LINKING STUDENT ASSESSMENT AND GRADUATE EMPLOYABILITY: A STUDY IN THE OMANI HIGHER EDUCATION CONTEXT

by

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Abstract

In recent years, there has been considerable emphasis on the need for higher education (HE) to facilitate graduate employability and readiness for the modern, fast-changing labour market. Producing employable graduates equipped with essential capabilities and attributes has become a major objective and concern for modern higher education institutions (HEIs). Among the various initiatives and activities leveraged by these HEIs to support this imperative, significant attention has been directed to student assessment (SA) as a critical activity for realising this goal. However, aligning SA with graduate employability development (GED) has proven to be a formidable task. This study explores the relationship between SA and GED, using the University of Technology and Applied Sciences, the largest HEI in Oman, as a case study. Specifically, the study aims to understand how SA relates to and can be effectively aligned with GED, and to identify the barriers and enablers of this alignment from the perspective of HE lecturers.

The study utilised a mixed-method sequential case study design, employing a questionnaire, documentary analysis, and reflection-aided semi-structured interviews as data collection methods. It adopted a sociocultural perspective based on Cultural-Historical Activity Theory (CHAT), which views student assessment as a social activity system (SAAS) with GED as its central objective. This framework provided a comprehensive and systematic approach to examining the SA-GED link, thoroughly analysing the interactions between the system components. The novel combination of CHAT and Boud et al.'s (1985) reflection model proved powerful in understanding the operational dynamics of SAAS, recognising its central objective and identifying its systemic contradictions.

The study revealed that while SA is a potent facilitator of GED, several factors impede its full alignment with GED at the research setting. The study emphasises the pivotal importance of conceptualising SA as a social activity system with GED as its central objective. This conceptualisation enhances clarity and understanding among SA community members, including lecturers, leaders, and students, by distinguishing the central objective of SA from its short-term goals such as grading student performance and ensuring accountability of assessment processes. The study illustrates how this

conceptual framework critically supports the alignment of authentic assessment tools and systemic components – rules, community dynamics, and role distributions – with the overarching objective of SA.

The study also revealed that successful implementation of authentic assessment hinges on effectively addressing systemic contradictions across all components of SA. These contradictions pose significant challenges to all community members involved. Specifically, the study underlines the critical role of the community component, which necessitates active and comprehensive engagement of leaders, students, workplace representatives, and lecturers in SA processes. Drawing on these insights, the study introduces an original “Model for Collaborative Engagement in GED-oriented Assessment”, thereby making theoretical and practical contributions to the fields of SA and GED in both the Omani context and similar international settings.

Dedication

To my beloved father, who passed away halfway through this project,

This thesis is dedicated to you.

You were my source of motivation and inspiration, and you encouraged me immensely to embark on this journey. Your unwavering belief in me and your constant support kept me going, even in the most challenging times.

Though you are not here to see its successful completion, I know you would have been very proud. Your memory continues to guide me and your legacy lives on in every step I take.

This accomplishment is as much yours as it is mine.

With all my love and gratitude.

إلى ذكرى والدي الحبيب،

هذه الأطروحة مهداة لك. كنت مصدر إلهام وتحفيز بالنسبة لي. شجعتني بشكل كبير على الشروع في هذه الرحلة وكان إيمانك الراسخ بي ودعمك المستمر دائمًا يدفعني للأمام، حتى في أصعب الأوقات.

على الرغم من أنك لست هنا لرؤية اكتمال هذا المشروع بنجاح، أعلم أنك ستكون فخورًا جدًا. ستظل ذكراك ترشدني وسيظل إرثك حيًا في كل خطوة أخطوها.

هذا الإنجاز هو لك بقدر ما هو لي.

مع كل حبي وامتناني.

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List of Abbreviations

AA	Authentic Assessment
AAT	Authentic Assessment Tasks
BMR	Boud et al.'s (1985) model of reflection
CA	Continuous Assessment
CHAT	Cultural-Historical Activity Theory
CLO	Course Learning Outcome
CPF	Common Pedagogical Framework
DBS	Department of Business Studies
DEN	Department of Engineering
DIT	Department of Information Technology
ECO	The Education Council of Oman
GAs	Graduate Attributes
GPA	Grade-Point Average
GE	Graduate Employability
GED	Graduate Employability Development
GES	Graduate Employability Skills (skills, abilities, capacities or competences)
HE	Higher Education
HEIs	Higher Education Institutions
HOTS	Higher-order thinking skills
ISA	Institutional Standards Assessment
ISAM	Institutional Standards Assessment Manual
LOTS	Lower-order thinking skills
NCSI	National Centre for Statistics and Information
OAAAQA	Oman Authority for Academic Accreditation and Quality Assurance of Education
PSC	Preparatory Studies Centre
QAM	Quality Assurance Manual
SA	Student Assessment
SAAS	Student Assessment Activity System
SCL	Student Centred Learning

SEs	Summative Exams
SAMs	Student Assessment Methods
UTAS	University of Technology and Applied Sciences
UTAS-X	The campus of UTAS selected for collecting the study's qualitative data

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CHAPTER 1: INTRODUCTION

1.1 Research Objectives and Questions

This study aims to understand the relationship between student assessment (SA) and graduate employability (GED) in HE. Joughin (2008) defines SA as the process of making 'judgements about students' work, inferring from this what they have the capacity to do in the assessed domain, and thus what they know, value, or are capable of doing' (p. 16). Graduate employability (GE) is defined as the graduate capacity to 'discern, acquire, adapt and continually enhance the skills, understandings and personal attributes' (Oliver, 2015, p. 63), which are crucial for increasing graduates' likelihood of finding and creating meaningful work, as well as for enhancing their social engagement and participation.

The motivation for conducting this study is threefold. First, it arises from my personal experiences as both a teacher and a leader at UTAS, the context of this study. Despite the substantial time and effort dedicated to the design and implementation of SA, it seemed to receive little attention from leaders and lecturers regarding its impact on learning and the development of essential skills and capabilities necessary for GE, a strategic national and university objective (refer to Chapter **2**). Most stakeholders' discussions about SA were dominated by technical issues, such as exam preparation, scheduling, moderation, invigilation duties, grading, and grade approval. To my surprise and disappointment, dialogue about the role of SA in facilitating student learning and employability was almost entirely absent. This situation, similar to those reported in various studies (e.g., Radloff et al., 2008; Hong, 2018; Simper et al., 2022),

emphasises the need to transform institutional SA cultures to better align with student learning and capability development. Hence, I developed a strong interest in understanding how SA relates to and can be utilised to facilitate the development of key GE capabilities. This constitutes the first objective of this thesis.

Secondly, upon embarking on this research project, I observed an increasing body of research focused on understanding the role of SA in facilitating GED, particularly through the implementation of authentic assessment methods. Researchers worldwide have been striving to develop frameworks for authentic assessment and to implement SA methods aligned with these frameworks, conducive to GED. However, multiple challenges hinder HEIs and HE lecturers from effectively implementing SA methods and approaches that foster the wide range of capabilities and attributes essential for GE. The literature acknowledges that such approaches are challenging to design and implement and that developing the desired GE capabilities and competences is complex (McNeill et al., 2012; Sadler, 2016; Schonell and Macklin, 2019; Schultz et al., 2022), as discussed further in section **3.5**. Therefore, another primary objective of this thesis was to address this gap in the literature by identifying how these challenges can be addressed to enable HE lecturers to implement SA for GED, thereby facilitating graduate preparedness for work.

Thirdly, very few studies have been conducted in the Omani context on this research area, despite continuous calls for HEIs to enhance and employ appropriate approaches for GED amidst national concerns about the rising rates of HE graduates' unemployment (see Chapter **2**). Significantly, many researchers in the Omani context lament the persistence of traditional teaching and assessment methodologies that are inappropriate for preparing graduates for the demands of the modern world, including professional settings. Therefore, before delving into the deeper questions of

understanding the nature of the link and alignment between SA and GED and identifying the challenges involved in the alignment process, it was necessary to explore the extent to which GED features as an objective of SA in the research context and to gain an overview of the main SA modes and methods implemented at the setting, which constitutes the third objective of the thesis.

To address the objectives outlined above, the thesis seeks to answer the following research questions:

1. To what extent is graduate employability development an objective of student assessment at UTAS?
2. How do the lecturers at UTAS-X perceive and use student assessment as a tool to facilitate graduate employability development?
3. What are the key barriers and enablers impacting lecturers' utilisation of student assessment for graduate employability development?

1.2 Overview of the Research Design

To address the objectives and research questions of the thesis, a sequential mixed methods design was employed, combining both quantitative and qualitative methods (Creswell and Plano Clark, 2018). Initially, focus groups were conducted with three stakeholder groups – leaders, lecturers, and students – as a pilot study to evaluate the significance and relevance of the research topic across the study's setting, UTAS. Upon confirming that the research topic was significant, relevant, and timely, a literature review was conducted to inform the design of a questionnaire aimed at gaining an overview of the link between SA and GED at UTAS. The questionnaire results informed the design of the subsequent qualitative data collection phase, which included documentary analysis and semi-structured interviews with lecturers. This

phase aimed to provide an in-depth understanding of the SA-GED alignment process and identify the barriers and enablers of this process.

Moreover, the theoretical frameworks of Activity Theory and Boud et al.'s (1985) model of reflection were integrated and applied in conducting the semi-structured interviews with lecturers (refer to Chapter **4**). Although I maintained an insider's position within the research context during these interviews, particularly due to my previous role as a manager at UTAS, I made considerable efforts to ensure a degree of objectivity and to reduce any potential negative impact on the quality of the data obtained from my interview participants, as discussed in Chapter **5**. This objectivity was further warranted by the fact that, before commencing my data collection, UTAS underwent a significant transformation or restructuring (refer to Chapter **2**), evolving into a university with new campuses and new managers filling the newly created management positions, including my previous role. This restructuring helped distance me from my participants, thus enhancing my objectivity as a researcher.

It is noteworthy that the research design was adapted in response to Covid-19 disruptions. This led to conducting the interviews remotely and omitting the originally planned participant observation. Further details on the impact of Covid-19 are discussed in sections **5.5** and **9.5**. Table **1.1** provides an overview of the primary research questions and the corresponding data collection methods used.

Research Question	Methods and Samples of Data Collection
To what extent is graduate employability development an objective of student assessment at UTAS?	**Focus groups (Pilot study)**: Four groups from different campuses: 1 x students, 1 x lecturers, 1 x leaders, and 1 mixed group of leaders and lecturers **Questionnaires**: Distributed to all three stakeholder groups across seven campuses
How do the lecturers at UTAS-X perceive and use student assessment as a tool to facilitate graduate employability development?	**Documentary analysis**: General documents from the whole university and specific documents from UTAS-X **Semi-structured interviews**: 24 lecturers from three academic departments and the Preparatory Studies Centre at UTAS-X
What are the key barriers and enablers impacting lecturers' utilisation of student assessment for graduate employability development?	

Table 1.1 Overview of primary research questions and data collection methods

1.3 Significance of the Study

The significance and urgency of conducting this study are demonstrated by the following considerations. Firstly, graduate unemployment is a global challenge (explored further in Chapter **3**), which is largely attributed to the widely recognised issue of graduate skills mismatch (Tymon, 2013; Pitan, 2017; Pham and Saito, 2019; Sarkar et al., 2020; Scandurra et al., 2024), affecting both international and local contexts, including Oman. GED has been declared a key national objective by the Omani government to address rising unemployment and supply the labour market with capable and employable graduates (Education Council, 2017; Oman Vision 2024), as discussed in Chapter **2**. Conversely, as mentioned earlier, HEIs in Oman continue to rely on traditional learning and assessment approaches, which fail to meet the

demands of the state and employers for high-quality, capable graduates (Dauletova, 2016; Al-Ani, 2017; Al-Riyami, 2021). This illustrates the importance of establishing and expanding a research base regarding graduate employability issues in the Omani HE context. Hence, the critical importance of this study stems from its aim to research this national priority by linking it with a key activity of HEIs: student assessment.

Globally, researchers have consistently stressed that HEIs' efforts to enhance GE are inadequate (Clarke, 2018; Succi and Canovi, 2020; Schueller, 2023). In particular, there are significant knowledge gaps (explored further in Chapter **3**) regarding how HEIs can effectively use SA as a tool for fostering GED (Sotiriadou et al., 2020; Cheng et al., 2022; Segbenya et al., 2023). Thus, by exploring the relationship between SA and GED, this study aims to provide valuable insights into how SA, as a critical activity within HEIs, can be enhanced and employed alongside other activities and initiatives to equip graduates with essential capabilities and enhance their employability.

Moreover, various studies (as described in Chapter **3**) have attempted to identify the characteristics of GED-aligned SA methods and to implement such methods for fostering essential capabilities related to GE under the broad framework of authentic assessment. However, these studies often focus on implementing specific SA methods (Deeley, 2014; Dauletova, 2016; Schonell and Macklin, 2019; Arsenis et al., 2022) or generally addressing factors hindering these methods' effective design and implementation in a broad manner (Norton et al., 2013; Asonitou, 2022; Schultz et al., 2022; Montano et al., 2023). Notably, there is a lack of research that employs comprehensive, theory-driven approaches to thoroughly and systematically examine the key factors impacting the process of aligning SA with the imperative of GED.

Responding to issues like these, this thesis sets out to fill some of these knowledge gaps by examining the link between SA and GED and the factors impacting this link. In my research, I have adopted an Activity Theory (AT) perspective (Engeström and Miettinen, 1999; Nussbaumer, 2012), which examines SA as a social activity system. Activity Theory is a framework used for examining social human practices or activities within their contexts (communities, cultures, rules, norms, values, technologies, artifacts) to understand and enhance their functioning mechanisms (Adamides, 2023). In line with the basic assumptions of AT, this study provides a comprehensive sociocultural perspective to understanding SA. It focuses on identifying its key components or factors (tools, rules, community, and distribution of roles) and examining how these components impact the functioning mechanisms and the realisation of the central objective(s) of SA. Determining and understanding the crucial factors impacting the SA-GED alignment process can aid assessment designers and lecturers in addressing the challenges encountered in designing and implementing assessment methods for enhancing GED, thus supporting lecturers in their assessment practices and students in their transition to the workforce.

1.4 Structure of the Thesis

This thesis consists of nine chapters. The first chapter serves as an introduction to the thesis. Chapter two provides an overview of the Omani educational context, with particular focus on UTAS, the site of the study, outlining its initiatives and aspirations concerning the SA-GED link. Chapter three reviews the existing literature on GE and explores the SA approaches employed as crucial tools for GED in HE. It concludes by identifying the knowledge gaps that the thesis aims to address. Chapter four presents the theoretical frameworks and explains how they were applied in investigating the

SA-GED link. Chapter five outlines and justifies the research methodology suitable for the study's inquiry. Chapter six presents the initial questionnaire findings, while chapter seven presents the findings from the qualitative methods, including semi-structured interviews and documentary analysis. Chapter eight offers a critical analysis and discussion of the study's major findings, drawing on the reviewed literature and the study's theoretical frameworks. Chapter nine concludes the thesis, outlining the study's main contributions, recommendations, limitations, and suggestions for future research.

CHAPTER 2: THE EDUCATIONAL CONTEXT OF OMAN

2.1 Introduction

Understanding the local context where research is conducted is crucial, as it allows researchers to uncover unique features and challenges specific to the study's setting and to situate the research within its proper international context. To illuminate these crucial aspects, this chapter provides an overview of the educational context in the Sultanate of Oman. It focuses on key aspects relating to the national imperative of producing employable graduates to join the Omani workforce. It begins with a brief description of the school education system in Oman. This is followed by an exploration of the development of the HE system while directing special attention to the emphasis placed by Oman's government bodies on ensuring the quality of HE provision and graduate outcomes. Next, the chapter discusses the persisting issue of high rates of graduate unemployment and outlines the response of HEIs to national directives concerning GED. Finally, the chapter describes UTAS's initiatives concerning the alignment between GED and its learning and assessment approaches and highlights the urgency for investigating the link between SA and GED within the context of UTAS.

2.2 Higher Education in Oman

The Sultanate of Oman is an Arab nation situated on the southeastern coast of the Arabian Peninsula. With a population of 5,165,602, it comprises 57% Omanis and 43% expatriates (NCSI). Table **2.1** provides a breakdown of the population, detailing the numbers and percentages of Omanis and non-Omanis residing in Oman as of January 2024.

Nationality	Total	Percentage
Omanis	2,928,957	56.7 %
Expatriates	2,236,645	43.3 %
Grand Total	**5,165,602**	

Table 2.1 The numbers and percentages of Omanis and non-Omanis residing in Oman as of January 2024.

Despite Oman's historically significant background and strategic geographical location, its approach to innovation and modernisation was initially characterised by a slow and insular mentality. However, in 1970, Sultan Qaboos Al Said ascended to power, initiating a transformative era by opening the country to the modern world and spearheading major development initiatives aimed at building an advanced economy (Peterson and Crystal, 2020). Education emerged as a key focus area under his leadership. Prior to 1970, only three primary schools existed in the entire country, catering primarily to male students.[1] By 2023, the Ministry of Education managed 1,241 public schools across the nation, providing free education from grade 1 to 12 to approximately 744,015 students of both genders (NCSI).[2] Figure **2.1** illustrates the growth in the number of schools categorised by educational type from 1970 to 2018.

[1] There was also a vocational school established in 1967, known as the Industrial School, coinciding with the beginning of oil production in the same year (Gonzalez et al., 2008).
[2] The National Centre for Statistics and Information.

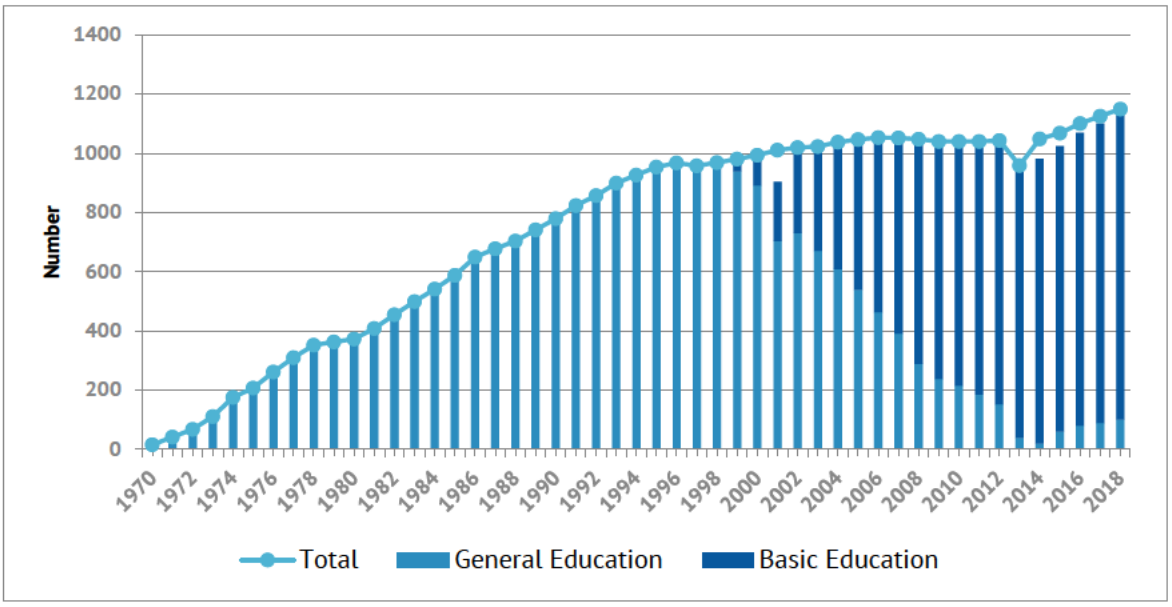

Figure 2.1 Number of schools by type of education from 1970 to 2018

Almost a decade after the dawn of the renaissance in 1970, the Omani government turned its attention to developing the HE sector to accommodate graduates of the school system. The first tertiary-level institution, the Banking Institute of Oman[3] was established in 1983 with the aim of supplying the growing banking sector with the necessary human resources (Education Council). This was followed by the opening of institutions including the Industrial Technical College a year later, which trained skilled technicians in various industrial fields, and the Colleges of Teachers.[4]

However, a pivotal shift in HE provision occurred in 1986 with the establishment of the first public university, Sultan Qaboos University (SQU), marking the inception of the first public university in Oman (Al'Abri, 2019). SQU was the sole public university enrolling students from all parts of the country until August 2020. In that year, the

[3] Now the College of Banking and Financial Studies.
[4] The Colleges of Teachers were stablished to address the urgent need for teacher training in the pre-tertiary education sector (Education Council).

second state university, the University of Technology and Applied Sciences (UTAS), [5] the site of the present study, was established by Royal Decree (76/2020) (UTAS).

2.3 Aligning Higher Education with Oman's Economic and Employability Demands

The prioritisation of enhancing Omani HE graduates' readiness for the labour market stands as a cornerstone of the state's agenda. This commitment is underlined in pivotal government documents delineating the nation's strategic directions and developmental goals. Spearheading these reforms is the Education Council of Oman (ECO) which serves as the overarching authority governing all educational institutions in Oman and is entrusted with formulating education policies across all levels. Its mandate includes directing, monitoring, and evaluating educational plans to align with overarching state policies, thus meeting developmental imperatives and realising Oman's scientific, cultural, economic, and social aspirations (Education Council).

A recent milestone initiative by the ECO involves the revision of Oman's Education Philosophy.[6] Central to the Education Philosophy is the principle of lifelong learning, emphasising the cultivation of independent learning, lifelong learning, and strategic planning skills among students (Education Council, 2017). Alongside this revision, the reforms encompass the formulation of a new Education Strategy 2040, the exploration of educational pathways and stages restructuring, and the enactment of legislative measures and diverse programmes. These initiatives aim to instigate:

> "A quality shift in education in the Sultanate so that students are adequately prepared to meet the challenges of living and working in a rapidly changing

[5] The university was formed by merging two sets of colleges: the 'Colleges of Technology' (7 campuses) and the 'Colleges of Applied Sciences' and Rustaq College of Education (6 campuses).
[6] The Philosophy of Education in the Sultanate of Oman is an official document, published by the ECO, and distributed to all educational institutions in the country to ensure adherence to its guiding principles and objectives (Education Council, 2017).

world and to ensure the achievement of the nation's development needs" (Education Council, 2017, p. 10).

Furthermore, the state's focus on nurturing employable graduates has recently been underlined in the official document of Oman Vision 2040, which delineates aligning education with the vision of cultivating a knowledge-based society and fostering competitive national talents as one of its strategic objectives. This encompasses the implementation of inclusive education, scientific research, and lifelong learning in order to equip graduates 'with competitive qualifications and employability skills to enter the local and international labour market' (Oman Vision 2024, p. 20).

In addition to the broad education initiatives spanning both school and higher education sectors, the ECO has also undertaken specific quality enhancement initiatives tailored to the HE sector. These initiatives aim to improve the overall quality of HE and enhance the capabilities of its graduates. One of the most important of the these was the establishment of Oman Accreditation Council (OAC)[7] in 2001 which sent a clear message to all HEIs about the requirement for their educational processes to be put on the quality test (Carroll et al., 2009). The council was shouldered with ultimate responsibility of ensuring 'the maintenance of a level that meets international standards, and to encourage HEIs to improve their internal quality' (OAAAQA).

OAAAQA requires HEIs to give particular attention and diligence to the educational experiences that contribute to shaping the nation's desired graduates and equipping them with the requisite skills for future challenges (Al-Saadi, 2023). It employs a two-stage accreditation process applicable to all HEIs in Oman. The first stage, Quality

[7] Now 'the Oman Authority for Academic Accreditation and Quality Assurance of Education (OAAAQA).

Audit, adopts a formative approach, concentrating on areas for enhancement and culminating in a public report. The subsequent stage, Institutional Standards Assessment (ISA), typically occurs four years after the quality audit and is predominantly summative.[8]

To facilitate this accreditation process, the authority has disseminated the Institutional Standards Assessment Manual (ISAM), which outlines nine overarching standards such as 'student learning by coursework' and 'industry and community engagement' that HEIs must fulfil to obtain accreditation. Each standard comprises specific criteria and provides explanatory commentary for each criterion, elucidating the requirements for its attainment (OAAAQA). Table **2.2** provides excerpts from ISAM that illustrate the commentary for criterion 2.1 and 2.11, respectively, related to standard 2 'student learning by coursework':

Criterion	Commentary
2.1: Graduate Attributes and Student Learning Outcomes	The HEI has defined generic graduate attributes which reflect stakeholder expectations and which graduates from all programs are required to attain. These are effectively communicated to all stakeholders and incorporated into program development, design and delivery ... The process for assessing student attainment of generic graduate attributes and program-specific learning outcomes is clearly defined and implemented
2.11: Graduate Destinations and Employability	The HEI actively monitors and reviews the destinations (such as employment/unemployment or rates of further study) of its student learning by coursework program graduates and implements strategies to help ensure student, graduate and other stakeholder expectations for graduate destinations and employability are met

Table 2.2 Examples of criterion 2.1 and 2.11 from the ISAM

[8] This means that meeting the established standards leads to accreditation, whereas failure to meet them results in probationary status (OAAAQA).

As of March 2024, the majority of HEIs in Oman have completed the first stage, the Quality Audit, with 25 undergoing the second stage, ISA. Out of these, 20 have been successfully accredited, one conditionally accredited, and four placed on probation (OAAAQA). It is noteworthy that all campuses of UTAS have completed the first stage and received quality audit reports detailing areas for improvement in the form of recommendations, which they need to address before applying for the ISA.

GED is a strategic national priority, as highlighted by the Omani government through various official documents. While all HEIs in Oman have committed to enhancing the employability of their graduates, this thesis aims to research this national priority and provide insights to HEIs, including UTAS, on aligning it with one of their key activities: student assessment. The next section discusses the efforts and challenges faced by Omani HEIs in realising GED.

2.4 Implications of Oman's Rentier State Economy on Graduate Employability

Mahdavy (1970) was one of the first to define a "rentier state", describing it as a country that generates a significant portion, or even the entirety, of its income from the export of natural resources like oil and gas. The concept of a rentier state is not merely abstract but serves to explain how recent economic developments, particularly oil production, have shaped the state's social, political, and cultural characteristics (Beblawi, 1987). Oman is classified as a rentier state due to its heavy reliance on oil production and trade since the 1970s. The generation and allocation of oil and gas revenues have been instrumental in shaping Oman's political economy, which operates under a highly centralised, top-down governance structure (Al-Sarihi and Cherni, 2023). Oil and gas export revenues accounted for 77% of total government

income in 2022 and continued to dominate Oman's export profile in 2023, comprising 74% of total exports (The World Bank).

Another key concept introduced by Beblawi (1987) in relation to rentier states is the notion of a "rentier mentality". In simple terms, a rentier mentality emerges when a government distributes wealth or resources derived from external sources, such as oil profits, rather than from the productive efforts of its citizens. This creates a system where individuals may feel less compelled to work hard, as they can rely on government support. Over time, this undermines the value placed on hard work and fosters heightened expectations of receiving substantial benefits with minimal effort (Levins, 2012).

Levins (2012) highlights that, beyond income, shelter, and food, one key aspect that citizens with a rentier mentality depend on their governments to provide is job opportunities. This dimension holds significant implications for this study, particularly due to its close connection with graduate employability. Specifically, such a mentality may lead Omani graduates to prioritise state or government employment, which is often perceived as offering advantages such as higher pay, reduced workloads, and greater job security compared to private-sector roles, where these benefits may be absent. As a result, this mentality might discourage Omani students at HEIs from fully engaging with the development of critical employability skills and attributes that are highly valued in private-sector workplaces. Alternatively, it might encourage a strategic, counterproductive attitude focused on achieving high grades in assessments while neglecting genuine learning and skill development. This is because such grades are often perceived as increasing their chances of securing sought-after government jobs.

To alleviate the impact of its heavy reliance on oil and gas revenues, which is closely linked to the development of a rentier mentality, Oman introduced significant plans to utilise the income from its natural resources to achieve economic diversification. This process began with Oman Vision 2020 and has continued with the more recent Oman Vision 2040. One of the key strategic priorities of Oman Vision 2040 is “economic diversification and fiscal sustainability”, with the aim of identifying and investing in sectors that support diversification, such as manufacturing, fisheries, mining, logistics, and tourism. In parallel, the government introduced the Omanisation policy to increase the percentage of Omanis working in the private sector, which has traditionally been dominated by a foreign workforce. According to the National Centre for Statistics and Information (NCSI), the Omanisation rate in the private sector was 27.6% in 2021, while it reached 89.4% in the public sector. As outlined in Oman Vision 2040, the country aims to achieve a 40% Omanisation rate in the private sector by 2040 (Oman Vision 2024).

2.5 HEIs Efforts and Challenges to Meet the National Requirements for GED

The accounts provided above concerning educational reforms in Oman affirms the nation’s proactive response to socio-economic factors, driven by the imperative to meet the evolving needs of Omani society and its expanding labour market. These reforms reflect Oman’s commitment to cultivating a workforce of employable graduates equipped with competitive skills, essential for their participation in both the national and global knowledge economy (Chryssou, 2020; Al-Riyami, 2021). Hence, HEIs in Oman responded by following criteria essential for achieving this national objective established by OAAAQA for accreditation. This involved defining generic graduate attributes (GAs) aligned with stakeholder expectations and integrated into

programme development, design, and delivery processes (Halibas et al., 2020). As such, the generic GAs delineated by each HEI convey a crucial message to its specific HEI community and stakeholders as they encapsulate ‘knowledge, abilities, and values chosen to maximize graduate employability’ (Al-Saadi, 2023, p. 108). Consequently, it has become evident that the effective application of these GAs significantly enhances graduate employability (Halibas et al., 2020).

However, despite the government’s emphasis on the significance of producing employable graduates and the subsequent efforts by HEIs to achieve this goal, several studies in Oman have revealed that Omani HEIs face challenges in effectively executing this imperative. These challenges have been attributed to various factors. Some authors suggest that Omani HEIs are entrenched by traditional teaching and learning methods which fall short of preparing the required graduates. Al-Ani (2017) characterised the methodologies commonly employed by HEIs in Oman as predominantly traditional, lacking in flexibility to address diverse learning requirements or adequately prepare students for the demands of the workforce. Al-Ani (2017) advocates for the adoption of innovative methods, or what he termed, ‘alternative education’ to better fulfil these objectives. Similarly, in the context of business education, Dauletova (2016) criticised the prevalence of traditional education paradigms in delivering business courses. She points out that business organisations in the region encounter a challenge as they must allocate substantial financial and human resources to develop in-house training initiatives aimed at equipping newly recruited university graduates with the requisite professional communication skills and capabilities essential for effective job performance. The gap identified between the academic and business sectors in Oman prompts a re-evaluation of the practical

efficacy of current teaching and learning formats, underscoring the necessity to revise existing ‘learning methodologies, objectives, and outcomes’ (p. 454).

2.6 Unemployment and the Associated Skills Gap

The persistence of traditional methodologies in HEIs, coupled with a lack of understanding of learning approaches conducive to fostering essential employability attributes, has contributed to skills gaps and exacerbated unemployment issues in the country. High unemployment rates among HE graduates persist, while the workforce continues to rely heavily on expatriates, a trend extensively discussed in the Omani context (Forstenlechner and Rutledge, 2010; Al-Harthi, 2011; Soundararajan et al., 2021; Al-Riyami, 2021). Al-Riyami (2021) contends that this phenomenon can be largely attributed to the deficiency among Omani graduates in key employability skills, particularly in communication, a gap frequently cited by prospective employers. Similarly, Belwal et al. (2017) reports employers’ reluctance to hire recent graduates and scepticism about the accuracy of GPAs in reflecting genuine knowledge, arguing that HEIs must equip graduates to compete effectively with expatriates and gain preference from private sector employers. Forstenlechner and Rutledge (2010) identify the heightening unemployment levels as one of the ‘key domestic policy challenges’ (p. 38), while Sawant (2019) claims it to be one of the reasons that triggered the uprising in Oman in 2011 during the so-called ‘Arabian Spring’. The total number of Omani job seekers as of January 2024 has reached 88,631, representing 3.02% of the Omani population.

Table **2.3** shows the number of Omani job seekers per year since 2020. While these statistics provide an overview of unemployed Omanis, they lack specific data on the percentage of graduates among them. This absence of detailed statistics can be

attributed to some important factors. Firstly, as a developing country, Oman faces challenges in data collection, being relatively new to this area. Although some HEIs, such as UTAS, have implemented basic systems to track graduate employment, they are not required by the government to publish these statistics on their websites or government platforms like the National Centre for Statistics and Information (NCSI). This lack of obligation renders such data either inaccessible or difficult to obtain for researchers or other interested parties. Additionally, graduate employment data from both public and private HEIs is not linked to government incentives or funding, which reduces the motivation for these institutions to prioritise its publication.

Gender	2020-12-12	2022-01-01	2023-01-01	2024-01-01
Male	24,559	17,318	26,324	38,071
Female	40,879	20,475	45,773	50,560
Total	**65,438**	**37,793**	**72,097**	**88,631**

Table 2.3 The numbers of Omani Job seekers per year since 2020

Many researchers tried to investigate the factors that aggravate unemployment within the Omani context and to uncover the underlying challenges driving this national issue (Al-Busaidi and Tuzlukova, 2021; Al-Riyami, 2021; Al Harrasi et al., 2023). Notably, these researchers concur on two essential measures necessary to tackle the growing challenge of unemployment and the related skills gap in employability. They argue that HEIs in Oman must depart from conventional teaching methods and embrace innovative approaches capable of nurturing GE capabilities crucial for thriving in the contemporary job market. For instance, Al-Busaidi and Tuzlukova (2021) emphasised the imperative for HEIs to adopt explicit teaching and learning methodologies aimed at enhancing key employability skills. Al-Riyami (2021) concluded by flagging the urgency of 'HEIs need to improve their curriculum, pedagogy and infrastructure' to

focus on skill development (p. 145). Meanwhile, Soundararajan et al. (2021) advocate for an educational transformation that expands HEI's role beyond the mere dissemination of factual knowledge and include the provision of essential employability skills. Moreover, these researchers underline the crucial role of collaboration between HEIs and workplaces in addressing this gap, asserting that achieving such national objectives necessitates the involvement of professionals with expertise in the industry, rather than solely relying on academic knowledge (Dauletova, 2016; Belwal et al., 2017; Al-Riyami, 2021; Al-Abri et al., 2024).

2.7 The University of Technology and Applied Sciences

As mentioned previously, UTAS was established in 2020 following the merger of 13 campuses located across diverse regions of Oman (UTAS). UTAS comprises six colleges, namely Engineering and Technology, Computing and Information Sciences, Economics and Business Administration, Applied Sciences and Pharmacy, Creative Industries, and Education. It is noteworthy that most campuses house a selected subset of these colleges. For instance, UTAS-X, the campus chosen for qualitative data collection in this study, includes only the former three colleges. Presently, UTAS remains the leading provider of HE in Oman. As shown in Table **2.4**. UTAS admitted 9,066 new students for the academic year 2022/2023, comprising 31.8% of all new students enrolled in all public or state HEIs (Higher Education Admission Centre).

