to prepare business students for navigating the job market and enable their successful transition from education to employment. The findings indicated a need for a variety of new learning solutions and resources to address the skills gap and maintain graduates' relevancy in the job market. This will be highlighted in the next section.

5.1.1.1 Learner-Centred Education

Various aspects of graduates' educational experience may act as trigger mechanisms to GE (Cashian, 2017). In line with this, the study has synthesised HE stakeholders' views on the learning approach and its connection with GE. HE stakeholders conceptualise GE from a

“learning view” perspective, which places GE as a central component of the HE curriculum (Bennett, 2018; Smith et al., 2018). In this view, GE is no longer a complementary component to HE but an essential part of a successful learning experience (Campbell et al., 2019). Self-centred learning was seen as an integral component of students' educational experience. However, there is a disconnect between teaching theories and how employability skills are acquired (Igwe et al., 2022). As previously discussed, conventional teaching methods commonly used in classrooms may not effectively support students to develop the skills employers most value. Therefore, by bridging the gap between the labour market and HE teaching methods (Zhai et al., 2021), HEIs can better prepare their students to access the graduate job market successfully.

The need for a transition toward more learner-centred practices has been emphasised by the accelerated changes in the workplace landscape. Current learning systems must be transformed to better qualify and prepare graduates to become competent employees in a volatile labour market (Tohir, 2020, as cited in Mursitama et al., 2022). This approach acknowledges that each learner has particular interests, learning styles, and views (Choi et al., 2019). Therefore, it assumes that conceptual education and practice contribute to skills enhancement (Berdrow and Bird, 2018). The findings suggest that students' engagement with self-centred education expands their abilities. Specifically, it develops in graduates the skills valued by employers, such as cognitive abilities, learning agility, emotional intelligence, social capital, AI literacy, and business acumen. This has been achieved by establishing a set of work-integrated programs designed to expose students to the actual workplaces (Abrandt et al., 2008). In line with this, work-integrated learning has become a fundamental element of students' educational experience (Jackson, 2015); practical experience helps students to network with industry professionals and gain in-depth knowledge of job market requirements. Furthermore, students' active participation in their education through self-directed learning contributes to successful entry into the job market.

Participants of the present study described the intersection between employability, employment and lifelong learning as driving the evolution of HE learning practices (Campbell et al., 2019). This finding suggests that the learning interventions should teach students how to learn for life, ultimately enhancing their employability and career success. The learning solutions offer

students various opportunities for professional development, career exploration, and to effectively navigate real-life challenges that could significantly impact their career development. As a result, students can acquire the required knowledge, skills, and experiences through interdisciplinary and multidisciplinary integration to succeed in their chosen career pathways.

5.1.1.2 Adaptation to the Digital Age

The UAE National Strategy for 2030 aims to build and achieve high scientific and professional education benchmarks to qualify national citizens to sustain growth and partake in research, entrepreneurship, and the employment market (U.AE, 2021). However, actualising this vision entails overcoming barriers related to the skills gap, conventional HE assessments, and the quality of education. As such, the UAE national strategy for AI suggests a shift to digital transformation in education; this measure was proposed to both respond to the aforementioned challenges and enjoy the benefits of this technology.

Integrating new technologies into learning allows educators to provide learners with a more engaged educational experience that prepares them for the contemporary world. However, despite the promising role of AI impact in education, HE has been relatively slow to adopt the use of data and AI in learning interventions. That being said, the COVID-19 pandemic accelerated the need for HEIs to embrace certain technological advancements, shifting exclusively to remote learning in compliance with pandemic protocols (Microsoft, 2022). Therefore, as the traditional forms of knowledge delivery have been replaced by new, digital methods of instruction (Lee et al., 2019), adequate technical and digital infrastructure is essential in HE. HEIs must employ emerging technologies to effectively adapt to AI's anticipated impacts.

The research suggests more attention should be paid to the benefits of big data and AI in learning solutions. AI and big data can transform HE by providing educators valuable insights and analysis about student learning and academic progress. Accordingly, HE institutions can improve GE outcomes and prepare students for career success. This is consistent with Rotatori et al.'s (2021) recommendation that HE should harness the power of emerging technologies like machine learning and AI. Employers play a crucial role in developing AI and robotics. It is,

therefore, a privilege for HEIs to work with stakeholders from the industry, academia, tech companies, and government to address AI's technical and societal challenges (HAI Stanford University, 2022).

The study probed participants' perspectives on the relationship between technological advances and GE. In response, the research participants alluded to a need for HEIs to prepare students for careers in increasingly digitised workplaces, in which they will naturally come across machines as their co-workers. The research suggests this preparation can be achieved collectively with HE stakeholders, thus moving AI initiatives forward. Rotatori et al. (2021) suggested that human-machine collaboration will grow to become even more harmonious.

5.1.2 Career Development

The findings highlight graduates' career development as a valuable way to improve job prospects and increase their chances of achieving employment compatibility, thus facilitating their successful transition to the job market. Findings furthermore indicate a lack of graduate comprehension regarding their career paths and how to achieve their goals. Simplifying job roles can help graduates develop a better understanding of their responsibilities and, in turn, take ownership of their career development from an early stage. Career development has been broadly researched as an individual-level phenomenon with a focus on what individuals can accomplish to construct successful and sustainable careers (Spurk et al., 2019). The findings suggest that providing clear and accessible career development support to graduates is crucial in enhancing their GE.

GE was defined by Yorke (2004) as a set of dynamic attributes that make graduates more likely to secure employment and be successful in their chosen careers. This definition recognises career development and employability as a continuous process (Cashian, 2017). Previous research into the evolving practices of HEIs demonstrated a growing trend of incorporating employability and career development education through educational course design (Bridgstock et al., 2019). Findings from the present study – and from the extant literature – suggest that restructuring and ameliorating career services at HEIs can improve students' educational experiences and, in consequence, employability. Proposed changes include providing enhanced career counselling, accessible resources and labour market information, as well as increased

recruitment support and networking opportunities. These efforts can improve the overall educational experience of graduates by better preparing them for their careers and increasing their employability outcomes.

The existing literature has identified many fundamental factors that influence GE. However, several aspects of employability – for instance, predicting career success based on factors such as behaviours and attitudes, transitioning to the employment market, accumulating skills, knowledge over time, and contextual factors – are mostly unexplored and require additional investigation (e.g., Ng and Feldman, 2014; Wang and Wanberg, 2017). Contextual factors may involve job role requirements, the organisation's culture, sector and market trends and economic conditions. By recognising the importance of these factors in enhancing GE, researchers and career advisors can develop more effective strategies and interventions to support students in achieving their career goals.

Graduates' transition to the job market requires an understanding of various employment processes according to the targeted sector (Cashian, 2017). However, irrespective of graduates' proactive behaviour, employers' employment processes and decision-making can limit graduates' occupational opportunities (Small et al., 2018). Employers play an essential role in developing and sustaining individuals' careers, as they provide various work experiences and development opportunities (Van der Heijden et al., 2020). Therefore, it was argued that graduates who understand employer perspectives, labour market opportunities, and their own abilities can adapt their social capital to suit and attract potential employers (Hillage and Pollard, 1998). This indicates that a collaborative partnership and shared responsibility between employers and HEIs is fundamental to graduates' career development. Of course, employment is just one outcome of employability; it does not address the underlying causal elements that guide the successful transition (Cashian, 2017).

5.1.2.1 Transition to the Job Market

Entry into the professional workforce is a critical milestone in a graduate's career development journey. How effectively graduates manage this transition to the job market affects their career development. The proactive activities performed and decisions made during this transition can serve as a foundation for ongoing professional development and foster long-term career success.

As explained in sections 4.2.2 and 4.2.3, the transition to the workplace involves several complex structural, cultural, and agency-related elements. The interrelations between these elements, focusing on aspects at the micro, meso, and macro levels, provide a causal relationship for business graduates' obstacles in transitioning to the job market.

The study's results shed light on many factors that complicate GE at different levels (individual, institutional and national). The research findings indicate that the complexity of employability emerges from the evolving interaction between HE stakeholders. For example, graduates' interaction with employers may trigger their insecurities and inspire fear, thus diminishing their interview performance and affecting their employability. In addition, the UAE public sector has many initiatives for collaboration with the HE and the private sector with the intention of producing a new generation of employable workers. This relationship concentrates on increasing the opportunities for UAE citizens in the private sector in alignment with the Emiratisation policy (Sarker and Rahman, 2020).

The findings illustrated that the complexity of employability is additionally compounded by the changing labour market requirements and insurmountable expectations for graduates. As the job market constantly changes, graduates must adapt to its demands and trends to stay relevant. Employers require their workforce to continue developing new skills and upgrade their existing ones (Felstead et al., 2007; Kokkodis and Ipeirotis, 2021).

Uncertainty about the future of skills and jobs in the era of AI further adds to the complexity of GE. The future of work has become increasingly insecure due to emerging technology and the resulting incidence of outdated skill sets (Kirschner and Stoyanov, 2020). Emerging technologies and AI advancement warrant the fast-paced evolution of jobs. Accordingly, AI technologies are replacing various job positions (Kilbride, 2019). Moreover, workplace screening and recruitment processes are often conducted by AI. This necessitates that graduates adjust to these changes in order to transition successfully to the employment market. Preparing graduates for the uncertainty of the job market requires obtaining employer insights in regard to employable skills and knowledge. This skills forecasting approach supports graduates in employing their current skills and developing the skills required by the job market (Thake,

2017). However, this method requires additional collaboration between HE, the government, and the private sector (Sarker and Rahman, 2020).

5.1.2.2 Graduate Employment Compatibility

Previous scholars have argued that the primary mechanism for graduate employment success is to achieve a person-employment fit aligned with their skills, interests, and values (Van der Heijden et al., 2020). However, employment compatibility in the era of AI represents different aspects of fit beyond skill demands. As per Chapter Two, many studies operationalise employability as a set of skills and knowledge that increases the possibility of graduates gaining and maintaining employment throughout their careers (York, 2006). Therefore, successful employability relies on graduates' ability to acquire various capital, including human, cultural, social, identity, and psychological capital (Pham et al., 2019; Pham and Jackson 2020b). However, the results of the present study convey employability achievement as a construct varying based on each employer's requirements and perspectives.

In critical realist views, the trigger mechanisms for graduates' employment concern their capability to negotiate the employment and selection processes related to the hire. This implies that the use of graduates' capital should be explored in the context of the company's employment process, in which the job application is presented. This approach guides graduates to develop "agentic capital" to cultivate strategies in a context that are aligned with career goals, individual traits, and experience (Pham, 2021). Consequently, the study identifies a link between optimising employability and demonstrating an awareness of the employment process. These findings construe the aforementioned employment compatibility components as GE enhancement mechanisms (i.e., employers' requirements that guide the employment decision). Accordingly, understanding employment compatibility aspects, as highlighted in section 4.2.1, ultimately helps prepare graduates to transition to the workplace and bolsters their employability.