Public Seats	Percentage	Males & Females	Females	Males
University of Technology and Applied Sciences	**31.8 %**	**9066**	**4051**	**5015**
Sultan Qaboos University	**10.6 %**	**3014**	**1438**	**1576**
Vocational College	**9.5 %**	**2711**	**1215**	**1496**
Oman College of Health and Sciences	**1.9 %**	**553**	**397**	**156**

Al-Khaboura College of Marine Sciences	**1.3 %**	**361**	**149**	**212**
Military Technological College	**1.1 %**	**311**	**3**	**308**
College of Sharia Sciences	**0.5 %**	**139**	**57**	**82**
Total	**56.6 %**	**16155**	**7310**	**8845**

Table 2.4 New students enrolled in the state HE seats according to gender for AY 2022/2023

Before progressing into their specialisations within their chosen fields of study, students spend approximately one year, equivalent to three semesters, in the Preparatory Studies Centre (PSC).[9] Here, they engage in coursework covering English Language – the medium of instruction – mathematics, and computing skills (Education Council). The primary objective of the PSC is to equip students with the essential skills needed to pursue their HE programmes (OAAAQA). UTAS offers three types of degrees: diploma, advanced diploma, and Bachelor, which students attain after successfully completing at least two, three, and four years, respectively, in their study programmes. Alongside meeting the overall grade requirement for each level, students must attain scores of 4, 4.5, and 5 in the IELTS proficiency test, or the equivalent TOEFL score, to gain admission to their chosen programmes of study (UTAS). Furthermore, prior to entering the job market, students must undergo an eight-week on-the-job training pertinent to their academic specialisations within either private or public sector organisations (Education Council).

As a leading HEI committed to bolstering the employability of its graduates amid stiff competition from other universities, UTAS has introduced numerous educational initiatives geared towards realising the nation's aspirations for enhancing graduates'

[9] Previously known as the General Foundation Programme

employability skills. These initiatives were integrated with the university's strategic objectives. For example, UTAS's mission statement highlights the university's commitment to enhancing GE through various initiatives[10] (UTAS). UTAS has also outlined a set of GAs that students are expected to cultivate upon graduation, which include communication skills, entrepreneurial skills, teamwork and leadership abilities, lifelong learning aptitude, critical thinking, analysis and problem-solving, creativity and innovation, and technical and digital competency[11] (UTAS-Shinas).

2.7.1 An overview of the pedagogical and assessment practices at UTAS

The alignment of the national objective of fostering employable graduates with the strategic goals of the University was accompanied by the introduction of guiding documents disseminated across all campuses, aimed at immediate implementation to actualise these strategic objectives.[12] Among these documents was the Common Pedagogical Framework (CPF), which elucidated the guiding principles underpinning the desired reforms in teaching, learning, and assessment at the University, with a central focus on GAs' development (UTAS-Shinas). The CPF outlined the 'pedagogical philosophy' that embraced the interconnectedness of teaching, learning, and assessment, and presented a range of teaching methods for lecturers to select from in pursuit of fostering the designated GAs. Emphasising the significance of SA, the CPF highlighted SA's role as a crucial tool that 'influences the manner by which students approach their study' (UTAS-Shinas, p. 10).

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[10] The mission statement of UTAS is 'to build competitive and innovative capabilities by providing a stimulating environment and effective engagement with the community and industry to promote excellence in learning, research, and innovation' (UTAS).

[11] The vision, mission, values, goals, and graduate attributes are standardised across all the university campuses.

[12] Following the dissemination of these documents, each campus organised workshops and practical sessions to encourage the adoption of these instructional and assessment strategies by all lecturers.

The second document aimed to raise awareness about student-centred learning (SCL) and offer strategies for its implementation (Ministry of Manpower). The rationale behind embracing SCL across university campuses was to empower students 'to become more responsible, active, creative, and lifelong learners' (p. 6). In addition to encouraging teachers to involve students in activities fostering skills like 'self-development' and 'peer and self-assessment' (p. 12-13), the document outlined various SCL-based assessment techniques, emphasising the importance of formative assessment and providing feedback on student achievement of learning outcomes.

In addition to the aforementioned initiatives common to all campuses, UTAS-X has placed significant emphasis on enhancing GE capabilities locally through one of its key documents, the Quality Assurance Manual (QAM)[13]. The QAM introduces 'the teaching and learning strategy' at the campus, which is grounded in 'an assessment of work skills and competences needed in the modern world', as well as an understanding of the latest findings on the efficacy of teaching and learning (p. 46). Furthermore, the strategy outlines a set of skills that graduates require to gain a competitive advantage in the labour market, which the teaching and learning activities at the campus must aim to foster among students. These encompass higher-order cognitive abilities, interpersonal skills, and independent learning capabilities, with the goal of developing them to a level that meets 'international standards' (p. 46).

The teaching and learning strategy is complemented by an assessment strategy that asserts the assessment pattern in each module is intricately linked to the intended learning outcomes. Moreover, it contends that these outcomes are clearly delineated

[13] The QAM outlines and communicates the overarching approaches to teaching, learning, and assessment to lecturers and the wider UTAS-X community, with the aim of ensuring quality in these areas.

to eradicate any ambiguity regarding the required learning objectives and their proficiency levels in order to ensure that every student has ample opportunity to demonstrate their mastery of the learning outcomes. The assessment strategy claims to aim at supporting student development of the aforementioned skills through the utilisation of a diverse array of assessment methods and approaches, including:

> "Final examinations, mid-term examinations, assignments, oral presentations, practical tests, forms of continuous assessment, and project work … [as well as] case studies, role playing and micro research works to assist student creativity" (p. 55).

UTAS-X appears to place significant emphasis on employing a variety of assessment methods tailored to meet the specific requirements of different modules and the capabilities students need to develop. For instance, oral presentations are advocated to 'sharpen interpersonal skills', while assignments are designed to maximise opportunities for students to demonstrate 'their individuality and creative thinking' (p. 56). Additionally, UTAS-X emphasises the importance of exams, linking them to the development of skills that necessitate an exam setting.[14]

2.8 Summary

This chapter presented an overview of Oman, setting the broad context for the study. It commenced with a brief overview of the Omani educational system, encompassing both school and HE systems and delineating the key stages of their development. Subsequently, it discussed the state's initiatives aimed at aligning HE with emerging economic and employment demands, followed by an exploration of the national issue

[14] According to the QAM, exams are deemed essential as they 'test the student's ability to think carefully and express himself clearly under time pressure, a situation that is likely to be replicated later in the individual's working life' (p. 55).

of unemployment and its concomitant skills gap. Next, the chapter introduced UTAS, the primary study site, comprising seven campuses selected for the exploratory survey. Finally, it provides an overview of the pedagogical and assessment practices currently adopted at UTAS-X, the focal case from which qualitative data for the study was collected.

The chapter establishes the context for this thesis by stressing the critical role of assessment activities within HEIs. These activities play a fundamental role in nurturing essential GE capabilities, which HEIs are expected to develop in students as a primary outcome of their programmes. Through aligning SA processes with the GED objectives, HEIs aim to bridge the skills gap identified by employers and to address the high unemployment rates prevalent in the country (Belwal et al., 2017; Al-Riyami, 2021; Ali et al., 2022). As a key HE provider, UTAS has demonstrated a commitment to meeting the national objective of GED which is reflected in its adherence to the quality and accreditation requirements set by OAAAQA across various areas, including those with significant implications for GED. As the chapter illustrates, UTAS-X has endeavoured to translate this commitment into action by describing teaching, learning, and assessment strategies aimed at optimising the mechanisms through which these activities facilitate GED.

However, as discussed in the chapter, studies conducted in the Omani context continue to blame HEIs for exacerbating the graduate skills gap by continuing to apply traditional methodologies in their learning and assessment activities (Dauletova, 2016; Al-Ani, 2017). Other studies call for the urgent adoption of appropriate methodologies better suited to facilitating GED (Al-Riyami, 2021; Soundararajan et al., 2021; Al-Busaidi and Tuzlukova, 2021). This suggests that HEIs still have a long way to go in achieving this national priority. Such calls provide strong justification for the study, as

it aims to explore the alignment between SA and GED at one of the leading HE providers from the perspectives of key internal stakeholders. Prior to this study, the Omani HE context lacked research that investigates SA-GED link. The next chapter provides a review of the literature and empirical research conducted on this topic.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

The previous chapter established the contextual backdrop for this thesis by exploring the Omani educational context. This chapter reviews the existing literature pertinent to the research focus: the relationship between SA and GED. It aims to scrutinise the research landscape surrounding the role of SA processes, a pivotal aspect of HE operations, in nurturing the capabilities crucial for GE. Divided into two main sections, namely GE and SA, this chapter synthesises insights from literature across these intertwined domains. It argues for the indispensable role of HEIs in harnessing SA as a potent mechanism for cultivating GE capabilities essential for personal, professional, and social fulfilment.

Given the broad scope encompassing both GE and SA addressed in this study, it is essential to outline the methodology used for the literature review. The primary objective of the review was to obtain a comprehensive understanding of these two concepts, exploring the nature and significance of the link between them and identifying the various factors impacting this link in the context of HE. The review employed a narrative approach, aiming to identify key themes and significant issues highlighted by scholars concerning the research area, and then provide a synthesis and summary of the findings (Bryman, 2012; Thomas, 2017). Baumeister and Leary (1997) describe narrative reviews as valuable when the researcher aims ‘to link together many studies on different topics, either for purposes of reinterpretation or interconnection’ (p. 312). This is particularly relevant to this study, as the aim is to explore the interconnection between the two broad topics of GE and SA in HE.

Thomas (2017) distinguishes narrative literature reviews from systematic reviews, which adhere to specific methods in searching the literature, whereby 'only studies of a predetermined type and/or quality are included in the review' (p. 59). Conversely, in narrative reviews, researchers do not confine their searches to specific 'search formulae'. This approach was deemed the most feasible and preferred over a systematic review for several reasons. I had a basic understanding of the research area, so it was not possible to start with a specific search formula. Since it was important to gain a comprehensive grasp of the key terms, I began with the terms I knew and expanded my search terms as I read and learned more. This process continued throughout the project, with new relevant terms added to my search strategy over time. Additionally, rather than having a clearly pre-identified set of questions, I began this study with initial 'prima facie questions'[15] that evolved and were refined as the study progressed (Thomas, 2017, , p. 18). Thus, a narrative review seemed more suited to this study than a systematic review, which is typically used in studies aiming to answer specific pre-defined questions (Robson and McCartan, 2016).

I followed guidelines for ensuring the quality of this review, as suggested by Ferrari (2015) for narrative reviews. First, I included this section describing the review process, as mentioned earlier. Although this is not often required for narrative reviews, it enhances quality by providing increased clarity to the reader. In other words, I aimed to keep my literature review 'systematic' by being 'fully explicit in describing the process' I followed (Robson and McCartan, 2016, , p. 84).[16] Secondly, I conducted a critical assessment of the included literature, focusing on the general debates

[15] These types of questions are considered suitable for qualitative-dominant studies that adopt flexible case study designs, as in this study (refer to Chapter **4**), compared to fixed designs (Robson and McCartan, 2016).

[16] This also contributes to providing an audit trail (Creswell and Miller, 2000), a key quality principle discussed further in Section **5.7**.

concerning the research topic, evaluating previous studies in terms of their methods, findings, and limitations, and identifying knowledge gaps, as provided in the summary of the literature review chapter.

Thirdly, I followed a specific yet flexible search strategy to review relevant literature, aiming to provide some objectivity and reduce bias (Ferrari, 2015), as mentioned earlier. Initially, I started with the broad primary terms (‘graduate employability’ and ‘student assessment’) to gain an overview of their meanings, significance, and the approaches and challenges in their implementation in HE. In the later stage, focusing on the link between these concepts, I conducted a more targeted investigation, exploring literature that examines the intersection between GE and SA as a means of enhancing it. I refined my search parameters, employing specific terms and their synonyms, and using the Boolean operator ‘AND’ to combine relevant keywords.[17]

The search primarily used the University of Birmingham's library search engine, ‘FindIt@Bham’, as well as ‘Scopus’, ‘Web of Science’, and ‘Google Scholar’ to ensure a thorough review of scholarly literature. The resulting sources included journal articles, books, and book chapters, which were assessed for relevance by reviewing their titles, abstracts, and, when necessary, the main body of text. It is important to highlight the scarcity of literature in the Omani HE context, particularly regarding assessment and its link with GE due to its nascent nature. As discussed in Chapter **2**, most studies in the Omani HE sector have focused broadly on the importance of employability, highlighting the skills gap among graduates and related unemployment issues, without exploring the pedagogical approaches needed to enhance

[17] Terms like ‘graduate employability’, ‘employment’, ‘professional careers’, and ‘work readiness’ were paired with terms related to SA such as ‘assessment practices’, ‘assessment tasks’, ‘assessment activities’, ‘student coursework’, and ‘authentic assessment’.

employability in depth. Consequently, this literature review has relied extensively on international studies from more established HE contexts. The next section presents the review findings on the first key research area, graduate employability.

3.2 Graduate Employability in Higher Education

This section explores the concept of graduate employability within HE, which constitutes a primary focus of this thesis. Initially, it examines the closely intertwined notion of graduate attributes, emphasising on generic skills commonly associated with employability. While recognising subtle distinctions between graduate attributes and employability, the section contends that treating these concepts as separate entities is unnecessary. It observes a growing tendency among HE scholars to interchangeably use these terms, particularly in light of embracing a broad conceptualisation of GE adopted by this thesis, which encompasses capabilities essential for preparing graduates for both professional and social roles. Furthermore, the section discusses the driving force behind the GE agenda, articulates the thesis's stance on why HEIs should support this agenda, and assesses its impact on redefining the purpose of HE. It elucidates two models of HE associated with differing conceptions of its roles: the liberal and neoliberal paradigms. The section argues for HE's capacity to concurrently uphold both roles, advocating for a balanced approach aligned with the broad conception of GE.

A notable trend in HE over the past few decades is the increased emphasis placed by various stakeholders on student graduate attributes, defined as 'the qualities, skills and understanding a university community agrees its students should develop during their time with the institution' (Bowden et al., 2000). GAs have been used by many universities worldwide to express their commitment to societal responsibility and delineate the quality of education they aim to provide (Barrie, 2012; Kalfa and Taksa,

2015; Bennett et al., 2017; Bridgstock, 2017). This practice involves outlining the generic attributes and qualities to be cultivated in graduates through various educational experiences, alongside subject-specific or discipline-based knowledge and skills essential for thriving in their post-graduation lives (Harvey, 2001; Barnett, 2004; Barrie, 2007; Green et al., 2009; Spencer et al., 2012; Hill et al., 2016; Chan et al., 2017; Wong et al., 2022).

The GAs movement is largely triggered by the employability imperative and there is a consensus about the intricate link between them (Barrie, 2006; Kalfa and Taksa, 2015; Oliver and Jorre de St Jorre, 2018; Wald and Harland, 2019). However, some authors maintain that GAs extend beyond mere “employability”, encompassing not only career skills but also emphasising competences necessary for academic and social engagement (Hill et al., 2016; Ramnund-Mansingh and Reddy, 2021). Notably, other authors argue that creating a division between these concepts is deemed unnecessary and unproductive (Oliver and Jorre de St Jorre, 2018; Bridgstock and Jackson, 2019). Oliver and Jorre de St Jorre (2018) observe that the distinctions between terms like learning outcomes, graduate attributes and employability (associated with civic engagement) have become gradually blurred over the past two decades, to the point where they are often used interchangeably. Bridgstock and Jackson (2019) echo these viewpoints and have delineated three perspectives on graduate employability embraced by universities in Australia and the UK. The three perspectives vary in scope, ranging from narrow to broad conceptions. Firstly, employability is seen as immediate employment outcomes; secondly, as involving readiness to pursue a profession with degrees accredited by professional bodies; and lastly, as encompassing the development of a graduate’s sustained ability to live and work, making meaningful and productive contributions to society and the economy

throughout life (Bridgstock and Jackson, 2019). As the authors note, the third broad perspective on GE is less clearly defined compared to the other two.

The increasing association of employability with societal benefits has been also observed by other authors. For example, Blackmore et al. (2016) conclude that despite the wide variation in using the term 'employability,' authors refer to it in broad terms, encompassing various aspects of an individual's life beyond the restrictive notion of 'employment.' They suggest that employability is perceived as a quality that fosters 'success within employment and also life more widely' (p. 10). Hence, the renewed and repeated emphasis on the significance of employability attributes for all aspects of an individual's life reaffirms their continual recognition and identification as capabilities for life (Cole and Tibby, 2013; Blackmore et al., 2016; Montano et al., 2023). Similarly, Oliver (2015) stress that employability involves cultivating *enabled graduates* with the *capability* to function effectively in various settings, including employment and other social contexts (p. 59, emphasis added). Thus, consistent with these perspectives, this thesis embraces this broad conception of employability, as captured by Oliver's (2015) definition.[18] Within this framework, employability is defined as the graduate capacity to:

> "Discern, acquire, adapt and continually enhance the skills, understandings and personal attributes that make them more likely to find and create meaningful paid and unpaid work that benefits themselves, the workforce, the community and the economy" (Oliver, 2015, p. 63).

While some authors (e.g.,Brown et al., 2003; Cheng et al., 2022; Isopahkala-Bouret and Tholen, 2023) critique such a definition for its limited consideration of the relative nature of employability, this thesis acknowledges the significance of its dual nature,

[18] This definition is based on the definition originally offered by (Yorke and Knight, 2006, p. 567)

emphasising the interplay between the relative and absolute dimensions of employability (Brown et al., 2003). Consequently, the thesis recognises the significance of broader definitions of employability, such as Brown et al.'s (2003) characterisation of employability as 'the relative chances of acquiring and maintaining different kinds of employment' (p. 111). While not adopting this broader perspective, the thesis acknowledges that employability is not solely defined by the development of skills, understanding, and personal attributes. Instead, once graduates enter the job market, their employability is influenced by external factors, such as economic and labour market conditions (e.g., supply and demand dynamics), biographical factors (e.g., gender and social background), and the socially constructed nature of employability (e.g., which jobs are deemed socially appropriate for university graduates) (Brown et al., 2003). Additionally, Isopahkala-Bouret and Tholen (2023) highlight that relative employability involves conflict and positional competition among individuals and social groups as they compete for advantage in the labour market by exploiting various resources, such as graduate degrees, which, as Shavit and Park (2016) note, derive their value partly from their limited availability within the population.

The above discussion is particularly significant in the context of the thesis's earlier position, which argues that creating a division between graduate attributes and employability is unproductive. The current discussion highlights that graduate employability is inherently multi-dimensional and extends beyond the attainment of skills and attributes alone. However, the decision to adopt Oliver's (2015) definition, which emphasises the absolute dimension of employability, is driven by key considerations. Specifically, this definition aligns well with the primary objectives of the thesis, which focuses on the role of HEIs in enhancing graduate employability through

one of their core activities: student assessment. By emphasising what can be achieved within the classroom through SA, this definition prioritises factors that HEIs can actively shape, rather than external macro-level factors that lie beyond their influence. It thus centres the focus on the skills, understandings, and personal attributes that play a pivotal role in enhancing graduate employability. By selecting this definition, the thesis highlights the areas where HEIs have a greater degree of capacity and accountability to impact graduate employability more practically.

3.2.1 Employability focus on generic attributes and skills

The emphasis on GAs within the employability imperative often stems from the widely acknowledged notion that in a rapidly evolving labour market, disciplinary knowledge and skills can quickly become outdated. Therefore, it is crucial that future workers possess generic strategies to adapt, re-learn, and remain equipped to tackle the ever-changing tasks essential for success in dynamic labour market operations (Nilsson, 2017; Scaffidi, 2018). As Oliver (2015) asserts, ‘employability is about learning, not least learning how to learn’ (p. 59). Indeed, as highlighted by Wald and Harland (2019), a pivotal concept bridging GAs with employability is “lifelong learning”, which is rooted in the belief that learning will be an ongoing necessity for individuals in various aspects of their lives. Consequently, graduates must possess the skills and attitudes necessary to facilitate this continual learning process.

In the professional sphere, there is a notable orientation towards placing greater emphasis on generic capabilities. Research indicates that employers increasingly prioritise and target generic skills as much as, and sometimes even more than, technical, subject-specific ones during their rigorous recruitment procedures (Lowden et al., 2011; Scaffidi, 2018; Succi and Canovi, 2020). For example, Succi and Canovi

(2020) investigated the perceptions of HE students and employers regarding the significance of generic skills relative to technical or functional skills across four European countries. The study revealed that employers placed higher importance on skills such as teamwork, creativity and innovation, and adaptability to change in their hiring processes compared to students' perceptions of these skills' importance for success in their future careers. Earlier, Bridgstock (2016) reported that many employers in creative digital sectors exhibited a preference for hiring graduates from humanities and social sciences backgrounds rather than those specialising in creative digital fields. Despite the necessity for both groups to undergo substantial training, employers emphasised the superior critical thinking and adaptive learning abilities often exhibited by humanities and social sciences graduates.

Within the HE business teaching context, Andrews and Higson (2008) demonstrated that both skill sets are equally important as necessary components in empowering graduates to fulfil their professional responsibilities with minimal supervision. However, their findings suggest that subject-specific knowledge alone is inadequate to meet the demands of a complex labour market, stressing the importance of complementing it with essential generic skills for achieving success. Moreover, while both sets of skills are crucial for enhancing GE and may vary across disciplines, the issue lies in the persistence of HEIs to prioritise integrating technical skills into their programmes while potentially neglecting the integration of generic attributes, as highlighted in both earlier and more recent studies (Knight and Yorke, 2003; Andrews and Higson, 2008; Cinque, 2016; Bridgstock, 2016; Succi and Canovi, 2020).

Illustrating the above, Knight and Yorke (2003) observe that HEIs have generally succeeded in imparting subject-specific skill sets to students; however, they have been less effective in fostering the development of generic skills. More recently, Succi and

Canovi (2020) found that HEIs are failing to effectively communicate to students the significance of soft or generic skills development, nor are they adequately preparing them to enter the job market. Consequently, as both skill sets hold significant importance, the focus of governments and employers on more generic attributes can be justifiably linked to the reported deficiency in these skills among graduates, particularly when contrasted with their proficiency in subject-specific ones.

3.2.2 The impetus for the graduate employability agenda

As discussed earlier, the increasing emphasis on fostering generic skills and attributes, besides subject-specific technical knowledge and skills, has largely originated from an emphasis on enhancing graduate employability, which in policy terms is widely recognised as the 'employability agenda' (Sin and Neave, 2016; Moore and Morton, 2016; Clarke, 2018; Bridgstock and Jackson, 2019). Several interrelated factors are associated with the strong impetus given to this agenda around the world and the attendant strengthening of the link between HE and the labour market. Clarke (2018) contends that this movement is largely fuelled by governments and industry groups as key HE stakeholders, by whom graduate education and employability are unequivocally identified as 'the main pillars of social and economic development for any country' (Osmani et al., 2019, p. 423). As Holmes (2013) highlight, societal prosperity heavily relies on HE graduates, as they impact not only the economy but also the political structure of society, assuming significant positions of influence in these domains (p. 538).

To elucidate the impact of education on GE outcomes, various authors draw on notions of human capital theory (Bridgstock, 2009; Kalfa and Taksa, 2015; Suleman, 2018). Human capital theory conceives education and training as vital economic devices for

sustaining participation and engagement in ‘a rapidly changing information- and knowledge-intensive economy’ (Bridgstock, 2009, p. 32), wherein employees become increasingly identified as ‘knowledge workers’ (Atkins, 1999; Candy, 2000; Bridgstock and Jackson, 2019; Tomlinson, 2012). Suleman (2018) adds that the level of education is conceived as bearing heavily on the economic gains a graduate could subsequently generate. She explains that the fundamental concept revolves around individuals investing in education and training, which equip them with a range of skills and attributes that employers may value. Essentially, education and training provide individuals with a pool of marketable skills and attributes that enhance their productivity, leading to increased earnings.

Recognising the positive impact of education and training on individuals, various stakeholders, including governments and employers, advocate for increasing access to HE, a notion known as the massification of HE (Green et al., 2009; Sin and Neave, 2016; Cheng et al., 2022). Notably, the massification of HE, leading to a surge in the number of graduates and heightened competition in the labour market, has exacerbated the issue of the graduate skills gap. Indeed, some scholars attribute the impetus behind defining GAs within the employability movement to this perceived skills gap and the subsequent increase in unemployment rates stemming from graduates’ inability to meet evolving labour market demands (Leoni, 2014; Pham and Saito, 2019). This scenario necessitates graduates’ continuous adaptation to rapidly changing work settings and demands, which encompass emerging technologies (Bridgstock, 2009; Bridgstock, 2016).

Such circumstances have led governments and employers to place increasing pressure on universities to prepare larger cohorts of graduates with attributes deemed

essential for their immediate impact and contribution to the success of the businesses they enter (Chapman and O'Neill, 2010; Hager and Holland, 2006; Krouwel et al., 2019; Mason et al., 2009; Nilsson, 2017). Hence, GAs function as an ‘orientating framework’ (Hill et al., 2016), serving as a practical approach utilised by HEIs to enhance communication and assurance among various stakeholders. This accentuates the acknowledgment that these attributes have become top priorities for HEIs as mechanisms for fostering GE (Wald and Harland, 2019). Bridgstock (2017) claims that

> “To date, the most dominant way universities have engaged with the employability agenda is to include ‘graduate attributes’ and ‘employability skills’ in the degree curriculum” (p. 340).

The massification imperative in HE is further sustained by the moral discourse of ensuring social justice and equity, which aims to provide fair access to HE for all individuals. McCowan (2015) highlight that failing to promote employability leaves graduates disadvantaged in the face of intense competition, impacting their social well-being and society at large. This is because lacking employability significantly curtails graduates’ life chances, hence, HEIs have a moral obligation to facilitate their pursuit of it. Authors such as Kalfa and Taksa (2015) conceptualise the attributes and skills imparted by universities as a form of cultural capital that enables students to assimilate into workplaces, enhancing their employability. Thus, by supporting the employability agenda, universities contribute to the ‘social inclusion’ of graduates who might otherwise face disadvantages. Evans et al. (2021) note that in the UK, the massification of HE has contributed to diversifying the student body by attracting students from a broader spectrum of social, ethnic and cultural backgrounds. Notwithstanding these positive aspects to the widespread expansion of HE, it is

important to recognise that many scholars attribute this phenomenon to the emergence of a consumerist mindset among HE students, a topic explored in the following section.

3.2.2.1 The view of students as consumers of higher education

A key issue associated with the employability agenda is its partial link to fostering a consumerist mindset among students, which could encourage passive and instrumental approaches to learning (Tomlinson, 2017; Bunce et al., 2017). This association is primarily driven by the ongoing marketisation of HE, which places increasing financial burdens on students to fund their education (Mason O'Connor et al., 2011; Williams, 2013; Tomlinson, 2017; Souto-Otero et al., 2024). Building on the work of Fromm (1976), Molesworth et al. (2009) characterise the increasing consumerist orientation within HE as transforming students' mode of existence from aspiring learners to individuals primarily focused on obtaining a degree. Consequently, other linked student orientations, such as prioritising rights over responsibilities, become prevalent, negatively impacting teaching and learning activities by fostering conditions that compel educators to conform to the emerging consumerist culture. While students increasingly demand educational content that equips them for success in market-driven environments, educators often find themselves adapting their teaching methods to align with 'consumer-students [who] seek maximum outcomes for minimal effort' (p. 283).

Similarly, Boden and Nedeva (2010) comment that engaging in the employability agenda may impose various constraints on universities, potentially leading to the narrow definition of acceptable curricula and pedagogies. Such restrictions may not necessarily benefit all stakeholders involved, including students and society at large.

These negative effects of a student consumerist approach are linked to a growing inclination among students to assess their HE experiences and resulting qualifications based on their ‘instrumental values’ (Tomlinson and Kelly, 2018, p. 357). This trend leads them to become more sceptical and critical of university education that does not align with labour market demands, thereby appearing to have low ‘functional status’ in their eyes (Al-Harthi, 2011, p. 543). This situation is exacerbated by the exponential increase in both the number of graduates aching for employment and the financial costs incurred by pursuing a degree (Tomlinson, 2008).

However, other authors challenge this consumerist perspective of HE students (James and Yun, 2018; Brooks et al., 2020; Souto-Otero et al., 2024). For instance, Souto-Otero et al. (2024) explore factors influencing student engagement with their HEIs in the UK, specifically focusing on donation behaviours post-graduation. Their research distinguishes between ‘transactional contracts’, associated with a consumerist, economic perspective where alumni donation levels are influenced by students' grades, and ‘relational contracts’, linked to a social perspective of higher education, where donations are influenced by students' social and emotional experiences. They found that while donations are more likely from students with better grades, the impact of social experiences that foster long-term connections with the institution is significantly greater than that of academic performance. Their findings challenge the dominant transactional models of HE and highlight the limitations of viewing the student-university relationship purely through a consumerist lens.

In the Canadian context, James and Yun (2018) present parallel findings regarding the importance students place on employability aspects when assessing their university experiences. They found that while students may initially choose HEIs with the goal of enhancing their employment prospects, their assessment of their university journey is

largely influenced by their actual interactions within the institution and the fulfilment of their personal objectives. In essence, the research suggests that students prioritise elements such as education, personal growth, and social engagement over merely pursuing employment opportunities. This underlines the importance of conceptualising employability in the broader terms discussed earlier, rather than solely focusing on short-term employment prospects. As McCowan (2015) emphasises, while HEIs cannot overlook the significance of preparing students for professional roles, this should not detract from the other critical purpose of HE: preparing graduates for effective civic participation. This aspect of HE's mandate leads to the exploration of another key topic associated with GE: the role of HE, which the next section addresses.

3.2.3 Employability and the Role of Higher Education

The employability agenda, alongside the notable rise in student enrolment rates, has played a significant role in reshaping the conceptualisation of university education (Down, 2006; Boden and Nedeva, 2010; Evans et al., 2021). Markedly, it has impacted the nature of the relationship between universities and their governing bodies, which play a significant role in funding and regulating HE systems (Boden and Nedeva, 2010), as well as the relationship between universities and workplaces (Nilsson, 2017). Evans et al. (2021) point out that as HE has become more widespread and accessible (massified), there have been shifts in how it is perceived and the purposes it aims to achieve, as delineated in policy and perceived by society at large.

Amidst such shifts, many scholars have delved into the critical question of how universities should perceive their role in educating and preparing students to effectively address and navigate the significant levels of uncertainty and complexity

anticipated in the future, particularly in a world of work where these factors will play a prominent role (Barnett, 2004; Down, 2006; Reid et al., 2008; Holmes, 2013; Krouwel et al., 2019). This question has shifted attention to the nature of the attributes that graduates will need to respond to this imperative, forming part of a vigorous yet ongoing, debate about the purpose of HEIs (Hager and Holland, 2006; Star and Hammer, 2008).

In addressing this question, scholars are engaged in debates over two main models of HE. Wheaton (2020) offers a useful comparison between these polarised HE models: the Humboldtian model and the Neoliberal model, which is more strongly associated with the employability agenda. According to Wheaton (2020), proponents of the Humboldtian model advocate that the university should primarily serve the purpose of pursuing knowledge for knowledge's sake by establishing a strong link between research and teaching. Thus, offering freedom to academics and students to engage in scientific inquiry is considered the foremost mechanism through which the university facilitates the public good and welfare of society, rather than blindly supporting economic ends. Conversely, Neoliberals argue that the primary purpose of the university should be to cultivate graduates well-equipped with the attributes and skills that will enable them to enter the job market. In this model, students are viewed as customers purchasing services offered by the university, with academics favourably inclined to conduct research that is financially profitable. As Campbell et al. (2019) contend, within Neoliberalism, the quality of university education becomes increasingly measured by the value it adds to graduate employment and economic outcomes.

Importantly, a number of authors argue that these two purposes are not mutually exclusive (Star and Hammer, 2008; McArthur, 2011; Fung, 2017; Campbell et al., 2019; Crisp et al., 2019), suggesting that universities can effectively support both simultaneously. McCowan (2015) contends that relying solely on the Humboldtian model poses challenges, as it is entirely reasonable for learners, educators, and other stakeholders invested in their education to have instrumental goals for their learning. Additionally, Roche (2017) critiques Cardinal Newman's ideas[19] regarding the role of universities, which are associated with intrinsic values of education rather than its extrinsic or instrumental aspects. Roche (2017) argues that despite the sincerity behind this perspective on intellectual development, it is inherently infused with imperialist values. This suggests that Newman's vision of the university embodies a hierarchical perspective of society and is primarily accessible to a privileged elite.

Moreover, other scholars advocate for the significance of fostering student development of generic attributes and skills essential for improving their employability, citing crucial pragmatic reasons. Hager and Holland (2006) explains that the reason for educational providers to facilitate the development of generic attributes is not merely instrumentally motivated; rather, it emanates from their understanding that numerous educational benefits could be derived from the integration of carefully considered GAs into HE programmes. This approach aids educators in various aspects including course delivery, development and assessment, leading to the enhancement of overall learning. The authors stress that 'the strategies needed to develop generic attributes are also the ones that lead to good learning outcomes' (Hager and Holland, 2006, p. 7). Additionally, Star and Hammer (2008) advocate for a

[19] Newman perceives the university as a site where individuals cultivate their minds 'to reason well in all matters, to reach out towards truth, and to grasp it' (Newman, 1852, p. 126).

skills-based pedagogy in HE, highlighting that while universities may face criticism for seemingly prioritising contemporary vocational demands over their traditional role of shaping effective citizens and social critics, this perspective relies on ‘an artificial dichotomy’ regarding the purposes that universities can effectively support (p. 237). They argue that unskilled graduates fall short in two essential areas for which universities are expected to prepare them: being employable and contributing to the advancement of civil societies. McCowan (2015) attributes this to the diverse qualities associated with improved GE, such as communication, critical thinking, and problem-solving skills, which have the potential to enhance graduates’ productivity and, consequently, the overall efficiency of the workplaces they enter.

Therefore, rather than an approach that separates the purposes of HE strictly into ‘liberal’ and ‘vocational approaches’, a balanced or mixed approach seems much more intuitive and is well-supported in the theoretical literature, given that a significant driver behind students’ pursuit of HE degrees is preparation for employment (Molesworth et al., 2009; Blackmore et al., 2016; Lock and Kelly, 2020). This equilibrium can be achieved by universities empowering graduates to contribute to and transform their societies, while also providing them with the necessary skills to fuel economic growth and reshape economic systems (Crisp et al., 2019). Crisp et al. (2019) argue that universities should structure their teaching and research endeavours to contribute to the employability agenda through facilitating both the ‘employ’ alongside ‘ability’ aspects of employability. Based on such comprehensive understanding of employability, Star and Hammer (2008) suggest that embracing the GE agenda offers universities a unique opportunity to reaffirm and clarify the perceived ‘higher purpose’ of HE: cultivating reflective professionals and responsible citizens.

3.2.4 Higher Education's response to the employability imperative

Due to the increasing global acknowledgment of the significance of GAs in enhancing GE, many HEIs have undertaken evaluations and revisions to determine the most crucial sets or combinations of attributes that graduates must develop to better align with the expectations of diverse employers across various occupational contexts and disciplines (Bridgstock, 2009; Holmes, 2013; Kaider et al., 2017). This often entails the integration of new courses and instructional strategies into student study programmes, as well as modifications to existing ones, and strengthening the curriculum by providing opportunities for work experiences (Cranmer, 2006; Mason et al., 2009). McCowan (2015) summarises the diverse range of initiatives undertaken by universities in Anglophone countries and other regions worldwide as part of their dedication to improving GE, which include:

> "Enhanced careers services, integration of skills development within degree courses, introduction of standalone skills development courses, increased opportunities for work placements, and increasing involvement of employers in curricular design and delivery." (p. 268).

Other scholars have put forth frameworks and models to guide HEIs in implementing initiatives and activities aimed at enhancing GE. These frameworks go beyond merely focusing on skills; they also encompass other vital dimensions essential for GED. One such widely recognised framework is proposed by Knight and Yorke (2002). Knight and Yorke (2002) state that employability relies on a harmonious combination of diverse skills (both generic and subject-specific), personal attributes, alongside disciplinary knowledge. Hence, in their USEM model, they incorporated four key dimensions of employability, comprising understanding or knowledge of the discipline, generic and discipline-based skills, efficacy beliefs, and metacognition.

Drawing from the USEM model, Dacre Pool and Sewell (2007) expanded the dimensions of employability by including 'emotional intelligence' in their CareerEDGE Model. Furthermore, Römgens et al. (2020) recently synthesised insights from diverse dimensions, amalgamating research on learning in HEIs and workplaces. They devised a comprehensive framework outlining employability dimensions for HEIs, which encompasses transferable generic skills, emotional regulation, self-efficacy, self-management, career development skills, and the application of disciplinary knowledge. However, while identifying these key aspects is crucial, the integration of these dimensions into HEIs' curricular and pedagogical activities poses significant challenges and complexities.

HEIs have encountered various challenges that hinder their ability to integrate the necessary capabilities into study courses and programmes, as well as to design activities suitable for nurturing these capabilities. Some authors argue that the rapid and unprecedented changes in labour market demands pose numerous challenges to HEIs and educators, necessitating effective strategies to prepare graduates with suitable and efficacious attributes and skills for the sophisticated and rapidly changing labour market (Williams, 2013; Nilsson, 2017; Roche, 2017; Jääskelä et al., 2016). A significant challenge that universities must address is the need to adapt and respond with considerable agility to volatile labour market developments and changes by incorporating these evolving requirements into the curricula and pedagogies they employ to equip their graduates with sought-after skills and attributes (Chan et al., 2017; Nilsson, 2017; Pitan, 2017; Roche, 2017). Failure to do so may risk graduates falling out of favour with employers or, to a lesser degree, losing a vital competitive edge (Tomlinson, 2008). This concern is highlighted by more recent research on the UK labour market, which affirms that employers are increasingly prioritising 'job

readiness' over educational credentials when recruiting new candidates (Brown and Souto-Otero, 2020).

Besides the unprecedented speed of change, another significant aspect complicating this task for HEIs is the vast array of scopes and areas within the labour market for which they must prepare their graduates (Boden and Nedeva, 2010; Nilsson, 2017). This proliferation of diversity stems from the intricate complexity of modern workplaces, where graduates are expected to demonstrate effective performance (Hager, 2006; Nilsson, 2017). The tasks performed by graduates in different occupations vary significantly, being highly contextualised and contingent on the nuances of their work environments. Consequently, the competence requirements for these tasks also vary, necessitating a combination of generic attributes that graduates must possess to fulfil their diverse roles effectively (Hager, 2006; Nilsson, 2017).

While it's important to cultivate specific skills in graduates, some authors caution against relying solely on generic lists of desired skills and attributes without considering the context in which they are developed (Jones, 2009; Bridgstock, 2017). Hager (2006) also indicate that the diversity of professional contexts highlights the limitation of predetermined skills in adequately meeting the nuanced demands of specific work environments. Therefore, it is reasonable to argue that HEIs should prioritise the development of attributes and qualities that enhance graduates' ability to engage in workplace learning. This would enable them to adapt to the rapid changes in professional environments and maintain their competitiveness. By focusing on fostering graduates' capacity for continuous learning, they can acquire and apply optimal combinations of attributes and skills tailored to the specific challenges they will encounter in their future careers. Adopting an approach that empowers graduates with

the ability to learn and adapt as needed appears to be the most prudent and practical course of action.

Significantly, prioritising attributes and capabilities for lifelong learning can support both the economic and social roles of the university, discussed earlier. Various authors envision the role of HEIs as empowering graduates to excel in dynamic and unpredictable environments (Kember and Leung, 2005; Cassidy, 2006; Boden and Nedeva, 2010; Dumford and Miller, 2017; Suleman, 2018). As Barnett (2006) aptly highlights, the primary role of HE revolves around preparing individuals who can 'withstand profound and incessant change' (p. 51). Other authors have extensively underlined the importance of embracing lifelong learning to address the evolving forms and structures of careers that graduates will likely encounter in the prospective precarious and competitive labour market. In this scenario, the traditional notion of a stable career becomes obsolete, and the norm shifts towards following less stable, non-linear career paths (Thijssen et al., 2008; Tomlinson, 2012; Donald et al., 2017). In essence, it is imperative to tackle the challenge of continuous change through ongoing learning (Down, 2006; Thijssen et al., 2008; Akkermans et al., 2015; Bunney et al., 2015; Nilsson, 2017).

Therefore, multiple authors advocate for approaching employability as a process that is significantly influenced by the nuances and peculiarities of the work contexts graduates will need to interact and engage with (Holland, 2006; Holmes, 2013; Jones, 2013; Krouwel et al., 2019; Ramnund-Mansingh and Reddy, 2021). Within this perspective, graduates are viewed as learners with a capacity to capitalise on the affordances of their unique contexts whereby they engage in continuous learning and progress along their employability trajectories. As Krouwel et al. (2019) highlight, recognising this insight facilitates a shift in the emphasis of teaching employability from

tailoring students' development to fit a particular career context to equipping them with a range of abilities that empower graduates to adapt to various circumstances and effectively 'take control of the process of career management' (p. 117).

To facilitate the understanding and practical application of such framework, authors have emphasised the importance of comprehending the nature of the learning processes that students will encounter in their future professional environments (Down, 2006; Hager, 2006), and subsequently structuring HE experiences to align with these requirements. Initiatives aimed at defining and evaluating the attributes necessary for graduates to thrive in the job market are unlikely to be effective without a thorough understanding of how the learning experiences in HE can support and enhance their future workplace learning (Down, 2006), often characterised as 'unstructured' and 'messy' (Fung, 2017, p. 92). As Beckett and Mulcahy (2006) highlight, 'one learns for work by doing work' (p. 245). Echoing these perspectives, McArthur (2011) contends that the most effective preparation for the messy nature of workplaces is through an equally messy learning environment.[20]

Ensuring compatibility between HE learning and workplace learning requires HEIs to adjust their programmes to assist their graduates in addressing such requisites through raising their awareness and understanding about the labour market demands and building their long-term career management capacities (Bridgstock, 2009; Belwal et al., 2017). Bridgstock et al. (2019) argue for the need to introduce what they term 'career development learning' early on in HE curricula as an effective strategy in assisting students create clearer visions about their prospective career paths and

[20] "Higher education should challenge, provoke and inspire. It should look messy. It should not fit neatly within the lines of an accountant's ledger. It should look rather like the world in which it exists and which it partly serves" McArthur (2011, p. 743).

facilitating better student identity development. This contributes to making the link between their current learning and future careers more explicit and transparent which as a result could potentially increase their overall engagement with the curriculum.

Refining programme designs and course structures to embed and foster GE capabilities, along with enhancing students' awareness of its importance, are frequently highlighted in the literature as essential steps to promote the development of these capabilities (Rowe and Zegwaard, 2017; Jorre de St Jorre and Oliver, 2018; Fung, 2017; Sarkar et al., 2020). Other authors argue that universities should prioritise the deliberate and thoughtful design of teaching and learning activities to maintain optimal alignment with programme outcomes, incorporating desired GAs (Harvey, 2001; Badcock et al., 2010).

In addition to integrating GE skills and attributes into teaching and learning, several authors emphasise the crucial need for their explicit inclusion in student assessment. Scholars have proposed assessment approaches and tools aimed at using assessment not only for evaluating but also for fostering GE capabilities. Essentially, students are expected to cultivate these capabilities through their engagement in assessment activities. Advocating for skills-based pedagogy, Star and Hammer (2008) indicate that assessment practices should contribute to developing graduate capabilities, tailored to the required level of capability development at different stages of students' study programmes. Hughes and Barrie (2010) note an increasing acknowledgment among scholars that the most compelling evidence of GE attributes accomplishment lies in their deliberate integration into assessment. Similarly, Oliver and Jorre de St Jorre (2018) recommend HEIs focus on key actions of good practice,

including the use of more objective criteria to assess students' attainment of attributes by 'inculcating them more explicitly into assessments in the curriculum' (p. 833).

3.2.5 Summary of section 3.2

Section **3.2** accentuated the significance of embracing a holistic perspective on employability, wherein it is viewed as the cultivation of enabled graduates equipped with capabilities for ongoing learning and development, facilitating their success in both professional and social spheres. Consequently, it advocated for an approach that prioritises the cultivation of broad capabilities alongside subject-specific skills, enabling graduates to adapt to the dynamic and unpredictable nature of modern workplaces. The section emphasised the importance of treating employability as a continuous process, wherein students engage in contextualised activities tailored to the professional tasks they are likely to encounter, thus bridging the gap between academic and workplace learning. This approach highlights the significance of aligning educational activities with real-world demands, particularly through assessment practices, which will be the focus of the subsequent sections.

3.3 Student Assessment in Higher Education

The previous section introduced GE as a key movement in contemporary HE, placing HEIs under increasing pressure to facilitate their graduates' development of a wide range of GE capabilities. This section explores the link between GE and SA as a potential tool for its development as well as the key factors impacting this link. First, the section discusses the role of SA in fostering key GE capabilities and highlights some of the key issues with current HE assessment practices in this regard. The section then introduces the concept of authentic assessment (AA) that the literature shows as a pivotal approach linking SA with GED, delineating four broad

characteristics or dimensions of assessment authenticity. This is followed by a discussion of the key barriers and enablers of SA-GED link. While the section argues for the importance of adopting authentic assessment tasks (AATs) toward aligning SA processes with GED, it simultaneously stresses that this process of alignment can be significantly hindered without addressing the various factors that impact HE lecturers' efforts in effecting this process. It advocates for collaborative efforts to be orchestrated in both providing the means that enable this process and removing the barriers obstructing it.

3.3.1 The pivotal role of student assessment in shaping graduate employability

The significant role played by assessment in students' present learning, as well as its impact on future learning and functioning in workplaces and the society at large has been acknowledged by numerous authors. It has been recognised as 'the single most important component that influences student learning and education in general' (Taras, 2008, p. 389). While SA is often described as exerting a significant impact on students' motivation for learning (Harlen and Deakin Crick, 2003), it is also recognised as a source of a great deal of anxiety to students more than any other aspect of their HE experiences (Bryan and Clegg, 2006). Significantly, it has long been identified to be providing signals to students about which aspects of learning are valued by their educators (Cumming and Maxwell, 1999; Litchfield and Dempsey, 2015). It is viewed as 'cultural communication' activity through which values and intentions of the subjects taught by educators are transmitted to their students (Boud, 2000, p.160).

It is on this basis that various scholars have called for much greater heed to be directed to SA if HE is to effectively respond to the imperative of fostering GE, which they have

been increasingly and constantly being demanded to accomplish, as section **3.2** shows. Boud (2010) stresses that if the cultivation of the capabilities required of students to become employable and able to meet continuous learning requirements are not embedded into HE assessment practices, 'then the skills needed for this will not be promoted effectively and the message communicated to students will be that they are not valued' (p. 4). These perspectives align with Brown et al.'s (2007) suggestion that SA represents the primary area where HEIs should focus their efforts to bring about desired changes in student learning, including the enhancement of their employability. They contend that 'if you want to change student learning, then change the methods of assessment' (Brown et al., 2007, p. 7). Similarly, Dolin et al. (2018) affirm that 'developing new competencies may well remain as an aspiration on paper unless appropriate assessment tools and processes are developed" (p.54).

Therefore, scholars consider assessment as an integral component intricately connected with the broader curriculum, advocating for a comprehensive reassessment and alignment of the entire university curriculum with GED goals. The concept of 'a pedagogy for employability' is promoted by various authors (Yorke, 2010; Pegg et al., 2012; Bennett et al., 2020), emphasising the holistic alignment of all key curriculum components with GED requirements. Yorke (2010) specifically highlights the need for HEIs aiming to facilitate GED to 'rethink curriculum, pedagogy, and assessment' (p. 10). These interconnected components markedly signal that advancing employability necessitates innovations not only in curriculum and pedagogy but also in well-conceived and effectively designed assessment methods (Pegg et al., 2012; Archer et al., 2021; Montano et al., 2023).

Another important thread about the critical role of assessment in GED comes from research on how students develop their pre-professional identities. The link between

student professional identity development and HE assessment practices has been recently demonstrated by Blaj-Ward and Matic (2021) who explored how the assessment experiences undergone by a group of undergraduate students played out in shaping their pre-professional identities. Having endorsed the central influence of such experiences on student university journeys, the authors recommended assessment experiences undergone by student in HEIs as

> "An excellent lens through which to explore how pre-professional identity begins to develop and how possible selves acquire sharper contours as learning journeys unfold" (p. 3).

Two useful concepts to elucidate the link between AATs and students' future professional roles are brokering and boundary objects or devices. Ajjawi et al. (2020) applied these two concepts to visualise the university and workplace settings as two distinct 'communities' with intersecting practices.[21] A boundary object is a tool or an artifact that serves as a bridge connecting individuals from the different communities. Brokers play a crucial role in coordinating activities and understanding between these distinct communities. An example of this is workplace-informed assessment tasks, such as projects and case studies, which can function as boundary objects, enabling students, who act as brokers, to connect their current academic community with the future professional community they aspire to join and enhance their understanding of both. Drawing a distinction between the viability of different assessment tools in terms of enhancing students' readiness to assimilate into future professional contexts, Garraway (2010) notes that:

[21] The authors drew upon the theory of 'communities of practice' proposed by Wenger (1998).

> “Some of the devices serve to disrupt inter-community coherence whereas others serve to enable the passage and transformation of knowledge between the communities” (p. 217).

Hence, the assessment regime encountered by students throughout their educational journeys can profoundly shape their professional identities and, consequently, influence their preparedness for and transition into the workforce. Having highlighted the significant impact of SA on student learning and GED, the next section will explore situations and circumstances in which SA can negatively affect student learning and employability. These negative implications often arise in the context of implementing traditional assessment forms, as opposed to more novel and innovative forms better suited to respond to the GED imperative.

3.3.2 Issues with current HE assessment practices

One criticism of traditional assessment practices is their overemphasis on specific forms of assessment, which favour or focus on limited, and arguably less useful, assessment types, neglecting others that are crucial for developing essential GE capabilities. While this concern was raised by HE assessment researchers more than two decades ago (Struyven et al., 2005), it persists in many HEIs until recently (Jorre de St Jorre et al., 2021; Archer et al., 2021). Jorre de St Jorre et al. (2021) observe that many widely used assessment approaches in HE are dominated by written tasks, leading to an emphasis on writing skills. However, tasks involving skills like interpersonal or digital communication are less common, despite their relevance and significance for success in a wide range of workplaces.

Alongside the dominance of written exams, another significant issue arises from the types of skills often promoted through these conventional assessment methods

(Villarroel et al., 2020). Critics argue that such methods emphasise the learning of factual knowledge or ‘knowledge transmission’, encouraging students to rely on memorisation for assessments rather than fostering ‘transformational learning’ (James and Casidy, 2018, p. 403). By focusing on information recall and reproduction, traditional assessment forms neglect essential capabilities such as collaborative and communicative abilities crucial in modern workplaces (Montano et al., 2023). This perspective contradicts calls to build students’ capacities as ‘knowledge producers rather than knowledge consumers’ (Libman, 2010, p. 66).

Furthermore, Montano et al. (2023) point out that many problems or scenarios presented to students in traditional assessment methods do not factor in real-world work contexts. This renders them deficient in relevance and meaning as they fail to offer students adequate exposure to authentic work situations where they can apply the knowledge and skills acquired at the university, limiting their awareness of the complexity and messiness of real work environments (Sokhanvar et al., 2021; Montano et al., 2023). Along similar lines, Archer et al. (2021) emphasise that examinations and essays, as the predominant forms of conventional assessment methods, ‘risk creating a schism between theory and practice while assessment remains dominated by academic procedure’ (p. 326).

Another thread of criticism regarding traditional assessment forms that currently dominate HE practices is that they can instil attitudes in students that are detrimental to both their current and future learning requirements. This is consistent with the perspective that poorly executed assessments can have adverse negative effects (Villarroel et al., 2020). In their examination of students’ attitudes toward assessment, Struyven et al. (2005) revealed that traditional assessment tasks were perceived by many students as arbitrary, lacking relevance and clear rationale. Consequently,

students tended to approach their studies solely for the sake of the assessment tasks, showing little intention for applying or retaining the acquired knowledge beyond academic settings. Other researchers suggest that conventional assessment tasks contribute to fostering a mindset in students, wherein they perceive their teachers as the sole experts or gatekeepers of knowledge. This perspective limits their role to accessing and obtaining knowledge rather than actively engaging in autonomous and collaborative learning with peers (Lombardi and Oblinger, 2007; Montano et al., 2023). Such practices tend to confine the learner to a passive student role, subjecting them to external judgments of competence, while failing to nurture a heightened level of responsibility commonly encountered in professional environments (Ajjawi et al., 2020).

Owing to such issues, several authors have noted that, rather than serving as a bridge facilitating students' transition into the real world, or as 'boundary objects' as discussed earlier, most traditional assessment tasks predominantly function as tools for enculturating students into academic practices and procedures (Herrington et al., 2004). In other words, they merely serve as instruments for demonstrating that students have learned 'to do the *academic* task' rather than providing evidence of their ability to assimilate into professional environments (Jones et al., 2009p. 205, emphasis added). Given that one of the fundamental objectives of HE assessment is to empower graduates to engage in continuous, lifelong learning by enabling them to assess their own work and progress (Boud, 2000; Poikela, 2004), which is crucial for thriving in a world marked by complexity and uncertainty (Barnett, 2007; Kreber, 2014), most traditional forms of assessment are likely to do a disservice not only to students but also to society at large. As Bryan and Clegg (2006) emphasise:

> “Society today demands more than passive graduates who have complied with a fixed assessment regime. It wants people who can plan and monitor their own learning and do so without continuous prompting from others” (p. xviii).

Recognising the issues associated with traditional assessment methods, authors worldwide have advocated for the adoption of assessment methods that are relevant, meaningful, and fit-for purpose, that is, purposefully designed to facilitate GED. Montano et al. (2023) argue that the continued dependence of HEIs on traditional assessment methods is no longer tenable given the intensified demands from governments and employers to produce work-ready graduates. These methods are currently inadequate in addressing the diverse needs of students seeking to develop as employable graduates. Hence, there is a pressing need for HEIs to explore alternative, authentic approaches that could more effectively support them in fulfilling this mission. Morley and Jamil (2021) argue that HEIs should undergo a process of modernisation and innovation, revisiting their current educational objectives and approaches to align learning with GED and practical application. By centring their pedagogical approaches on real-world learning ethos, HEIs can effectively and simultaneously meet the demands of GE and foster deep learning.

However, when considering which assessment methods align with GED, the literature lacks a consensus among scholars on completely ruling out traditional assessment methods from contributing to GED (Litchfield and Dempsey, 2015). The issue becomes complex, particularly concerning widely prevalent, long-established methods like exams and essays, which Boud (2008) describes as being heavily ‘influenced by longstanding cultural practices in the academic disciplines’ (p. 29). For instance, while some methods, specifically written exams and essays, are deemed inappropriate for

GED as they may not reflect the future tasks that students will be expected to perform (Boud, 2008; Jones et al., 2009; Sotiriadou et al., 2020), others find them more useful (Scouller, 1998; Kaider et al., 2017; Sarkar et al., 2020).

This lack of consensus on assessment methods can be attributed to several factors. First, the issue of method usefulness is a matter of prioritisation influenced by the nature of the discipline (Kinash et al., 2016; Forsyth and Evans, 2019). For example, in fields like law and medicine, where familiarity with key terms is crucial for students, exams and tests are considered essential, especially early in their academic journeys (Kaider et al., 2017). Second, other reasons are related to the costs and resources required for implementing more innovative assessment methods aligned with GED (Rowe and Zegwaard, 2017; Schonell and Macklin, 2019). Therefore, some studies suggest reviewing and enhancing traditional, well-established methods rather than completely discarding them. These traditional methods, widely accepted across many HEIs, can still be utilised to foster the development of essential capabilities, particularly those related to higher-order thinking (Forsyth and Evans, 2019; Villarroel et al., 2020). This view is supported by Ajjawi et al. (2020) who argue that assessments in written formats, such as essay questions, problem-solving, and case analysis can be exploited to introduce students to the real world.

3.4 Authentic Assessment in Higher Education

Due to the limitations of traditional assessment methods, there is a growing demand for alternative approaches that address the imperative of GED. This is reflected in the increased call for the implementation of ‘assessment for employability’, urging for assessment types and methods tailored to facilitate GED and potentially ease students’ transition into the world after graduation (e.g., Ruge and McCormack, 2017;

Jorre de St Jorre and Oliver, 2018; Boud and Ajjawi, 2019). Assessment for employability not only addresses students' learning needs within the academy but also endeavours to meet their learning and functioning requirements beyond the university walls, in a world permeated by 'supercomplexity' (Barnett, 2004). Boud and Ajjawi (2019) apply this notion of assessment for employability to describe:

> "How assessment in its many forms can equip students to operate effectively in a complex and ever-changing world, in which new knowledge and skills will need continually to be acquired and developed in unpredictable contexts with a variety of other people" (p. 168).

It is important to highlight that the current literature review identified various frameworks that have been proposed to align SA with GED. However, the review reveals that these GED-linked frameworks share a central theme: enhancing graduates' employability and preparedness for post-graduation life through engagement in authentic learning and assessment. Therefore, this study uses the overarching concept of authentic assessment (AA) to refer to these frameworks. The upcoming sections focus on the benefits, dimensions, and factors for optimal enactment of AA, which Gulikers et al. (2004) define as

> "Assessment requiring students to use the same competences, or combinations of knowledge, skills, and attitudes, that they need to apply in the criterion situation in professional life" (p. 69)

According to Koh (2017), the term 'authentic assessment' originated from high school educational contexts.[22] The impetus for this form of assessment was underpinned by the urgency of the application of alternative, varied assessment methods, deemed suitable to meet the requirements of the 'diverse and rich contexts of performance' which graduates will need to cope with (Wiggins, 1993, p. 231). Subsequently, AA

[22] Grant Wiggins (1989) was the first to use the term 'authentic assessment' in 1989 (Koh, 2017).

found widespread application in HE contexts. Numerous authors have sought to define the dimensions of authenticity in SA, presenting frameworks and guidelines for AA designs. These contributions include works by Gulikers et al. (2004), Herrington et al. (2004), Ashford-Rowe et al. (2014); Bosco and Ferns (2014), and, more recently, Villaroel et al. (2018). Instead of tracing the historical development of the concept, the explanation of what AA means will be organised around the three critical dimensions of authenticity proposed by Villaroel et al. (2018).

The choice of Villaroel et al.'s (2018) framework is justified not only by its recent inception but also by its widespread applicability across various HE contexts. This framework was effectively applied to infuse authenticity into conventional assessment methods, as demonstrated by the authors in a subsequent publication (Villaroel et al., 2020). Furthermore, it served as the foundation for conceptualising 'authentic feedback' in HE by other scholars (Dawson et al., 2021). Notably, this framework goes beyond confining authenticity solely to work-related tasks; instead, it embraces both 'learning and employability' (Villaroel et al., 2018, p. 840), rendering it highly practical for supporting current learning and achievement as well as cultivating future learning capabilities. This makes it a suitable choice for fostering GE in its broadest sense, (as discussed in Section **3.2)**. AA fundamentally revolves around knowledge transfer, with tasks typically carried out in academic settings simulating the application of valuable skills relevant in the real world beyond university walls (Villarroel et al., 2018; Blaj-Ward and Matic, 2021). This perspective aligns with the current thesis, asserting that AA for GED can seamlessly integrate into regular classroom learning and instruction.

Furthermore, the framework offers a more nuanced conceptualisation of the significance of feedback processes, a dimension often overlooked by other frameworks. This is evidenced by its emphasis on fostering graduate evaluative

judgment capabilities, an increasingly vital requirement in contemporary workplaces (Boud and Ajjawi, 2019). Having conducted a literature review to discern the characteristics of AA, Villarroel et al. (2018) identified 13 key features. These were subsequently categorised into three broad dimensions, encapsulating the essence of AA: realism, cognitive challenge, and evaluative judgment. While the main headings for discussion will be derived from this framework, the exploration of each dimension will incorporate insights from a wider body of literature authored by different scholars. Before exploring the three dimensions of authentic authenticity, the next section will discuss the significance of AA for GED.

3.4.1 Importance of authentic assessment for GED

The imperative of involving students in AA tasks during their HE academic journeys is warranted by the potential benefits it holds for GED. The primary goal of incorporating AA is to augment classroom learning with real-world applicability, exposing students to performance standards and tasks reflective of their future roles as graduates (Wiggins, 1993; Gulikers et al., 2004; Villarroel et al., 2018). In this context, AA provides students with a valuable opportunity to engage with ‘a simplified version of the real world’ (Schultz et al., 2022, p. 3). Lombardi and Oblinger (2007) contend that AATs provide students with a valuable opportunity to immerse themselves in ‘authentic disciplinary communities’. The more exposure they have to such communities, the better equipped they are to navigate the ambiguity of a world characterised by ‘ill-defined real-world problems’ – a crucial skill expected of competent professionals as they graduate (p. 10).

Research has demonstrated that engagement in AATs correlates with increased academic engagement, motivation (Litchfield and Dempsey, 2015; Colthorpe et al.,

2021; Collins, 2022), self-confidence (Wilson et al., 2016), sense of accomplishment (Blaj-Ward and Matic, 2021) and self-regulation and self-efficacy (Fraile et al., 2017). This can be attributed to the perception that tasks deemed authentic imbue coursework with meaning and purpose as they become associated with the tasks students will encounter upon graduation (Litchfield & Dempsey, 2015; Collins, 2022).[23] This infusion of authenticity is found to support students' learning of subject content. For instance, despite the perceived challenges, students express a preference for AATs and tend to enrol in courses integrating them rather than those that do not (Collins, 2022). This positive impact has been observed by other authors, describing it as an enhancement in student 'promoting behaviour' (James & Cassidy, 2018, p. 411).

Another pivotal factor driving the adoption of AATs in HE is its acknowledged positive impact, not only on students but also on educators. According to Forsyth and Evans (2019), the concept of 'becoming' they closely associate with the implementation of AA extends beyond learners and permeates into the realm of educators. This is because the adoption of more AA methods not only transforms student activities but also, by extension, shapes teachers' daily practices in teaching, learning, and assessment. Consequently, it contributes to their 'becoming' as assessment professionals. That is, while AATs prepare students for their professional roles, they also play a role in shaping teachers' professionalism. In this form of assessment, students are encouraged to embrace challenges, contingent on the interaction and trust extended by their educators, who are expected to assume the role 'not just as knowledge experts but also as co-learners/inquirers' (Kreber, 2014, p. 51).

[23] This aspect has been recognised as a critical factor enhancing assessment validity (McAlister, 2000).

3.4.2 Realism in authentic assessment

According to Villarroel et al. (2018), achieving 'realism' in AA involves two approaches: first, by engaging students in performance-based tasks that mirror activities in real professions, resulting in the production of tangible work or the demonstration of skills, understandings, or knowledge; second, by providing students with realistic contexts, achieved when the assessment problem or situation incorporates details or inputs from real-life or professional settings. The use of realistic contexts is crucial as it enables the learning acquired through assessment engagement to be applicable or transferable to the corresponding real-world situations or contexts. When this feature is incorporated into assessment tasks, such as problem-solving or case analysis questions, the assessment can effectively function 'as a proxy of the real world' (p. 845).

While sharing roughly a similar perspective with Villarroel et al. (2018) on realistic tasks as part of conceptualising realism in AA, Gulikers et al. (2004) further categorise the context dimension into two aspects: physical context and social context of the task. The first aspect pertains to how closely the assessment task mirrors real-life tasks or problems in terms of the ways that the attitudes, skills, and knowledge deemed essential for the student to draw upon are reflective of the conditions or characteristics of real professional contexts. It also encompasses aspects relating to the nature and amount of guidance and resources provided to students while accomplishing the task like the allocation of time to finish the task, presentation of tools or materials, and provision of information or details. These elements should align with the real-life target or 'criterion situation' informing the assessment task and to which it relates (Gulikers et al, 2004). On the other hand, the social context dimension accounts for the social

processes necessary for performing an equivalent task in a real-life situation. This includes the types and nature of social processes that real professionals need to draw upon to achieve a pertinent task in a real professional context, for instance, the interactions, negotiations, collaborations that might be necessary.

Various authors emphasise the need to carefully consider students' characteristics when designing and introducing AATs. Kaider et al. (2017) recommend gradually progressing towards tasks that are highly authentic as students approach graduation. This strategy is particularly beneficial for programmes that plan assessments at the programme level, discussed in section **3.5.2**. Similarly, Gulikers et al. (2004) advise educators to 'not lose sight of the educational level of the learners' (p. 75). This caution is crucial because novice students may not be ready to handle the heightened assessment authenticity represented by 'real, complex, professional situations', underscoring that neglecting this aspect can lead to 'cognitive load' (p. 75–76). Over a decade later, Forsyth & Evans (2019) highlight that AATs should be introduced to students in a systematic, supportive, and scaffolded manner, succinctly stating that:

> "We clearly need to beware of taking authenticity too far – throwing students into the deep end is not teaching them to swim" (p. 758).

To mitigate such potential adverse outcomes, Gulikers et al. (2004) recommends that the 'criterion situation' or benchmark scenario should serve as an 'abstraction' or simplified representation of the pertinent, authentic professional practice. This approach ensures that the standard situation is realistic yet attainable for students across diverse educational levels. Applying the term 'fidelity' to the real workplace context, some have emphasised that ensuring high or maximum fidelity does not necessarily guarantee the best assessment conditions that lead to optimal results in

student learning (Herrington and Herrington, 2006; Ashford-Rowe et al., 2014). As recommended by Ashford-Rowe et al. (2014), a critical question for assessment designers is whether ensuring high fidelity, including the tools used by students (simulated or actual) in the assessment environment, is a necessary requirement for achieving optimal authenticity. Hence, defining the level of fidelity or simulation required to maintain an optimal level of effectiveness in AATs is crucial.

3.4.3 Cognitive challenge in authentic assessment

The second cognitive dimension in AA is linked to the development of higher-order thinking skills or capabilities (HOTS), whose significance in facilitating GED is emphasised by multiple authors (Oliver et al., 2007; Mohamed and Lebar, 2017; Villarroel et al., 2018; Boud and Ajjawi, 2019). These capabilities are often associated with other popular concepts that emphasise thinking processes such as critical thinking and creative thinking, which take centre stage in the qualities that HEIs aspire to instil in their graduates toward enhancing their preparedness for the demands of workplaces and society at large (Conklin, 2011; McNeill et al., 2012; Rear, 2019). Indeed, Sadler (2016) equates such cognitive processes with generic graduate attributes, referring to them as '"higher-order" capabilities', including 'thinking, reasoning, synthesizing, conceptualizing, evaluating, and communicating' (p. 1081). According to Conklin (2011), cultivating students' higher-order capabilities serves two essential goals: it facilitates their academic achievement and better prepares them for the lifelong learning demands of the future.

AA centres around the implementation of tasks that activate students' application of higher-order thinking in solving problems or making decisions about given situations (Koh, 2017; Villarroel et al., 2018). In this form of assessment, students utilise and

reconstruct the disciplinary knowledge obtained through their courses to generate new knowledge forms. Indeed, some authors define authenticity as being based on the integration of HOTS (Newmann and Wehlage, 1993; Savery and Duffy, 1995; Rule, 2006). For instance, having analysed HE teachers' perception of authentic learning, Rule (2006) reported that authentic learning activities are ones 'that engage students in real-world inquiry problems involving higher-order thinking skills with an authentic audience beyond the classroom' (p. 6).

Hence, designing cognitively challenging AATs requires prioritising students' deployment of HOTS over lower-order thinking skills (LOTS) (Villarroel et al., 2018). Bloom et al. (1964) were among the early scholars to distinguish between these two interrelated skill sets in their well-known Bloom's Taxonomy, which has long served as a tool to familiarise teachers with HOTS (Conklin, 2011).[24] Tasks designed to develop students' HOTS engage them in cognitive operations like deciding, suggesting, judging, criticising, proposing, designing, innovating, and inventing. By employing these cognitive skills, students can reorganise and reconstruct their acquired knowledge to generate novel versions of knowledge (Mohamed and Lebar, 2017; Villarroel et al., 2018). Such processes enable students to 'find deep and meaningful connections during times of change', empowering them to continue applying and engaging in these processes independently after graduation (Su, 2015, p. 11).

Other authors emphasise the significant role that HE teachers should play in integrating the development of HOTS into routine classroom assessment activities. Van den Berg (2004) indicates that these skills are unlikely to be fostered by students unless teachers deliberately and thoughtfully incorporate them into their classroom

[24] Bloom's taxonomy was used widely and later refined by other scholars such as Anderson and Krathwohl (2001) and Marzano and Kendall (2008).

assessment practices while simultaneously providing students with sufficient guidance and support throughout the assessment process. Having examined the limitations of the widely used standardised tests for this purpose, Rear (2019) concluded that teacher-led classroom assessment tasks is the most effective approach for cultivating and evaluating HOTS. Similarly, Sadler (2016) argues that 'the most logical, direct and appropriate site' or approach for fostering HOTS is through embedding them in the learning and assessment activities they undertake as part of their courses (p.1081).

However, while HOTS such as creativity, critical thinking, and problem-solving are valued by HEIs and educators worldwide, their effective integration into learning and assessment still remains a challenging endeavour (McNeill et al., 2012; Sadler, 2016). McNeill et al. (2012) identified a tension between teachers' intentions and actual practices in terms of promoting HOTS. Despite teachers' acknowledgment of the value of such capabilities, this was not accompanied or met with sustained implementation of appropriate learning and assessment activities. Samuelowicz and Bain (2002) argue that the tendency of HE teachers to promote HOTS through their learning and assessment activities is significantly influenced by their beliefs regarding the role of assessment in student learning. In their study, they observed that academics inclined toward 'the reproduction of knowledge and procedure' tended to incorporate it into their assessments. This manifested in tasks like multiple-choice questions assessing factual understanding or open-ended questions gauging the application of principles to familiar scenarios. On the other hand, when academics prioritised the assessment's role in the 'transformation of knowledge', they were more inclined to create assessments that demanded higher-order processes like evaluation and the generation of innovative solutions (Samuelowicz and Bain, 2002, p. 197). Notably, one of the widely reported strategies provided as cognitively challenging AATs, as the

literature shows, is involving students in solving real-life problems, discussed in the next section.

3.4.3.1 Problem-Solving

The literature often associates HOTS application with problem solving and decision making (Oliver et al., 2007; Koh, 2017; Mohamed and Lebar, 2017; Villarroel et al., 2018). Villarroel et al. (2018) refer to this feature of AA as 'problematisation', which 'invokes a sense that what is learned can be used to solve a problem or meet a need' (p. 841). Student application of HOTS requires immersing them in tasks where they work out solutions and make decisions about uncommon or non-routine problematic situations (Koh, 2017; Mohamed and Lebar, 2017). This signifies that such problems should be non-repetitive and are applied to unfamiliar contexts. This means the assessment task is set within an 'uncommon context', which pertains to novel situations beyond the confines of the classroom or textbook, aiming to stimulate deeper thinking among students (Mohamed and Lebar, 2017, p.471).