5.1.2.2.1 Skills and Knowledge Required by the AI World of Work

The research aims to understand the views of HE key stakeholders (employers, educators, and graduates) regarding the skills and knowledge required in the AI-dominated labour market. The

findings indicate common digital era demands – as recognised by the participants – that offer a substantial competitive advantage for graduates entering the workforce. The findings of this study furthermore suggest that academic qualifications alone are inadequate in guaranteeing graduates' entry into the job market. Many other factors, such as the skills and knowledge of graduates, determine labour market outcomes (Tomlinson, 2017).

The results show that social capital, emotional intelligence, learning agility, business acumen, and AI literacy are core constructs facilitating GE in the new digital era. The participants acknowledged the need to address the skills gap. Overall, they regarded soft skills as being the most desired by employers on account of technological advancement and AI needs. The results summarise participants' views regarding the skills business graduates should possess upon completing their degree, as shown in Figure 5.2.

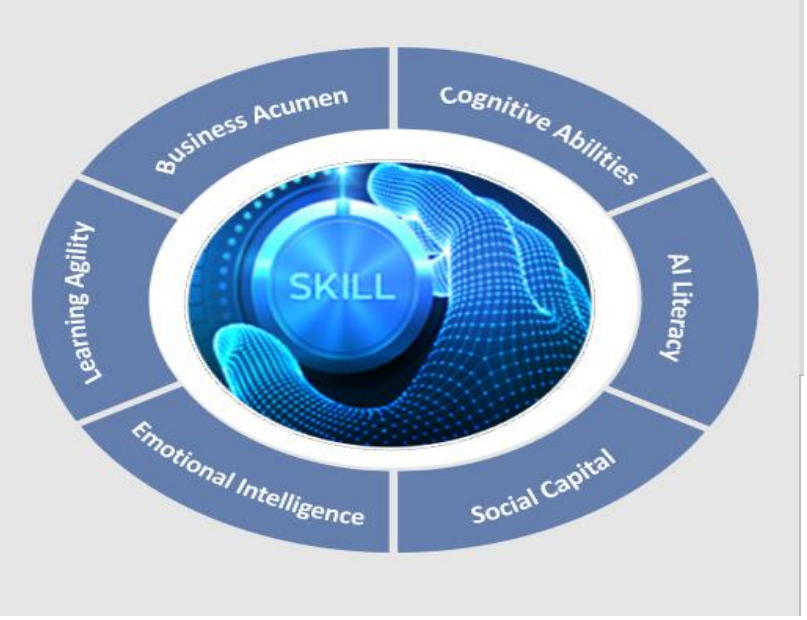

Figure 5.2: Skills and Knowledge Required in the Age of AI

5.1.2.2.1.1 Social Capital

Employability capital is comprised of various forms of capital that depict the relationship between HE and employment. Graduates need to cultivate diverse employability capital

including human capital, social capital, cultural capital, psychological capital, and identity capital (Pham and Jackson, 2020b). In this context, social capital emerges in the present study as a quintessential component of the UAE labour market entry (Caballero, 2020; Pham, 2020). In addition to technical skills, the era of technological advancement requires developing social skills (Fajaryati and Akhyar, 2020). The study findings highlight the need for prospective employees to develop networking skills to stand out from other candidates. Recent career literature highlights the significance of social capital in sustaining employability (Rodrigues et al., 2019). The extant literature supports the notion of social capital as an instrument for graduates' employment (Peeters et al., 2019; Pham, 2021). For instance, graduates referred to a job by current staff in their professional network are more likely to be employed (Fernandez et al., 2000). Expanding graduates' professional networks also provides graduates with new knowledge and ideas related to industry opportunities and trends (Bridgstock, 2020).

With AI shaping the future of work, there is a need for integration between humans and machines— while maintaining the human element. The World Economic Forum's 2020 report predicts that by 2025, social influence will be one of the top ten skills (Whiting, 2020). This demonstrates the escalating importance of social capital development, which has – evidently – merited significant attention in workforce development and HE dialogues (Hora and Blackburn, 2018).

5.1.2.2.1.2 Emotional Intelligence

The findings highlighted the importance of emotional intelligence competencies in helping graduates connect with their feelings. The literature revealed that increased emotional awareness allows graduates to discover a possible gap between their existing and desired competencies to achieve their career objectives (Bonesso et al., 2019). The extant empirical research emphasises the value of emotional intelligence skills in graduates' employment, providing evidence that, by obtaining the required behavioural competencies during the study phase, graduates can significantly enhance their employment prospects (Subbu Nisha and Rajasekaran, 2018). From employers' perspective, emotional intelligence displayed by employees is associated with positive organisational outcomes, including higher levels of performance, commitment, and customer happiness (Guchait, 2019; Prentice and King, 2011, 2012). Therefore, many

employers specify emotional intelligence in their hiring criteria. Employers who participated in this research recognised its importance in business operations, particularly in decision-making; as stated by Employer-P8, "*A lot of decisions are done with emotional content.*" In addition, as AI continues to proliferate across different industries, human skills such as emotional intelligence will remain essential to personal and professional success (Prentice et al., 2020).

Moreover, because graduates are expected to enter the workforce and interact with the industry, the findings emphasised that they need not be emotionally driven, but rely more on evidence-based and research-based discussion. Graduates must balance their emotions when making decisions in the workforce. This is reinforced by various employability models such as the CareersEdge model by Dacre Pool (2020). The model introduces employability as a combination of work experience, career progression, general skills, emotional intelligence, and degree, along with reflections and evaluation of the learning experience. The model was revisited in 2020 with the assumption that the model is still valuable and relevant (Dacre Pool, 2020).

5.1.2.2.1.3 Learning Agility

Technologies such as AI and machine learning are increasingly prevalent in the workplace. This adds to the complexity of today's work environments, which are characterised by the rapid obsolescence of knowledge and skills(Mainga et al., 2022). Therefore, graduates' ability for continuous learning and development is an expectation in today's workforce (Muduli and Pandya, 2018). Employers are looking for agile learners who can enhance institutions' performance by helping businesses to meet their goals (Ghosh et al., 2021). In this vein, the research findings – generated from stakeholders' perceptions – classify learning agility skills as quintessential to graduates' career maintenance and success. Learning agility and lifelong learning have become critical to graduates' employability (Dai et al., 2013; Mainga et al., 2022). The findings indicated that agile learning is an ongoing professional development that will allow graduates to continuously enhance their skills and adapt to an agile learning culture. Data analysis characterised learning agility as a timeless competency and broad skill founded on adaptability.

Although the pandemic has accelerated digital transformation and adaptation at the institutional level, the findings emphasise that HEIs are not updating their learning models and focusing mainly on a specific discipline or domain in the business school. The traditional academic system has established certain beliefs or practices (orthodoxies) that preclude HEIs from transforming and reimagining their learning models (Deloitte, 2020). Therefore, as AI continues to evolve, there is a need for HE and stakeholders to make systemic shifts to produce agile learners. This could entail harnessing emerging technology to transform the student experience to emphasise learning agility. For example, online learning platforms powered by AI can be embraced by lifelong learners due to their flexibility and scalability (Bigai, 2019). Making lifelong learning a reality requires stakeholders' collaboration to provide learning opportunities to students and graduates (Hammer, 2019). The study's findings demonstrate that HE stakeholders' collaboration can produce an agile workforce committed to lifelong learning.

5.1.2.2.1.4 Business Acumen

The current labour market requires professionals to possess a business-savvy mind in order to succeed. The changes brought to the workplace by the 4IR and digitisation impact humans and machines in terms of their capabilities and functioning (Umoru, 2020). In this context, the research findings suggest that graduates must acquire skills beyond disciplinary knowledge and gain business acumen to succeed in their future roles. The findings further indicate that business graduates – as prospective employees – are expected to demonstrate an entrepreneurial approach in terms of providing solutions that will optimise business operations and drive the organisation’s profit. The extant literature supports this link between graduates' employability and business acumen; Arain (2020) suggests that business acumen is considered one of the quintessential competencies for graduates. Similarly, Umoru (2020) emphasised that students must obtain education in various areas to cultivate practical business skills. Business education’s responsibilities and priorities in preparing students for workforce success can be derived from these objectives.

The findings of this study promote the integration of emerging technology into business studies and curricula. Many scholars have expressed their support of this measure, proposing frequent reviews of and updates to the curriculum to ensure meaningful business education (Edokpolor

and Egbri, 2017; Umoru, 2020). Jewell et al. (2020) argued that incorporating workplace information skills in the curriculum can develop students' business acumen, which can, in turn, attract potential employers. This aligns with the current study, in which participants indicated that including business subjects in the curriculum fosters the acquisition of business skills and knowledge and bolsters graduates' employability.

5.1.2.2.1.5 Cognitive Abilities

Building a qualified workforce with high employability skills is necessary to combat the labour market disruptions (i.e., job and skill obsolescence, etc) resulting from technology (Fajaryati and Akhyar, 2020). In light of this, the study aims to identify the employability skills needed for graduates to succeed in their transition to the job market. The findings highlighted the importance of cognitive skills in influencing employment decisions. Similarly, the existing employability research prioritises cognitive abilities as one of the primary employability skills (Bala and Singh, 2021; Gleason, 2018). In addition, new employment requirements have been characterised by a shift to non-routine tasks that require higher cognitive skills (Khuraisah et al., 2020). In a study by Dlhin et al. (2020), cognitive skills were viewed as a critical factor in evaluating job performance. This is supported by the World Economic Forum (2016, 2020), which reports that critical thinking and problem-solving skills are at the top of employers' demands and, furthermore, will become increasingly important in the next five years.

Technological advancement will inevitably impact the employability skills sought by employers (Fajaryati and Akhyar, 2020). The findings highlighted the need for a continuous upgrade of skills, including cognitive skills, as a basis for digital and AI literacy. In the same vein, the research suggested that continuous training protects graduates and employees from becoming outdated (Ayinde and Kirkwood, 2020). Thus, HEIs must consider integrating employability skills into education systems (Fajaryati and Akhyar, 2020). The participants of this study identified HEIs' role in inculcating cognitive skills in students throughout their educational journey to prepare them for shifting job market demands.