The emphasis on requiring students to engage with new situations lies at the heart of assessment for GED. This emphasis is strongly linked with the concept of learning transferability, which 'refers to the ability to apply learning to a new situation beyond the context in which it was learned' (McTighe et al., 2020, p. 5).[25] Hence, employability is widely recognised as embodying a host of transferable capabilities (Koh, 2017; Villarroel et al., 2018; Valero et al., 2020). Authentic problem-solving tasks often rely on other transferable capabilities, particularly collaboration and communication, as

25 The notion of transferability is further highlighted by Strathern (1997), who, from an anthropological perspective, suggests that immersing learners in multiple activities that incorporate essential skills positions them better to thrive in other contexts. In other words, 'if you embed yourself in site A, you are more likely, not less, to be able to embed yourself in site B' (p. 320).

they are frequently executed in teams and involve substantial intellectual discourse as learners explain and justify their proposed solutions to team members (Koh, 2017).

Therefore, various authors are critical of problem-solving tasks that are confined solely to the classroom context (Cumming and Maxwell, 1999; Herrington et al., 2004; Kreber, 2014). Herrington et al. (2004) criticise problem-solving approaches that involve students in textbook cases designed with predetermined resolution methods and expected answers, where task performance is evaluated based on students arriving at these pre-identified answers, which raises concerns about the effectiveness of such approaches. Disapprovingly, Herrington et al. (2004) suggests that such tasks are only useful as a means of 'enculturation into the practices of classrooms' as opposed to real-world transfer expected by educators (p. 7). Other authors maintain that tasks incorporating problem-solving are crucial, but they should engage students in tackling 'open-ended' (Cumming and Maxwell, 1999) and 'ill-structured' problems (Kuh, 2017). In these scenarios, finding solutions requires students to draw on theoretical knowledge, gather additional information, collaborate, and negotiate the best options – processes utilised by professionals in real workplaces (Cumming and Maxwell, 1999). Kreber (2014) argues that preparing students to accept the inherent nature of the real world, where most realistic problems lack fixed or singular answers, is a crucial step in helping them transition and become accustomed to the uncertainties and complexities it presents.

Therefore, a premium is placed on the optimal or feasible solutions proposed by students, along with a critical analysis and evaluation of their chosen course of action, as part of the tactics they apply while solving problems simulating real-life contexts (Kift, 2019). In this context, successful authentic problem resolutions need to account not only for task completion but also for how students' proposed solutions could impact

the concerned members or stakeholders of the larger community (Kreber, 2014; McArthur, 2023). This attaches a social value dimension to AA practices, as highlighted by McArthur (2023). She argues that upholding an ethos of authenticity requires a consideration of the broader social impact of decisions or solutions, prioritising the well-being of stakeholders within the larger community. This emphasis on social impact should be explicit. For instance, engineering students tasked with calculating the costs of creating an affordable, low-carbon transport system should actively reflect on the values behind this initiative and the various ways it can benefit the intended beneficiaries, that is, moving 'from simply focusing on the authentic task to considering why that task matters?' (McArther, 2023, p. 95).

Besides involving students in addressing authentic problems, nurturing higher-order capabilities can be critically facilitated by teachers' questioning strategies (Heron and Palfreyman, 2023). Part of this can be achieved by making students comfortable with the need to justify their proposed answers or solutions, as mentioned earlier, as this reveals their thinking or argumentation logic and encourages them to become more reflective on the process of devising their solutions or decisions on matters in question. Moreover, questions open rich venues for initiating rich peer discussions, or 'classroom talk', that is sustained by students themselves (p. 258). Besides responding to questions, Conklin (2011) highlights students' active participation in raising questions as a crucial route toward nurturing HOTS. This transformation helps in shifting students from passive to more active learners.

3.4.4 Evaluative judgement in authentic assessment

AA plays a pivotal role in enhancing students' evaluative judgment capability (Villarroel et al., 2018), a critical aspect in preparing them for academic learning, work, and life

by providing a scaffold for making informed judgments about their own work and that of others (Cowan, 2010; Boud et al., 2018; Tai et al., 2018). Cultivating the capability for 'evaluative judgment', defined as the ability to 'make decisions about the quality of work of self and others', is posited as a fundamental goal of HE (Tai et al., 2018, p. 471). Hence, there is a growing imperative for HEIs to incorporate the cultivation of this capacity into the day-to-day learning and assessment activities that students undertake in their university courses, leveraging and advancing the knowledge and technical skills acquired in their respective disciplines (Higgs, 2014). Fostering this capability needs to be embedded in the fabric of the discipline since students become competent in making informed judgements about the quality of their work as they gain expertise in a particular disciplinary area or subject (Tai et al., 2018).

This evaluative judgment capability is essential for preparing competent professionals who can contribute value to the professional settings they join (Higgs, 2014). Higgs argues that 'practice without judgment and decision-making is simply the implementation of procedures; indeed, it is not professional practice at all' (p. 259). Echoing this sentiment, Cowan (2010) emphasises that as professionals, graduates are expected to continually formulate sound evaluative judgments regarding their learning needs, the abilities to develop, the usefulness of accessible resources, and their ongoing progress in self-directed development (Cowan, 2010, p. 323). Remarkably, the demand for this capacity becomes more critical in workplaces as graduates, or future employees, progress in their careers, taking on increased responsibilities not only for their own performance but also for those they supervise (Luo and Chan, 2023).

Others have stressed the imperative of fostering these capacities by underlining that neglecting them in HE courses perpetuates graduates' reliance on others to make

judgments on their behalf in workplaces where heightened levels of responsibility are often expected (Tan, 2007; Fastré et al., 2013; Ajjawi et al., 2020). Thus, Tai et al. (2018) express concerns about developing students' evaluative judgment solely through working with teachers' provided criteria, as this approach may lead to dependence on others to define desired quality. They argue for a gradual progression toward students collectively brainstorming quality indicators and eventually setting their own standards or criteria, actively participating in the 'social construction and articulation of standards' (p. 476). This is crucial because, in professional settings, students often need to function without readily available standards for the work they will be held accountable to produce (Tai et al, 2018).

The literature highlights a variety of interconnected processes and tools that support students' evaluative judgment, encompassing feedback, self-assessment, peer-assessment, rubrics, and exemplars. It is crucial to acknowledge that some of these terms are often used interchangeably and are closely intertwined. For instance, certain authors consider self-assessment as a pathway to foster evaluative judgment, the overarching term, alongside other processes like peer-assessment and feedback (Tai et al., 2018). Yet others use self-assessment interchangeably with evaluative judgment itself (Tan, 2007; Bloxham and Boyd, 2007; Yan and Brown, 2017). Additionally, peer-assessment or peer-feedback is often integrated into feedback generation processes or discussed within the context of feedback literacy (Carless and Boud, 2018). Hence, self- and peer-assessment will be discussed collectively, and the following sections are devoted to exploring the other related concepts.

3.4.4.1 Assessment feedback

One crucial avenue for cultivating an advanced evaluative judgment capability is intricately linked with the feedback processes students actively engage in as part of their assessments (Villarroel et al, 2018). Discussions surrounding the correlation between student feedback and future learning capacities often spotlight the significance of students' agency in feedback generation, that is, transforming students from passive receivers of feedback into proactive participants who can seek and apply feedback toward enhancing the quality of their work (Hounsell, 2007; Archer et al., 2021). Researchers employ terms like 'sustainable feedback' (Hounsell, 2007; Carless et al., 2011) and 'feed forward (Archer et al., 2021) to articulate this connection. These concepts emphasise leveraging feedback to support current learning while recognising that the ultimate goal is to equip students with the capacity to constructively use feedback to meet future learning needs (Carless et al., 2011; Archer et al., 2021).

The increasing emphasis on connecting feedback processes with future learning and employability needs is further evident in the growing recognition of another pivotal concept in HE – student 'feedback literacy' (Carless and Boud, 2018; Molloy et al., 2020; Dawson et al., 2021; Winstone et al., 2022). Carless and Boud (2018) assert that feedback literacy aims to improve the necessary understandings, capacities and attitudes for optimal student utilisation of feedback from various sources, emphasising that it 'is not just a tool for doing better in university studies but a core capability for the workplace and lifelong learning' (p. 1323). Additionally, Dawson et al. (2021) criticise the widespread exclusive application of this concept to academic contexts, arguing that its relevance extends beyond academic learning to encompass learning in professional workplaces as well as throughout one's lifelong learning journey.

Therefore, drawing on the notion of ‘authentic assessment’ and conceptualising student feedback literacy as encompassing capabilities essential to meet the university, the workplace and lifelong learning demands, they proposed the concept of ‘authentic feedback’, which they define as ‘feedback processes that resemble the feedback practices of the discipline, profession or workplace’ (p.2).

In a similar vein, Winstone et al. (2022) stress the vital role of students’ active involvement in generating, seeking, and utilising feedback to foster continuous personal and professional growth. They argue that these capacities are crucial not only for academic success but also as lifelong learning skills, enabling students to thrive in diverse life contexts, including ‘professional, personal, recreational, and educational contexts’ (p. 58). Su (2015) further explains that instilling lifelong learning capacity occurs when students learn to value and accept feedback from various sources such as teachers and peers. This foundational skill then extends to interactions with prospective workmates and managers. By immersing students in ongoing, dialogic feedback processes, they come to realise the significant role of learning and working collaboratively, whereby they develop ‘maturity for their long-term learning and development’ (Su, 2015, p. 12).

3.4.4.2 Exemplars and Rubrics

The utilisation of tools such as rubrics and exemplars is integral to the cultivation of evaluative judgments. These tools engage students in the practice of judgment, providing a reference to criteria or standards, which constitutes a fundamental aspect of the evaluative judgment process (Villaroel et al, 2018; Tai et al, 2018). Fostering

evaluative judgment can include providing students with exemplars[26] or multiple examples demonstrating varying levels of quality (Tai et al., 2018). Through discussions and comparisons facilitated by these exemplars, students can develop the ability to recognise and appreciate quality standards in their work. Involving students in discussions and critiques of work presented in exemplars, which showcase varying levels of quality, is also crucial (Sadler, 2010). Through this engagement, students are introduced to both 'explicit and tacit knowledge', a vital factor in nurturing their ability to establish quality standards for their own work. In Sadler's words, this process empowers students 'to recognize or judge quality when they see it and also explain their judgments' (Sadler, 2010, p. 542).

Tai et al. (2018) emphasise that educators should focus on ensuring the sustainability of students' use of exemplars, proposing the implementation of AATs as a key strategy to meet this requirement. To this end, they recommend that exemplars should represent broad quality aspects found in disciplines or professions, rather than narrowly addressing features of specific tasks. Other authors suggest that the sustainability of exemplar use may be compromised if students approach them as mere 'model answers' to be imitated. To avoid this, students should engage in teacher-scaffolded dialogue to help them draw out principles and insights about assessment criteria (Handley and Williams, 2011, p. 98). It is recommended that during teacher-led deliberations around exemplars, teachers should withhold their judgments to afford students adequate time and leeway to discern the features of quality embedded in these exemplars independently (Carless and Chan, 2017).

[26] Exemplars are defined as 'carefully chosen samples of student work used to illustrate dimensions of quality and clarify assessment expectations' (Carless and Boud, 2018, p. 1320).

The use of rubrics has also been advocated for nurturing evaluative judgement (Fraile et al., 2017; Tai et al., 2018). Fraile et al. (2017) engaged students in a sport sciences course in the co-construction of rubrics. During this activity, students negotiated and determined criteria, ranging from ‘poor’ to ‘excellent’, as quality indicators specifically tailored to the target assessment task. These indicators were then incorporated into the rubric. The study reported that this engagement had positive impacts on crucial aspects like self-regulation and self-efficacy, which are associated with enhanced students’ evaluative judgement abilities. As Sadler (2010) suggest, such assessment practices are essential antecedents for raising students’ familiarity with ‘relevant appraisal terms and concepts’ (p. 542). This heightened familiarity, in turn, bolsters their confidence in participating in discussions about discerning quality, contributing to the creation and evaluation of complex works.

Summary of section 3.4

Section **3.4** addressed the place of SA in student learning and GED and introduced the concept of AA as a key approach toward fostering the capabilities required by graduates to become employable. It explained the three main aspects of assessment authenticity: realism, cognitive challenge and evaluative judgement, drawing upon the work of Villarroel et al. (2018) who built on previous research on the topic. However, the recognition of these elements is not sufficient for a seamless implementation of AA by educators or automatic acceptance by students. Just to quote some authors from the field, the endeavour to implement AA has been characterised as ‘labour-intensive and time-consuming’ (Wiggins, 1989, p.82), ‘not easy or swift’ Litchfield & Dempsey (2015, p. 77), and ‘not always straightforward’ (Kaider et al., 2017, p. 163). Therefore, the next section discusses some crucial assessment design considerations identified in the literature toward an effective alignment of assessment with GED.

3.5 Enablers and Barriers relating to Assessment for GED

The preceding section discussed the pivotal role of SA in cultivating employability capabilities and outlined key authenticity features essential for aligning assessment with GED. The following section explores critical prerequisites for HE lecturers to effectively incorporate these features into SA processes. These include implementing programme-level assessment planning, fostering constructive dialogue with students regarding the significance of AA in GED, and providing support and empowerment to HE teachers. The section argues that neglecting these requirements may render the task of integrating AA features unattainable for both HEIs and educators. Before introducing these crucial requirements, the section will start with a discussion of students' experiences of AA modes and methods.

3.5.1 Students' experiences of authentic assessment

As revealed in the previous section, a strong link is established between AA practices and various aspects of positive student experiences. However, several studies show that while shifting to more authentic modes of assessment correlate with more positive student experience, this was also accompanied by some negative experiences or attitudes (e.g. Harland et al., 2015; Arsenis et al., 2022). For instance, having shifted the mode through which student need to demonstrate their analysis of a contemporary economic issue from traditional report to a recorded video, Arsenis et al (2021) report that students found the task engaging yet more challenging compared to other traditional methods they were exposed to.

Others have also reported such mixed student experiences concerning AATs, highlighting the crucial feature of the complexity of these tasks. Indeed, most of the issues relate to challenging aspects like ambiguity, difficulty, unfamiliarity of students

with new ways of assessment. For example, despite describing the whole approach of introducing a new assessment initiative, live case studies, to be a success, Schonell and Macklin (2019) reported that students found this task as inherently involving heightened levels of unpredictability and risk when compared to more conventional assessment tasks (p. 1202). Yet a notable conclusion of the study was that 'unpredictable developments and challenges should be seen as learning opportunities, rather than problems' (p. 1202).

As the real-world environment that HE students venture into becomes more unpredictable, fostering their ability to navigate ambiguity through tasks involving complex learning situations and learning from mistakes is a crucial imperative and a key outcome of their study programmes (Schonell and Macklin, 2019). Lynam and Cachia (2018) exemplify this phenomenon by revealing the significant impact of assessment task predictability on student learning. They showed that assessments featuring a low predictability factor led to increased stress levels but fostered deeper learning approaches compared to assessments with higher predictability. In contrast, facing assessments characterised by higher predictability, such as predictable exam questions, resulted in lower stress levels but correspondingly led to reduced effort and more superficial learning approaches among students.

Another piece of evidence supporting the need to continue confronting students with complex AATs is suggested by Way et al. (2021) on examining the role of simulated case-based simulations in developing essential employability capabilities. They propose that the inclusion of elements of unpredictability in assessment tasks reflects the nature of real-life problems. Therefore, rather than diminishing the quality of the assessment task, incorporating unpredictability enhances its value and authenticity. This is particularly true when essential elements of authenticity such as 'surprise',

‘unpredictability’, and ‘emotional content’ are integrated, which represents key ingredients that characterise real-world problems and incidents (Lombardi and Oblinger, 2007; Way et al., 2021). This perspective aligns with Kreber (2014), who asserts that the significant impact of HE pedagogical approaches on student learning lies in creating ‘spaces where students have the opportunity to take risks and develop their own claims and put them forward’ (p. 50).

Another key issue debilitating against optimal student uptake of AA is the widely reported attitude of grade-orientation, which is often contrasted with ‘learning orientation’.[27] Grade-orientation means that students direct more focus to assessment that contribute to their overall grades within and across courses rather than valuing such tasks for their positive impact on their learning and skill development (Shim et al., 2012; Harland et al., 2015; Jessop and Tomas, 2017; Lynam and Cachia, 2018; Meyer et al., 2019). However, these authors crucially argue that other limiting factors are at play, contributing to the prevalence of a grade-oriented approach among students. In relation to such factors, Shim et al. (2012) discussed the intense pressures associated with the demands of university learning. Challenged with these pressures, HE students often feel compelled to mitigate their impact on their academic performance in a manner that does not jeopardise their employment prospects, as they typically perceive their grades as a gateway to a promising career. Consequently, these pressures play a detrimental role in undermining students’ motivation for learning and personal growth (Shim et al., 2012).

[27] Learning orientation is defined as “the predominant attitude held by those students who approached the college experience as an opportunity to acquire knowledge and to obtain educational and personal enlightenment” (Eison et al., 1983, p. 2).

In the context of project-based learning, Hartland et al. (2015) observed contrasting attitudes among students. Although the majority of students in their study expressed that they learned more substantially through extensive inquiry project-based assessment tasks compared to small, graded tests, these students still expressed a greater preference for the latter type of assessment. The study identified a tension among students as they also found enjoyment in the 'small, graded tasks' (p.533). Significantly, the study interpreted this finding as a strategic learning approach adopted by students. Confronted with a frequent regime of small, graded tests as part of the assessment system, students often found themselves in situations where they had to make choices about which goals to prioritise. Consequently, they sacrificed engagement in more meaningful learning in pursuit of higher grades, a situation corroborated by Jessop et al. (2014). Given that the study did not uncover any indication that students utilised their time inefficiently, the researchers suggested that students were basically kept incessantly occupied with assessment tasks whilst "understandably" their attention was primarily directed to grades (Hartland et al., 2015, p. 536).

Further explanation for why grade-orientation might prevail among students comes from research on the impact of the ratio between formative assessment and summative assessment on student learning. Jessop & Tomas (2017) indicate that heavy reliance on summative assessment can lead to hindering authentic learning as it often works against cultivating essential employability capabilities like 'creativity, complex learning and risk-taking' (Jessop and Tomas, 2017, p. 995). Interestingly, the authors attribute such students' attitudes to the organisation of assessment activities throughout their entire study programmes. They explain that programmes with a significant emphasis on high-stakes summative assessments tend to foster a greater

orientation towards grades among students. In contrast, programmes that carefully balance summative and formative assessment tasks encourage a more thoughtful and constructive approach. In common with Hartland et al (2015), they highlight the logical consequence that an excessive reliance on summative assessment consumes time that could be allocated to other forms of assessment.

In addition to these structural issues, others have pointed out challenges related to the characteristics and mindsets of HE students. Forsyth & Evans (2019) highlight that students enter HE heavily influenced by and accustomed to conventional assessment methods from their former educational backgrounds. Vu and Dall'Alba (2014) discussed the inclination of both students and teachers to continue with traditional assessment approaches as they might feel more comfortable with these modes. In the same vein, Eden (2014) associate more AA processes with increased emotional challenges, which necessitates the need for students to step out of their 'comfort zone' so that they can develop not only cognitively, but also emotionally to enhance their employability by dealing with and reflecting upon unfamiliar ideas, activities and contexts.

Additionally, Lombardi & Oblinger (2007) highlighted that students' resistance to AATs, particularly as they enter university, may stem from their premature level of epistemological development rather than a mere inclination towards passivity. This premature epistemological condition often leads students to perceive issues in binary terms of either right or wrong, black or white. Choy (2009) suggests that bridging this gap can be achieved by incorporating appropriate 'epistemological tools' into classroom learning, informed by the nature of real workplace problems and transactions. However, the success of this approach depends on students' improved uptake of such assessment forms. As Kreber (2014) acknowledges, encouraging

students to engage with AATs that are both emotionally and cognitively demanding hinges significantly on becoming deeply convinced and trusting that this is ‘what it takes to learn, grow, or improve’ (p. 50).

In addressing the outlined negative attitudes and perspectives toward AA, this literature review reveals that three key aspects should be considered to enhance student uptake of AATs. The next section will now address the first requirement: adopting a programme-level assessment planning.

3.5.2 Programme-level assessment planning

An essential strategy recommended by several researchers for effective assessment design and implementation is to plan assessment tasks and procedures at the programme level rather than focusing solely on individual courses or modules (Knight and Yorke, 2003; Bloxham and Boyd, 2007; Jessop and Tomas, 2017; Sarkar et al., 2020). This approach offers a valuable opportunity to scrutinise the variety of categories and assessment methods drawn upon, allowing for the evaluation of the effectiveness of different assessment tools throughout the entire programme (Bloxham and Boyd, 2007). Notably, Jorre de St Jorre and Oliver (2018) suggest that the lack of coordinated approaches of embedding GE capabilities may hinder individual HE academics from effectively discerning how progress within specific modules aligns with the overall structure of the course or programme which may lead to emphasising some capabilities whilst neglecting others.

Additionally, having stressed the need for assessment diversification to target the development of the various desired employability competences, Knight and Yorke (2003) highlight that attempting to ensure diversity or differentiation of assessment methods at the module level might exacerbate the issue of over-assessment. This is

attributed to the limited space available within a module for diverse assessments compared to the broader scope achievable at the programme level, stressing that ‘differentiation is primarily a programme or system-level concern’ (p. 53). Another key factor in determining the significance of this approach is the nature of the capabilities required to be fostered through learning and assessment activities, referred to as ‘wicked competences’ (Knight and Yorke, 2008, p. 179). Such competences or capabilities are complex, meaning that they require a long time for students to develop and become good at. Hence, the authors argue that this systemic approach is crucial not only for preventing over-assessment but, more significantly, for allowing the adequate development of competences. It ensures a scaffolded progression, allowing competences to span across multiple modules within the entire programme.

Within a whole-of-programme approach to embedding GE capabilities, particular attention is given to ensuring alignment between the various components of the curriculum. Studies focusing on assessment reforms to enhance authenticity have emphasised the critical importance of firstly integrating GE capabilities into programme and course learning outcomes, and then constructively aligning these with learning and assessment activities within individual student study programmes (Oliver, 2013; Hains-Wesson et al., 2020; Sotiriadou et al., 2020). This emphasis is rooted in the theory of ‘constructive alignment’ proposed by Biggs (2003). This alignment process plays a crucial role in achieving the objective of GED as it enables a critical and active examination for overlapping and missing capabilities (Oliver, 2013). Bloxham & Boyd (2007) also note that integrating key capabilities into learning outcomes provides greater assurance that they will be eventually assessed by teachers. They highlight a common issue where essential capabilities ‘get lost in the translation from a programme to a series of modules’ (p. 136). This often results in a mismatch or

contradiction between the intended or desired learning outcomes and the realised ones – what students actually experience in the classroom (Biggs, 2003; Ajjawi et al., 2020).

3.5.3 Dialogue with students

Given the earlier outlined student attitudes and characteristics, coupled with the heightened meaningfulness provided by carefully designed AATs, there is a premium on promptly initiating a dialogue with students about how AATs can relate to and enhance their GE (Harland et al., 2015; Tai et al., 2018; Schultz et al., 2022; Daubney, 2022). Deeley et al. (2019) term the pervasive problem of student dissatisfaction with HE assessment and feedback processes as the “wicked” problem, attributing it to misunderstandings or communication gaps between students and their teachers (p. 386). As Nixon et al. (2018) suggest, student-teacher dialogues become particularly valuable amidst the intensification of discussions on student-consumerism, discussed in section **3.2.2.1**. Therefore, initiating such dialogic interactions could potentially result in more satisfied students through recognising the substantial connections between their HE activities and future employment prospects.

The urgency of such interactions has been demonstrated by (Schultz et al., 2022). Having created an online tool to assist teachers in integrating AA into their courses, Schultz et al. (2022) identified various challenges requiring attention, a notable one of which being students’ insufficient understanding of the meaning of AA and its potential impact on future career prospects. The authors emphasised the need to enhance student awareness and comprehension by elucidating the rationale behind implementing AATs and the mechanisms by which they relate to the key outcomes of their courses and to their future professional roles. This awareness-building process

should be facilitated through induction programmes and dedicated awareness sessions. Consequently, the enhancement of students' awareness of the value of AATs for their GED increases their engagement in these tasks (Ehiyazaryan and Barraclough, 2009; Collins, 2022). Besides task quality, student engagement in AATs significantly relies on how effectively teachers can convey the tasks' relevance and the expected standards for successful fulfilment to students, which can motivate students to devote more time and effort in such tasks (Litchfield and Dempsey, 2015).

Other authors have explored the positive impact of this teacher-initiated dialogue among students and its influence on their wilful uptake of collaborative and cognitively challenging learning modes both within the university and beyond. Vu and Dall'Alba (2014) categorise these pedagogical affordances as 'discursive interactions', underscoring their role as an instrumental technique for teachers to mediate between the cognitive demands of AATs and the necessary support required to sustain student engagement. Concurrently, discursive interactions foster feelings of mutual trust and understanding among students, laying the foundation for future 'collaborative learning with, and from, peers' (p. 788). The involvement of students in constructive dialogues, where they evaluate diverse perspectives on complex issues, can stimulate them to challenge one another and apply higher-order thinking, particularly in formative assessment modes where concerns about grade repercussions are minimised (Hartland et al., 2015).

Markedly, it is important that such dialogues with students are initiated at the outset of joining university. Alexander et al. (2019) report on a whole-of-university approach implemented at their university to address the declining employment rates among graduates. The focus was on developing graduate skills and professional identity by 'embedding employability into every aspect of the student experience' (p. 117). One

key objective involved enhancing students' awareness about university expectations through tools like videos and orientation sessions from day one. This aimed to challenge the stereotypical image of university learning as merely 'attending lectures and tutorials, and then sitting for formal examinations to reproduce what has been remembered from lectures' (Alexander et al., 2019, p. 125). Students were introduced to the types of learning and assessment activities they would encounter throughout their HE journey, which promoted less reliance on exams and a greater emphasis on active learning and AATs. On similar lines, Field (2019) states that the success of designing and using assessment as a pedagogical tool is contingent on raising students' awareness about the process, describing this approach as a recipe for empowering students 'with the secrets of success' (p. 243).

Another critical factor prompting the necessity for establishing a constructive dialogue with students, to foster greater acceptance of AA, revolves around students' perceptions of it. AA is viewed as subjective and perception dependent; hence, students' perception of task authenticity might not necessarily align with that of their teachers and assessment designers (Gulikers et al., 2004; Ajjawi et al., 2020). Gulikers et al. (2004) emphasise that developing and implementing AA unilaterally based on the perspectives of the latter groups could pose a significant issue, as the entire endeavour may be futile if the students do not perceive these tasks as such. It is crucial that students can recognise the authenticity of assessment tasks both before and during their engagement with them (Ajjawi et al., 2020). The term 'cognitive authenticity' has been applied by some to refer to students' perception of the relevance and personal meaningfulness of AATs (Herrington and Herrington, 2006; Smith and Worsfold, 2015). Herrington and Herrington (2006) urge educators to give more emphasis to this aspect of authenticity than 'physical authenticity' in assessment

development. They stress that learners should be able to envision tasks as authentic, cautioning that such recognition should not be assumed to occur automatically based solely on physical features.

3.5.4 Supporting educators

Supporting educators is another crucial factor for the effective implementation of AATs that contribute to fostering GE capabilities. Numerous studies emphasise the pivotal role played by HE academic or teaching staff, not only in the overall process of GED but also in the specific implementation of learning and assessment activities compatible with this crucial objective of HE. To emphasise the role HE teachers play in aligning learning and assessment activities with GED, evocative terms have been employed by various authors, whereby they were described as ‘the first point of contact for students’ Amiet et al. (2021, p. 3) and ‘the catalysts’ for fostering employability capabilities (Sarkar et al., 2019).

Radloff et al. (2008) characterise HE teachers as ‘the custodians of the curriculum’ holding significant influence over how students in HEIs are taught and assessed in a manner conducive for the development of graduate capabilities or attributes. Consequently, the achievement of aligning SA activities with GED is fundamentally dependent on the beliefs held by these custodians and their willingness to adapt their practices accordingly. Radloff et al. (2008) uses the metaphor ‘the elephant in the room’[28] to illustrate that progress and change in aligning assessment tasks with GED can remain challenging ‘until the role of academic staff beliefs is acknowledged and addressed’ (p. 6). Furthermore, while endorsing teachers’ beliefs as a primary factor

[28] The elephant in the room’ is a common idiom referring to an obvious issue that is conspicuously present but often avoided in discussions or actions.

in aligning assessment tasks with GED, the authors highlight that addressing this issue requires more than recognising beliefs; it necessitates providing teachers with the necessary support and an environment conducive for enacting change.

Several studies have acknowledged the challenges faced by HE teachers in designing and implementing AATs, explicitly stating that academics often lack the necessary expertise (Vu and Dall'Alba, 2014; Jessop and Tomas, 2017; Ferns et al., 2019; Russell and Kay, 2019; Hains-Wesson et al., 2020; Sarkar et al., 2020; Asonitou, 2022). For instance, Vu and Dall'Alba (2014) noted that teachers find the shift from conventional to AA modes 'socially and intellectually challenging' (p. 789). This has been shown to be the case especially as this shift is highly likely to be associated with increased workloads (Vu and Dall'Alba, 2014; Litchfield and Dempsey, 2015; Schultz et al., 2022). Litchfield & Dempsey (2015) noted that AATs require more time while implementing as well as while grading students' work. In their action research endeavour to incorporate Live Case Studies, Schonell and Macklin (2019) identified a challenge in the design and implementation process, which initially took twice the time compared to traditional assessment methods.

Significantly, Schultz et al. (2021) reported that academic workload constraints manifested in various ways. Firstly, implementing and grading AATs are time-consuming which in turn can negatively impact the variety of tasks that can be feasibly incorporated. Consequently, there may be insufficient time allocated for the collaborative planning and design of assessment tasks with industry. As the authors indicate, keeping pace with changes in the dynamic world of work and updating assessment tasks accordingly poses a continual demand on time. However, some studies have significantly observed a gradual reduction in time demands when AATs were consistently implemented in subsequent semesters, especially when

collaborative modes of SA is adopted (Schonell and Macklin, 2019). This has been illustrated by Dyki et al. (2021), who showed that while the time required for grading remained consistent, the move from a traditional to a more authentic assessment task (from a written business report to a group-recorded video) had notable advantages for both students and teachers. For teachers, the new method was more enjoyable due to the variation and creativity displayed by students in the group's video presentations and less burdensome to mark compared to written assignments.

In addition to the time issue, other barriers have been highlighted. Upon scrutinising the perspectives of HE teachers on the mechanisms for fostering GE capabilities within the curriculum, Sarkar et al. (2020) reported that many teachers, particularly novices, found the integration of problem-based activities into their classrooms to be challenging. Similarly, Schultz et al. (2021) mention the challenge of effectively targeting and authentically assessing certain employability capabilities, like teamwork, as well as providing feedback on students' work in large classes, especially when compared to the more traditional assessment methods. In the context of Work-Integrated Learning (WIL), Natoli et al. (2013) reported poor understanding among teachers, as evidenced by varying views regarding what constituted authentic learning activities, even in the presence of a policy guiding the implementation of WIL-compliant learning and assessment activities. The study attributed this challenge to various factors, including the 'lack of communication on interpretation of policy, lack of professional development and lack of capacity building for academic staff' (p. 83).

Consequently, multiple authors stress the importance of providing training and professional development to empower teachers in adopting more AATs (Radloff et al., 2008; Vu and Dall'Alba, 2014; Koh, 2017; Russell and Kay, 2019; Sotiriadou et al., 2020; Asonitou, 2022). In the context of higher-order thinking assessment, one

consequence of the lack of expertise is teachers reverting to assessment methods that heavily emphasise memorisation and factual recall, rather than posing more cognitively challenging and engaging questions (Brookhart, 2010). Koh (2017) emphasises that unleashing the potential of authentic approaches and assessment methods to cultivate 21st-century graduate capabilities in the classroom requires teachers to possess the capacity to critically design their assessment tasks and engage in continuous reflection on their classroom practices. This necessitates capacity building and empowering teachers to competently design and utilise classroom learning and assessment tasks that integrate 'high authentic intellectual challenge' (p. 16).

Others have highlighted the role of educational leaders in initiating, managing and sustaining this process (Litchfield and Dempsey, 2015; Ferns et al., 2019). To exemplify, Litchfield and Dempsey (2015) assert that implementing necessary changes and innovations in HE assessment processes is a complex and gradual process, highlighting that this transformation should be facilitated by the management in a manner that is 'ongoing and systematic as well as systemic' (p.78). As part of capacity building, creating interactive and learning-oriented spaces for HE teachers is crucial for enabling them to become acquainted with alternative assessment methods that might otherwise go unnoticed (Petruzziello et al., 2023). Similarly, Higgs (2014) stresses the urgency of offering 'communicative and reflexive spaces' for teachers to address their concerns and challenges related to aligning assessment practices with the imperatives of GED. Fostering such interactive platforms serves as a catalyst for enhancing the clarification, humanisation, and meaning-making of professional practice (p. 257). This perspective aligns with Radloff et al.'s (2008) call to examine and elucidate teachers' perspectives, values, and assumptions regarding their

assessment practices in order to discontinue tiptoeing ‘around the elephant in the room’.

Part of the managerial and structural support has been expressed by researchers in terms of the alignment of educational policies with GED. Authors underline the critical need for policies that support and incentivise teachers in implementing authentic learning and assessment methods, as their absence can have a significant detrimental impact. Policies governing SA can constitute a major barrier, impeding teachers’ efforts to replace traditional assessment methods with more authentic approaches (Yorke and Vidovich, 2014; Ferns et al., 2019; Sotiriadou et al., 2020). For instance, Ferns et al. (2019) reported that the policies in their study contradicted this objective, acting as inhibitors and ‘disempowering’ teachers from innovating in assessment practices. They described the situation as a ‘lack of agility in assessment policies’ (p. 109).

In addition to support and training, guiding teachers towards transitioning from familiar assessment methods to embracing more authentic ones should be accompanied by educational structures that foster and recognise teachers’ efforts in this direction. Ferns et al. (2019) reported that a significant challenge hindering teachers’ integration of AA was the lack of incentives, specifically in terms of reward and appreciation. Similarly, Amiet et al. (2020) noted that while teachers acknowledged their substantial role in developing the capabilities required for improved employability, they emphasised the need for enhanced support and formal acknowledgement of this role ‘in academic position descriptions and promotional guidelines’ (p. 13). Some contend that it is crucial to align HEI reward and recognition structures with this objective, given the potential conflicts they may pose with the prevailing emphasis of academics on research efforts (Bosco and Ferns, 2014; Ferns et al., 2019; Russell and Kay, 2019).

3.5.5 Supporting links with workplaces

Maintaining links with industries presents another significant challenge which was cited by teachers in studies examining their perspectives and experiences in aligning university practices with GED. HE teachers recognise the crucial importance of establishing connections with industries and workplaces, which can assist them in designing classroom assessment tasks informed by realistic workplace contexts (Ferns et al., 2019). Hence, it is essential that they become acquainted with the tasks, functions, and operational mechanisms to align their assessment practices with those present in relevant workplaces (Villarroel et al., 2018; Amiet et al., 2020). Twyford and Dean (2023) characterise the collaborative efforts between academics and industry representatives as 'authentic assessment collaboration'. They consider this collaboration pivotal to ensure that assessment tasks maintain authenticity, relevance, and practicality; that is, securing the sustainability of graduates' future professional roles by allowing educators to augment classroom tasks with input from workplace professionals.

Nevertheless, studies indicate that the implementation of this collaboration does not meet teachers' expectations (Ferns et al., 2019; Amiet et al, 2019; Asonitou, 2022). For instance, Ferns et al. (2019) reported that teachers expressed a need for more interaction with the workplaces around them to enhance authenticity and maintain the currency of the curriculum they are responsible for delivering. However, they cited the absence of institutional structures that would support and enable them to fulfil this requirement. Indeed, poor partnerships with work organisations was identified by another study as a major barrier that hindered the cultivation of GE capabilities through appropriate learning and assessment activities (Asonitou, 2022).

Various studies attempted to address this gap by creating opportunities for collaboration between teachers and industry representatives in designing and implementing more AATs for students. Having identified the common practice of engaging employers through guest lectures as beneficial, Hanna et al. (2015) maintain that the full potential of employers as stakeholders in GED can be realised by collaborating on the design and delivery of specific learning and assessment activities. They suggested that collaboration with employers need to be enacted through involving them in setting student project problems, offering support and feedback, and participating in these projects' assessment. Thus, the authors embarked on an initiative engaging industry representatives toward this purpose. This involved contextualising a host of generic capabilities (namely, accountability, communication and teamwork) throughout the entire academic year, allowing students to see how internalising these skills is relevant and beneficial for their current academic performance and for meeting the demands of future learning and work. This development was evidenced by the study through enhanced academic engagement and target skills demonstration in the following year.

Similarly, Fettes et al. (2020) aimed to empower staff by facilitating their collaboration with workplace professionals, allowing them to enhance their expertise through hands-on experiences. They introduced an innovative approach involving industry partners who served as 'knowledge brokers', assisting staff in crafting business scenarios and engaging students in resolving authentic problems within a classroom setting (p. 191). Twyford and Dean (2023) also illustrated this collaboration by allowing subject coordinators revise classroom tasks in collaboration with industry professionals, focusing on incorporating various employability capabilities, such as problem-solving, critical and creative thinking, teamwork, and communication.

Interestingly, having endorsed the challenge of sustaining such partnerships and collaborations, some authors recommended the employment of technology to facilitate the establishment and maintenance of links with industry representatives (Orrell, 2011; Natoli et al., 2013). Others suggest capitalising on the benefits that employers can derive from such partnerships. For instance, having reported that employers in their project were enthusiastic and expressed intentions to sustain collaboration in student employment preparation, Hanna et al. (2015) suggested that this initiative is likely replicable in other contexts since employers benefit from these win-win relationships through establishing networks with students, hence, prospective employees. Markedly, they further articulated that this provides employers with the valuable opportunity for direct intervention to shape the quality of graduates by addressing the widely alleged graduate skills gap, which has long been a source of concern for them, as shown in section **3.2**.

3.6 Summary and Knowledge Gaps

This chapter provided a review of the literature pertaining to the two primary areas of focus in this thesis, SA and GE, and investigated the interconnectedness between them. Initially, the chapter explored the concept of GE, offering clarity on its definition, the factors driving its importance, and the challenges associated with enhancing it. Subsequently, the chapter discussed the crucial function of SA in fostering the development of capabilities necessary for both enhanced learning and GE. It argued that the failure of HEIs to integrate these capabilities into meaningful and relevant assessment methods poses a significant risk to their effective development. The chapter advocated for aligning assessment formats and forms conducive to the cultivation of such capabilities with the principles of AA, outlining its fundamental

characteristics. Additionally, it investigated the key enablers of these characteristics: adopting programme-level assessment planning, initiating dialogue with students, and supporting educators responsible for integrating these attributes. It emphasised the significance of addressing these essential requirements to prevent potential barriers to the effective implementation of AA by HE teachers. Failure to do so, the chapter argues, could hinder the cultivation of desired GE capabilities crucial for graduates' assimilation into professional and social spheres.

Through the review of the related literature, a foundational understanding has been established regarding the primary SA methodologies that can be employed to cultivate essential GE capabilities, alongside key factors that may either facilitate or hinder this process. However, this review has unearthed some knowledge gaps warranting further research attention. Firstly, while several authors continue to emphasise the inadequate efforts of HEIs in fostering GED (Cinque, 2016; Clarke, 2018; Succi and Canovi, 2020), others specifically point to assessment initiatives conducted for this purpose, highlighting a knowledge gap in how HE can harness SA to facilitate GED (Sotiriadou et al., 2020; Segbenya et al., 2023). For instance, Sotiriadou et al. (2020) highlight a 'knowledge gap in the ways assessment tasks in a formal learning environment can be designed' (p. 2145).

Secondly, while this review has identified numerous studies attempting to align SA practices with GED objectives, there is a significant lack of detailed insights into the nature of this alignment process and its effective execution considering the various influencing factors. Although various SA methods, such as case studies, projects, and video presentations, have been utilised to facilitate GED, existing studies have predominantly focused either on specific assessment methodologies (Deeley, 2014; Dauletova, 2016; Schonell and Macklin, 2019; Arsenis et al., 2022) or on particular

contextual elements influencing the alignment or implementation process (Natoli et al., 2013; Norton et al., 2013; Asonitou, 2022; Montano et al., 2023). Remarkably, no study identified in this review has undertaken a comprehensive analysis of the myriad factors at play when aligning SA with GED. Consequently, it is argued that the existing literature lacks a holistic approach to sensitise HE assessment designers and educators to the critical contextual factors integral to this alignment process. Such an approach would enable educators to effectively identify and address these key elements, thereby bridging the existing gaps in understanding and practice.

Thirdly, the reviewed literature uncovers a gap in evidence marked by contradictory findings. While some researchers report that students find AATs linked to GED development more engaging due to their realistic features, others indicate the opposite, noting student disengagement and a preference for traditional assessment methods (see Section **3.5.1**). Furthermore, various studies reveal that HE teachers acknowledge the importance of integrating employability capabilities into SA, yet this acknowledgment often does not translate into corresponding efforts in practice (Radloff et al., 2008; McNeill et al., 2012; Cotronei-Baird, 2020). Although these studies operate with different objectives, methodologies, and contextual factors, the current study suggests that the divergent findings and the reported gaps between beliefs and practice may stem from insufficient attention to how the various factors or elements of the assessment system interact and influence each other. Hence, research focusing on the interaction of different assessment components and their impact on teachers' – and consequently, students' – actions regarding the application of assessment tools for developing GE capabilities can offer deeper insights into these complex situations.

Fourthly, much of our understanding of the SA-GED link and the factors influencing HE lecturers' actions in aligning SA with GED is derived from research conducted in Western and developed countries, with limited investigation in the Arabian or specifically the Omani context. Some scant research in the Omani HE context has been conducted. However, these studies have been narrowly focused on specific methods, such as projects (Dauletova, 2016), or specific segments of HE teachers, such as EFL teachers (Ali and Al Ajmi, 2013). Crucially, these studies confirmed the inadequacy of current SA approaches in the Omani HE context and emphasised the necessity to transform these approaches to align with both academic standards and workplace demands. This emphasises the pressing need for additional research in this domain.

To address these gaps in the literature, this thesis aims to contribute to the existing literature by examining the alignment of SA processes with GED from a sociocultural perspective, utilising Activity Theory as an analytical tool, discussed in the next chapter. AT considers SA as a social practice, encompassing the alignment process and facilitating a holistic analysis of SA as an activity system. By applying AT, this study seeks to comprehensively evaluate the alignment process within the context of UTAS, which extends beyond the assessment tools or methods employed by lecturers to encompass crucial mediating factors such as rules, community members, and shared roles within the system. Adopting AT to explore this topic from a sociocultural standpoint is essential for deepening our understanding of assessment processes and the aims they support. Such an approach enables the conceptual alignment of learning, teaching, and assessment, moving away from viewing assessment as a mere adjunct to educational procedures (Lund, 2008). Furthermore, existing studies aiming to link SA with GED often neglect to consider the perspectives and experiences of HE

teachers or lecturers, as noted by several authors (Norton et al., 2019; Cotronei-Baird, 2020; Amiet et al., 2021). Hence, this study focuses on this crucial subset of the SA activity system's community to examine the alignment process from the viewpoint of those primarily responsible for its implementation.

CHAPTER 4: THEORETICAL FRAMEWORK

4.1 Introduction

This chapter outlines the theoretical frameworks influencing the development of the study: Cultural Historical Activity Theory (CHAT) (Engestrom, 1987) and Boud et al. (1985) Model of Reflection (BMR). The choice of CHAT for researching SA and its link with GED in the HE context is based on several considerations. Firstly, CHAT is regarded as a valuable tool for examining complex educational environments (Roth and Lee, 2007; Yamagata-Lynch, 2010; Nussbaumer, 2012). It offers a systematic approach to analysing human interactions, taking into account how individuals or groups and the way they interact with their learning environment influence their activities (Yamagata-Lynch, 2010). CHAT is also effective for facilitating change when issues and contradictions arise in these social learning environments (Roth and Lee, 2007).

SA is a significant and complex activity in HE, which serves various purposes, employs diverse tools, involves multiple stakeholders and is governed by different rules (Havnes, 2013). This means understanding SA does not depend solely on studying students, teachers, or their assessment tasks and materials, but rather on examining the SA activity in its entirety. Additionally, SA does not occur fully in the mind of the learner or, indeed, in the mind of the teacher; rather, it involves interactions between the learner and various contextual elements. Hence, achieving a comprehensive understanding of SA necessitates analysing the interactions between subjects (students or teachers), assessment tools, and other contextual elements (Postholm, 2008; Fletcher, 2021), including the rules or procedures organising their use, the other members involved in the activity, and their expected roles and responsibilities.

Secondly, CHAT aligns with the broad constructivist perspectives and the case study research methodology adopted in this study. Examining complex social activity systems requires in-depth analysis and data collection from various sources using multiple methods, for which case studies are well-suited (refer to Chapter **5**). AT provides a comprehensive framework for examining the SA activity system as the core unit of analysis, while the case study approach facilitates the collection of rich, varied data necessary for this analysis. Additionally, this chapter discusses the decision to complement CHAT with BMR. While CHAT is primarily used to examine and understand the dynamics and transformation mechanisms of the complex SA activity system, BMR was applied to help study participants understand themselves and learn from their experiences with SA through reflection.

The chapter starts with providing a brief description of CHAT. Next, the main elements or components of the notion of 'activity system' are introduced while elaborating on the central role of the 'object' in activity systems. This is followed by presenting three key principles of CHAT the study was influenced by. Subsequently, the chapter explains the significance of reflection in studying the student assessment activity system (SAAS), leading to the introduction of BMR as an effective model to assist lecturers in reflecting on their experiences of SAAS. Finally, the chapter illustrates how these two different frameworks were amalgamated and applied to investigate SAAS from the lecturers' perspective.

4.2 Understanding Activity Theory and its Development

Activity theory is a framework rooted in the socio-cultural tradition of Russian psychology. The socio-cultural perspective aims to bridge the divide between the human mind and culture/society, which views culture and society as generative forces

that produce the human mind. Activity Theory shares the fundamental assumptions of socio-cultural perspective regarding 'the social nature of human mind and inseparability of human mind and activity' (Kaptelinin, 2014). At the core of AT is the concept of "activity", defined as 'purposeful, transformative, and developing interaction between actors ("subjects") and the world ("objects")' (Kaptelinin, 2014).

A characterising feature of human activity is 'mediation', a concept introduced by Lev Vygotsky (Vygotsky, 1978) who viewed human behaviour as actions directed toward objects. He demonstrated that the development of human behaviour is primarily 'mediated by the use and creation of cultural artifacts such as tools, signs, symbols, ideas, and technology' (Yamazumi, 2008, p. 367). For instance, learning music is mediated by and influenced by the tool – the instrument – one learns to play. Take the difference between learning the violin and learning the piano. New violinists must first learn how to produce consistently pitched notes through accurate left-hand fingering, so early exercises often focus on pitch. Pianists, on the other hand, do not have to practice correct pitch, as the piano will always produce the same note when a key is pressed. Moreover, it is important to recognise that these tools are cultural. For instance, new violinists typically learn to play in a Western classical style and become part of the culture of Western classical music. In contrast, new players of the oud (a type of lute) learn to play in a Middle-Eastern style and become part of a different musical culture. The musical culture one belongs to influences aspects such as how music is written, how it is performed, and even the social contexts in which it is played.

The word 'mediation' relates to how individuals learn or construct knowledge through participation and actions within their social activity systems (Roth and Lee, 2007). Kaptelinin (2014) views tool mediation as 'a form of accumulation and transmission of social, cultural knowledge', enabling the appropriation of socially developed ways of

interacting with the world. Tools embody the past experiences of others, with this experience being embedded in their structural properties (e.g. shape and material) and in the knowledge of their optimal use. CHAT examines this process by revealing the mediation that takes place between the individual, the tools, other members or participants, and the socio-cultural context within which the activity occurs (Fletcher, 2021). For example, returning to our discussion of learning musical instruments, CHAT would study how the individual learner interacts with their instrument, how they relate to their teachers and other musicians, and the socio-cultural context in which music is made. For instance, a violinist can carry their instrument and play it wherever they are; however, because a piano is heavy, it is typically played in a fixed location. Violinists often perform in groups with other violinists, whereas pianists usually play alone or accompany other instruments – we rarely find large groups of pianists playing together. Additionally, classical instruments like the violin or piano are generally played in formal settings, while popular instruments, such as the guitar, are often played in more informal environments. Music serves as a strong example of an activity that is deeply *tool-mediated.*

The focus on mediation is typical of what is commonly referred to as the first generation of AT (Engeström, 2001; Roth and Lee, 2007; Nussbaumer, 2012). The mediation concept was solidified in Vygotsky's well-known triangular model whereby the simple, direct link between a stimulus and a response (S - R) was surpassed by a sophisticated, mediated act (Engeström, 2001), as shown in Figure **4.1**. In our earlier example regarding music, the subject is the player, the object is the music, and the tool is the instrument used to produce the music. Once again, the importance of the tool is obvious: one can play the same piece of music on, for instance, a violin or an

oud, but it will sound completely different. The cultural meaning of the music also changes depending on which instrument is used to play it.

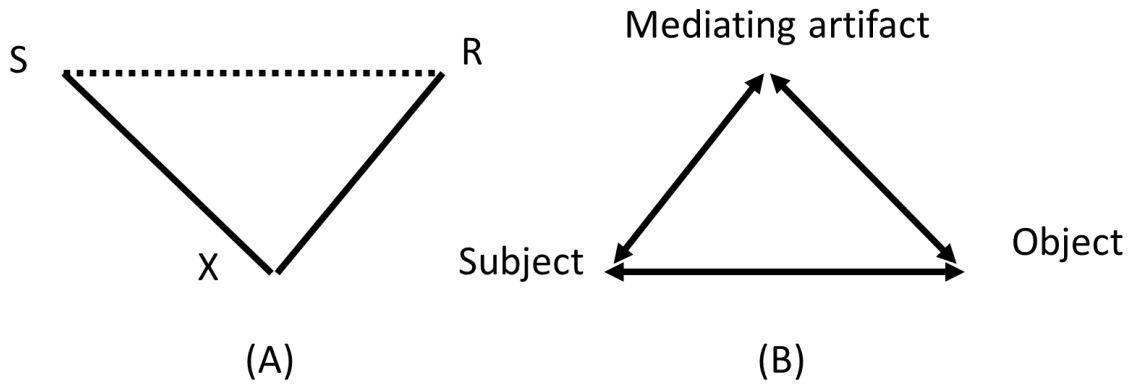

Figure 4.1 (A) Vygotsky's model of mediated action and (B) its common reformulation – first generation Model; adapted from (Engeström, 2001, p. 134).

The second-generation AT framework was initially introduced by Aleksei Leont'ev (1978).[29] It was later expanded by Yrjö Engeström (Engestrom, 1987) in the 1980s.[30] The core concept in Leont'ev's framework is that human behaviour revolves around 'activities' rather than actions, as proposed by Vygotsky in his model of mediated action presented above. For instance, playing a musical instrument is not just an action – it's not just physically manipulating the instrument – it is an activity. One can manipulate an instrument in the same way (perform the same actions with it) while engaging in different activities: a pianist might play the same piece of music during the activity of practising or during the activity of performing. A piano tuner might even play

[29] Aleksei Leont'ev, a Russian psychologist, was influenced by the ideas of his mentor and friend, Lev Vygotsky, to whom the first generation of Activity Theory is attributed.
[30] Yrjö Engeström is a Finnish educational researcher.

a piece as part of the activity of tuning the piano. The actions might be the same, but the activity is different.

Activities and their subjects reciprocally influence and shape each other, with activities acting as generative forces transforming both subjects and their objects (Kaptelinin, 2014). For instance, the first time a pianist gives a formal recital, they change from being a student of the piano to being a performer. In his work, Leont'ev introduced distinctions between three hierarchical types or levels of human effort: *activity*, which is object oriented and collectively and culturally mediated; *action*, which is performed to achieve goals within a specified timespan; and *operation*, which is done spontaneously without requiring prior meditation (Bligh and Flood, 2017, emphasis in original). Such variation in the nature of human effort led to rendering object-oriented activities as the unit of analysis in activity theory, rather than goal-directed actions and automatic operations since these 'can only be understood when interpreted against the background of a collective activity' (Nicolini, 2012, p. 108).

Unlike Vygotsky, who focused on specific mental functions and their development, especially the tools or signs that mediate these functions, Leont'ev concentrated on the tools which 'mediate a purposeful object-oriented activity as a whole' (Kaptelinin, 2014). However, Leont'ev's framework depicted subjects' interactions with their world mainly through the use of tools/instruments. It also primarily focused on the activities of individual subjects, without systematically exploring the development and structure of collective activities or presenting a conceptual model for them (Kaptelinin, 2014). This gap was addressed by Engeström, who expanded the framework by introducing the concept of an 'activity system' in his collective activity model, whereby activities became viewed as collective rather than solely subject-object interactions (Kaptelinin, 2014). For instance, returning to our musical example, while Leont'ev would focus on

the activity of a pianist's first formal recital, Engeström would stress that the recital takes place within an activity system, which involves other participants, such as those who organised the programme, those who sold the tickets, and the audience who attended the concert, etc. The activity of 'giving a piano recital' does not involve just one person, but several people who participate in the activity.

Building on the work of Leont'ev, Engeström developed the notion of the 'activity system' and represented it as a systemic model, known as the second generation of AT (Nicolini, 2012). The second generation of AT-model is the model that is adopted in this thesis. It focuses on the artefacts or tools in human activity while stressing that examining activity systems needs to pay attention to how the elements within one system link and relate to each other (Engeström, 2001). This involves integrating other macro-level components that influence the activity – namely, rules, community, and division of labour – which were absent in Leontev's conceptualisation. These components highlighted the collective social mode and scope according to which activity systems operate (Jonassen and Rohrer-Murphy, 1999; Warmington et al., 2004). Figure **4.2** shows these further developments made by Engeström.

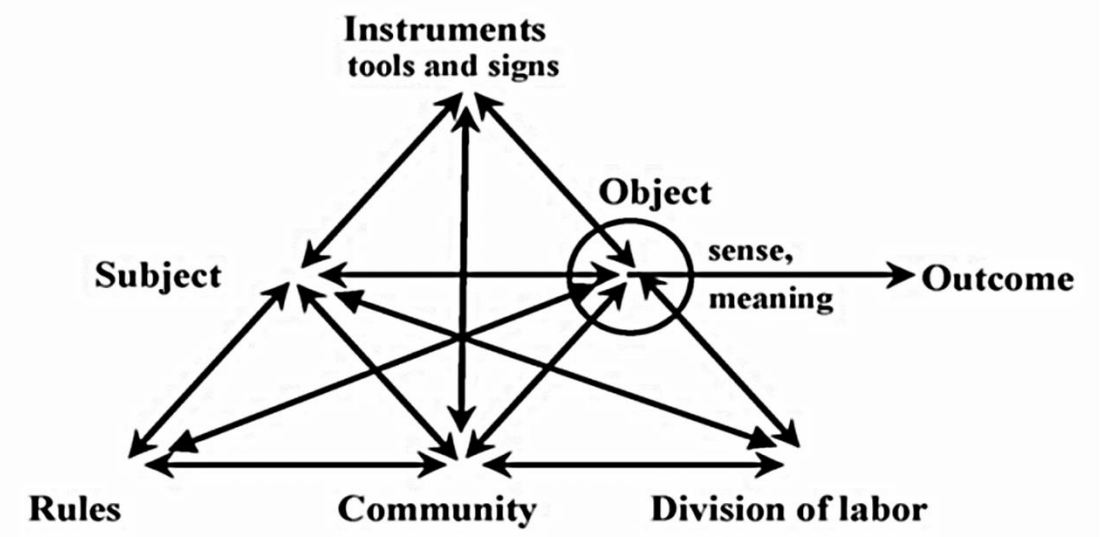

Figure 4.2 The structure of a human AS, second generation AT (Engeström, 1987, p. 78).

As Figure **4.2** shows, the double-headed arrows in the triangle represent the constant interaction and tension between the nodes of the activity system (Crossouard, 2009). The arrows also signify how all elements relate to each other reciprocally, representing a 'systemic whole' (Kuutti, 1996, p. 14). The new model also places the object of the activity within an oval shape to demonstrate various states of surprise, bewilderment etc. that actors go through while acting on the object, leading them to engage in processes of sense making and interpretation as they perform the activity, thus, effecting the transformation and development of the object (Engeström, 2001).

The new understanding imparted by Engeström's Model, as shown above, can be demonstrated through a relevant educational example. Consider Ali, an English language teacher. Ali teaches English (the 'object') and instructs his students to collaborate on writing a book review of a book they have recently read. In writing their book review, the students employ various tools, such as the source book, a dictionary,

and paper and pen. They collaborate in different ways, such as discussing the review verbally or dividing the writing into sections before assembling them. The choice of tools and methods of collaboration will impact both the ‘activity’ of writing the book review and the broader ‘activity’ of learning English. Turning to Ali’s assessment of the book review, he might use different tools for evaluation. For instance, he could mark the review with a red pen or ask the groups to present their reviews aloud and provide verbal feedback. He might assign a grade or choose not to. The way Ali provides feedback alters the nature of the collaborative task. From a broader perspective, Ali’s feedback process is mediated by several factors, including institutional rules that require teachers to provide feedback. It also involves the community, as the practice might be influenced by what is adopted by other teachers and encouraged by the institution’s management. Additionally, the division of labour affects whether feedback is considered solely the teacher’s responsibility or a shared one, where students are also expected to contribute feedback within their groups.

4.3 Elements of the Object-oriented Activity System

Building on these examples, let us now formalise the CHAT approach underpinning this thesis. For Engeström, a single activity system encompasses six key constituent elements: subject, object and outcome, tools, rules, community and division of labour. Table **4.1** provides a brief description of each of these components, followed by an elaboration on the central concept of ‘object’:

Component	Refers to
Subject	The individual or subgroup whose position and point of view are chosen as the perspective of the analysis.
Object	The 'raw material' or 'problem space' at which the activity is directed.
Instruments	The tools and signs that are utilised by the community to turn the object into outcomes.
Community	The individuals and subgroups who share the same general object.
Division of labour	The horizontal division of tasks and vertical division of power and status.
Rules	The explicit and implicit regulations, norms, conventions and standards that constrain actions within the activity system

Table 4.1 The components of an activity system; Adapted from Engeström and Sannino (2010, p. 6).

The object plays a central role in defining and organising its activity, which renders gaining adequate understanding of an activity largely dependent on understanding and identifying its object (Foot, 2002; Engeström and Sannino, 2021). Within AT, it is recognised that every human activity is motivated by an object that drives the actions of its subjects (Nilsson, 2008), and through which it becomes viewed distinctively from the other activities (Kuutti, 1996; Bayat and Naicker, 2012). The object is described as a 'need state' that can be identified by analysing the activity's context, history and the irregularities that prompt these members to adopt this motive or 'object' (Miettinen, 2005, p. 57). For instance, in the example above, Ali teaches his students the object 'English', but both Ali and we can conceptualise this object differently. For example, does Ali see himself as teaching 'Conversational English' or 'Business English'? Moreover, why does Ali teach English? Does he view learning English as part of a larger object of learning foreign languages and cultures, or does he see it as part of the broader object of 'becoming employable'?

The subjects, or participants, in a particular activity draw upon the various mediating artefacts afforded by the context or environment where the activity occurs to transform the 'object' into an 'outcome' (Dann, 2014, p. 159). Therefore, considering the perspective of one or multiple subjects of the activity is crucial for understanding the activity as it enables an understanding of how these individuals conceptualise the 'object' of the activity and work towards achieving an 'outcome' addressing it (Jonassen and Rohrer-Murphy, 1999; Lockley, 2016). For example, in my study, lecturers' projection of the outcome – producing employable graduates – helped them identify the object, fostering graduate employability capabilities, and determine the appropriate assessment tools to transform the object into the desired outcome (see Chapter **8**). On the other hand, students, might conceptualise the activity differently, as, for instance, getting a grade, passing a course, or earning a degree.

Kaptelinin (2005) describes the object of an activity as the 'ultimate reason' that accounts for the varying patterns of behaviours exhibited by individuals as well as groups or organizations, rendering it a valuable analytical tool for gaining deep understanding of people's actions and motivations. Hence, it can be understood 'as "the sense-maker", which gives meaning to and determines values of various entities and phenomena' (p. 5). However, as the examples of Ali and his students above illustrate, the object is often difficult to grasp and easily misunderstood. It is 'a moving target, not reducible to conscious short-term goals' (Engeström, 2001, p. 136). Subsequently, it may manifest itself in multiple ways to the different actors within and at different points in the lifespan of the activity (Foot, 2002; Nicolini, 2012; Dann, 2014). For instance, in this study, the object of SAAS was understood variably by lecturers as a grade to be granted, a learning outcome to be achieved, and as preparation for future professional and social roles (see Section **7.3.1**).

Moreover, Jones (2013) describes the object as being 'both given and emerging' (p. 594). While members of an activity hold initial assumptions about their object, they simultaneously construct new understandings of it through continued engagement in the activity. For instance, students might initially view the task of writing a collaborative book review simply as a grade to be earned. However, over time, they may begin to realise that writing a book review is just one aspect of critical writing more broadly. The students' understanding of the activity can change over time. Neither the given assumptions or emerging understandings are necessarily shared by these members, which renders the object 'a heterogeneous entity, having no fixed nor clearly definable identity' (p.595).[31] While the object relates to the collective activity shared by all participants, these participants could have motives or goals that differ remarkably from each other (Bayat and Naicker, 2012). For instance, in the context of SAAS, although leaders, lecturers and students are all members in the SAAS community; the latter group may have motives like passing exams or scoring high grades rather than maximising learning or developing GE capacities, motives likely to be more strongly adopted by the former community members.

4.4 Key Activity Theory Principles Influencing the Study

The first principle influencing this study is viewing the activity system, rather than its constituent elements in isolation, as the unit of analysis. The prime unit of analysis is represented by the collective activity system that is artifact-mediated and object-oriented and is viewed in terms of its interlinks with its neighbouring activity systems (Engeström, 2001). This perspective carries crucial implications: it provides a

[31] "One needs to distinguish between the generalized object of the historically evolving activity system and the specific object as it appears to a particular subject, at a given moment, in a given action" Engeström and Sannino (2010, p. 6).

‘conceptual map’ of key areas where cognition is distributed among subjects (individuals or groups) within the activity, and it necessitates considering other community members as significant participants (Cole and Engeström, 1993). Viewing the activity as the unit of analysis means researchers must engage in a comprehensive examination of the entire activity system, analysing ‘the activity systems for their components and dynamic relations’ (Jonassen and Rohrer-Murphy, 1999, p. 68).

The second principle is associated with the essential role played by systemic contradictions in how activity systems change and develop over time, which are described as ‘historically accumulating structural tensions within and between activity systems’ (Engeström, 2001, p. 137), and which ‘cannot be resolved through separate individual actions alone” (Engestrom, 1987, p. 165). For example, given that activity systems are interactive and open, contradictions may occur when elements from outside the activity are borrowed and introduced as new elements which as a result disturb the old ways of how they function, e.g., new rules being adopted which clash with existing, established rules (Engeström, 2001). Table **4.2** identifies four levels of contradictions and provides a brief description of each one (Engestrom, 2015).

Contradiction level	Description
Level 1: Primary	Inner contradiction (double nature) within each constituent component of the central activity.
Level 2: Secondary	Contradictions between the constituents of the central activity.
Level 3: Tertiary	Contradiction between the object/motive of the dominant form of the central activity and the object/motive of a culturally more advanced form of the central activity.
Level 4: Quaternary	Contradictions between the central activity and its neighbour activities.

Table 4.2 Four levels of contradictions within the human Activity System; adapted from Engestrom (2015).

Systemic contradictions impact the ability of the subjects in accomplishing and realising the object of the activity in various ways through both acting as barriers against the realisation of the object as well as enablers and sources of innovation leading participants to transform the functioning mechanisms of the activity (Kuutti, 1996; Engeström, 1999; Yamagata-Lynch, 2010). If the contradictions can be recognised and identified by the activity's participants, they can focus their efforts on 'resolving those contradictions by means of reorganising and expanding the activity' (Engeström, 2000, p. 153). Darwin (2016) describes contradictions as inherently unavoidable in activity systems and as essential for their transformation and evolution. They unlock the potential for expansive learning when the participants make visible and react to them, leading to enhanced future versions of the activity. As Miettinen (2005) suggests that when participants identify a contradiction in the object-oriented activity, it necessitates:

> "Reflection of the object of activity and stimulates new directions of actions, new trajectories of artifact construction as well as the creation of new individual and collective capabilities" (p. 53).

The third principle concerns the crucial notion of expansive learning or transformation of the activity which becomes possible when the activity reacts to and deals with its systemic contradictions and tensions (Engeström, 2001). This happens when the activity participants start to question the aggravating contradictions and deliberately take actions, either individually or collectively, to address and resolve them, which leads to changing the activity's established norms and modes of operation. Through

this process ‘the object and motive of the activity are reconceptualised to embrace a radically wider horizon of possibilities than in the previous mode of the activity’ (Engeström, 2001, p. 137). Engeström (1999) further explains this transformational process of expansive learning by applying the concepts of internalisation and externalisation, processes encompassed in an expansive cycle which may take place simultaneously yet with varying intensity at the different stages of the cycle. The variation in the intensity of the two cyclic processes over an expansive cycle is represented in Figure **4.3**.

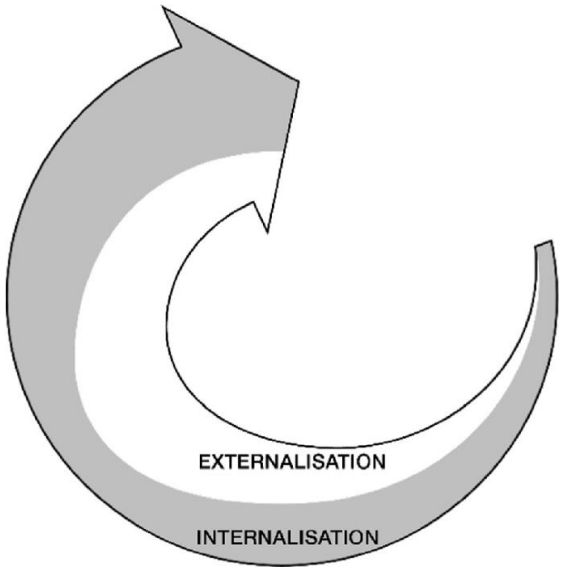

Figure 4.3 Processes of internalisation and externalisation in the expansive cycle (Engeström, 1999)

As Engeström (1999) explains, internalisation refers to the process of cultural reproduction where individuals become enculturated into the activity as they get accustomed with using its tools and functioning as per its rules and conventions. Expansive transformation of the activity becomes possible as the externalisation process commences when individuals start adopting and creating new artifacts, hence

engendering new form or structure of activity, upon envisioning a better version of the activity's object. With the inception of the new form of the activity, internalisation becomes intense again, and this marks the start of another expansive cycle. Adequate identification of internal contradictions in a particular activity is possible across its developmental phases, yet activities whose members tend not to work on resolving their internal contradictions may continue to exist by virtue of reproduction but are 'nonexpansive' (Engeström, 1999, p. 35). This points out to two significant aspects. First, depending on various cultural and historical factors, some activities may experience periods of very little or no transformation, or what Engeström and Miettinen (1999) refer to as 'stagnation'. Second, initiating an expansive learning cycle is challenging and heavily depends on the members' willingness to engage in reflective processes to identify the contradictions within their activity (Engeström, 1999), a requirement discussed in the next section.

4.5 The Role of Reflection in Expansive Learning

As the previous section demonstrates, participants' reflection on their activity is essential for initiating expansive learning which leads to transforming and creating culturally and historically new versions of their activity. To this end, various cultural-historical AT authors have emphasised the significance of reflection in conducting CHAT informed research. Langemeyer and Nissen (2005) recommend that CHAT informed research methods should promote 'ongoing theoretically informed reflection of the social practices' that the research aims to investigate rather than applying methods as fixed rules or recipes (p. 189). Engeström (1999) mentions participants engagement in 'critical-self-reflection', linked to seeking solutions, as an essential behaviour provoked by systemic contradictions and exhibited by actors within the

activity as these contradictions and disruptions aggravate (p. 34). This clearly demonstrates that reflection is a central ingredient in initiating and sustaining expansive learning cycles which serves as the catalyst for change and transformation and without which activities would likely remain 'non-expansive'.

Acknowledging the importance of reflection in improving practice, this study drew upon Boud et al. (1985) model of reflection (BMR) in order to supplement the interviews, the primary data collection method of this study. This served as a practical approach for the operationalisation of CHAT by guiding lecturers in reflecting on their local SAAS and potentially transforming it. This is consistent with various authors who have widely presented and applied CHAT as an intervention (Engeström, 2001; Nicolini, 2012; Foot, 2014) and as an action research tool (Yamagata-Lynch, 2010; Stuart, 2014; De Beer, 2019) to induce change in the researched contexts.

4.5.1 Boud et al's (1985) Model of Reflection

Viewing 'reflection' as closely linked to learning from experience or 'experiential learning', Boud et al. (1985) describe reflection as 'a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations' (p. 19). Although their model of reflection (shown in Figure **4.4**) presents the learning experience on which individuals reflect as a singular event or situation, the authors acknowledge that reflection may encompass a series of often interconnected events or experiences occurring over a period of time. They also recognise that reflection can occur after long-term substantial activities or short-term daily events, and that learners may engage in reflection independently or with the assistance of others who can help them reflect and learn from their experiences.

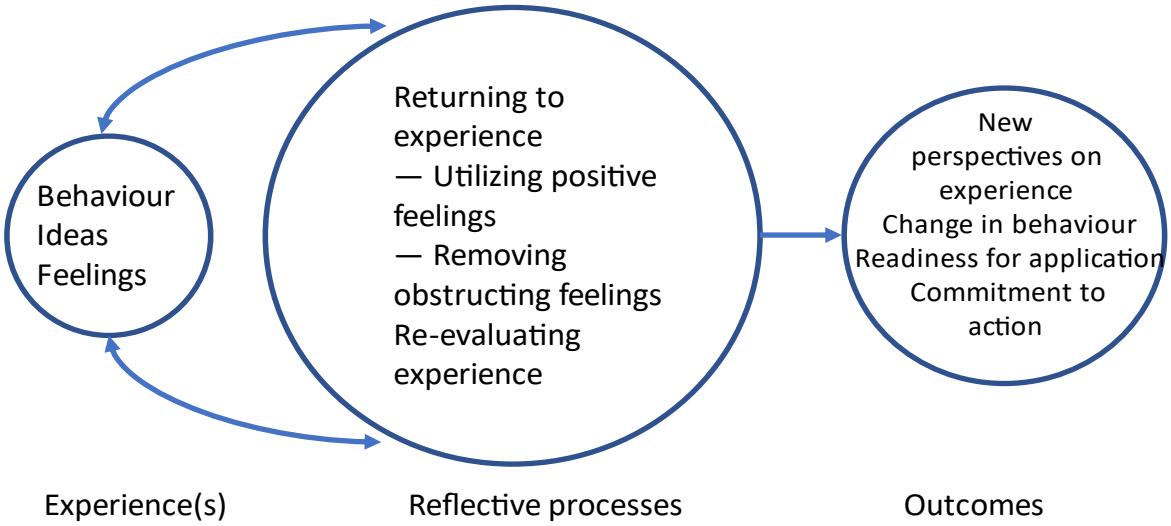

Figure 4.4 The reflection process in context; adapted from Boud et al. (1985)

As Figure **4.4** shows, BMR highlights three components: the experience, the reflective processes and the outcomes of refection. The experience preceding and becoming the focus or object of reflection incorporates the behaviours exhibited, ideas formed and feelings experienced by the learner during the experience. Second, the reflective processes, represented by the large central circle, outlines the three fundamental processes or stages required for reflection to occur effectively: returning to experience, leveraging positive emotions while minimising the impact of negative ones, and then reevaluating experience. Lastly, the model points to the outcomes that may materialise after or because of the engagement in the reflective processes, which could take various forms and include cognitive, affective and behavioural outcomes. For instance, having reflected on the experience, the learner could develop new perspectives, new links; change attitudes, assumptions or values; or take an action or make a

commitment to do something differently in the future. The next section provides a description of how BMR and AT were combined and applied in this study.