HE ostensibly focuses on growing students' human capital through cognitive skills and proper credentials (Hora and Blackburn, 2018). However, the findings reinforce the limitations of this narrative; participants' perspectives highlighted the importance of noncognitive skills and

contextual factors – in addition to cognitive skills – in enabling GE. The view of education as a talent supplier to the labour market does not account for other resources that influence GE, such as social and cultural capital (Cleary et al., 2017; Hora and Blackburn, 2018).

5.1.2.2.1.6 AI Literacy

The study aims to advance research investigating employability capital, which enables graduates' likelihood of finding a new job (Peeters et al., 2019). The construct of graduates' capital, as explored in the literature review, was introduced to explain GE (Clarke, 2018; Pham, 2021; Pham and Jackson, 2020b; Tomlinson, 2017). The concept of AI and digital literacy was also referenced in the literature review as an essential enabler for developing required skills in an era of technological revolution (CEFRS and EFESO, 2019; Igwe et al., 2022; Pinheiro and Simões, 2020). In light of this, the present research highlights the need to integrate AI literacy into employability resources.

The reality of the digital economy prompted the participants to suggest introducing AI and machine learning into the business school curriculum as a measure to prepare graduates to meet market demands. There was an agreement among the participants (employers, educators, and students) that well-rounded graduates in these areas have a competitive advantage. The study findings indicate the need for HEIs to cultivate in graduates a sense of citizenship in the digital economy, which supports Ellahi et al.'s (2019) proposition that a curriculum framework should integrate big data, IOT, cloud computing, AI, and augmented reality. The researcher's proposition highlight the need for graduates to understand their role in the digital society. This demonstrates the complexity of GE, indicating myriad interacting elements affecting graduate employability (Abd Majid et al., 2020).

AI and digital literacy were expected to appear in this research as critical and distinct elements of employability capital. However, subverting hypotheses, they did not emerge as a separate dimension in the employability literature. Instead, they are embedded within the human capital concepts, resulting in enhancement to graduates' employment (Bejaković and Mrnjavac, 2020; Clarke, 2018). As digital capital has resulted from the acquisition of digital skills, literacy, and readiness (Pinheiro and Simões, 2020), to survive the rise of AI, the research suggests a capital distinction, which differentiates between human capital (knowledge, skills, and attitudes)

(Peeters et al., 2019) and digital capital. This contribution provides a broader view of employability capital. In addition, it guides the HE stakeholders to create necessary interventions about the employability capital dimensions, including AI literacy and digital capital, that enable GE.

5.1.2.2.2 Views Among Stakeholders: A Comparative Analysis

Educators in the present study emphasised that developing a well-rounded education requires obtaining soft skills, including emotional intelligence, and technical skills, such as AI and machine learning. This perspective highlights the need for graduates to have a broad range of skills and knowledge to succeed in their careers. The importance of a multi-disciplinary approach was also emphasised in discussions with the participants. The present study highlighted that employers in the modern workforce often seek employees with diverse skillsets– such as AI, big data, business analytics, corporate initiatives, business acumen and media trends – and knowledge that allow them to bring creative ideas and unique perspectives. It helps graduates adapt to changing circumstances and transition to the job market by drawing from multiple sources of knowledge. Hains-Wesson and Ji (2020) proposed integrating interdisciplinary study programs that meet industry requirements to combat graduate unemployability. Furthermore, an emphasis was placed on individuals' cognitive abilities, which employers can assess in various ways for selection and performance tracking. Employers additionally alluded to the importance of both being a quick learner and demonstrating a willingness to continuously develop new skills. Emotional intelligence is also noted as a crucial skill utilised in decision-making and navigating professional relationships. Additionally, participants recognised that existing employees may need to be trained or refreshed to adapt to new technologies like AI; this is particularly salient in a job role that requires specific, high-maintenance skills such as business acumen. The perspectives presented by employers illustrate the value of individual cognitive abilities and a continuous learning mindset in adapting to changing work environments and technology advancements. On the other hand, graduates' perspectives suggested that connections and networking skills are most beneficial to individuals seeking employment.

The stakeholders' perspectives highlighted the importance of various skills and approaches in determining graduates' career success. Employers emphasise the importance of cognitive skills such as agile learning, continuous skill development, emotional intelligence, and business acumen. Educators emphasise the value of a well-rounded education that fosters soft and technical skills, promotes AI and machine learning, and employs a multi-disciplinary approach. Graduates, alternatively, identified building connections and relationships as paramount in creating job opportunities. However, all stakeholder perspectives suggest that boasting both job-relevant skills and adaptability to changing work environments are fundamental to GE.

5.1.2.2.3 Skills Summary

One of the main objectives of this study was to examine the employability skills sought by employers relative to business graduates. The research findings highlight that credentials play a mediating role in graduates' access to the job market. Employability skills play a comparably more significant role in signalling the right candidate for the final employment decision. Grand-scale studies about employability competencies can be found in the recent literature (e.g., Mckinsey, 2018; Pham et al., 2019; Rakowska et al., 2021). This has resulted in extensive wish lists detailing the various employability skills desired by employers (Ayala Calvo and Manzano García, 2021). However, the present research is one of the few empirical studies to examine AI skills and GE within a business education context. Emerging technologies such as AI are more likely to expedite skill transformations compared to traditional trends (Mckinsey, 2018). In this sense, the research does not refute the applicability of other core employability skills; instead, it argues the need for skills that can be sustained in the AI era. It is not practical to imagine an adequate education system today without considering emerging technologies.

The above-mentioned skills that emerged from the data were viewed by the participants as being the quintessential skills for the future workforce. These findings have some common components with the competencies presented by McKinsey (2018). According to McKinsey (2018), the most demanded skills by 2030 are classified into three categories: technical and digital, social, and higher cognitive competencies. The findings of the present study have also highlighted that generic skills, such as communication, IT skills, management, leadership, and interpersonal competencies, are imperative to GE. Deficiencies in terms of generic skills may

jeopardise graduates' employability. This supports the findings of Pham et al. (2019), in which researchers explored different forms of capital and agency as mediations in negotiating employability. In addition, the present findings construed the practical work experience and evidence produced by graduates as portfolios demonstrating their acquired skills.

These outcomes have practical implications for HE, including curriculum redesign to fit real-world needs, graduate hiring, academics' professional development, and the recruitment process. It provides evidence-informed recommendations for HE and stakeholders to support students' employability and career development.

5.1.3 Collective Partnership

Although previous empirical research has indicated that social relations significantly affect graduates' employment (Khan and Lundgren-Resenterra, 2020), there are surprisingly no analyses exploring the role of stakeholders' collaborative partnerships as an essential element of the employability social structure. An emphasis on stakeholders' relationships would thus provide a mechanism for HEIs to fulfil their commitment to generating training and employment opportunities for students and graduates. The stakeholders' collaborative approach encourages a meaningful partnership to improve students, educators, and employers' practices, experiences, and outcomes (Jackson, 2016). Under these roles, HEIs are required to develop partnerships in different areas such as curriculum design, career development programmes, real-world projects and work placement (Pitan and Muller, 2020; Teng et al., 2019).

5.1.3.1 Stakeholders Engagement

In view of the critical realist philosophy, HE stakeholders' engagement with the concept of employability will determine their perception of employability. The present study highlighted the importance of engagement with HE stakeholders, emphasising the need for enhanced engagement with students, parents, and faculty members. Employability flourishes under a broad approach in which all stakeholders are engaged (Smith et al., 2018). A number of scholars have highlighted the importance of graduates' engagement in educational practice, assessing the effectiveness of different methods and learning interventions in enhancing their participation (Ertel, 2021; Pedler et al., 2020).

The present study highlighted a positive link between student engagement and GE development (Huang et al., 2021). The study findings also indicated the importance of youths' engagement at the national level as actors in the country's development. In addition, the participants acknowledged the influence wielded by families on graduates' employment choices. In response, participants suggested expanding the role of HEIs to guide parents in enhancing graduates' employability. Scholars widely regarded the family as an influencing aspect of GE; the aspects of family financial situations, parents' education status, and social and political status influence employability (Huang et al., 2021). Yoong et al. (2017) study suggests that the family plays a vital role in developing a graduate's skills, beliefs, and attitude, which are essential for their future employability.

The findings also revealed the lack of faculty engagement in decision-making, which was identified as a barrier to delivering employability. This suggests a need to widen academic engagement to enhance employability delivery. The study analysis highlighted the need for internal and external stakeholders' engagement in fostering productive conversation regarding GE. This is identified as a strategic approach of institutions in devising practices that support individual employability enhancement (Divan et al., 2019).

5.1.3.2 Critical Perspective of HE Stakeholders

Although the participants' feedback reflected a shared critical perspective on GE, discrepancies still existed among stakeholders' interpretations. These findings indicated that the participants' perspectives on employability are influenced by their experiences and the context in which they function. This indicates that the factors that influence GE are assessed according to the specific situation of each HE stakeholder.

The graduate participants' views on GE emphasised a combination of technical skills, personal qualities, and extracurricular experiences that enable graduates to secure and maintain employment in the job market. The educators' depictions of GE emphasise the importance of practical skills, hands-on experience, and constant skill-upgrading exercises for graduates to be proactive in developing their skills. The employers' definitions emphasised essential skills such as digital awareness, entrepreneurial mindset, continuous learning and development, independent thinking, passion, and soft skills like communication, interpersonal, and

presentation skills. The employers' perspectives additionally referenced the importance of practical experience and staying up-to-date with the latest trends. These views underscored the importance of eclectic skills to graduates' employment.

However, in the present study, stakeholders' perspectives overlooked the relationship between employability and the scarcity of job market opportunities (Brown et al., 2003; Sin and Amaral, 2017). The aforementioned circumstance can have an adverse effect on graduates and HEIs; if there are no available job opportunities, graduates will not be able to employ the skills acquired during their education, leading to unemployment and underemployment. Overlooking the external influences of employability reinforces the view that the employment rate is the sole measure of employability (Cheng, 2021).

GE is interpreted as being primarily the responsibility of HEIs and graduates. As a result, HEIs will be pressured to raise the employment rate as a criterion of employability, and graduates will be subjected to the volatile job market (Higdon, 2016). This lack of clarity on the essence of employability warrants a consented mechanism of employability, orienting HE stakeholders toward the same goals and outcomes (Small et al., 2018).

According to a critical realist approach, clearly distinguishing between trigger mechanisms and pre-existing context is necessary (Cashian, 2017). Potential trigger mechanisms comprise the GE enhancements; this includes incorporating stakeholders' critical perspectives and partnerships into the GE social structure to enhance employability. By understanding the interaction between immediate triggers - such as stakeholders and industry demands - and the broader social context, including the education system, society expectations and government policies, HEIs can adopt a holistic approach to GE within a broader ecosystem in which graduates and stakeholders operate. As such, HEIs must assess the present state of GE from stakeholders' perspectives in order to respond effectively to the knowledge and skills demands of the industry (Shivoro et al., 2018).