4.6 Application of CHAT and BMR in the Study

As discussed earlier, CHAT is a theoretical tool that allows researchers, and practitioners, to understand how the subjects in an activity system conceptualise and work on the activity's object while drawing upon its mediating artifacts, including tools, rules and division of labour, to produce an outcome (Engeström, 2001). Therefore, CHAT framework was applied in this study to explore lecturers' conceptions of the object of the SAAS in an HEI's setting. This framework was vital in assisting lecturers to explicate what they believe the ultimate object of their SAAS is and to investigate the factors influencing and underpinning their decisions to take certain actions toward its achievement. Additionally, since CHAT posits that the activity should be treated as the unit of analysis, beside identifying the object of SAAS, CHAT was applied to identify the various elements of SAAS and to explore the interactions that took place between them toward sustaining the activity and accomplishing its object. Both the quantitative, questionnaire, and qualitative methods, interviews and documentary analysis, adopted in this study were applied to achieve these overarching aims.

In the questionnaire, the objective was to obtain an overview of SAAS at the setting by exploring key stakeholders' (the activity's community) perceptions of the main purposes or objectives of SAAS and its main tools applied at the setting (see Section **5.4.2**). To achieve this, the respondents were presented with five purposes that they were asked to rate the extent to which SAAS was oriented toward achieving. To identify the tools of SAAS, respondents were also asked to rate the extent to which various SA tools, identified through a literature review, were applied as mediating artifacts

toward the accomplishment of the activity's object. The subsequent qualitative research phase subjected these initial thoughts to further processes of verification and elaboration aided by BMR. For this purpose, the second-generation CHAT model was applied to investigate the SAAS as the unit of analysis. This approach was chosen because the central objective of the study was to examine lecturers' engagement and the nature of interactions occurring within the SAAS itself, rather than interactions between the SAAS and neighbouring systems. Exploring these inter-system interactions could be a potential topic for future research, which could be studied through third-generation CHAT (see Section **9.5**). Figure **4.5** offers a redrawn second-generation CHAT diagram containing the main questions guiding lecturers' interviews.

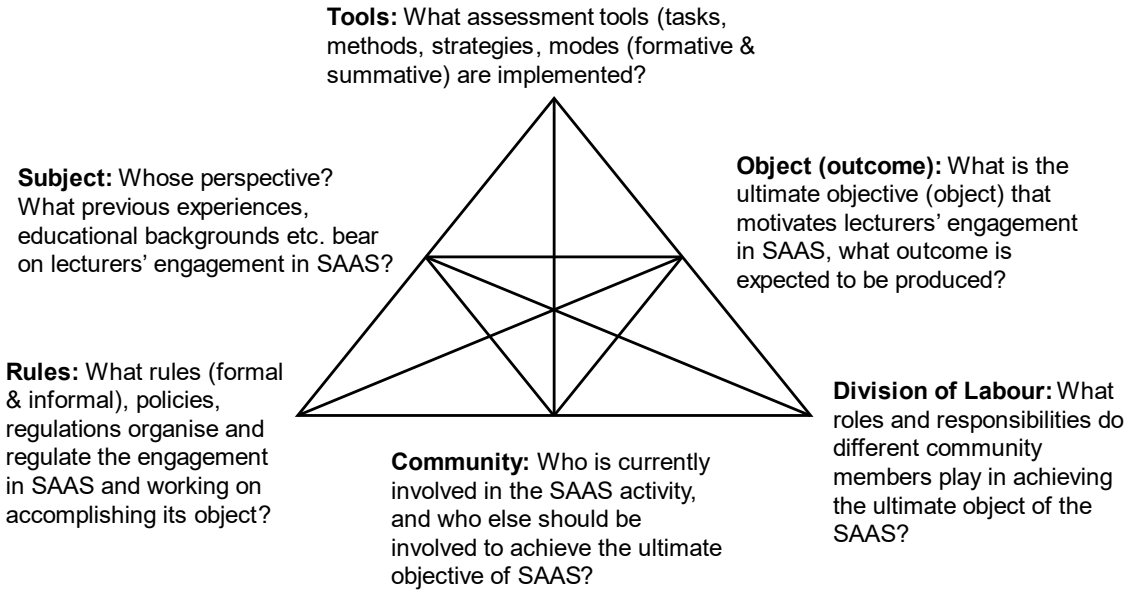

Figure 4.5 A reworked model of second-generation CHAT model as applied in lecturers' interviews; adapted from Leadbetter et al. (2007).

As shown in Figure **4.5**, the CHAT model directed the interview questions around the six elements of SAAS: subject, object (outcome), tools, rules, community and division

of labour (Refer to Appendix **A** for the interview guide). Exploring and analysing these components was critical to understanding how SAAS functioned at UTAS and how it was oriented toward its ultimate object, GED. The interview was structured into three stages to promote a reflection process, as shown in Table **4.3**. The initial stage focused on identifying the object of the SAAS and other elements facilitating its attainment. Lecturers were guided through a series of questions aimed at vividly and comprehensively describing their experiences within SAAS, with a particular emphasis on the ultimate object they aim to achieve. Simultaneously, I noted potential sources of tension and disturbances, highlighting systemic contradictions, as lecturers shared their experiences. Consistent with BMR, I also closely observed how lecturers expressed both positive and negative feelings, while ensuring they refrained from making judgments that might cloud their descriptions (Boud et al., 1985).

In the next stage, lecturers were assisted in re-evaluating their experiences through discussing how the interaction between the various activity components, including lecturers' use and creation of specific SA tools, following rules and performing different roles; could have led to the materialisation of internal contradictions within SAAS. I focused here on how these systemic contradictions acted as barriers restricting lecturers' abilities in accomplishing the object of SAAS as well as how they might have enabled innovation by stimulating lecturers to take agentic actions toward addressing these contradictions. During this stage, I utilised the notes taken in the previous stage about how lecturers described their feelings about their experiences. For example, negative feelings were used to recognise and follow up on internal contradictions while positive feelings reflected innovative instances where lecturers managed to address such tensions.

The final stage elicited further outcomes emerging from lecturers' engagement in the reflective sessions. This involved asking lecturers to share any new opinions, plans or actions that they had formulated or committed themselves to taking either individually or collectively to further address the contradictions and to transform the SAAS; that is, initiating expansive learning by creating a developed version of the activity (Engeström and Sannino, 2010).[32] Table **4.3** outlines the reflective processes that lecturers engaged in as they reflected on SAAS, with highlighting how concepts from CHAT and BMR were utilised.

Stage	BMR concepts	CHAT concepts
First	**Returning to experience:** Questions guiding and stimulating lecturers to return to their experiences of SA and provide holistic and vivid descriptions.	**SAAS as the unit of analysis:** Lecturers describing the six elements of SAAS: Subject, object (+outcome), tools, rules, division of labour, and community.
Second	**Re-evaluating experience:** Lecturers were guided to identify the challenges or issues facing them as part of their SA experiences, and to think about how these could be addressed and resolved.	**Identifying systemic contradictions:** Having identified GED as the object of SAAS, lecturers were guided to identify existing tensions within the system and to predict what tensions might arise as a result of adopting this emerging object for SAAS, i.e., who needs to be involved in the community; what tools, rules or roles need to be added to or removed from the activity system.
Third	**Outcomes of reflection:** Based on the reflection they underwent, lecturers shared new perspectives, plans or intentions to take future actions toward improving their experiences of SA.	**Expansive learning:** How could SAAS be collectively developed or transformed and what would a new version of SAAS look like.

[32] "Expansive learning requires articulation and practical engagement with inner contradictions of the learners' activity system" (Engeström and Sannino, 2010, p. 5)

Table 4.3 The structure and organisation of teacher interviews examining SAAS.

While various studies have applied CHAT to the study of SA, integrating BMR with CHAT in the manner outlined above is a novel and original approach of this study. To the best of my knowledge, these frameworks have never been previously applied, neither generally in HE nor specifically in studying SA. This integration offers several advantages for investigating lecturers' experiences of their SAAS. Firstly, BMR is consistent with fostering deep approaches to learning, which this thesis seeks to promote through the implementation of authentic assessment tools (Boud, 1999). Secondly, both BMR and CHAT share the overarching objective of learning from engagement in social practice. Therefore, the practical steps provided by BMR were effectively employed to help lecturers reflect on their SAAS, thereby triggering transformation and collective learning within the system, as discussed earlier. In doing so, reflection was not approached as occurring naturally as part of the interview method or applied as a fixed recipe (Langemeyer and Nissen, 2005). Rather, it was emphasised and executed in a more theoretically informed manner through the application of BMR.

Thirdly, AT has been criticised for neglecting the complex role of emotions or the 'emotive dimension' in analysing human activity (Toomela, 2000; Fanghanel, 2004), a dimension heavily emphasised in BMR, as shown in section **4.5.1**. Fourthly, while CHAT helped me, as the researcher, gain a comprehensive understanding of the SAAS, the integration of BMR afforded my participants the opportunity to engage in reflective processes aimed at better understanding themselves, as primary members of the SAAS community, and learn from their experiences. It also helped them understand their SA practices by reflecting on the systemic interactions and

contradictions within their SAAS, rendering the research process mutually beneficial for both the researcher and the participants. Thus, the amalgamation of these two frameworks provided a robust and balanced approach to examining and gaining valuable insights about SA as a social activity system by capitalising on the strengths of both frameworks.

4.7 Summary

This chapter introduced the two theoretical frameworks that influenced the study. It began by providing an overview of the history of the first major framework, CHAT, and introduced its second-generation model, adopted by this study. The chapter then discussed the primary components of an activity system, followed by the three key principles embraced by the study. Next, it highlighted the role of reflection within CHAT as a crucial factor for transforming and initiating collective learning among the community members of the activity. This was followed by introducing the second framework, Boud et al.'s (1985) model of reflection. The last section of the chapter illustrated how the two models were amalgamated and applied to investigate the SAAS and its connection with GED at UTAS.

CHAPTER 5: METHODOLOGY AND RESEARCH DESIGN

5.1 Introduction

This chapter outlines the research design, which I consider crucial for addressing the research objectives and questions of this study. First, I explain my philosophical standpoints, which guide the questions I ask and the approaches I adopt to address them. Then, I discuss the research methodology that I consider appropriate for this study. Following this, I present the three methods I utilised to collect the data. In each method's section, I provide details about key methodological aspects such as the method's design, the pilot study, data analysis, and the presentation of findings. In the latter sections, I explain my positionality and reflexivity, describe how I obtained access, and ensure the quality of the study.

The primary objective of this thesis is to understand the link between SA and GE and to explore lecturers' experiences in implementing SA to enhance GE at UTAS. This thesis aims to achieve this objective and address the knowledge gaps identified in the literature review chapter by answering the following research questions:

1. To what extent is graduate employability development an objective of student assessment at UTAS?
2. How do lecturers at UTAS-X perceive and use student assessment as a tool to facilitate graduate employability development?
3. What are the key barriers and enablers impacting lecturers' utilisation of student assessment for graduate employability development?

5.2 Philosophical Perspectives

Being aware of and elucidating one's philosophical standpoints is essential to research practice. This is because researchers need to be aware of the paradigm they operate within (Gray, 2014; Creswell and Creswell, 2018).[33] As a researcher, I should ensure that my paradigm or worldview is 'in harmony across three elements of ontology, epistemology and your [sic] approach to methods' at the stage of planning or designing my research project. This is crucial as it does not only impact what I aim to know and understand, but also can significantly contribute to enhancing the quality of my research findings and the coherence in reporting them (Hamilton and Corbett-Whittier, 2012, p. 24).

My ontological perspectives concerning the nature of reality (Thomas, 2017; Waring, 2017) are significantly influenced by the Activity Theory framework outlined in the previous chapter, which aligns considerably with constructivism, as emphasised by various authors (e.g.,Jonassen and Rohrer-Murphy, 1999; Morrison, 2003; Postholm, 2008; Blunden, 2023). As discussed in Chapter **4**, in Activity Theory, social and cultural contexts play crucial roles in shaping human behaviour through learners' engagement in collaborative activities, thereby initiating social change by transforming the mechanisms of social activities, principles which align significantly with constructivist approaches (Blunden, 2023).

[33] A research paradigm is defined as 'the basic belief system or world view that guides the investigator, not only in the choices of method but in ontologically and epistemologically fundamental ways' (Guba and Lincoln, 1994, p. 105).

However, I would like to clarify the version of constructivism with which my philosophical perspectives are most aligned. Rather than viewing reality as merely constructed in the minds of social actors (Hesse-Biber, 2010; Waring, 2017), I subscribe to the thesis of the unity between the subjective human mind and the objective world (Kaptelinin, 2014). This unity is afforded through participation in shared social activity systems, which represent major parts of the reality of social actors, as discussed in Chapter **4**. Therefore, I view social actors' construction of reality as being organised around and constrained by the activity systems in which they engage and participate.

In the context of HEIs, social actors (e.g., students, lecturers, and leaders) participate in various cultural and historical activity systems like teaching, learning, and assessment, which have evolved over time through the continuous adjustment and refinement of tools, member composition and roles, and rules or procedures. For instance, participation in a particular activity system entails the appropriation and utilisation of the system's various physical and abstract tools and compliance with certain norms and principles of acceptable or good practices. While participants' interactions with these system components lead to the formation of experiences and the construction of meanings and interpretations about their lived experiences, this construction is significantly shaped and influenced by the cultural and historical context of the shared activity system.

While the researcher's ontology centres around the essence of reality and truth, epistemological viewpoints deal with the nature of knowledge and the manner through which this knowledge could be accessed, obtained or produced (Thomas, 2017; Waring, 2017). It also addresses the forms of knowledge that can be considered acceptable in a particular discipline (Bryman, 2012). Consistent with my activity theory

perspective on the nature of reality, my epistemological views on the nature of knowledge align with the central AT concept of mediation, introduced in Chapter **4**. This concept addresses how individuals learn or construct knowledge through participation and actions within their social activity systems (Roth and Lee, 2007). Instead of perceiving learning as mere transmission, I see it as 'socially constructed based on the intentionality, history, culture, and tool mediation used in the process' (Jonassen and Rohrer-Murphy, 1999, p. 64).

Hence, access to this knowledge, can happen through engaging the social actors in dialogue, discussion, and reflection while examining their perspectives and interpretations in a way that aligns with their practical and observable experiences (Merriam, 1998) within the activity systems they participate in. This means it is important to assess and validate the sought knowledge against the background of cultural and historical developments, as well as the social norms governing the functioning of this activity system and the actions of its participants. Therefore, in this study, access to knowledge about the SA activity system involved an examination of the participants' interactions with the system's components and the mediation that occurs, using a combination of theoretical models of activity theory and reflection (refer to Section **4.6**). The next section presents the specific methodology applied for this purpose.

5.3 Case Study Methodology

Methodological assumptions relate to the means, research instruments and techniques, that the researcher deems most effective in obtaining the knowledge and understanding s/he seeks (Della Porta and Keating, 2008). Alternatively, they influence the research design of a study by underpinning the decisions made by the researcher

regarding the selection of research methods (Hamilton and Corbett-Whittier, 2012). Methodological assumptions are not separated from the researcher's ontological and epistemological assumptions; rather, they are an extension or a reflection of them (Waring, 2017, p.16).

As previously stated, this study is underpinned by a constructivist perspective aligned with the AT framework. Consequently, I chose to adopt a qualitative case study methodology, employing interpretivist methods rather than 'hard' quantitative methods. These methods are crucial for understanding the SA activity system – the focus of the study – in depth by examining events and situations within their relevant contexts, with a particular emphasis on the meanings that individuals assign to their actions and their perceptions of the world around them. Notably, the rich contextual descriptions generated by this qualitative methodology (Creswell and Creswell, 2018) align with the primary objective of understanding SAAS as a whole within its natural context (Taylor et al., 2016).[34]

Additionally, the case study methodology required the application of multiple data collection methods. Consequently, I adopted a mixed methods approach, incorporating a questionnaire, semi-structured interviews, and documentary analysis to capture the complexity and nuances of lecturers' experiences within their SAAS. This approach characterises the study as 'qualitative dominant mixed methods research' (Johnson et al., 2007). Importantly, the questionnaire was chosen not simply for its popularity, but because it aligns with the research questions and objectives

[34] "In qualitative methodology the researcher looks at settings and people holistically; people, settings, or groups are not reduced to variables, but are viewed as a whole. The qualitative researcher studies people in the context of their pasts and the situations in which they find themselves" (Taylor et al., 2016, p. 9)

(Bryman, 2014). Robson and McCartan (2016) caution against using methods without clear relevance, describing this as ‘methods in search of problems’ (p. 242).

The study followed a sequential design where the questionnaire was administered early on to address the initial research question. This involved surveying internal stakeholders to gauge their perspective on the relationship between SA and GED. The questionnaire served as a triangulation tool, providing ‘extra knowledge about the issue in question’ (Flick, 2017, p. 53). However, the data obtained from the questionnaire was not considered final; it underwent further rigorous processes of elaboration, clarification, and reflection using qualitative tools, which extended the study’s scope and enhanced triangulation (Flick, 2017). Applying the notation system used by Creswell and Plano Clark (2018), the research design in this study can be represented as ‘quan + QUAL,’ where the emphasis is placed on the subsequent qualitative dataset. Based on this integrated approach, all methods worked holistically and complementarily to create a more complete and ‘balanced picture’ (Patton, 2014, p. 281) of how SA links to GED.

To emphasise the variability that exists in defining case study as a methodology or research approach, scholars like Schwandt and Gates (2018), stress that ‘what constitutes a case is disputed’ (p. 600), while Yazan (2015) describes it as a ‘contested terrain’ (p. 134). To provide some clarity about case study methodology, I will draw on literature that aims to clarify its usage and purposes and explain how it was applied within this study. To begin, I concur with the description provided by Hamilton and Corbett-Whittier (2012), who describe case study as a research approach that aims at capturing:

> "The complexity of relationships, beliefs and attitudes within a bounded unit, using different forms of data collection and is likely to explore more than one perspective" (p. 10).

The two key aspects in this description resonate with the objectives of this study and the procedures followed for its data generation. First, the primary objective of this study was to provide an understanding of the complex and intricate link between SA and GE by investigating lecturers' perceptions and attitudes within a specific higher education institution, UTAS – therefore, a defined or bounded unit. A more detailed description of UTAS is provided in Section **2.6**. As various authors explain, the unit of investigation could be a process, location, a programme, an action, an activity or a specific institution or organization (Robson and McCartan, 2016; Schwandt and Gates, 2018; Creswell and Creswell, 2018). Second, to achieve this objective, the study employed multiple methods to gather comprehensive, rich data for illuminating the issue under investigation (Stake, 1995; Merriam, 1998; Yin, 2009), while involving multiple groups of stakeholders at the initial stage of data collection to ensure diverse perspectives were considered. **Figure 5.1** illustrates the research design of the case study:

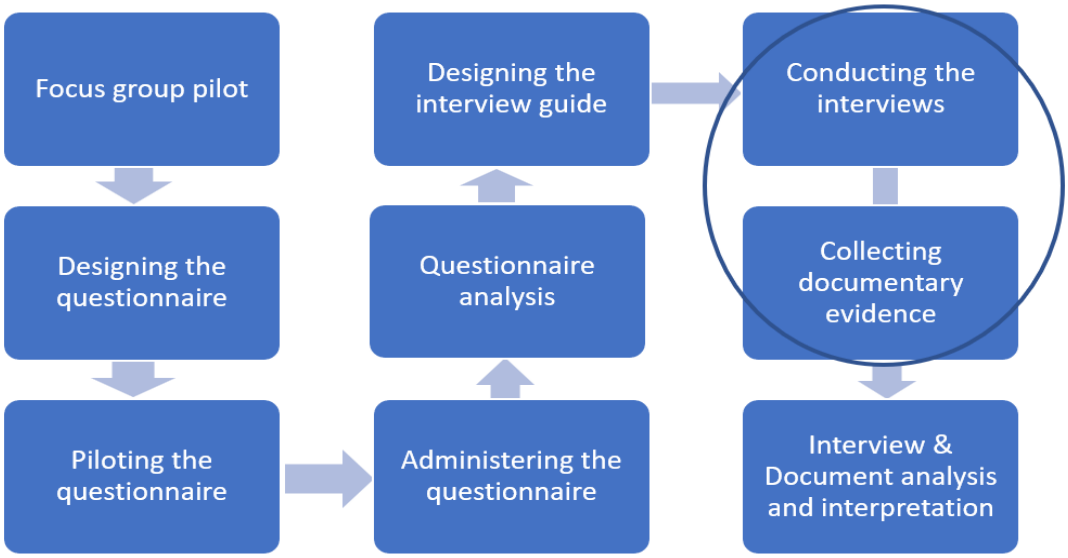

Figure 5.1 The sequential case study design adopted by the study

Moreover, case studies are renowned for allowing researchers to focus on a specific case or a group of cases, engaging in an in-depth study and analysis (Thomas, 2017; Creswell and Creswell, 2018). This makes them invaluable for researching a wide range of issues and topics. Of particular relevance to this study is their usefulness in investigating topics where connections may be unclear, not well-known, or not well-defined (Gray, 2014), as is the case with the link between SA and GED, as explained in Chapter **3**. Another strength of case study has been highlighted by Stake (2000) who reported it to be a powerful strategy in enhancing people's understanding, broadening their experiences, and strengthening their convictions about certain issues pertinent to their social lives. Additionally, when there is limited knowledge about a particular complex phenomenon or issue, using a case study can be instrumental in exploring and expanding our understanding about it (Dooley, 2002; Ashley, 2017), an aspect which is particularly relevant to the context and the topic of this study.

Stake offers a useful classification of case studies into intrinsic and instrumental types. This classification is based on the researcher's aim in selecting a particular case. In an intrinsic case study, the researcher is interested in learning about the case itself. In contrast, in an instrumental case study, the researcher selects the case for its particular characteristics or relevance to a broader topic of interest, using the case as a tool to gain insights into that topic. Thus, while intrinsic case studies focus on the case itself, instrumental case studies focus on how the selected case can provide insights into the researcher's area of interest. The type of case study adopted in the current study falls under the latter category. Although the study focuses on a specific HEI, the rationale for selecting this case is not to understand this particular institution

as a whole, but rather to gain insights into the broader question by studying this specific case (Stake, 1995, p. 3). In other words, the case is instrumental for understanding and illuminating the issue under investigation: lecturers' use of SA for GED within the boundaries of this institution. Hence, the emphasis is placed more on the issue than on the case itself.(Stake, 1995).

5.3.1 Focus group

A preliminary understanding of the study's context is crucial, as it significantly influences the researcher's decisions regarding case selection and participant characteristics (Lewis and McNaughton, 2014, p. 102). Qualitative inquiries, as mentioned earlier, place great importance on the contexts and settings in which phenomena occur, recognising that the meanings people ascribe to their experiences are anchored in and intertwined with their originating contexts (Taylor et al., 2016). This is especially relevant to the study of the SA activity system, as the AT framework, highlighted in Chapter **4**, emphasises the critical role that social and cultural contexts play in shaping the activity systems in which social actors engage. Consequently, before commencing data collection, it was essential to assess the relevance of the topic within the study's context by gaining insight into the perspectives of the various stakeholders involved.

Focus group was the most suitable method for this purpose due to their several benefits. According to Bryman (2012) focus groups are time and effort-saving since the topic is discussed with a group of people simultaneously, and they assist researchers in exploring a particular area or topic in depth. The researcher focuses on the dynamics of the discussion while the participants build upon different views and respond to each other's opinions about the topic (Bryman, 2012). This feature was

particularly crucial since I needed to make a comprehensive, collective evaluation of how members in different academic communities (e.g., the business and engineering communities), rather than individuals, feel about the topic and its significance to their particular context. This was achieved through my role as the facilitator of the group discussions, where I tried to sustain a process of interaction between the members to generate insights and let the salient aspects of the topic emerge (Finch et al., 2014).

To achieve this goal, I selected four groups from various campuses of UTAS to represent the three stakeholder groups: leaders, lecturers, and students. Table **5.1** provides details of these groups. The focus group discussions served as a pilot study, informing the development of subsequent data collection methods. From these discussions emerged key insights regarding the linkage between SA and GED, notably its significance, timeliness, and the need for further research. Incorporating this focus group pilot study, the research design sequence can be summarised as follows: QUAL > QUAN > QUAL (Creswell and Plano Clark, 2018).

No	Stakeholder group	Campus	Community
5.	Students	UTAS-A	1 x 8 students, members of the academic committee in the Student Advisory Council (SAC)
6.	Leaders	UTAS-B	1 x 3 leaders, managers of business department
7.	Teachers	UTAS-C	1 x 7 teachers, members of the research committee at the campus
8.		UTAS-D	1 x 7 teachers, members of IT department

Table 5.1 Details of the four focus groups included in the pilot study

5.3.2 Questionnaire

The integration of a questionnaire is one of the techniques that qualitative researchers apply alongside other qualitative methods like in-depth interviews to address a concern about data representativeness that many readers and consumers of educational research have (Wellington, 2015, p.191). It offers the researcher the advantage of asking standardised and open questions of relevance to the study to a large number of its sample in a 'cheap, reliable, valid, quick and easy to complete' manner (Cohen et al., 2018, p. 471), wherein respondents are asked to provide information about a wide range of aspects pertinent to their social life like 'thoughts, feelings, attitudes, beliefs, values, perceptions, personality, and behavioural intentions' (Burke and Christensen, 2017, p. 274). Questionnaires are generally conducted for descriptive purposes as they are considered very useful in furnishing details about how a diverse array of 'people characteristics' or traits are distributed and how they relate to each other (Robson and McCartan, 2016). However, they should only be used when they are expected to add value to the study in terms of achieving its research objectives and questions; that is, its use should not be underpinned by being a prevalent method (Gray, 2014; Rowley, 2014; Robson and McCartan, 2016).

As mentioned earlier, the questionnaire in this study was utilised principally to address the first research question, following a sequential design. This design began with the deployment of the questionnaire as a preliminary exploratory method. The insights gained about the status quo of SA at UTAS provided a contextual background, which was then used to explore the topic in depth through semi-structured interviews, focusing on how SA can be aligned with GED from lecturers' perspectives. According to Robson and McCartan (2016), an exploratory rather than confirmatory data analysis

approach is suitable for projects involving a supplementary quantitative component. Such designs aim to explore contexts and inform further data collection stages rather than confirm specific hypotheses or predictions set by the researcher prior to data collection. Therefore, the analysis of the questionnaire data primarily involved descriptive statistics and graphical displays to outline the main features of the SA and GE link, based on the opinions and experiences of the concerned stakeholder groups at UTAS. Since the questionnaire addressed a separate research question, its results are presented in a separate chapter, Chapter **6**, within this thesis.

5.3.2.1 Design of the questionnaire

Assessing the strength of the link between SA and GED at the setting necessitated that a broad overview is obtained about how the key internal stakeholders within this context generally view GE and the various factors impacting its development. It was also important to measure to what extent specific forms of assessment that the literature identifies to be conducive to GED are integrated into the design and implementation of SA at UTAS as experienced by these key stakeholders. These principal objectives informed the design of the questionnaire which aimed at capturing stakeholders' perceptions and experiences. The questionnaire began with broad questions about stakeholders' general beliefs regarding GE, then explored their opinions on lecturers' roles in developing GE. Subsequent sections focused on stakeholders' experiences, including the availability of resources and mechanisms like student assessment and extracurricular activities for enhancing GE in their departments. Finally, it measured the alignment between SA and GED by having

stakeholders rate their experiences in five key areas identified through literature review.[35]

I translated the students' version of the questionnaire into Arabic and then piloted it with a professional translator with an educational background. The translator made slight adjustments and confirmed that the translation was clear and appropriate for the study's purpose. Although English is the medium of instruction at UTAS, Arabic was chosen for the student questionnaire to ensure thorough understanding, as it is their first language. This was particularly important because the target respondents included students from all cohorts, including first-year students, most of whom have only an elementary level of English proficiency.[36]

I was mindful that the value of the questionnaire depended entirely on its completion and return by the target respondents. Therefore, it was paramount to design the questionnaire to achieve the desired response rate (Denscombe, 2014; Gray, 2014). To this end, I ensured that the questionnaire was easy and straightforward for respondents to complete, and I followed up with a pilot test. The questionnaire included information about its purpose, completion time, confidentiality assurance, contact details, target respondents, voluntary participation, and a consent option. Questions were organised into sections to improve the flow and make the questionnaire easy to follow (Rowley, 2014). Additionally, each section involved instructions about how to answer the questions (Denscombe, 2014). As Wellington (2015) suggests, the final

[35] See Appendices **B** and **C** for further details about the structure and content of the questionnaires.
[36] The academic staff completed their questionnaire in English. Arabic translation was used only during the administration of the student questionnaire; all other stages of the research – drafting, analysis, and reporting – were conducted in English. This ensured consistency while accommodating students' varying English proficiency.

section contained an open-ended question inviting respondents to provide further details, opinions, and feelings about the SA and GED link.

The questionnaire was administered online through Qualtrics survey tool. Using this online tool proved very useful due to the wide range of common benefits offered by web-based questionnaire tools. Many authors like Denscombe (2014); Wellington (2015); Cohen et al. (2018) discussed the advantages of web-based surveys, some of which were made use of in the design, distribution and data retrieval of this study's questionnaire. First, Qualtrics made the questionnaire easy to design with built-in options and features like different measurement scales that were selected based on the type of question or item. In this study, a 5-point Likert scale was used. Bryman (2012) describes this as a scale that measures the intensity of a respondent's feelings in relation to an aspect of the study, most often represented using a group of statements or items, which are therefore called a 'multiple-indicator measure' (p. 166). Yet, in this study Likert Scale was applied sometimes as a single-indicator measure and at other times as a multiple-indicator measure to measure constructs with multiple dimensions like 'authentic assessment'.[37] Other features related to question sequencing and skipping options, as well as receiving notifications and providing statistics about participants responses. Second, it made it easy for me to distribute the questionnaire by sharing it through email and mobile links with the target respondents. Having it available on mobile provided the respondents extra convenience to fill out the questionnaire at any point in time or place whenever they desired. Finally, it

[37] An average mean score was calculated for each respondent in each broad area (e.g., 'current learning,' 'assessment authenticity'), resulting in an overall score for each respondent in these areas (see Section 6.6).

allowed me to export the whole data file in an SPSS format which I uploaded to SPSS before commencing the questionnaire data analysis.[38]

5.3.2.2 Piloting the questionnaire

Piloting the questionnaire is vital for enhancing its efficiency, as it allows the researcher to detect and remove misleading questions (Gray, 2014). It also provides an overview of how respondents will receive the questionnaire and whether they will find it easy to complete – factors that significantly impact the response rate (Gray, 2014; Rowley, 2014). Therefore, piloting offers an early indication of key aspects of the questionnaire design, such as the clarity and difficulty of questions, timing, coverage, flow, and respondent interest (Baker and Foy, 2008). Piloting is especially important because questionnaires are typically 'one-shot'; once completed and returned, the researcher cannot rectify issues or add overlooked questions (Denscombe, 2014).

Burke and Christensen (2017) suggest that the pilot should be done with 5 to 10 people at minimum, and it should start with people whom the researcher is familiar with, friends or colleagues, whereas the next iteration should target a small group of the study's target population. The questionnaire in this study was piloted in two stages, first with a few colleagues and then with a small group of the target population. As for the first stage of the pilot test, I adopted the 'think-aloud technique' (Burke and Christensen, 2017), which was applied with both the students' and staff's questionnaires.[39] The purpose of this technique was to detect potential problems live and rectify them based on the respondents' suggestions.

[38] Further details about the analysis of the questionnaire are provided in Section 6.1

[39] I separately invited a lecturer and a student at the setting to answer the questionnaire and meanwhile I asked each to instantly share with me any thoughts or issues encountered while going over each item.

Concerning the second stage, the questionnaire was piloted on a sample of the targeted stakeholder groups constituting of 6 leaders, 10 lecturers and 10 students. I gave each respondent instructions about how to take the pilot study whereby they were requested to time themselves, complete the questionnaire and record any thoughts in a Word document feedback form that I supplied to them. This form contained the same questionnaire with an additional section next to each item titled 'suggestions for improvement'. Purposefully, I asked the pilot respondents to fill out the questionnaire on Qualtrics so that they would have the same experience of the actual respondents. The pilot Qualtrics version had an additional final section containing 6 questions that respondents had to answer which addressed aspects like coverage, ease of completion, etc. I received valuable feedback that I used in refining the questionnaire items and making them more understandable and answerable.

The comments provided concerned various aspects of the questionnaire, such as the scales applied, the items included, and other technical elements. Table **5.2** shows the pilot participants' ratings on the questions from the feedback form while Table **5.3** provides details about the actual questionnaire response rate according to stakeholder groups. Additionally, examples of significant suggestions for enhancing the questionnaire can be found in Appendix **D**.

To what extent do you agree with the following statements?			
	N	Mean	Std. D
The objectives of the questionnaire are stated clearly.	16	4.63	.500
The instructions are easy to follow and understandable.	16	4.56	.814
The sequence of the questionnaire is well-structured.	16	4.56	.629
The questionnaire content is clear.	16	4.25	1.065
The questionnaire content is understandable.	16	4.38	.885
The questionnaire content covers key aspects about the impact of student assessment on graduate employability development.	16	4.50	.632

Table 5.2 Questionnaire pilot respondents' ratings on feedback form questions

		Frequency	Valid Percent
Valid	LEADERS	40	5.62
	LECTURERS	378	53.1
	STUDENTS	290	41.2
	Total	708	100.0

Table 5.3 Stakeholders' responses based on stakeholder group

5.3.3 Documentary Analysis

Reviewing institutional documents was considered crucial for investigating the broader context influencing lecturers' perceptions and experiences of using SA for GED purposes. From the project's outset, I consistently sought documents referencing key areas and concepts, carefully examining both implicit and explicit connections or associations between SA and GED within these documents, along with their related concepts.[40] My approach to searching and utilising documents in this study is based

[40] Such as student assessment, assessment modes and methods, assessment feedback, assessment rules and policies, and graduate employability and employment.

on the assumption that they are integral components of the social settings in which my study participants engage and conduct their activities. In social contexts, documents serve as ‘social facts’ (Atkinson and Coffey, 2004, p. 58), or ‘institutionalized traces’ that provide insight into the activities, decisions, motives, and beliefs of their producers and the organisations they represent (Wolff, 2004, p. 284).

Therefore, Coffey (2014) regards documents as vital resources for understanding and interpreting social and institutional practices. She contends that gaining a complete understanding of modern HE and its institutions can be challenging without examining their institutional documentary realities. Additionally, Bowen (2009) highlights the utility of documents, particularly in case studies, as they serve as a significant source of data for achieving both data and methodological triangulation. Of particular importance to this study is the ability of documents to contextualise the research by providing background details about past events and activities related to SA and GED at the research setting and enabling further questions to be raised about them.

Several authors have provided definitions of what documents encompass. For example, as Merriam and Tisdell (2015) assert that ‘*document* is often used as an umbrella term to refer to a wide range of written, visual, digital, and physical material relevant to the study’ (emphasis in original, p. 162). However, in attempting to understand the nature of documents, Prior (2003, p. 2) emphasises the importance of not viewing them merely as ‘stable, static and pre-defined artefacts’, but rather as ‘fields, frames and networks of action’. This is because the identification of objects as documents is particularly reliant on how they are incorporated into fields or networks of action, so a definition could be established only in relation to these fields or networks. Viewing documents as fields of action implies that our attention is directed to all the three components playing a key role in their emergence: creators, those who

produce or publish them; users, those who read or receive them; and settings, the spatial and temporal circumstances surrounding their creation (Prior, 2003).

Similarly, Flick (2009) warns against 'focusing only on the contents of documents without taking their context, use, and function into account' (p. 261). Such insights led me to approach documents with caution and not accept them at face value. For instance, documentary evidence positioned GED as one of the university's key objectives that all teaching, learning, and assessment activities should aim to achieve. However, as the interview findings revealed (see Section **7.4.2**), not all management members strived to implement this objective, highlighting an important aspect regarding the production of such documents. Specifically, they were primarily generated during a period when the university was preparing for a crucial stage of institutional accreditation, serving primarily to meet quality assurance and accreditation requirements rather than serving as firmly established principles guiding learning and assessment activities.

Since one key objective of using documents in this study is to examine how they support lecturers' understanding and actual implementation of SA for GED, the emphasis was placed on the actions that such documents may direct or influence lecturers to take regarding SA implementation for GED. Therefore, viewing documents as 'fields of action' (Prior, 2003) was significant to this study in two interconnected ways. First, it aligns with the Activity Theory framework adopted by this study, (see Chapter **4**), which conceptualises documents in their various forms as part of the mediating artifacts which serve as both tools and rules that mediate the actions of the activity subjects, namely lecturers, toward accomplishing the central object within the SA activity system. Second, this perspective informs the presentation of the findings from both documentary and interview analyses, as they were interwoven into a single

chapter, Chapter **7**. This integration was done because the salient findings from the documents were used to support the interview findings. For instance, findings from documents were utilised to explain lecturers' behaviours and orientations toward implementing SA for GED, as revealed through the interviews.

The documents identified for this study were categorised into three types, as shown in Table **5.4**. However, it is important to note several points regarding document retrieval. Firstly, the process of accessing relevant documents was not consistent across all departments. While some departments and lecturers provided the requested documents, others did not. For instance, although I was granted access to obtain all such documents, some lecturers refrained from sharing their course's past exams with me, without providing reasons for their reluctance. This could be attributed to the secrecy often associated with exams, as well as the tendency of some lecturers to reuse their exam materials. Additionally, it is worth mentioning that some departments possessed a more extensive collection of documents pertaining to the design and implementation of SA compared to others. Secondly, the third category of 'course specific' documents was utilised solely to enhance discussions and facilitate reflection on SA experiences during interviews. Therefore, they were not subjected to the same analytical process as the previous two categories.

Type / category	Description	Example	Accessed through
University / campus	General documents applicable to all departments that make reference to SA and GED	University bylaws, QA manual, institutional audit report, SA policies, staff handbook, student handbook, common pedagogical framework	University intranet
Department / Centre specific	Documents related to how SA should be conducted in each academic department	Department assessment plans, minutes of meetings where SA is discussed	Heads of departments
Course specific	Documents delineating how SA is conducted in individual courses or modules	Course delivery plans, copies of quizzes, mid-term and final exams, classroom assessment activities	Interviewed lecturers

Table 5.4 Types of the university documents obtained and used in the documentary analysis

The analysis of documentary data in this study followed the approach recommended by Bowen (2009) which integrates features from thematic analysis and content analysis. This involved three stages: skimming the identified documents for relevant data, engaging in a thorough reading of the identified data, and then interpreting the data. During the analysis, passages of text containing pertinent information about the central research questions were identified and coded. Since the documentary analysis phase coincided with the interview analysis, similar codes were used to label the data in both methods. Consequently, as mentioned earlier, the most significant passages from documents were used to complement the interview findings, resulting in a comprehensive chapter presentation. Thus, the final stage of data interpretation was applied to the entire dataset from both sources.

However, it is essential to note that the number of relevant documentary passages was considerably fewer than those identified from the interviews, as reflected in the

presentation of qualitative findings, Chapter **7**. This discrepancy is not surprising for two reasons. Firstly, it was anticipated that the majority of data would originate from interviews, being the primary method of data collection. Secondly, it is attributed to the inherent nature of the documents used in this study, which is also a general limitation of documents. These documents were produced for purposes other than research, which may result in insufficient, inaccurate, and potentially biased details (Bowen, 2009; Robson and McCartan, 2016). Such potential limitations highlight the importance of integrating interviews as part of the case study methodology adopted by this study, as discussed in the next section.

5.3.4 Interviews

The rationale for including interviews as a primary data collection method in this study is rooted in the AT framework, which necessitated the adoption of a case study methodology, as discussed earlier. This approach requires the use of various methods to ensure a thorough and comprehensive investigation of the selected case, which is essential for understanding the SA activity system. Rubin and Rubin (2012) view the interview method as a powerful research instrument allowing researchers to 'explore in detail the experiences, motives and opinions of others and learn to see the world from perspectives other than their own' (p. 3). Interviews centre around understanding the experiences that people undergo in their social lives and the meanings they attach to such lived experiences (Seidman, 2006). This renders the use of interviews vital for understanding lecturers' experiences within their SAAS.

Research methodologists classify interviews into three types: structured, unstructured and semi-structured based on the degree of structure or flexibility in each type (Merriam and Tisdell, 2015; Thomas, 2017). Structured interviews are more aligned

with quantitative or positivist research approaches as they are aimed at ensuring that the key pre-defined research concepts are measured with maximum validity and reliability, which demands that the interview questions are presented in the same structure and style to all respondents. Thus, rather than reflecting the interviewees' concerns, interpretations and perspectives, structured interviews place the utmost importance on the researcher's concerns (Bryman, 2012). By contrast, in an unstructured interview, the researcher goes to the interview with a rough set of topics, or questions, that will serve as an 'an aide-mémoire' while the actual questions will be formulated by the researcher 'on the fly' based on how the interview progresses (Gray, 2014). Such interviews are often conducted when little is known by the researcher about the phenomenon being studied, so the interview serve as a preliminary exploratory tool to aid in formulating more refined questions for further interviews (Merriam and Tisdell, 2015).

The semi-structured interview, adopted in this study, maintains a middle ground between the former two types (Merriam and Tisdell, 2015), offering the best of both (Thomas, 2017). In this approach, the researcher prepares a list of questions or topics to guide the interview, often referred to as an 'interview guide' (Bryman, 2012). However, the interviewees are given flexibility in their responses, and the researcher remains open to new directions the interview may take, rewording questions and adding new ones to address emerging perspectives (Bryman, 2012; Merriam and Tisdell, 2015). A characterising feature of semi-structured interviews is enabling researchers to probe deeper into participants' perspectives, opinions, and views. This is achieved through the use of comments, prompts, and follow-up questions, which stimulate interviewees to expand upon their responses, thereby facilitating in-depth exploration of the investigated topic (Gray, 2014; Thomas, 2017; Cohen et al., 2018).

The decision to conduct interviews for this study in a semi-structured manner was driven by several factors. Initially, conducting a literature review before data collection expanded my understanding of the various SA methods associated with GED globally. Subsequently, conducting focus groups with three key stakeholders – students, lecturers, and managers – within the research setting allowed for an assessment of their familiarity with the research topic and its local significance. Insights gleaned from both the literature review and focus groups informed the design of a questionnaire, as detailed in section **5.4.2**, to explore pertinent aspects of the topic further. Therefore, by the time I commenced the interview phase, I had developed a strong knowledge base regarding SA methods used worldwide for GED and those utilised locally by stakeholders. Consequently, the focus of the interview phase was to thoroughly explore lecturers' experiences with these implemented methods. This entailed posing probing 'why' and 'how' questions, for which semi-structured interviews proved most effective, as demonstrated earlier. All the interviews were conducted online via Zoom and were video recorded. This allowed for revisiting the interviews during transcription and coding, as discussed further in section **5.4.4.3**.

5.3.4.1 Designing and piloting the interview guide

Cohen et al. (2018) maintain that the design of the interview schedule or guide, encapsulating the body of the interview, need to be informed by the research objectives and questions that the research is trying to address, which requires the translation of these objectives and broad questions into the actual interview questions that will be presented to the interviewees. In this study, the interview, as the main method of data collection, was designed to answer the second and third research questions which respectively addressed the objectives relating to how lecturers use SA for GED, and the barriers and enables they perceived to be either restricting or

supporting their implementation of SA for GED (refer to Section **1.1**). The structure of the interview and the format of its questions were underpinned by the theoretical frameworks adopted by the study (see Section **4.6**).

Before conducting the interviews, the interview guide was piloted with seven lecturers from the four departments to which the target interviewees belonged. This pilot study provided hands-on experience in asking the interview questions and prompting lecturers to share their experiences. At the end of each pilot interview, I asked participants for feedback on the clarity, coverage, and flow of the questions, as well as general suggestions for improving the interview quality. The suggestions and insights gained from the pilot study led to the refinement of the interview guide. Details of the pilot interviews and examples of participants' suggestions for improving the interview guide can be found in Appendix **E**.

5.3.4.2 Interview sampling and recruitment

In qualitative research, sample sizes are typically small to allow for an in-depth exploration of the phenomenon being studied, thereby yielding richer and more nuanced details (Ritchie et al., 2014). Cohen et al. (2018) highlight that in case studies, sampling refers not only to the participants but also to the case or site to which these participants belong. To achieve this, most qualitative studies employ purposive sampling techniques, selecting cases and participants based on their suitability for achieving the study's objectives and answering its questions (Bryman, 2012; Ritchie et al., 2014; Merriam and Tisdell, 2015). Unlike quantitative surveys, qualitative interviews focus on the significant contributions each participant can make to understanding and illuminating the research topic, rather than on achieving a representative sample (Merriam and Tisdell, 2015). For this study, I selected one

campus, or case, from among the seven campuses of UTAS based on three key reasons.

First, the selected campus, UTAS-X, demonstrated the highest interest in the research topic, evidenced by the largest and most homogenous questionnaire response rate across all four of its departments. Second, it was the most recent campus I had worked at, allowing me to maintain good relationships with key individuals and gatekeepers. Thirdly and most importantly, the questionnaire analysis indicated that the relationship between SA and GED was consistent across all campuses, with no significant differences in the ratings provided by respondents. This consistency signified that since all campuses followed the same system for key activities, including SA, one typical campus would be sufficient to accomplish the study's objectives. Therefore, a typical case was selected because there was nothing unusual about the other cases (Stake, 1995). In fact, Wellington (2015) lists 'typical case sampling' as one type of purposive sampling.

As for the sampling of the participants, I deliberately aimed for 'key knowledgeables' or 'informants' within this campus, which Patton (2014) describe as invaluable to qualitative research since these are 'knowledgeable about a topic and are willing to share their knowledge' (p. 430). The recruitment of these participants was achieved in two ways. First, I used the questionnaire to identify lecturers who expressed interest in discussing the study's topic further through an interview.[41] Second, I approached the head of each academic department to nominate six lecturers from different study levels, sections, or specializations and with varying levels of seniority. I specifically emphasised that lecturers known for implementing innovative methods of teaching and

[41] I included a section where interested lecturers could leave their contact details at the end of the questionnaire.

assessment would be most preferable. To nominate these lecturers, each department head consulted with the heads of sections in their departments, obtained consent from the nominated lecturers, and then collated and shared the final list of names and contact details with me. Upon receiving this list, I contacted these lecturers individually to arrange for their interviews. This approach ensured that I targeted 'key informants' in each department.[42]

5.3.4.3 Interview data analysis

This section explains the coding and theme-generating methods used in the analysis of the interview data for this study. It presents the approach adopted for data analysis, detailing the coding strategy and techniques used to develop the key themes emerging from the analysis. Before discussing this approach, it is important to provide a brief overview of the nature of qualitative data, which is the primary type of data collected for this study, as discussed in section **5.3**. Understanding the nature of qualitative data and how it works is crucial for anticipating potential pitfalls in data analysis. This understanding is a precursor to effective handling and analysis.

In qualitative research, various authors recommend that decisions relating to analysing and dealing with data should be made by the researcher at the outset of the research project. Robson and McCartan (2016) outline some important decisions that researchers must make during the research design stage. These decisions, such as determining the study focus and making sampling choices about whom to interview and which locations to visit, have significant implications for the analytical process. Indeed, some authors (e.g. Braun and Clarke, 2006; Robson and

[42] Details and characteristics of the recruited interview participants, with pseudonymised names, can be found in Appendix **F**.

McCartan, 2016) suggest that qualitative researchers actually begin the analysis process as they commence their data collection. This begins to take place when they start ‘to notice, and look for, patterns of meaning and issues of potential interest in the data’ (Braun and Clarke, 2006, p. 86).

This nature of qualitative research is also depicted by other authors using the metaphor of a spiral (e.g. Dey, 1993; Creswell and Poth, 2018) to describe how qualitative researchers conduct their data analysis process. Creswell and Poth (2018) refer to it as the ‘data analysis spiral’, describing researchers as ‘moving in analytic circles’ rather than following a linear process, which typically characterises quantitative methods (p. 254). Additionally, Spencer et al. (2014) emphasise the fluidity of the analysis process, where researchers often move forward and backward between the stages of data management and data interpretation. These stages are depicted not as separate but as overlapping, with each sharing features of the other (Sandelowski, 1995).

5.3.4.3.1 Constant comparative method

To analyse the qualitative data generated for achieving my research objectives, I adopted the ‘constant comparative method’, which Thomas (2017) describes as the fundamental approach underpinning all interpretivist analytic techniques (p. 244). The significance of this analytic method is conveyed through the two key terms describing it: *constant* and *comparative*, denoting and underscoring that the researcher engages in a process, of *constantly* revisiting and referring to the generated data to make comparisons between the various units or elements constituting the data set, such as phrases, sentences, or paragraphs (Thomas, 2017, emphasis in original). This process is also captured by Braun and Clarke

(2006) in their seminal work explicating thematic analysis, which according to them is a *recursive process* involving (emphasis in original):

> "A constant moving back and forward between the entire data set, the coded extracts of data that you are analysing, and the analysis of the data that you are producing" (p. 86).

For Sandelowski (1995), constant comparison is one of the key methods allowing 'the researcher to see the data in a new way' (372). This suggests that the data keeps presenting itself differently each time the researcher revisits it, due to continuous comparisons that offer new insights and evolving interpretations. Such state of flux, according to Sandelowski (1995), provides the bedrock for the key stage of interpretation, uncovering the meanings embedded within the data. This is the essence of the analysis process, which is 'a creation of the researcher that permits the audience to see the target phenomena in a new way' (p. 372). Dey (1993) also describes this process using a useful analogy of separating and then reassembling pieces of a jigsaw puzzle.[43]

5.3.4.3.2 Thematic analysis

Having identified constant comparison as my overarching analytical approach, which permeates all aspects of my data analysis, I decided to follow a specific method that is both congruent with my research objective and flexible enough to accommodate the large amount of data generated from the interviews. This data needs to be analysed comprehensively and organised based on emerging patterns. Thus, in line with the constant comparative method, I adopted thematic analysis,

[43] "We must cut them [bits of data] out in ways which correspond to the separate facets of the social reality we are investigating, but which also allow us to put them together again to produce an overall picture" (Dey, 1993, p. 41).

which Braun and Clarke (2006) define as ‘a method for identifying, analysing and reporting patterns (themes) within data’ (p. 79). This method seemed appropriate for gleaning and interpreting the meanings that my participants at UTAS ascribe to their experiences within the SA activity system.

Thematic analysis is particularly suitable because it allows for organising the data into ‘a rich and detailed, yet complex, account’, thereby illuminating or making more “visible” the link between SA and GED, which is what thematic analysis is renowned for (Braun and Clarke, 2006, p. 78). The authors recommend a six-step guide for researchers adopting thematic analysis. They emphasise that this guide can be applied flexibly, with the analysis process being conceived and implemented as iterative and recursive, rather than linear. I followed this guide in the analysis of this study’s data, as shown in Table **5.5**.

Phase	Description of the process
1. Familiarizing yourself with your data:	Transcribing data, reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts and the entire data set; generating a thematic ‘map’.
5. Defining and naming themes:	Refining the specifics of each theme and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	Selecting vivid, compelling extracts; conducting a final analysis of these selected extracts; relating the analysis back to the research questions and literature; producing a report.

Table 5.5 The phases of thematic analysis followed in this study, adapted from Braun and Clarke (2006)

Having adopted the approach of Braun and Clarke (2006) for analysing my data, it is important to highlight some of the key phases within this approach to which I paid special attention. These steps were crucial for enhancing the trustworthiness of the research by providing an 'audit trail' of the procedures I followed (Creswell and Miller, 2000). This audit trail demonstrates to my potential readers how I conducted the analytic process in a fluid, spiral, and recursive manner, as discussed above.[44]

5.3.4.3.3 Data reduction

Data reduction is a key concept in qualitative data analysis, frequently mentioned in conjunction with data analysis. Authors discuss it as a crucial step in managing large data sets, which are often an inevitable consequence of qualitative research's inherent nature, particularly in the case of qualitative interviews (Creswell and Poth, 2018).[45] identify data reduction as the second major step after data organisation and before data representation and discussion. Due to its significant importance, I initiated data reduction early in this study, concurrently with conducting my interviews as I realised at an early stage that I would likely accumulate a substantial amount of data.[46] In fact, various authors stress the necessity of engaging in preliminary analysis early in the interview process, rather than postponing it until all interviews are completed. They argue that this approach helps researchers to remain attentive and document emerging themes and patterns (Sandelowski, 1995; Spencer et al., 2014; Cohen et al., 2018). Initiating the process of reducing the large volume of data generated by interviews is also essential to prevent or address a

[44] Further details about providing an audit trail as a key quality principle in this study are discussed in Section 5.7.
[45] Creswell and Poth (2018) identify data reduction as the second major step after data organisation and before data representation and discussion.
[46] This is largely due to the considerable number of interview participants (24) and the extended duration of each interview, which ranged from 55 to 95 minutes.

potential issue associated with qualitative research, commonly referred to as ‘data overload’ (Miles et al., 2013; Cohen et al., 2018).

A crucial strategy that helped me pre-empt data overload was the approach suggested by Miles et al. (2013), which involved accounting for my theoretical framework and research questions as guiding principles during my pattern identification processes. As the authors argue, being selective is not only inevitable but also recommended, as it demonstrates the researcher’s sense of direction and awareness of the pertinent issues in their research. They warn that if one lacks clarity on what is most important, every aspect becomes significant. Similarly, Lochmiller (2021) advocates for researchers to formulate well-articulated research questions before embarking on thematic analysis of their data as these questions provide ‘opportunities to refer to specific patterns in the data’ (p. 2043). Therefore, throughout the analysis process, I remained focused on my primary research questions and theoretical framework, which provided the basis for identifying the key emerging themes of my study.[47]

5.3.4.3.4 Transcribing and Coding

Having realised the side effects of relying on computer tools to transcribe my interviews, I viewed the inaccuracy of Zoom and the transcription errors it made as an opportunity to familiarise myself with my data word by word, despite the long time it required. This approach aligns with Braun and Clarke (2006) who see the transcription process as informing the early stages of analysis and deepening understanding of the data through close reading (p. 88). This activity gave me the

[47] Further details on how the Activity Theory framework influenced the interview data analysis are provided in Section **5.3.4.3.5**.

chance to get ‘a sense of the interview as a whole’ and to start identifying salient patterns (Sandelowski, 1995, p. 373). So, during this process, which commenced after the first interview, I listened carefully to the early interview recordings and began correcting the original audio transcripts.

Once my audio recordings were transcribed, the next stage I undertook was assigning codes to my data.[48] Coding has been described as laborious yet fundamental to the entire analysis process. Spencer et al. (2014) views coding as a pivotal step in the data management stage, noting that while it may be time-consuming, the effort pays off during the interpretation stage. They stress that ‘well-labelled and sorted data provide a firm foundation on which researchers can then build their more interpretive analysis’ (p. 364). The significant role of coding in the analytic process is succinctly captured by Charmaz and Mitchell (2001), who assert that coding initiates the analysis by ‘developing theoretical categories. Through coding, researchers start to define what their data are all about’ (p. 165).

Moreover, Thomas (2017) regards codes as the initial building blocks, or what he refers to as ‘temporary constructs’, that form the foundation for the categories or themes central to the analytic process. Researchers utilise them as temporary or working tools to conduct their initial assessments, evaluating the extent of relations between categories and constructing ‘theories about those relations’ (Richards, 2014, p. 105). Thus, codes play a crucial role in aiding researchers in deciphering the messages inherent in their data by assisting in defining its essence. This notion allows for viewing the data as already containing implicit codes of meaning, awaiting

[48] A code is defined as a word or brief phrase ‘that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data’ (Saldaña, 2013, p. 4).

identification and clarification by the researcher, essentially becoming an act of decoding (Saldaña, 2013). This act of decoding and attributing value enabled me to represent ‘different perspectives, experiences, or recollections’ of my participants, thereby shedding light on the phenomenon under study (Lochmiller, 2021, p. 2031).

However, it is also crucial for researchers to appreciate their codes not only for what they represent but also for their utility. The significance of coding lies in facilitating easy and efficient access ‘to the data you want to inspect, interrogate and interpret.’ (Richards, 2014, p. 105). Therefore, understanding this conditional aspect of the codes’ significance during the analytic process was essential; it was valuable to recognise that codes are effective as long as they enable effective connection with the data. This perspective aligns with the conceptualisation of codes by Charmaz and Mitchell (2001) who view codes as the juncture where the researcher and their dataset become connected. The themes that emerged from the coding activity were crucial for understanding and illuminating the SA-GED link. They facilitated unifying the fragments of meaning encapsulated by the codes and constructing a cohesive narrative (Lochmiller, 2021).

5.3.4.3.5 Constructing ‘Thematic maps’

After constructing my themes through multiple iterations of refinement, involving constant comparisons between coded data items and condensed themes, I had to address a critical element of the analysis stage: making connections between these themes to articulate the entire narrative of the data cohesively and persuasively. Thomas (2017) refers to this step as theme mapping and identifies it as a challenging aspect for novice researchers, noting that many struggle to execute it effectively. Lochmiller (2021) considers theme mapping as ‘the hallmark of an

effectively developed thematic analysis' (p. 2042), highlighting that failing to establish links between overarching themes is a common mistake that results in a lack of 'substantial depth'. This step is pivotal because it represents the core analysis phase. In thematic analysis, unlike other approaches such as content analysis,[49] researchers consider themes as the primary unit of analysis (Braun and Clarke, 2006).

The distinctive landmarks on thematic maps are the sub-themes or categories identified or developed through the coding activity by the researcher. These categories serve as the initial stage in identifying patterns which 'explain (inter)relationships in ways that allow researchers to state commonalities across their observations' (Lochmiller, 2021, p. 2032). Thus, when linked together, these categories or identified patterns play a pivotal role in demonstrating the depth of the researcher's engagement in analysing their data. They also enhance research transparency by illustrating to prospective readers of the research how the ultimate themes were crafted and arrived at. Importantly, these patterns within thematic maps should not only encapsulate similar opinions or agreements but also incorporate and address the tensions and inconsistencies inherent in the dataset (Braun and Clarke, 2006; Lochmiller, 2021). With these crucial aspects in mind, I constructed eight themes encapsulating the essence of the data, as outlined in Chapter **7**. Table **5.6** presents an example of one of these themes, its sub-themes, and the corresponding codes from which they were derived. Additionally, an extended sample of the coding scheme (Codebook, exported from NVivo qualitative data analysis software) applied to the data is provided in **Appendix L**.

[49] In content analysis, the unit of analysis is often more granular, such as a phrase or word (Braun and Clarke, 2006).

Theme	Sub-themes	Codes
Rules and Regulations	*The challenges presented by course learning outcomes*	Lack of compatibility between SA for GED and LOs achievement
		Limiting assessment to certain material
		Lack of linking theory to practice
		The main focus is on memorisation
		It all depends on the LOs
	Mark distribution causing dominance of Summative Exams	Need to increase the variation of assessment techniques
		Different courses demand different assessment
		Innovation is limited by the way marks are divided
		Lecturers must stick to a specific assessment format
		Assessment tasks are standardised
		Changing mark allocation to suit students' abilities

Table 5.6 An example of one of the study's themes, along with its sub-themes and corresponding codes

It is important to highlight the role of the Activity Theory framework in the analysis of the qualitative data, which primarily relied on interviews. In addition to guiding the interview data collection phase, as discussed in section **4.6**, AT also influenced the analysis of the data. While the research questions served as the primary tools for organising the qualitative findings (refer to Chapter **7**), AT provided the overarching structure for organising the interview themes under each research question. For example, the themes of 'assessment purposes' and 'holistic development' captured lecturers' understanding of the object of SA and its link to enhancing graduate employability whilst the themes of 'summative versus continuous assessment' and

‘quality dimensions’ highlighted the primary tools that lecturers, as subjects of the system, use to achieve the system’s object. Conversely, themes related to RQ3, such as ‘internal engagement’ and ‘rules and regulations,’ addressed other key elements of the SA activity system and the interactions between them, focusing on the challenges represented by systemic contradictions that lecturers face in achieving the object.

5.4 Access

Gaining access to people, settings, and documents can be problematic for researchers conducting social research. This challenge arises when the agendas of gatekeepers at the social settings or institutions, whose access is required, contradict those of social science researchers (Gray, 2014). Researchers may find themselves forced to change or cancel research plans due to limited or no access to these settings and/or the necessary data sources within them (Wellington, 2015). Gray (2014) suggests several steps to ease the process of gaining access to the target setting, which this study followed. First, I sought access from the highest authorities or figures, such as the vice chancellor of UTAS and the Deans of each campus. Second, I formulated the study’s objectives in an unambiguous, transparent, coherent, and focused manner before sharing them with the gatekeepers. Third, I thoroughly explained to the gatekeepers what type of data and participants were required and the methods for collecting this data. Fourth, I clearly outlined how the expected research outcomes could benefit the university and the broader HE sector in Oman.[50] These steps facilitated my access to the setting and enabled the collection of the required data.

[50] This is detailed in the letters and information sheets shared with both the gatekeepers and the interview participants, which can be found in Appendices **G** and **H**, respectively.

However, it's worth noting that despite these concerted efforts, gaining access to the setting proved to be challenging due to some factors. Firstly, my insider status, as elaborated upon in section **5.6**, may have played a significant role. With 12 years of experience working at the university and having held significant roles, I possessed a solid understanding of the institution and its SA processes. However, this familiarity might have led the university gatekeepers to perceive me as a potential liability, concerned that I could uncover flaws or critique the SA activities, especially since my research aimed to explore the link between SA and GED – an area not traditionally associated with SA and still in developmental stages at the university (see Section **2.7**). Instead of viewing my research proposal as an opportunity for constructive feedback, it may have been seen as a risk of exposing the system's shortcomings.

The second factor concerned the secrecy surrounding SA, particularly pronounced because assessment primarily involves exams that only a limited number of people can access. This secrecy is evident in the scarcity of research publications on SA in Oman and in some lecturers' reluctance to share old assessment samples with me, as mentioned earlier. The third factor was the disruption caused by COVID-19, which complicated my ability to gain in-person access to the research setting, as originally planned. I had intended to conduct face-to-face interviews and incorporate participant observation into my case study design. This involved observing classroom events prior to the interviews to enrich the discussions with firsthand observations. However, due to these disruptions, I had to revise my approach and conduct the study remotely instead.[51]

[51] Section **9.5** (Limitations and Suggestions for Future Research) provides further discussion on how researchers can address this aspect in future studies.

5.5 Positionality and Reflexivity

Clarifying my positionality as a researcher – how I position myself in relation to my participants and the social world under investigation – is integral to enhancing the quality and credibility of this study and its reported findings. According to Rhoads (1997), positionality encompasses various identity-related aspects such as class, race, age, gender, roles, positions, and personal experiences, and entails an awareness of how these aspects influence the research process and the knowledge it generates. Consequently, it directly intersects with the epistemological assumptions guiding the researcher's understanding of knowledge acquisition and generation. The recognition and articulation of these factors are crucial because, particularly in qualitative research, researchers cannot divorce themselves from their biographies, beliefs, and values during the research process, and these aspects inevitably influence the contexts and participants under study (Cohen et al., 2018). Clarke (2005) aptly notes that researchers inevitably bring preexisting knowledge, biases and perspectives to almost any research project, influencing their interaction with the subject matter from the outset.

Therefore, Cohen et al. (2018) argue that instead of attempting to eliminate the influence of these aspects on the research endeavour, which may be impractical, qualitative researchers acknowledge their inseparable connection to the world they study. They aim to produce transparent research by reflecting on and openly documenting how their social positions might have influenced their research activities. Thus, researchers employing qualitative methodologies regard and manage these effects as inherent features of their research process (Drake, 2010). Berger (2015) describes this engagement as demonstrating reflexivity regarding one's social

position, aligning reflexivity closely with the concept of positionality. She defines reflexivity as:

> "The process of a continual internal dialogue and critical self-evaluation of researcher's positionality as well as active acknowledgement and explicit recognition that this position may affect the research process and outcome" (p. 220).

In what follows, I outline the key aspects of my positionality that could have influenced this research project and discuss how I endeavoured to address them reflexively. This includes an examination of my positionality in relation to my research questions, the setting, and the participants. The first key aspect of my positionality affecting the research process in this study is my choice of the research topic and related questions. Being reflexive about our positionality involves questioning our motivations for conducting research in a specific area, our decisions to pursue certain research topics and questions, and our personal assumptions and experiences that influence these motivations and choices (Haynes, 2012).

My motivation for investigating how lecturers perceive and use SA for GED is primarily rooted in my experiences during my most recent role at UTAS as the Assistant Dean for Academic Affairs, where I was responsible for overseeing teaching, learning, and assessment activities. This role provided me with insight into the assessment practices that lecturers use to engage students throughout their educational journeys, preparing them as IT, Business, and Engineering graduates across the three academic departments. Simultaneously, as a member of the university's senior management team, one of my responsibilities was to ensure that academic programmes effectively develop students into employable graduates. Therefore, when I had the opportunity to pursue a PhD degree, I already had a strong personal interest in exploring the

importance of linking SA to GED. Through this research project, I aimed to help lecturers enhance their understanding and implementation of SA to better support GED. It is important to note that neither my employer nor my sponsor influenced the choices and directions of the research questions, methodology, methods, or outcomes.

The second aspect of positionality concerns my relationship with the setting and participants of this study. As Bourke (2014) indicates, researchers' identities interact with those of their participants in ways that can influence the research process, primarily through biases resulting from how researchers perceive their participants and expect to be perceived by them. Being aware of the biases arising from such interactions provides valuable insights into how we can engage with a particular research setting and individuals from specific groups (Bourke, 2014, p. 1). Additionally, discussing my relationship with the study participants brings up the notion of my 'insider/outsider' status in relation to the research setting and the participant community. Gair (2012) refer to this 'insider/outsider' status as:

> The degree to which a researcher is located either within or outside a group being researched, because of her or his common lived experience or status as a member of that group (p. 137)

Having worked at UTAS for about 12 years, I consider myself an "insider to the setting". My roles at the university began as an English language teacher at the PSC for about six years, where I taught various language skills and academic courses such as research, projects, and presentations. After six years, I transitioned into administrative roles, serving as Head of the PSC and later as Assistant Dean. In these roles, I nearly ceased teaching and took on responsibilities that might have shifted me to an outsider status in relation to my research participants, while still maintaining my insider status

to the setting itself. Because I was no longer performing the same duties or experiencing the same daily activities as the other lecturers – my interview participants – I was likely no longer considered a member of their teaching community, thus becoming more of an outsider to them.[52]

In this way, although I considered myself a complete insider in the setting, I held multiple statuses in relation to my participants, both insider and outsider (Deutsch, 1981). More precisely, I was a researcher 'in the middle', a notion offered by Breen (2007) to describe researchers studying people in their own settings. Professionally, I continued to perceive myself as a teacher akin to my participants, as we all belonged to the broader teaching community and shared concerns about student learning and employability. Yet, simultaneously, my management role at the time of conducting the study and my educational background might have contributed to lecturers perceiving me as being affiliated with other communities. As Mercer (2007) describes, my relationship with my participants was 'not static, but fluctuates constantly, shifting back and forth along a continuum of possibilities' (p. 13).

Before initiating my data collection in the field, I anticipated the potential challenges arising from my role within the setting and its implications for interacting with participants. As a senior member of the management, my position could have influenced participants' perspectives on the purpose of the interviews and the use of the acquired knowledge, given my prior duties, which included observing and evaluating lecturers' performance. Consequently, participants might have been hesitant to disclose certain details, especially regarding sensitive topics such as the management's role in supporting SA for GED or unwritten assessment rules.

[52] Merton (1972) states that 'insiders are the members of specified groups and collectivities or occupants of specified social statuses: Outsiders are non-members' (, p.21).

Conversely, being selected by their department heads to participate in the “Assistant Dean’s study” might have prompted some participants to present a distorted account of events, as indicated by (Schwartz-Shea and Yanow, 2012), engaging in purposeful “performance” for the researcher.

To mitigate the potential adverse effects of these factors on my data quality, I employed several strategies. I ensured clarity with department heads and participants regarding the voluntary nature of participation, the confidentiality of their data, and their right to withdraw within a 4-week period after participation. This information was conveyed through consent forms and participant information sheets, outlining the purpose of the interviews and the handling of data (see Appendix **I** for consent form). Before recording interviews, participants were given the opportunity to seek clarification and provide verbal consent. Additionally, to foster transparency and openness in discussions about their assessment practices, participants were asked to share their course delivery plans and classroom assessment tasks. These materials enriched the interviews, allowing for deeper exploration of specific aspects and facilitating further explanation when needed.

Furthermore, belonging to the disciplinary community of English Language Teaching (ELT) as an English language teacher, I addressed the potential perception of being an outsider to the disciplinary communities of lecturers from IT, Business, and Engineering departments by approaching the interviews with the acknowledgment that they are experts in their respective fields. While I may share common principles regarding assessment practices, I recognised the unique disciplinary cultures that influence teaching, learning, and assessment methods in each department (Entwistle, 2005). Therefore, I refrained from imposing my own opinions or experiences as an insider to the setting. Instead, I adopted the role of a neutral observer throughout the

data collection process, adhering to the notion of ‘holding up everything for scrutiny’ as suggested by (Holliday, 2016, p. 21).

5.6 Quality considerations

In addition to addressing my positionality and reflexivity, which are essential for research quality, I have implemented further measures to ensure the robustness of my study. Drawing from the framework of Creswell and Miller (2000), I will discuss three key procedures: audit trails, disconfirming evidence, and thick description. These procedures, along with researcher reflexivity discussed in the previous section, collectively contribute to ensuring the validity and credibility of this study’s research findings.