5.1.4 Interconnected Mechanisms

This study presents GE as a dynamic process involving various factors. Identifying and analysing these factors contributes to a better understanding of how HE can prepare graduates

for the AI world of work. In addition, it provides valuable insights for stakeholders involved in student career development and employment outcomes. The study analysis identified key themes highlighting essential components of the GE process adopted by various stakeholders. These themes emerged as underlying mechanisms facilitating the transition from education to employment. The study findings underscored the interconnectedness between the aforementioned themes and the significance of enhancing GE among the research participants. These mechanisms incorporated a range of factors related to educational experience, career development and collective partnership.

Educational experience and career advancement are intertwined in a two-way relationship, significantly impacting each other. A university's quality educational opportunities focus on students' skills development, well-established career services, and networking opportunities that contribute to GE and career success in their chosen professions. The educational experience of a university is closely linked with the career development of students and their transition to the job market. The study participants highlighted the need for more commitment to the "*careers and employability learning curriculum,"* as remarked by Educator-P22, to prepare students for employment as part of their educational experience. On the other hand, the findings indicated that graduates' careers depend on education as a mean of continuous development in the evolving job market. Accordingly, graduates need to continue upskilling and reskilling through education "*to keep up with the times and engaging in a constant skill-upgrading exercise."Educator-P25.*

As the job market evolves, industry requirements and demands shape the opportunities available to graduates. In light of this, the study promoted education and student career development as means for graduates to remain connected, meet labour market demands and contribute to the industry's development.

5.2 GE Stakeholders Agency

Critical realism advocates that the reality of GE is not fully captured but instead exists beyond the stakeholders' views. However, the insights constructed in this study increase current understandings of the phenomenon and the influence of the HE stakeholders in enabling GE.

The second research question is: *To what extent can the agency of key stakeholders in higher education contribute to enhancing GE in the era of AI?*

This study defines stakeholders' agency as the capacity of stakeholders to act as agents in ways that contribute to enhancing GE. Their capacity to act is subject to the limitations and enablement under which key stakeholders' agencies are exerted. Therefore, the study provides a more objective approach to structure and agency to cultivate a thorough and comprehensive knowledge of stakeholders' views (Sewell, 1992). Findings from the present study associated employability with the elements that impact the stakeholders' agency and are critical to the stakeholders. In view of the capacity of HE stakeholders to act and make choices, it is feasible to understand how stakeholders' actions and societal factors shape employability. Hence, examining employability through a critical realism lens presents a broad view of various aspects of employability. The study's conceptualisation recognises that the social positioning of GE stakeholders influences their capacity to wield agency within the business school and job market environments and, in turn, GE.

5.2.1 Educators' Agency

Agency in HE is mainly related to educational policy revamps that aim to promote student learning (Moses et al., 2020). Educational policy reform aims to address the changing needs and demands in the modern digital world. It underlines developing students' and graduates' skills and competencies. The study's findings highlighted that the promotion of modern education shifts the responsibility of learning from being dependent on educators, instead illustrating students' agency in directing their own learning. Accordingly, students are viewed as collaborators of knowledge (Robertson, 2017). This realignment of roles between educators and students permits power sharing in the education journey. In this case, students have a voice over their learning, and educators adjust their practice to support students' learning and achievement (Robertson, 2017). In line with this, the concept of educators' agency has arisen in representing educators' initiatives to make choices and act purposely in practices that make a meaningful difference (Toom et al., 2015). Educators are viewed as the stakeholders most knowledgeable about the reality of student agency support (Cochran-Smith & Stern, 2015).

Accordingly, the educators in this project shared their experiences supporting students' agency to enhance their employability. The data analysis is based on the perception of different educator groups, including career advisors, deans, senior leaders, and faculty members. Although the researcher predicted that educators would not accept the responsibility of employability, surprisingly, the study's findings demonstrated their acknowledgement and embrace of their developing role in enhancing GE.

The results indicate that academics' influence on improving GE is primarily associated with knowledge delivery through teaching and learning practices. Graduates expect HEIs faculty members to enhance GE by cultivating student professionalism. However, the provision of university degrees is not the only aspect of improving employability skills. The findings highlighted various HE practices that aim to improve GE, including new academic programs, start-up support, industry advisory boards, Memorandum of Understanding (MOUs) with tech companies and industry, and work placement. However, additional new learning interventions and learner-centred practices are required to adequately address the skills gap and ensure graduate relevancy, as discussed in 4.1.1. The HE senior leaders also influence GE; the new, comprehensive role of HEIs requires HE leadership to align HE goals with national priorities and global standards.

The findings also highlighted how activities provided by career and employability professionals, including recruitment activities, internship opportunities, extracurricular activities, and career counselling, can empower graduates and enrich their professional portfolios. However, the employability and career team's efforts and influence are restricted by the limitations of other generative mechanisms of the GE social structure as they are based on the interaction with other stakeholders' agency. The study results highlighted the generative mechanisms that constrain educators' agency, such as the educational authority, lack of labour market information, professional development opportunities, financial stability, competition, fixed mindset and silo, lack of career resources, and students' engagement.

Data analysis highlighted the interdependencies between HE key stakeholders, depicting their influence and agency on the GE social structure. In return, the GE structure impacts the HE stakeholders' agency. This is aligned with Archer's (2000) argument that agency is always

collective, as agentic actions are essentially the outcome of interactions implanted in particular contexts, cultures, and structures. Therefore, educators' agency construction needs collective decisions and collaboration to overcome these constraints and, furthermore, to contribute to the enhancement of GE's social structure over time.

5.2.2 Employers' Agency

The UAE government advocates for youth employment through a scheme rewarding companies that support the employment of Emiratis (Al Shouk, 2022). Employers in the present study, particularly in private-sector companies, strongly supported the policy implementation. In addition, employers demonstrated positive attitudes towards their contribution to the enhancement of the GE agenda. The involvement of employers as stakeholders is often a reflection of the growth and diversity of the national economy (UNESCO, 2021).

As economic growth shapes the labour market skill demands, employers in the present study indicated that they do not place a high priority on the academic degree of graduates. Instead, they base their expectations on candidates' abilities and attributes. Accordingly, the research findings highlighted that the employers' agency in improving GE is primarily associated with their involvement and commitment to the national agendas, participation in the advisory boards, provision of expertise, sharing of labour market information, and support of curriculum design. In addition, the findings underscored the influence of employers in enhancing GE by providing quality work placement. Although previous work experience may increase the probability of graduates becoming employed, educators urge employers to place additional value on internships in their recruitment processes. Ideally, internships should provide students with practical experience in the workforce, training students to operate as actual employees and navigate real situations and challenges. Educators suggested that employers should endorse the internship experience through certificates that can enrich the student's profile.

Besides work placement experience, educators realise that students and graduates need career opportunities such as sponsorship, internship, and full-time job opportunities; however, this can be extended to include part-time jobs, mentorship, and job shadowing. The data iteratively highlighted the need for collaboration between academia and industries. However, the

interaction between HEIs and employers requires more commitment on the part of employers to adequately support students and graduates.

Because employers undertake the employment of graduates, they play a crucial role in interacting with students. Often, employers engage with students in their senior year through on-campus recruitment activities. Employers identify top candidates whose qualities best accommodate their job description. Employers have the ability to provide meaningful feedback to the graduates who did not pass the interview stage, offering rejected candidates the opportunity to improve their employability skillset and ultimately benefiting them in their future applications. Industry mentors are an effective resource in developing students' and graduates' skills, offering expert guidance and feedback to students and graduates.

In considering employers' agency in developing their support for the GE agenda, it is important to emphasise the structural constraints that the job market may exert on the employers' business operations. In light of this, the researchers examined the structural components that restrict employers' agency to support GE. The study findings highlighted the difficulty of accessing the right talent as one of these impediments. Misalignment between job roles and curriculum, the crisis and volatility of the job market, and graduates' employment preferences and readiness were further identified as factors stifling employers' GE agency.

5.2.3 Graduates' Agency

GE involves a process of interaction between the graduates pursuing jobs with employers and the educators taking actions that promote graduates' employability (Holmes, 2013). In line with this, the study findings highlighted that graduates' agency is essential; students must assume responsibility for their professional development and proactively participate in employability-related activities such as work placement and training (Tomlinson and Jackson, 2019; Trede and Jackson, 2021).

However, graduates' agency is constrained by many factors, such as the missing components of HE curriculum necessary for students to access the job market. In addition, graduates' agency is determined by certain psychological aspects, such as the graduates' possible struggle to accept employers' rejection. This indicates graduates' lack of preparation and readiness concerning the

job market reality; participants alluded to a phenomenon of graduates harbouring high expectations yet a lack of previous experience. This aligns with the argument that unmet skills applicability and relevance needs lead to fear and anxiety (Ryan and Deci, 2017). Moreover, graduates are challenged by the rigid recruitment processes and lack of job opportunities—difficulties compounded by the lack of employer feedback following unsuccessful interviews. Finally, the pandemic has made accessing the labour market more challenging for graduates due to the recruitment freeze strategies. These strategies refer to the companies' organisational decisions to temporarily limit their hiring activities in response to the economic conditions and business disruptions induced by the pandemic.

Given the interrelation between graduates' agency and GE structure, students' knowledge and skills should be viewed as complementary rather than as a central component of employability (Khan and Lundgren-Resenterra, 2020). However, there is a misconception about graduates' agency. Placing students in the driver's seat of their employability without equipping them with the right competencies is akin to offering them a licence to operate a vehicle without first offering fair driving classes (David and Maurer, 2022). Graduates often lack the terminology and understanding to apply their learning to employability and career choice (Daubney, 2022). Therefore, educators' agency is also necessary to revise agendas, curricula, and programs (Barnett, 2013). Employment prospects are often dependent on graduates' capacity to formulate agentic capital; agentic capital refers to their mastery in perceiving their capacity and limitations to rationally interlink different resources (Pham, 2021). It behoves graduates to brand their unique image in the labour market, explore opportunities, and make adjustments as needed to maintain their employability throughout their professional careers (Pham, 2021).

Accordingly, data analysis has led to the following conclusion: HEIs must do more to give students and educators a voice in employability. GE's social structure must be formed in a way to offer adequate agency to educators and students, facilitating a supportive rather than restraining role. HEIs must teach students to apply their learning and knowledge to non-academic, practical contexts. However, educators need support to make this achievable (Daubney, 2022). Supporting educators requires a collaborative effort from various GE stakeholders. It is essential to provide educators with the necessary resources, including labour market information, funding, and policy support to design programs that align with employer

demands.

The study analysis highlighted how graduates who have successfully entered the job market can provide insights into overcoming employability barriers. Therefore, graduates should be part of HE planning, and their perspectives should be employed as a guide to developing HE practices and policies (Higdon, 2016). In light of this, the UAE government has designed several policies to inspire youth participation in every sector and at all levels of governance and decision-making. These policies seek to infuse youth perspectives into the national strategy, recognising youth as key stakeholders and actors in the country's development (UAE Government, 2021). Consequently, graduate views can influence the future strategy and policy related to GE in HE.

In addition, graduates' employability can be influenced by individual traits. The research findings highlighted that graduates' personalities, preferences, and expectations, as discussed in section 4.2.2, could influence their learning agility and success of the transition process. This notion supports previous employability literature focusing on individual aspects of graduates, such as personality and attitudes (Clarke, 2018; Hillage and Pollard, 1998). The way in which graduates present their attitudes and competencies signals to hiring managers their potential fit – or lack thereof – in the workplace based on the organisation's cultural perspectives. In addition, as workplace demands constantly evolve, graduates are expected to acquire eclectic skills compatible with different careers (Williams et al., 2019). In this context, the study findings indicated that the skills developed by students at an early stage and throughout their lives could positively influence their employability.

In conclusion, graduates interact within the GE social structure through their learning journeys, transitions to the workforce, and relationships with various stakeholders that constrain or promote their personal growth. GE stakeholders are interested in ensuring that graduates acquire skills and knowledge applicable in real-world contexts to allow their organisations to compete and innovate. Therefore, their feedback to HEIs can support educational institutions in developing programs to meet the job market's needs. Consequently, graduates' agency is influenced by stakeholders' collective agendas on learning relevant to real-world topics and problems. These findings underscore the importance of the industry-HEIs relationships in shaping the agency and employability of students and graduates. Industry stakeholders can share

valuable insights about the latest industry trends and provide career, employment and networking opportunities to help graduates enter the workforce. Such relationships influence graduate career development and guide institutions to accordingly align their efforts to accommodate AI advancement.

5.3 GE Ecosystem Model

Critical realist research focuses on investigating the relations between GE's social structure and the potential influences of its mechanisms on agents' actions (Cashian, 2017). Applying this view, GE relates to stakeholders' engagement with the surrounding employability social structure and aims to facilitate graduates' successful transition to the job market. Accordingly, the GE ecosystem model proposed by this study was developed by conducting a thorough analysis of stakeholders' experiences. The current research uses an inductive approach to determine the underlying causal relationships that depict the GE social structure and the interconnected mechanisms, as discussed in 5.1.4. The research identified these relationships within an employability social structure using the Gioia method. The analysis phase involved searching for relationships between and among the themes and categories. This technique enabled the construction of several overarching dimensions that form the basis of the emergent GE model. This method was not linear but rather formed a "recursive process-oriented, analytic procedure" (Locke, 1996, p.240) that persisted until the study captured the theoretical relationships used to develop the GE framework. The final data structure, depicted in Figure 5.3, shows the second-order themes that constitute the basis of the GE model.

The nature of the relationship was explored through the stakeholder theory perspective (Freeman, 1984). The stakeholders' capacity to wield agency within GE's social structure was discussed in section 5.2. Accordingly, discussions with stakeholders formed the basis for devising a critical realist structure for employability and ultimately proposing a GE ecosystem model, as shown in Figure 5.3. The GE ecosystem model, specific to the UAE context, is formed from the concepts and structures that evolved from the data analysis. The elements in Figure 5.3 fall into three categories: GE social structure, stakeholders' agency, and the two-way interaction of these elements. What makes the GE ecosystem paradigm distinct from other frameworks is the emphasis on the phenomenon's individual and contextual dimensions. Various prominent

aspects, including institutional, national, and organisational factors, must complement the individual level (Van der Heijden et al., 2020). Evaluating these factors alongside individual-level factors, such as graduates' skills and preferences, is essential for a complete view of how graduates negotiate job market opportunities. In addition, the model depicts GE as a process by which they transition to the labour market (Khan and Lundgren-Resenterra, 2021).

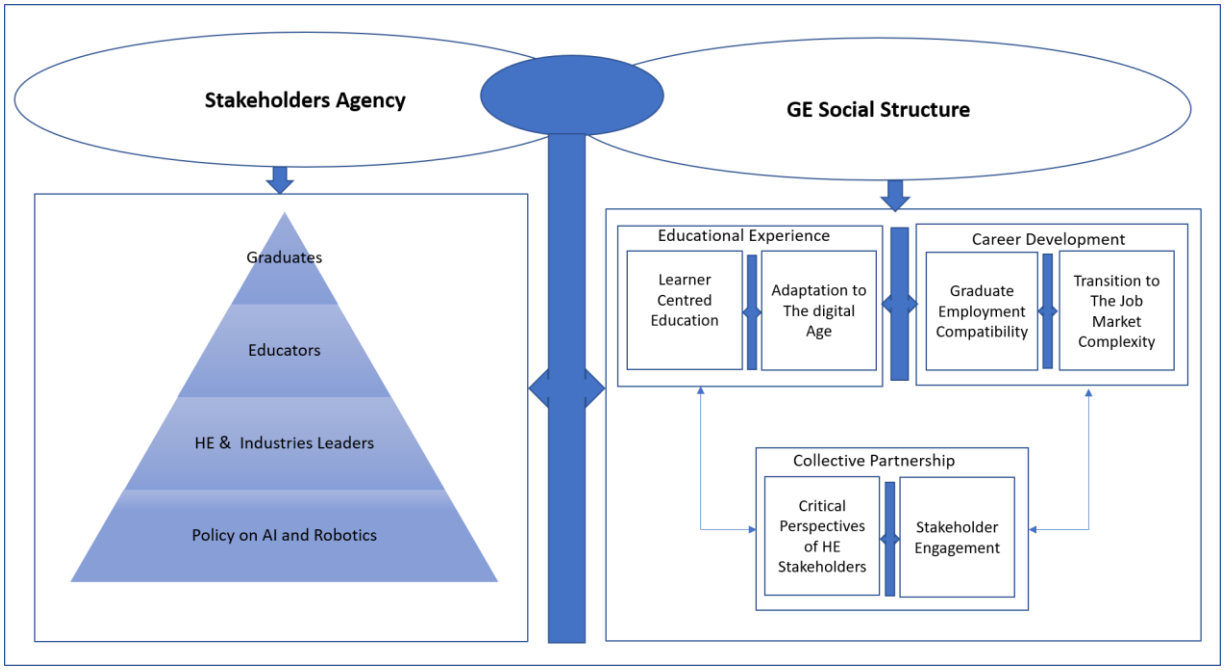

Figure 5.3: GE Ecosystem Model

The proposed GE ecosystem model represents the interaction between the principles of the United Nations (UN) sustainable development goals (SDGs), in particular, goals 4, 8, 9 and 17, and thus focuses on education, work, technology, and partnership (UN, 2022). The research adopts a distinct approach to GE compared to the skills-based frameworks currently prevalent in employability literature. This model was inspired by Hallett's (2012) statement, "It is refreshing to think that 'employability' might grow into something broader than a particular set of skills and competencies, into a richer idea of graduate readiness" (p.30). In this context, a broader approach to employability is achieved when universities focus on the learning aspect of employability rather than the static quality of possessing skills (Divan et al., 2019).

GE has been examined considerably over the last decades. However, the extant research has primarily been informed by the graduates' skills and ability to gain employment based on the job market conditions. This research aimed to rectify this oversight by employing a broader understanding of GE in the new era of AI, transcending the traditional and predominant focus on skills and competencies. GE is crucial for all HE stakeholders as they aim to bridge the gap between academia and industry. The purpose of this model is to allow a better understanding of the aspects contributing to enabling or constraining GE.

Figure 5.3 introduces the GE ecosystem model, highlighting its key components. The model can be applied in future research to guide the development of employability strategies to foster graduates' career success. The relationship between social structure and agency, as represented by the GE model, provides a more comprehensive understanding of the factors that influence graduates' success in the job market. This includes considering factors like learning solutions, adaptation to the digital age, graduates' compatibility, the nature of the transition to the job market, and stakeholders' perspectives and engagement. The model provides a structured approach for educational institutions to enhance their programs and services to improve GE. The model provides a shared understanding and language across various GE stakeholders about the key components to enhance GE. This includes identifying areas to improve the educational experience and curriculum development, such as integrating AI and machine learning, business law curating UAE laws and public speaking components.

HEIs provide various learning opportunities beyond the classroom and, furthermore, promote lifelong learning and practical experience. This implies that graduates with solid educational backgrounds may have greater employability and career prospects. In addition, enhancing career services' scalability helps to facilitate graduates' employment compatibility by involving exposure to the work environments and professional networks that support graduate career development. In line with this, the GE model emphasises the importance of understanding the job market and ensuring that graduates' competencies and qualifications are compatible with the current and future needs of the market. The benefit of using the GE ecosystem model as a research-based framework is that it is evidence-based and grounded in data, which can help ensure that the strategies and interventions implemented are effective in enhancing graduate outcomes.

These mechanisms suggest that the model views GE as a multifaceted concept that is influenced by a range of factors. Graduates who attend universities that pay attention to these mechanisms and display job readiness qualities are more likely to be more employable and better equipped to succeed in the workforce. However, it is also important to note that the model construes graduate employability as depending on the state of the job market and the availability of job opportunities. The model suggests that GE is not just the responsibility of individual students, but also of the broader educational and professional ecosystem. Higher education institutions must collaborate with employers, industry associations, and other stakeholders to ensure that their programs are aligned with the needs of the labour market.

This chapter have discussed the findings relative to stakeholders' views on GE for business students in the age of AI. This study's findings have highlighted the complexity of the interplay between GE's social structure and stakeholders' agency for employers, educators, and graduates. The data analysis identified the key mechanisms contributing to enhancing GE and explored stakeholders' role as agents in achieving successful outcomes. By developing a GE model that integrates these factors, the research provides a valuable resource for educators, employers, and policymakers aiming to enhance GE.

To conclude, the study has investigated stakeholders' perspectives on GE in the age of AI. The overarching research question was divided into two sub-questions. The first sub-question investigated the underlying mechanisms that shape employability outcomes— Figure 5.1 and section 5.1 presented a detailed analysis of the findings. The second sub-question regarded how the agency of GE stakeholders can contribute to improving GE. This research has found that stakeholders accept GE responsibility as central to their changing role. Section 5.2 delivers an in-depth analysis and examination of the results. This study has proposed a GE ecosystem model (see Figure 5.3) that provides a framework of the factors that enable or hinder GE enhancement. The research question is approached by conducting detailed data analysis to derive significant findings and critically evaluated them in light of the existing literature. The next chapter explains the further applications and relevance of the research.

CHAPTER 6: CONCLUSIONS, AND RECOMMENDATIONS

The study's findings shed light on the factors enhancing GE and the stakeholders' agency in achieving successful employability outcomes. Based on the findings and the critical perspectives of key HE stakeholders generated in this study, the current research proposed a GE ecosystem model applicable to the era of AI (see Figure 5.3). This chapter is categorised as follows: first, an overview of the study is provided, followed by a discussion on the theoretical implications, the practical implications, and the policy implications. The chapter culminates by exploring the present study's limitations and areas for future research.

6.1 Research Overview

The earlier chapters of this study presented a literature review of GE, AI, and digital transformation in the corporate world and business schools. The findings section of the work emphasised both the rapid transformations of business and industry as a result of embracing AI and business schools' stagnancy in meeting the labour market demands generated by this advancement. As a consequence of this phenomenon, technological progress outside academia is projected to increase the gap between business graduates' skills and market demands, a concept often overlooked in the employability discourse. Therefore, the study integrates the perspectives of different stakeholders, including educators, employers, and graduates, to understand GE in the modern digital age.

The study employed a critical realist research approach and case study methodology. Subsequently, the qualitative data applied Gioia inductive logic to interpret grounded theory. The UAE was chosen as the research context. Therefore, GE in the era of AI was explored using a single case study for the research questions underlying this study, namely: *How should business schools respond to the changing demands of stakeholders in the AI-driven world of work to enhance GE?*

The overarching research question is divided into two sub-questions.

- What collaborative mechanisms among key stakeholders in HE underpin the social structure of GE in the era of AI?

- To what extent can the agency of key stakeholders in HE contribute to enhancing GE in the era of AI?

The first step to investigating GE in the era of AI is to understand the mechanisms causing the skills gap and identify appropriate institutional practices to address this gap. The findings of this study draw on data generated from the interviews and document reviews involving HE internal and external stakeholders. The research applied the critical realism philosophy, whereby the interactions between social structures, mechanisms, and agency are understood to have guided the way participants perceived the reality of GE. In order to achieve the aim of the study, the exploration focuses on understanding both the mechanisms of GE and stakeholders' roles as agents in preparing graduates for the new era of AI.

6.2 AI and Robotics Towards the Evolution of Sustainable GE Ecosystem

According to the AI national strategy, the UAE aspires to become a global leader in AI by 2031; this requires a high-level commitment to educating local talent capable of satisfying the growing demands of the job market. Accordingly, the present research intended to explore how business schools can respond to the stakeholders' changing labour market demands – resulting from rapid AI and general technological advancement – to enhance GE. The exploration solicits stakeholders' perspectives regarding GE, the cause of the skills gap, skills demands, the changes in the workplace and business schools caused by emerging technologies, and the challenges of stakeholders in the transitional phase from education to employment. The data analysis identified key mechanisms contributing to enhancing GE and the influence of stakeholders' agency in achieving successful outcomes. The research findings led to the development of a GE ecosystem model that integrates these factors.

6.3 Theoretical Implications

The following theoretical implications emerged from this research:

6.3.1 Stakeholder Theory

The current body of literature neglects ST in the context of GE. Therefore, this study answers the calls of Mhlanga and Moloi (2020) and Nankervis et al. (2017) to apply stakeholder theory to graduate employability. The central argument of ST is that an organisation's true success lies

in satisfying all its stakeholders and addressing their needs and interests (Freeman, 1994). The study employs Freemen's (1994) framework in arguing that stakeholders' engagement enables GE, which, in turn, creates value for all stakeholders. Accordingly, this research demonstrates that ST can be used to understand the complex relationships between stakeholders, including graduates, employers, and educators.

By highlighting the different levels of agency among stakeholders, this study emphasises the importance of a multi-stakeholder approach in shaping GE. Furthermore, it highlights the social position of stakeholders as agents in enhancing GE. This indicates that stakeholders are not inactive beneficiaries but engaged participants in the GE structure. Therefore, stakeholder groups are capable of increasing the efficiency of initiatives advancing GE. GE stakeholders, such as employers, educators, and graduates, have different interests in preparing graduates for the job market. However, ST balances the diverse interests of stakeholders to achieve long-term value (Birindelli et al., 2018). The results of the present study align with the findings of Reynolds et al. (2006), which highlighted the importance of harmonising stakeholders' interests in decision-making processes to gain their trust and legitimacy as a means of achieving the organisation's goals. In addition, the study supports the existing literature findings pertaining to the powerful influence of stakeholders on the strategies applied by organisations (Epstein et al., 2015; Gallardo-Vázquez and Sánchez-Hernández, 2014). This belief guided various organisations' strategic management to specify and prioritise stakeholders' demands, as well as to engage stakeholders in organisational activities (Langrafe et al., 2020). As such, business school approaches necessitate a shift toward more engagement with GE stakeholders (Thomas and Ambrosini, 2021). Including stakeholders' agency in explorations of improving GE offers a more nuanced interpretation of the role of stakeholders in shaping GE outcomes.

The concept of value creation is explicitly adopted by stakeholder theory (Kayikci et al., 2022). It emphasises the stakeholders' capacity to create value for the institutions (Audretsch et al., 2022). The debate surrounding stakeholders' management approach in substituting the economic view has contributed to new collaborative relationships among shareholders as well as shared responsibilities (Beisheim and Liese, 2014; Civera and Freeman, 2019; Dodds, 2015). It highlights the purpose and commitments of businesses in a broader societal context towards an inclusive approach that considers the interests of various HE stakeholders. HEIs must consider

the stakeholders' needs, interests, and concerns in developing GE strategies and initiatives. By adopting this approach, HE transcends maximising profits and considers its broader impact on stakeholders and society. In the same vein, the present study findings supported that partnership and responsibility for enhancing graduates' transition to the job market is a collectively shared value among GE stakeholder groups. These responsibilities entail eclectic actions such as curriculum alignment, work placement, industry partnership and career and learning opportunities. This collaborative approach provides students with industry insights that improve graduates' job prospects and career growth. HE stakeholders' commitment to GE aligns students' skills with business needs, enabling them to stay relevant in the modern digital age. This, in turn, improve organisational competitiveness in the market, fosters economic development and promotes a thriving society.

In addition, the findings highlighted the importance of HEIs in serving the 17 UN Sustainable Development Goals, particularly goal number 17, which concerns “Partnerships for the Goals” (Globalgoals, 2022). The study furthermore supports the findings of Butcher et al. (2011), which suggested that stakeholders’ commitment and genuine collaboration represent the shift from transactional to transformational partnership.

The data analysis indicated that the responsibility of initiating and coordinating GE efforts with other stakeholders should not rest exclusively on the shoulders of academics. This aligns with Bhattacharya's (2021) results which underscore employers' responsibility in enhancing employability. In addition, Pham’s (2020) study suggests that HE stakeholders should share responsibilities to help students access and develop the resources needed to achieve employability success. The knowledge of both employers and academics can provide students with a more comprehensive outlook on employment (Lock, 2019). Therefore, academic program development in HE should be viewed as a collective social responsibility (Al-Sharafi and Rubai’ey, 2020).

The findings of the present study emphasised that it is in the best interest of business schools and their stakeholders to produce graduates who can quickly integrate into the job market and add value to GE stakeholders. This indicates the need for an alignment between business schools and their stakeholders that can be formalised in institutional strategy and action to ensure the

consideration of all stakeholders' needs and expectations in the future. The adoption of ST in the context of GE can provide a stronger relationship between stakeholders, subsequently improving their performance and efficiency in enhancing GE. By integrating GE stakeholders into ST framework, the present study provides a more comprehensive understanding of the interests, demands, and perspectives of HE stakeholders affected by GE. Accordingly, the shared responsibilities and values generated in this study expand stakeholder theory leading to more informed strategies to enhance GE. The study provided new insights into the agency of stakeholders in shaping GE outcomes.

6.3.2 Agency and Structure

As discussed in Chapter Three, the present research relies on Archer's (2000, 2003) framework. This ideology is rooted in the critical realist paradigm and theorises an interplay between structure and human agency. The qualitative design of the study served as a basis for generating more abstract concepts from the data to construct a GE ecosystem model. Accordingly, the study proposes a GE ecosystem model (Figure 5.3) developed from the study's findings. The interplay between stakeholder agency and structure supports an interpretation of GE as a social phenomenon. The nature of the dynamic between employability structure components and stakeholders' agency provides an understanding of the relationship between various factors shaping employability outcomes. In addition, the model draws attention to how stakeholders' actions and the wider socio-economic context interact to impact GE outcomes. It recognises that employability is influenced by different stakeholders and requires a collaborative effort to achieve. The framework acknowledges that GE is associated with the capacity of stakeholders to respond to the rapidly transforming job market conditions. As a result, the GE model demonstrates the complexity of GE, which proves there are other impacting elements for employability (Abd Majid et al., 2020).

This study supports Pham and Jackson's (2020b) finding that the complexity of employability results from differences in stakeholders' expectations at different levels. This concept can advance the theoretical understanding of GE to inform the development of new, accurate theories relevant to GE, thus expanding the current theoretical frameworks beyond the employability skill components. In addition, it recognises the limitation of current theories and

frameworks related to GE, such as the traditional human capital theory. Alternatively, the new human capital theory proposed by Brown et al.(2020) " rejects the idea of treating humans as capital as the route to individual freedom via investment in education. It signals a shift in economic priorities from making people fit for existing economic arrangements to making existing economic arrangements fit for human purposes" (p.213). The proposed GE model allows for extrapolation to other theories and research exploring proactive approaches to GE, such as the ST and the new human capital theory. By constructing a GE model, the research contributes to the currently limited sociological and critical perspective of GE (e.g. Tholen 2015; Tomlinson, 2017). The study adds to the few studies seeking to identify the interplay between employability structures, mechanisms, and agency with the intention of enhancing GE (Cashian, 2017; Delva et al., 2021; Lundgren-Resenterra and Kahn, 2020).

The proposed GE model can foster comparability between studies by standardising the employability framework, in turn, guiding hypotheses about the factors that contribute to GE outcomes. The GE model proposed in this study in the context of UAE comprises various factors that have proven significant in enhancing GE. Similarly, in non-western countries where the labour market may have different conditions and employment demands, the factors in the UAE context can be evaluated in tailoring strategies of non-western contexts. In addition, although the GE ecosystem model is designed in a business school-specific context, it can be applied to other disciplines. Accordingly, the study contributes to broader theoretical knowledge and academic debate on employability relevant to HEIs and the labour market.

6.4 Practical Implications

The study aimed to explore the GE phenomenon in the age of digital disruption by analysing the interplay between GE structure and stakeholders' agency. In light of this, the study procured stakeholders' critical perspectives on HEIs' insufficiencies in producing employable business graduates. Participants suggested curriculum and internship revamp to address this issue, mainly focusing on enriching the graduates' human capital. Findings from the research signal that the best practices, such as the alignment of university educational programs with the national agenda of the country and the periodic assessment of the university curriculum and internships, are critical to developing GE. This finding corresponds with the results of previous studies

regarding the role of university practices in enhancing GE (e.g., Mgaiwa, 2021). However, the present study also discussed the role of external factors in affecting graduates' transition to the modern job market. Therefore, a more holistic direction to enhancing GE is generated by this study through the GE ecosystem model. The GE ecosystem framework intends to encourage educators, employers and policymakers to reflect on which factors of employability they consider valuable and which they feel may be neglected.

This research falls within the context of AI disruption. This is a new and contemporary aspect of the existing body of GE literature. The present study clearly showed the drastic changes in the employment landscape that impact GE. As the traditional forms of knowledge delivery are replaced by digital and new instruction (Lee et al., 2019), adequate technical and digital infrastructure is essential in helping HE harness emerging technologies and the power of data to improve the efficiency in HE systems. The present research suggests utilising big data in learning solutions and increasing the use of AI in HE. This is consistent with Rotatori et al. (2021) recommendation that HE should recognise the increasing complexity of emerging technologies like machine learning and AI. Employers play a crucial role in developing AI and robotics. It is, therefore, a privilege for HEIs to work with stakeholders from the industry, academia, tech companies, and government to address AI's technical and societal challenges (HAI Stanford University, 2022). In line with this, the study proposes a modern approach by incorporating the adaptation to the digital age component into the GE ecosystem.

Although many studies focus on the transformations born from emerging technologies, they connect future skills directly to digital skills, which – as crucial as they are – offer a limited understanding of future skill requirements (U-D.Ehlers, 2022). However, the study provided a better understanding of the skills and competencies as explained in section 5.1.2.2.1 – beyond digital skills – graduates should possess to succeed in the AI age. At the practical level, this will inform HE stakeholders' practices regarding the current and future skills development inspired by technological advancement.

The study findings highlighted the need to blend conventional and student-centred learning methods that meet students' diverse needs and preferences. By adopting various learning interventions, HEIs can help graduates cultivate a broader range of qualities valued by

employers. However, this also involves investing in the educators' professional development to provide this quality of educational experience to students and graduates; HEIs must train their educators to design a customised curriculum that includes appropriate learning solutions, giving students ownership of their learning and enhancing the quality of their educational experience. The findings emphasised that the diversity of learning solutions plays a critical role in bridging the gap between universities and the real world, immersive industry projects, and personalised learning experiences for students. This conclusion aligned with the findings of other studies suggesting that training is essential for educators to develop the appropriate learning portfolio—given the insufficiency of innovative pedagogies to independently enhance the quality of education (Hora et al., 2015; Lorange and Thomas, 2016). Institutions that have successfully embraced new learning solutions offered support and training for students and faculty adapting their subject content and delivery (McKinsey and Company, 2022).

The present study's findings highlighted students' career development as a paramount factor that impacts GE. These results emphasise the importance of providing clear and accessible career development support to students and graduates in effectively directing their professional careers. However, university career services are typically delivered to students on a voluntary basis, generating poor engagement. These findings can inform GE stakeholders to promote practices that prioritise career development given their relevance to the educational curriculum and labour market demands. In addition, HEIs may need to consider scaling career services and expanding their mission as part of a strategic graduate employability focus. The employability professionals who participated in this study recognised the challenge of the careers department to handle increasing demands and provide effective career support to students and graduates. As stated by Educator-P22, *"We have a very small careers department, and sometimes scalability is more and more difficult now."*

The career readiness literature has been primally informed by a perceived need to prepare students for today's job market. Instead, HEIs must be future-focused (Bridgstock, 2017), Because the accelerated pace of technological evolution has introduced a new dimension to employability, HEIs must foresee and project potential labour demands created by technological advancements. This will guide all GE stakeholders to contribute to the career preparation process to produce a more work-ready workforce. For example, employers can be proactive in

sharing their requirements with HEIs, providing career development opportunities before students' graduation. In addition, employers' clarity in defining clear career pathways with specific expectations can guide students in understanding the opportunities offered by employers fit into their long-term career aspirations.

The study highlighted the complexity of the transition phase from university to the job market. This difficulty is associated with the rigid hiring and assessment process in which graduates may wait longer than six months to receive a job offer. In addition, in a highly competitive country like the UAE, it may take even longer for graduates to find jobs that satisfy their expectations and support their career aspirations. The data analysis revealed that the six to 12 months after graduation was often insufficient time for graduates to land their first job. Most of the graduate participants of this project were unemployed at the time of the interview. This indicates that the employment status of the graduates after graduation questions the GE measurements. Therefore, measuring GE's success based solely on indicators of successful transitions to employment within six months or 18 months after graduation may not be a reliable measure of graduates' overall career potential (Clarke 2018). This measure perpetuates the confusion between employability and employment and places more emphasis on short-term outcomes at the expense of longer-term outcomes (Pham, 2023).

The study suggests that evaluating graduates' employment outcomes at different times can provide a more robust picture of their employment versus their employability. The short-term outcome (six months) can provide insight into how fast graduates can find employment after graduation. This can be particularly helpful in assessing the usefulness of career services, quality of education, learning solutions, and industry support programs designed to engineer graduates' successful transition into the workforce. However, there is also a need to evaluate their employment outcomes over extended periods to gain a more accurate insight into GE. Therefore, the attention to the timeline of conducting the assessments can be constructive for evaluating GE and the adaptability of education in addressing changing job market needs. This may require that HEIs establish new industry partnerships to create long-term career opportunities.

Many scholars suggest closer university-industry collaboration as a possible solution to the skills gap (Langrafe et al., 2020; Otache et al., 2021). However, these skill gaps are also

attributed to the complexity of the transition to the job market, as discussed in Chapter Four. Therefore, this research identified underlying mechanisms to be linked to the GE ecosystem. Given that employability stakeholders tend to work in a silo, as explained by the participants, HE and business schools must identify stakeholders' needs, expectations, and roles and responsibilities within the GE ecosystem to embrace changes collectively and sustainably. Therefore, defining the stakeholders' changing roles will help clarify what contribution and insights they can bring into the GE ecosystem.

From a broader perspective, the study highlighted the need for a shift in the nature of the relationships between HE stakeholders, focusing on the link between work, education, partnership, and technological support, which are all part of the 17 sustainable global goals (UN, 2022). According to Žalėnienė and Pereira (2021), HEIs are key agents in the education of future graduates who will contribute to the successful implementation of the UN Goals (SDGs). This establishes a close link between sustainable development goals and GE ecosystems. Therefore, the study can provide a practical application that engages more stakeholders representing these global domains. In addition, since GE is a common topic across different domains, this study can be applied to different fields such as HE, career development, HR, and possibly technology.

6.5 Policy Implications

The present study has provided insight into the external factors guiding graduates' transition to the job market, such as trends and challenges. In addition, the study highlighted the role of stakeholders' agency and GE social structure constraints in limiting stakeholders' agency to contribute to GE. This information can help policymakers design policies and programs to effectively align education programs with the job creation and market demands necessary to support GE. As discussed in Chapter Three, the UAE vision regarding the Emiratization policy mandates the inclusion of Emiratis in the job market, particularly in the private sector. As a result, this requires a considerable investment in new pathways and educational programs to facilitate the economic development of the UAE. In line with this, there is a need for policymakers to work with HE stakeholders to identify and assess the requirements of the new programs most needed in the coming years, as well as identify in-demand specialisations and occupations of relevant industries in the UAE.

Therefore, the study recommends remodelling education systems in alignment with UAE strategies to meet GE needs at the national level. This is aligned with other studies' implications in enhancing GE (e.g. Mgaiwa, 2021). The findings of the present study emphasised that improving GE requires involvement from all stakeholders; engagement and collaboration is necessary in identifying enduring solutions to GE concerns in the UAE. The claims of HE stakeholders to align education systems with the national agenda require urgent attention from HE; HEIs must be adjusted to produce graduates who can meet the changing demands of the labour market. Therefore, designing robust policies for enhancing employability should be a priority for HEIs (Igwe et al., 2022). In light of this, the policymakers must consider developing strategies to effectively engage all key stakeholders in HE. Opening a window for a GE policy would allow for the timely implementation of change in HE to adjust to the fast pace of industry transformations. The research suggests that legitimising GE at the national level may lead to more engagement by industries, inspiring them to communicate their demands to HEIs. Policies can play a significant role in fostering sustainable relationships between industries and HEIs, as well as among other HE stakeholders.

As highlighted in the data analysis, youth are emphasised as key stakeholders in the UAE. Therefore, the study suggests including students' and graduates' voices to inform GE policies in the UAE. Closer collaboration between HE key stakeholders increases graduate competitiveness as prospective job candidates and facilitates a collective response to the rapid changes in the stakeholders' demands. The policymakers' support of GE policy could involve incentivising stakeholders to collaborate; this could entail offering funding or rewards to cooperative organisations as a means of developing graduate programs that support longer-term job placements or work experience opportunities.

The study highlighted career development as a critical factor that impacts GE. Therefore, the support of policymakers can be extended to fund and scale university career services. This could entail developing students' careers through counselling or, again, incentivising employers to create more long-term career opportunities for graduates, such as apprenticeship programmes. In addition, the study will help policymakers foresee AI's impact on HE, enabling them to make informed policy responses and meaningfully reflect on the future direction of GE. Policymakers can invest in developing technological infrastructure, learning solutions, and AI-powered

platforms. AI platforms can enhance GE by providing access to personalised learning and development opportunities to meet new job market demands. These potential advantages indicate the instrumental role of emerging technology in providing career and educational resources. Accordingly, the present study provides evidence of the link between career development, educational experience, and adaptation to the digital age, as presented in the GE ecosystem model (see Figure 5.3).

In conclusion, the study's implications highlight the need for more comprehensive and holistic interventions and policies that consider the complex interplay of different factors and stakeholders in shaping employability outcomes.

6.6 Limitations of the Study and Future Research

The study's limitations include its restricted scope for generalisation due to its research design as a qualitative study. The study intended to form the findings in a proposed GE model that will not be tested in practice as part of this research. However, the benefits of using 'purposeful sampling' in this research included the representation of diverse groups and, in turn, the promotion of internal and external generalisability (Maxwell, 1992, p.293). In terms of external generalisability, the selected sample, as shown in Chapter Three, included nine different universities from both private and federal levels and 15 different employers from the private and public sectors. In addition, the entire spectrum of business school majors is represented across all participating universities. In terms of internal generalisability, the educators' sample is characterised into three major categories, academics, deans, and employability professionals, to represent different experiences at each level. All the participants working in UAE are from 18 different nationalities, as represented above, and their profiles were selected purposefully to enter the GE discourse based on their own experience.

One of the primary limitations of this research is that employability in the age of AI is a relatively a new topic. As such, it has not been researched adequately in UAE. I – the researcher –was consequently confronted with inadequate responses from students and senior leadership. These deficiencies warranted supplementing participants' views with public data, such as panel discussions, videos, and documents, to increase the validity of the research. Therefore, multiple tools, including LinkedIn and emails, were employed to encourage active participation and

recruit the sample for the study. Likewise, interviews were conducted via the mediums of email interviews, qualitative surveys, or virtual interviews, in consideration of the busy schedule of the participants. Since the study is qualitative-oriented, the researcher realised that the interpretation of data might appear subjective. However, when the analysis is conducted in a rigorous, reliable, and valid fashion, as in the case of the present study, the data provides a unique opportunity to understand the phenomena.

The case study analysis was adopted and analysed in the context of the UAE. Given the predominant focus on business graduates' employability, AI national strategy, and sample size for each stakeholder group, the study may not generalise the findings to other majors or contexts. Therefore, future research about GE could validate the employability model developed in this study. This would involve testing the model in different contexts or with different populations to assess its generalisability. Additionally, future research could assess the effectiveness of interventions offered by stakeholders in the present study to address the factors highlighted in the GE model. Further research could also examine the role of emerging technology and digital skills in employability, exploring the interaction of employability with other related mechanisms. Finally, future research could investigate the potential of collaborations among different GE stakeholders to promote employability, as suggested by the agency component of the model.

In brevity, the research findings attributed the skills gap to the absence of a comprehensively articulated GE ecosystem – beyond the skills-based and employment outcome approaches – that integrates the HE stakeholders' voices and facilitates genuine collaboration among stakeholders. Employability is not exclusively confined by HEIs but also by the broader external factors, specifically the labour market. Therefore, the alignment between GE stakeholders is crucial to address the dynamic nature of employability. Accordingly, the study concludes that neglecting to view employability in the new digital age as a complex phenomenon results in oversights pertaining to the influence of stakeholder agency and other mechanisms through which different factors influence employability outcomes in open systems. As such, a narrow approach dismisses various factors fundamental to graduate employability (Naess, 2010). The employability mission necessities view GE as a social structure involving various stakeholders interacting with each other and a broad ecosystem.

Given that AI has become a priority of the UAE government, the emergence of AI and technological advancement adoptions has created opportunities to maximise HE's potential, in turn paving the path for graduates' job market access. Therefore, the performance of HEIs and business schools in achieving their new role requires a deliberate effort to understand the stakes of each stakeholder group in HE and create value that establishes a long-term relationship. Education systems must shift towards developing new values and genuine collaboration with their stakeholders (Thomas and Ambrosini, 2021). In doing so, they can continuously create and sustain business graduates' employability and create unique value for HE stakeholders.

The UAE context of this study added new employability insights and knowledge relevant to non-Western countries. This research contribution lies in understanding the agency of HE stakeholders in enhancing GE in the digital era. By using critical realism and empowering the voice of different HE stakeholders, this research has explored the types of impediments, trends, and factors that impact GE. Critical realism draws attention to realities in which GE ecosystems are open systems influenced by external factors, representing a new perspective and knowledge of GE. The informed analysis of stakeholders' views and experience provides insights for current and future HE and industry leaders determined to drive change in an uncertain and complex work environment.

The study concludes that business schools can play a crucial role in enhancing GE and preparing graduates for success in the AI world of work. Enhancing business graduates' employability requires addressing both stakeholders' agency and larger structural issues impacting the labour market and education system. GE does not just refer to employment outcome; it is the collaborative mechanisms among HE stakeholders in affects business graduates' success in the employment market. The study elucidated these mechanisms, defining the complex interplay between stakeholders' agency and GE structure. It was ultimately concluded that stakeholders' agency acts as a trigger mechanism that enables GE.

Accordingly, the research adds to the limited studies seeking to identify the employability structures, mechanisms, and agency through which GE is enabled. In addition, the research contributes to the competency gap analysis by informing the development of future skill schemes. The primary contribution of the study, however, includes the establishment of a broad

GE ecosystem generated from stakeholders' perspectives; this model can guide further research and test hypotheses about the factors contributing to employability outcomes.

Reflections on the DBA journey

This doctoral journey has been an evolutionary process of considerable development and learning. I have grown as a researcher in terms of my ability to share views about what is required for graduates to stay employable in the new digital age. I have entered this intellectual world that offers transitional learning spaces to develop a new sense of professional identity. During the transition into the DBA in Management Studies, I was conscious of the knowledge gap between my educational background in computer science and the research target knowledge. However, the structure of the DBA program has allowed for such alignment throughout the taught program and thesis phases. Ultimately, I have realised the substantial value of connecting my professional experience with academic knowledge.

When I started the journey, I thought it would be a milestone in my professional career and a consolidation of my experiences. I soon realised that this was the starting point. Actually, my interest in the journey of learning has led to self-imposed deadlines, which was the motivational factor for the words to flow in writing the thesis chapters. The lesson I learned is that DBA requires a great deal of patience and determination. Throughout the process, I formed my work with a solo effort realising that I am the key player in this journey. However, I would not be where I am without my supervisors' guidance and comments, which significantly impacted my academic progress. Accordingly, I have progressed through an itinerary to make sense of epistemological and ontological realms that I have learned to evolve as a critical realist researcher.

The journey was influenced and shaped by the scholars and participants I encountered at different stages of the process. They were willing to support my study even though I had not met them before. This experience taught me the benefits of asking for help, which is an important skill to have. The data analysis phase was the most enjoyable part of the research, which kept me enthusiastic and curious until the production of the GE model.

At the end of this journey, I have developed many competencies necessary in the professional and academic worlds. In addition, this journey has helped me identify new areas of interest in HE, such as programming for AI development, educational technologies and learning psychology.

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APPENDIX

Interview Questions for Employers	
1	Do you use any Artificial Intelligence (AI) applications in your company?
2	In which departments of the company are AI projects used?
3	Have you heard about the UAE National Strategy for Artificial Intelligence? How is the UAE strategy for AI translated into your company's strategy?
4	How does the use of digital and AI technologies or platforms influence your organisation's employment strategies?
5	In your opinion, what is the impact of AI on the skill demands of business graduates in your company?
6	In going through business graduates' CVs, do AI technology skills make a difference in the hiring process? Suppose someone has studied in an AI course; do you take it as a merit and therefore think that he/she will behave differently from someone else who did not take any AI technology courses?
7	What do you expect from a newly recruited graduate? Do you think that the abilities of new business graduates match your expectations?
8	Describe a top graduate.
9	What are the requirements (technical and soft skills) your organisation is looking for in business graduates?
10	When deciding to employ a new business graduate, what are the main factors you consider (e.g., specialisations, competencies, GPA, certain criteria)?
11	How does your company identify the skills and personal characteristics required from new hires?
12	What tools and criteria do you use to assess the possession of skills and attributes of new business graduates during the employment process?
13	How important is university name or status on your expectation of employability for business graduates?
14	What do you consider to be the areas of greatest challenge for graduates in the university-to-employment transition?
15	How can business graduates stay relevant and employable in the era of AI and rapid technological advancement?
16	What skills should be incorporated into the business education curriculum?
17	What are your suggestions for improving the university learning outcomes for business students?
18	How frequently do you cooperate with higher education institutions? In which areas do you collaborate with HEIs?
19	How important is cooperation with HEIs for both your organisation and HEIs?
20	What is your role in assisting students to develop their attributes, skills, and personal qualities?

Interview Questions for Educators	
1	What courses do you teach?
2	Do you have any content related to AI, machine learning, or digitalisation?
3	Have you heard about the UAE National Strategy for Artificial Intelligence? What does your institution currently do to prepare business students to become work-ready in the age of AI?
4	How do you think AI technology will change business schools in terms of teaching and learning in the future?
5	Are the current courses relevant to the labour market needs? What recent changes have been made to degrees or courses in order to further improve student employability in the era of AI?
6	What skills are graduates supposed to acquire from their degree so they can meet job market demands?
7	What other skills do you think should be incorporated into the graduates' university curriculum?
8	How can business graduates stay relevant and employable in the era of AI and rapid technological advancement?
9	What tools and criteria do you use to assess the possession of skills and attributes of business students?
10	How frequently do you cooperate with industries? In which areas do you collaborate with industries?
11	How important is cooperation with industries for your business graduates' employability?

Interview Questions for Graduates	
1	What is your field of study?
2	What or who guided your decision to choose a business course at university?
3	When did you graduate from the college?
4	Please indicate your employment status and role if employed.
5	How would you describe your transition from HE (university) to the job market?
6	Have you studied any AI courses at the university? Have you studied any AI courses outside the university?
7	Please name the title of any AI-relevant course(s) you have taken.
8	Do you see any connection between AI and business graduates' employability?
9	Has your education prepared you for the workplace?
10	To what extent has your study at your institution contributed to your knowledge, skills, and personal development?
11	What do you think about the quality of the education you received, and can you apply it to the industry?
12	What is your experience with the career centre services, and how effective were they in enhancing your employability prospects?
13	What the role of faculty members in enhancing graduate employability?
14	In your opinion, what makes students employable?
15	What are the skills you acquired during your study? Do you think they are relevant to the job market demands?
16	What skills do you feel should be incorporated into the university curriculum?
17	In which year of your course did you realise the importance of knowing about the skills required for employability?
18	How does/did your university engage you with industry professionals?
19	What are the activities you have experienced as part of your studies to enhance your employability (i.e., employer visit, guest speaker, career fair, etc…)?
20	Do you think practical training/internship helped in preparing you for the workplace?
21	What are your recommendations to HE institutions for improving students' employability?
22	What is the role of employers in helping graduates transition to the job market?
23	According to your experience, what changes do you recommend HEIs make to successfully prepare business graduates for new job demands in the era of AI?