According to Creswell and Miller (2000), qualitative researchers are recommended to provide an ‘audit trail’, ensuring clear documentation of the decisions made throughout the research process, either integrated into the research account or provided as appendices. Given its focus on a fundamental question – the sufficiency of evidence production detail for assessing research credibility – such transparency is crucial for establishing research trustworthiness (Robson and McCartan, 2016). These detailed accounts offer substantial evidence for research readers and consumers to evaluate the quality of the outcomes and conclusions, enabling informed decision-making and the formulation of social policies and legislations (Lincoln et al., 2018, , p. 120).

Aside from the positionality account section, this chapter demonstrates that a great deal of thought and care was dedicated to providing detailed accounts of the various steps and procedures followed in the data collection and analysis of this study. I began by delineating my philosophical perspectives that underpin the research topic, objectives, and questions of this study. This was followed by an elaborate account of

my choice of case study methodology and the selection of methods within it. Detailed explanations were provided for why these specific methodological and methodical choices were made and deemed suitable for the investigation and achievement of the study's objectives. Additionally, each method's section included details about the pilot test, sampling strategy, and the approach adopted in analysing the obtained data. Besides the accounts provided within the body of the thesis, appendices containing further details were included in the final part of the thesis.

Another procedure applied to enhance the quality of this study is providing 'thick description' (Creswell and Miller, 2000). Some authors refer to this as 'authenticity,' which emphasises the need for a study to establish a clear link between its analysis and interpretations and the genuinely lived meanings and experiences of the participants. This entails capturing the multiple perspectives and nuances of their experiences (Gray, 2014). Lewis et al. (2014) view authenticity as the essence of qualitative research quality, defining it as the extent to which the researcher can capture and interpret the meanings that participants ascribe to the phenomenon under investigation in a detailed and effective manner. This requires the researcher to 'describe[s] the setting, the participants, and the themes of a qualitative study in rich detail', enabling readers to feel and experience the richly detailed events and meanings through the authentic accounts provided (Creswell and Miller, 2000, p. 128).

To offer readers of this study 'thick description', this chapter provides a detailed description of the setting where the study took place and the characteristics of its participants. Chapter **2** also includes information about the broader context of the study, such as details about the country where the setting is located and the school and higher education systems relevant to the investigated topic. Additionally, Chapter

7 outlines the qualitative findings, highlighting themes that capture the rich meanings and interpretations of participants' experiences in connecting SA to GED.

The third procedure followed to ensure the quality of this study was triangulation. This involved 'methods triangulation' by incorporating a quantitative method alongside qualitative methods for data comparison and extension, as well as 'triangulation of sources' by comparing and interweaving data generated through interviews with another qualitative source, documentary evidence (Lewis et al., 2014). Besides offering multiple perspectives for examining the research topic, triangulation significantly enhances research credibility by bolstering confidence in the drawn conclusions (Patton, 2014).

In this study, triangulation was applied in its broader sense, as highlighted by Flick (2017) , which goes beyond seeking convergences in the data to also account for contradictory data across various data sources. Therefore, rather than viewing contradictions and ambiguities revealed through analysis as a sign of weakness, qualitative researchers embrace them as a natural component of the social reality they seek to explore (Denscombe, 2014). Creswell and Miller (2000) include the consideration of such contradictory accounts in the data as one of the criteria for assessing the quality of qualitative studies. They refer to this process as searching and accounting for 'disconfirming or negative evidence', describing it as 'closely related to triangulation' (p. 127).

Since most of the data from the three methods applied in this study converged, triangulation primarily served as a confirming procedure. However, some contradictory accounts were encountered during data analysis and were not disregarded. The broader understanding of triangulation helped clarify and explain these discrepancies.

Most SA practices highly rated in the questionnaire as being implemented toward GED were frequently reported in classroom experiences during interviews. Lecturers provided detailed examples linking these practices to graduates' future professional roles. However, some SA practices mentioned in the interviews did not consistently match their questionnaire ratings. For instance, while lecturers reported high engagement in assessments developing evaluative judgment capacities (mean score of 3.96), fewer lecturers reported implementing such strategies in their classrooms. Another example of disconfirming evidence emerged between the interview and documentary data. While key university documents indicated that course learning outcomes (LOs) linked SA to GED, lecturers' accounts revealed that many LOs focused on lower-order thinking skills, like memorisation, rather than higher-order skills. The study provided explanations for such contradictions in the discussion chapter.

5.7 Ethical Considerations

Researchers must observe ethical considerations throughout all stages of their research projects. This is crucial because conducting research means delving into the lives of participants and exposing their ideas, thoughts, and experiences to the outside world, which 'has both political and ethical implications' (Schostak, 2002, p. 191). Conducting research ethically involves more than just selecting the most suitable research methodology; it also entails carrying out research in a conscientious and ethically justifiable manner (Gray, 2014). Robson and McCartan (2016) advise researchers to approach ethical aspects concerning their projects from the outset, viewing it as a continuous process rather than a one-time consideration. This process

should be carefully examined and regularly evaluated throughout the project's lifespan.

Recognising the pivotal significance of ethics in my research project from its inception, I initiated several measures to ensure strict adherence to ethical standards throughout its execution. Firstly, I sought approval for the research project from the Humanities and Social Sciences ethics committee at the University of Birmingham. This entailed providing a comprehensive explanation of the ethical considerations relevant to my research methodology, setting, participants, and data generation procedures. Following my competition and submission of the necessary documentation, the committee conducted a thorough review of my application and subsequently granted permission for the project's implementation and data collection (refer to the Appendix **J** for the ethics committee's approval letter).

As outlined in section **5.5**, access to the research setting, UTAS, was granted by the gatekeepers, enabling me to initiate contact with the relevant participants and commence data collection (refer to Appendix **K** for the approval letter). Upon receiving this authorisation, the first step was to administer the staff and student questionnaires, constituting the initial data collection method. The questionnaire commenced with a brief introduction outlining its purpose, time required for completion, assurance of data confidentiality, and contact details of the researcher and supervisors for further inquiries. Additionally, it provided information regarding the target respondents, emphasised voluntary participation, and instructed respondents to signify consent by selecting the option 'yes, I agree to participate', after which they proceeded to the first section.

For the interviews with lecturers, participants were assured that their participation was entirely voluntary and that their data would be anonymised and treated with the utmost confidentiality. Moreover, they were informed of a four-week window post-participation during which they could opt to withdraw from the study, with their data promptly destroyed. These conditions were clearly delineated in both the consent form and the interview participant information sheets, providing comprehensive details regarding the interview's purpose, data handling procedures, and assurances of anonymity and confidentiality (see Appendices **I** and **H**). Before the interview recording commenced, lecturers were given the opportunity to address any queries about the process, ensuring their continued interest in participation.

After completing data collection, I rigorously upheld the ethical principles outlined in the approved ethics form and in the consent and information sheets distributed to all participants. Throughout the processes of data analysis and reporting, I used pseudonyms when referring to individual lecturers within the thesis text. Concerning the research setting, while the University's name, UTAS, remained unchanged in the thesis, an anonymised term, UTAS-X, was employed to denote the specific campus from which interview participants were recruited. This measure ensured maximum confidentiality and minimised the possibility of participant traceability, thus mitigating potential harm to participants. In terms of data management and safekeeping, all participant data was assigned a code and securely stored on my password-protected laptop, as well as on one of my personal encrypted flash memory discs. Additionally, data was stored on the BEAR Research Data Store (RDS) provided by the University of Birmingham, with access restricted solely to my two supervisors and myself.

5.8 Summary

This chapter described the research design of this study, beginning with the three research questions formulated to explore the relationship between SA and GED. It then discussed the broader philosophical perspectives underlying the study. Following this, the chapter presented the case study methodology, which aligns with the study's philosophical standpoints and is deemed most appropriate for answering the research questions. Each data collection method was then discussed, including focus groups, questionnaires, documentary analysis, and interviews. Special attention was given to the interview method, which constituted the primary data collection method, explicating key aspects of its design, pilot, participant recruitment, and the analytical approach adopted to derive the interview findings' themes. Next, the chapter addressed important aspects – gaining access, positionality and reflexivity, quality, and ethical considerations – that were observed to ensure the robustness and high quality of the research design and execution. Having outlined the study's methodological choices and decisions aimed at understanding how SA can be utilised to enhance GED, the following two chapters present the key findings of this study.

CHAPTER 6: FINDINGS OF THE QUESTIONNAIRE

6.1 Introduction

This section presents the findings from the questionnaire. As highlighted in Chapter **5**, the objective of the questionnaire is to gain an overview of how key internal stakeholders – namely managers, lecturers, and students – perceive and experience the relationship or alignment between the SA practices and GED at UTAS. This overview paves the way for the semi-structured interviews and documentary analysis that examined this relationship in-depth, with findings presented in Chapter **7**. The questionnaire primarily addressed the first exploratory research question: To what extent is GED an objective of SA at UTAS?

The results are presented according to the organisation and flow of the statements in the questionnaire which contained five major sections. The first section of the questionnaire in this study explored the understandings of graduate employability among the three stakeholder groups. The second section examined their perceptions of the role of HE lecturers in the process of employability development. The third section asked stakeholders about their experiences regarding the contribution of eight key activities or aspects, including teaching, assessment, and extracurricular activities, to GED in their respective departments. The fourth section explored the various purposes served by SA from the stakeholders' perspectives. The final section addressed stakeholders' experiences of how well SA aligns with five areas associated with GED: authentic assessment, authentic feedback, evaluative judgement, current learning, and future learning.

The questionnaire data analysis was performed using SPSS, beginning with the generation of descriptive statistics, specifically focusing on the mean scores and standard deviations of the respondents' ratings for the questionnaire statements. Following this, comparisons were made to highlight the main agreements and disagreements among respondents. These comparisons were based on demographic variables such as group, campus, department, years of experience (for lecturers), and level of study (for students). These demographics were treated as independent variables and analysed in SPSS in relation to the statements (dependent variables). For example, I assessed whether there were any significant differences in stakeholders' responses based on the campus to which lecturers or students belong. However, the analysis revealed no significant differences except those based on the stakeholder groups: leaders, lecturers, and students. Therefore, the presentation of findings focuses on these group differences.

The following steps were taken to identify significant differences between the three groups. First, after identifying differences in mean ratings among the groups using descriptive statistics from SPSS, an analysis of variance (ANOVA) was conducted to determine whether these differences were statistically significant. When the ANOVA results revealed a significant effect of group on the ratings ($p < 0.001$), a Bonferroni post-hoc test was conducted to identify which specific groups differed significantly from each other. Table **6.1** presents an example of Bonferroni post-hoc test results for respondents' ratings concerning the role of the lecturer in GED (Section **6.3**). It highlights the statistical significance of differences between the groups evidenced by a p-value of < 0.001.

Multiple Comparisons							
Bonferroni							
Dependent Variable	(I) POST	(J) POST	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
1. Responsibility for developing the employability of his/her students	LEADERS	TEACHERS	-.217	.134	.315	-.54	.10
		STUDENTS	.058	.135	1.000	-.27	.38
	TEACHERS	LEADERS	.217	.134	.315	-.10	.54
		STUDENTS	.275*	.063	**<.001**	.12	.42
	STUDENTS	LEADERS	-.058	.135	1.000	-.38	.27
		TEACHERS	-.275*	.063	**<.001**	-.42	-.12
2. Responsibility for teaching specialisation-specific knowledge and skills only	LEADERS	TEACHERS	-.134	.167	1.000	-.53	.27
		STUDENTS	.336	.169	.141	-.07	.74
	TEACHERS	LEADERS	.134	.167	1.000	-.27	.53
		STUDENTS	.471*	.078	**<.001**	.28	.66
	STUDENTS	LEADERS	-.336	.169	.141	-.74	.07
		TEACHERS	-.471*	.078	**<.001**	-.66	-.28
3. Impacting the employability of his/her students through the teaching and learning strategies (s)he implements	LEADERS	TEACHERS	-.095	.120	1.000	-.38	.19
		STUDENTS	-.060	.121	1.000	-.35	.23
	TEACHERS	LEADERS	.095	.120	1.000	-.19	.38
		STUDENTS	.035	.056	1.000	-.10	.17
	STUDENTS	LEADERS	.060	.121	1.000	-.23	.35
		TEACHERS	-.035	.056	1.000	-.17	.10
4. Impacting the employability of his/her students through the assessment methods and techniques (s)he implements	LEADERS	TEACHERS	.180	.123	.432	-.12	.48
		STUDENTS	.227	.125	.212	-.07	.53
	TEACHERS	LEADERS	-.180	.123	.432	-.48	.12
		STUDENTS	.046	.058	1.000	-.09	.18
	STUDENTS	LEADERS	-.227	.125	.212	-.53	.07
		TEACHERS	-.046	.058	1.000	-.18	.09
5. Requirement to be competent in implementing the methods necessary for developing the employability of his/her students	LEADERS	TEACHERS	-.189	.116	.310	-.47	.09
		STUDENTS	-.146	.117	.641	-.43	.14
	TEACHERS	LEADERS	.189	.116	.310	-.09	.47
		STUDENTS	.043	.054	1.000	-.09	.17
	STUDENTS	LEADERS	.146	.117	.641	-.14	.43
		TEACHERS	-.043	.054	1.000	-.17	.09

Table 6.1 Bonferroni post-hoc test results for significant differences in ratings between stakeholder groups

6.2 Understanding of Graduate Employability

To what extent do you agree with the following statements? The employability of a higher education graduate is represented by	All stakeholders		LEADERS		LECTURERS		STUDENTS	
	Mean	Std. D	Mean	Std. D	Mean	Std. D	Mean	Std. D
1. having the skills required for getting employed after graduation	4.40	0.68	4.57	.549	4.45	.634	4.18	.847
2. being prepared for after-graduation life including social and professional life	4.37	0.69	4.38	.774	4.36	.624	4.37	.669
3. having the capacity to continue learning and responding to new learning requirements after graduation	4.43	0.69	4.50	.679	4.50	.652	4.30	.748
4. achieving a high grade-point average (GPA) upon graduation	3.81	0.87	3.78	.800	3.94	.812	3.71	.999
5. having specialisation-specific knowledge and skills	4.34	0.64	4.45	.504	4.37	.636	4.20	.773
6. having graduate attributes like Effective communication, teamwork and innovation	4.39	0.68	4.45	.639	4.45	.621	4.28	.794

Table 6.2 Understandings of graduate employability among the three stakeholder groups

The first section of the questionnaire consisted of six statements addressing stakeholders' understanding of what constitutes or represents GE. In general, the responses from the three groups reflect that all groups hold a comprehensive view of GE, emphasising the importance of possessing both subject-specific and employment-specific skills, as well as more generic capacities necessary for lifelong learning and social engagement. As Table **6.2** indicates, all stakeholders rated the statement concerning the capacity to continue learning and responding to new learning demands as the most important quality representing GE, with an overall mean score of 4.43. Other statements associated with the broader conception of GE, such as possessing generic graduate attributes and being prepared for general social and professional life challenges, were also highly agreed upon as essential representations of the GE. These aspects received mean scores of 4.39 and 4.37, respectively. Interestingly, stakeholders attributed almost equal significance to other aspects such as having skills for employment (4.40) and possessing subject-specific skills (4.34). In contrast, they responded less favourably to the statement addressing the significance of achieving a high grade-point average (GPA) in representing an employable graduate, with a mean score as low as 3.81. This marked GPA as the least important aspect compared to all others. Additionally, this statement received the lowest mean score and the highest standard deviation (0.87), indicating a wider dispersion of opinion among stakeholders.

A comparison between the three stakeholder groups revealed one significant difference in opinion between lecturers and students concerning the first item (with a p-value of <0.001). While the least important representation of GE was consistent across all stakeholders, students differed from lecturers regarding the highest priority.

Lecturers placed the greatest emphasis on the possession of skills for finding employment, while students prioritised being prepared for their professional and social lives after graduation. This difference likely reflects each group's primary concerns: lecturers focus on getting students employed as a direct measure of the effectiveness of their teaching strategies, while students are more concerned with being well-prepared both professionally and socially after graduation.

6.3 Understanding of Lecturers' Role in GED

To what extent do you agree with the following statements? In general, a higher education staff member	All stakeholders		LEADERS		LECTURERS		STUDENTS	
	Mean	Std. D	Mean	Std. D	Mean	Std. D	Mean	Std. D
1. is responsible for developing the employability of his/her students	4.05	0.79	4.00	.784	4.22	.743	3.94	.857
2. is responsible for teaching specialisation-specific knowledge and skills only	3.78	1.02	3.85	1.051	3.98	.958	3.52	1.057
3. impacts the employability of his/her students through the teaching and learning strategies (s)he implements	4.22	0.70	4.17	.594	4.27	.688	4.21	.809
4. impacts the employability of his/her students through the assessment methods and techniques (s)he implements	4.25	0.71	4.40	.632	4.22	.677	4.14	.830
5. is required to be competent in implementing the methods necessary for developing the employability of his/her students	4.26	0.73	4.15	.802	4.34	.636	4.28	.763

Table 6.3 Understandings of the role of academic staff in graduate employability development

This section consisted of five statements investigating stakeholders' perceptions of the role of the lecturer in GED. As Table **6.3** shows, stakeholders overall expected lecturers to take on a central role in the process of developing the employability of their students. This perspective is reflected by a mean score of 4.05, indicating strong agreement that lecturers should be shouldered with this responsibility. More importantly, stakeholders collectively expressed that lecturers should display a

genuine commitment to becoming competent in implementing the required methods for fulfilling this key role, which received the highest agreement mean score of 4.26. A important finding is that when stakeholders were asked whether lecturers are responsible for teaching subject-specific knowledge and skills only, their level of agreement dropped to a mean score below 3.8. To further examine the lecturer's role in GED, stakeholders were asked to what extent they agree that 'the teaching and learning strategies' and 'the assessment methods and techniques' implemented by the lecturer have an impact on GED. Both statements received remarkably high mean scores of 4.22 and 4.25, respectively, demonstrating stakeholders' strong agreement that these two activities are crucial means that lecturers can deploy towards GED.

The comparison between the three stakeholder groups revealed two significant differences between lecturers and students regarding items one and two, both with a p-value of <0.001. As shown in the Table **6.3**, students expressed slightly less agreement than lecturers on the notion that GED is primarily the responsibility of lecturers, with a mean score of 3.94 compared to 4.22. Additionally, students were less in favour of the idea that lecturers should focus solely on teaching subject-specific knowledge and skills, with an agreement mean score of 3.51, compared to 3.98 for lecturers. These findings might suggest that while students believe they should take more responsibility for their own employability development than lecturers do, they also believe more strongly that lecturers' roles should extend beyond just teaching subject-specific knowledge and skills.

6.4 Experiences of GED

Having obtained a broad view of stakeholders' opinions about the constituents of GE and how instrumental they consider the role of lecturers, as well as the teaching and

assessment activities they adopt in the process of GE development, this section investigated stakeholders' actual experiences with GE in the context of UTAS. The objective was to obtain an overview of the level of success of the different academic departments at UTAS in deploying major activities to enhance GE and to compare the role of SA to other activities deployed for the same purpose. It is worth mentioning that the first aspect did not apply to students, as it addresses a management issue that students are likely not aware of.

Based on your actual experience at your academic department(s) / ELC, how would you rate the following aspects in relation to GE development?	All stakeholders		LEADERS		LECTURERS		STUDENTS	
	Mean	Std. D	Mean	Std. D	Mean	Std. D	Mean	Std. D
1. The support provided to lecturers for developing GE like receiving relevant professional development	3.85	0.86	3.65	.949	4.05	.776	NA	NA
2. The alignment of GE requirements with student programme goals / course learning outcomes	3.98	0.87	3.98	.920	4.10	.704	3.86	.997
3. The implementation of appropriate teaching and learning strategies	4.08	0.78	4.13	.686	4.20	.650	3.91	1.009
4. The implementation of appropriate assessment methods and practices	4.04	0.77	4.05	.639	4.17	.698	3.90	.965
4. The extracurricular activities organized for students	3.67	0.99	3.70	.853	3.77	.941	3.55	1.175
6. The On-the-job training provided to students	4.02	0.96	4.00	1.013	4.15	.776	3.90	1.083
7. The course materials provided to students like textbooks and reading materials	3.96	0.86	4.00	.751	4.06	.796	3.81	1.026
8. The general approach adopted by the department to support GE development	3.89	0.90	3.90	.955	4.10	.724	3.68	1.025

Table 6.4 Stakeholders' experiences of graduate employability development

As Table **6.4** indicates, all statements received considerably positive ratings, showing that stakeholders report their experiences with the implementation of key aspects related to GED to be "good" (mean score of 4) or slightly less than good. The three aspects receiving the most positive ratings from stakeholders were the teaching strategies, assessment methods, and on-the-job training at the university's academic departments, each scoring over 4 on average. In contrast, the two aspects that

received the least positive ratings in relation to facilitating GED were the general departmental support provided to lecturers (mean score of 3.85) and the extra-curricular activities offered to students, which received the lowest mean score among all aspects (3.67).

The comparison between stakeholder groups revealed significant differences between lecturers and students concerning items two, three, and eight, with a p-value of <0.001. Notably, lecturers rated the implementation of 'teaching and learning' and 'assessment' methods positively, with mean scores of 4.20 and 4.17, respectively. In contrast, students expressed less satisfaction with these items, rating them below good in their respective departments, with mean scores of 3.9. This disparity in students' perceptions likely contributes to their significantly lower rating of the overall approach adopted by their departments to support GED, with a mean score of 3.68 compared to 4.10 for lecturers.

6.5 Purposes of Student Assessment

Having identified stakeholders' broad views of GE, the role of lecturers in its development, and the importance placed on various aspects contributing to GED, the next two sections focused on GED primarily in relation to SA. This section examined stakeholders' experiences concerning the purposes that SA supports. The results of this section present stakeholders' ratings of five purposes, including GED, asking them to identify the extent to which the design and implementation of SA in their respective departments align with each of these purposes. While the purpose of supporting lifelong learning is strongly linked to GED, as discussed in Chapter **3**, other purposes with varying degrees of linkage to GED have been included to compare how they feature in relation to GED-linked purposes.

To what extent does student assessment at your academic department(s) / ELC serve each of the following purposes?	All stakeholders		LEADERS		LECTURERS		STUDENTS	
	Mean	Std. D	Mean	Std. D	Mean	Std. D	Mean	Std. D
1. Measuring and certifying student performance	4.29	0.73	4.35	.662	4.46	.671	4.05	.852
3. Supporting student academic learning and development	4.20	0.84	4.25	.742	4.39	.718	3.83	.926
2. Ensuring and documenting the quality of teaching and learning processes	4.16	0.80	4.35	.770	4.47	.687	3.79	1.052
4. Preparing students for future learning requirements by developing their lifelong learning capacities	3.96	0.95	3.98	.920	4.31	.807	3.58	1.132
5. Preparing students for their career and professional lives	3.91	0.96	3.93	.917	4.28	.831	3.52	1.126

Table 6.5 Purposes of student assessment

Table **6.5** presents assessment purposes in descending order based on their reported frequency ranging from “never” to “always”. It indicates that all five purposes were reported by stakeholders as being served almost often or more frequently (mean score of 4) by UTAS’s current assessment regime. Slight variations are observed in the frequency with which SA aligns with each of the five purposes, with the mean values ranging from 3.91 to 4.29. As the table shows, SA most frequently serves the purpose of ‘measuring and certifying student performance,’ followed by ‘supporting student academic learning and development,’ which received the highest mean scores of 4.29 and 4.20, respectively. In contrast, the two assessment purposes of preparing students for ‘future learning requirements’ and for ‘career and professional lives,’ which the results show to be closely correlated, were reported to be fulfilled by assessment practices less frequently, with mean values of 3.96 and 3.91, respectively.

A significant divergence in opinion between students and their lecturers is evident, with a p-value of <0.001 across all five purposes. While there is broad consensus among

all stakeholder groups about the most and least served assessment purposes, lecturers' responses generally show higher ratings with a narrow range between these purposes (from 4.28 to 4.46). This indicates that lecturers believe all five purposes are fulfilled with a fairly similar frequency, more than often in all cases. In contrast, students' responses were not only lower in value but also had a wider range (from 3.52 to 4.05). Students reported that all purposes, except for 'measuring and certifying,' were served less than often, with the two least supported purposes being accomplished with mean scores as low as 3.58 and 3.52, respectively.

6.6 Experiences of student assessment and GED link

This section is based on the largest part of the questionnaire, consisting of 25 questions asking stakeholders about their actual experiences with the design and implementation of SA at UTAS. It aimed to measure the extent to which SA aligns with forms of assessment that the literature suggests are linked to or have a positive impact on GED (see Chapter **3**). Stakeholders were presented with statements describing SA and asked to rate how often these statements correspond with the way assessment is designed and implemented in their respective academic departments, using a five-point scale ranging from 'never' to 'always' (see Appendix **B**).

In the questionnaire, the statements were organised into five main themes or assessment areas, each containing five statements. Two of the areas relate to the degree of authenticity of assessment and feedback provision, while the other three concern the impact of assessment practices on students' current learning, future learning, and development of evaluative judgment capacity. For analysis, an average mean score was calculated for each respondent for each broad area. Thus, each respondent had an overall score for 'current learning,' 'assessment authenticity,' and

so on, based on which the first round of analysis was conducted. The findings from this section are presented according to these broad areas.

To what extent does the design and implementation of student assessment in your academic department(s) / ELC align with the following areas?	All stakeholders		LEADERS		LECTURERS		STUDENTS	
	Mean	Std. D	Mean	Std. D	Mean	Std. D	Mean	Std. D
Current learning	4.08	0.69	3.98	.685	4.35	.63	3.90	.75
Authentic assessment	3.90	0.71	3.90	.69	4.24	.64	3.56	.80
Authentic feedback	3.87	0.78	3.88	.79	4.22	.67	3.52	.87
Future learning	3.71	0.59	3.63	.63	3.88	.53	3.62	.62
Evaluative judgement	3.61	0.89	3.44	.91	3.96	.82	3.44	.94

Table 6.6 Stakeholders' experiences of student assessment

In general, the results of this section correlate with those of the previous section, which explored stakeholders' opinions about the purposes that SA at UTAS aims to accomplish. As Table **6.6** shows, stakeholders' responses reveal that the design and implementation of SA at UTAS are more closely oriented toward supporting 'current learning' (4.08 mean score), which was also identified in the previous section as the second most frequently served purpose by SA after measuring students' performance. While the areas measuring how frequently students at UTAS are provided with 'authentic assessment' experiences and 'authentic feedback' received moderately positive ratings of about 3.9, the areas assessing the potential of assessment to develop students' capacities for 'future learning' and 'evaluative judgment' received the least positive ratings, with overall mean scores dropping to 3.71 and 3.61, respectively.

The comparison between subgroups of stakeholders revealed significant differences between lecturers and students. While all groups largely agreed on the areas where SA at UTAS is most and least aligned, students provided significantly lower ratings (p-

value of <0.001 across all five areas) compared to lecturers. The difference in mean values between students and lecturers was particularly notable in the areas of 'authentic assessment' and 'authentic feedback,' with students giving significantly lower ratings of 3.56 and 3.52, compared to 4.24 and 4.22 from lecturers, respectively. Additionally, students rated assessment alignment with supporting 'evaluative judgment' capabilities as the lowest (3.44), whereas lecturers rated the alignment with facilitating 'future learning' capabilities as the lowest, with a mean score of 3.88.

6.7 Summary

The questionnaire aimed to provide an overview of the perceptions and actual experiences of three internal stakeholders – leaders, lecturers, and students – regarding GED and its connection with SA practices at UTAS. Although the results show a high level of agreement between the three groups on many areas and statements of the questionnaire, some significant differences in opinion were observed concerning certain aspects of the SA-GED link, especially between lecturers and students. The stakeholders broadly agreed on aspects related to the understanding of GE, which corresponded with a broad understanding of it as encompassing both the development of subject-specific and employment-specific skills, as well as more generic attributes and capabilities essential for graduate professional and social success. Additionally, there was consensus on the central role of lecturers in the process of GED, especially through the teaching and assessment activities they implement.

The items that examined SA purposes at UTAS revealed that respondents hold that SA is most strongly aligned with the purposes of measurement and certification and support of current learning, while it is least aligned with supporting future learning and

professional readiness. These results were mostly consistent with the findings in the following section, which examined stakeholders' experiences of SA in terms of its alignment with GED. Notably, 'current learning' was the top-rated area in terms of its alignment with SA, followed by 'authentic assessment' and 'authentic feedback'. The least rated areas were 'future learning' and 'evaluative judgement'. These areas also marked the most divergence in stakeholders' opinions, with lecturers being the most positive about the alignment of current SA practices with GED, followed by leaders, and then students, who generally expressed the least positivity. The next chapter presents the findings from the qualitative phase of the study, employing interviews and documentary analysis, which explored the nature of the relationship between SA and GED in more depth.

CHAPTER 7: QUALITATIVE FINDINGS

7.1 Introduction

The previous chapter presented findings of the questionnaire which aimed to provide an overview of the degree of alignment between SA processes and GED from the perspective of key internal stakeholders across seven campuses of UTAS. This chapter presents findings from the qualitative data collected through interviews with 24 lecturers and documentary evidence from one campus of UTAS, UTAS-X. The chapter aims to offer a comprehensive and detailed account of how lecturers utilise SA for GED and the key factors, including both barriers and enablers, that influence this utilisation. In addition to providing deeper insights and details to RQ1, which was addressed by the questionnaire, this findings chapter addresses research questions two and three of the study:

2. How do lecturers at UTAS-X perceive and use student assessment as a tool to facilitate graduate employability development?
3. What are the key barriers and enablers impacting lecturers' utilisation of student assessment for graduate employability development?

7.2 Presentation of Findings

The chapter's key findings are organised into broad themes. These themes were derived from the analytical approach adopted by the study that combined processes of constant comparison and thematic analysis discussed in the methodology chapter. The iterative processes of coding, identifying patterns, and generating themes culminated in eight main themes that encapsulate the most significant issues relating

to the study and address its research questions. These themes are arranged based on their relevance to the respective research questions. The chapter is divided into two main parts as Table **7.1** shows:

Section	Research Question	Themes
7.3	How do lecturers at UTAS-X perceive and use SA as a tool to facilitate GED?	7.3.1 Purposes of SA
		7.3.2 Holistic development
		7.3.3 SEs versus CA
		7.3.4 Quality dimensions
7.4	What are the key barriers and enablers impacting lecturers' utilisation of SA for GED?	7.4.1 Rules and regulations
		7.4.2 Managerial support
		7.4.3 Internal dialogue
		7.4.4 External dialogue

Table 7.1 Research questions and corresponding themes of the study

The themes are presented separately with each section starting with a clear label indicating its theme, and with some of these themed sections containing additional subheadings. For instance, theme five 'managerial support' contains the subsections of 'engagement of the management' and 'providing training'. As these themes are interrelated, references to each other are made whenever needed. Moreover, the findings within each theme are illustrated with quotes from the interview participants' responses, and where relevant are supported with documentary evidence. The incorporated quotes in the chapter are presented intact, with only minor modifications made to address confusing grammatical errors and eliminate unnecessary repetitions and fillers. To provide context and clarity, references are made when necessary to the specific course and/ or the SAM addressed by the participant providing the quote. A

pseudonymised name and the respective department the participant belongs to is included alongside each quote, e.g., William-DEN (see list of abbreviations).

Overall, the analysis of the qualitative data shows that lecturers at UTAS-X do use SA to facilitate their students' development of GES. All lecturers were aware of the important role that SA plays in this process, and they identified the facilitation of GED as the ultimate objective of SA activity system. This was evidenced through their identification of various SAMs as crucial for GED and others which they found less effective. Lecturers were not only aware of multiple tools that could be utilised toward GED, but they also provided accounts and examples of effectively using them in their classrooms. Lecturers also identified four key factors that significantly impacted the implementation of SA for GED at UTAS-X. There were no significant differences in lecturers' responses based on the academic departments they belonged to or other demographic factors. Subsequently, these aspects are not emphasised in the presentation of the findings.

Certain quantifiers or terms are used to describe the proportions of responses when discussing the findings. Sandelowski (2001) indicates that qualitative researchers often adopt this practice, which she refers to as 'verbal counting', to highlight their projects' significance, illustrate research complexity, generate meaning, verify conclusions, and represent issues, experiences, and events. However, she emphasises that researchers should inform readers about the meaning of the terms used. Therefore, Table **7.2** presents the terms applied throughout the chapter along with their corresponding percentage values.

Term	Percentage
Majority	More than 19
Most	Between 13 and 18
Some	Between 7 and 12
Few	Less than 7

Table 7.2 Terms used to describe proportions of participants' responses

7.3 Research Question Two: How Do Lecturers at UTAS-X Perceive and Use SA as a Tool to Facilitate GED?

This section addresses lecturers' use of SA for GED which includes four themes: 'SA purposes', which discusses how GED featured as the ultimate objective of SA; 'Holistic development', which describes how SA impacts graduates whole career lives, beginning with finding an employment to taking up leading roles, as well as their general lives; 'Summative exams (SEs) versus continuous assessment (CA)', which shows the contribution of each of these modes of SA to GED; and 'Quality dimensions' which explains the four key dimensions of quality relating to the types of SAMs that were perceived by the interviewed lecturers to be conducive to GED.

7.3.1 Theme one: Purposes of student assessment

The findings connected to this theme present lecturers' responses in relation to the purposes or objectives they aim to accomplish through implementing SA. The theme focuses on lecturers' direct or immediate responses when presented with the question 'why do you assess your students?'. Exploring lecturers' thoughts and beliefs in relation to this aspect of SA, why it is done, was critical to understanding lecturers'

motives for implementing SA and to evaluating the extent to which the facilitation of GED would feature as an objective in lecturers' responses. The next theme, holistic development, will focus on how lecturers made sense of GED as the ultimate objective of SA implementation, having been engaged in the reflective process which is a crucial element of the theoretical framework adopted in this study (see Chapter **4**).

The majority of interviewed lecturers highlighted the importance of achieving and measuring course learning outcomes as a primary objective of implementing SA. However, only some of these lecturers explicitly stated that this was the only objective of SA. Some typical responses where lecturers reduced the purposes of SA to assessing or measuring LOs achievement were:

> "We have objectives and outcomes … So, we try to assess as much as possible these outcomes through our assessments" (Henry-DEN).
>
> "I assess my student just to make sure they are capable to pass this course, they got the course learning outcomes, if they achieve it or not" (Margaret-DIT).

While as mentioned earlier the majority of lecturers referred to measuring the achievement of LOs as a key objective of SA, most of these lecturers elaborated on their initial responses and linked SA to what students will be required to do after graduation. Lecturers who did this belonged to two categories. First, there were lecturers who initially provided a LO-related objective to which they then linked or added the objective of assessing GED or a relevant concept, for instance, assessing students' ability to apply their learnt knowledge and skills in future work situations. Yet lecturers here tended to focus on the measurement dimension of SA more than the learning and development dimension. This is exemplified in the following quote where the objective of assessing LOs achievement was linked with an employability related notion, namely, the ability to apply gained knowledge in a future role:

> “We have some objectives, any course I’m teaching means I need to produce some outcomes from the students, so to test objectives I have to test whether they are understanding my teaching, whether they are studying as per the expectation of the outcomes or objectives. For instance, they should have some knowledge in wind energy, the application of wind energy, how that can be implemented in Oman, how they can contribute their knowledge when they are going for their profession, this is actually the aim” (Edward-DEN).

The second category contain a few lecturers who directly, and almost exclusively, identified GED as the ultimate objective of SA. Significantly, lecturers here clearly viewed the implementation of SA as a fundamental tool in enabling and empowering students to flourish in their future roles. So, SA was not merely viewed as a way to measure learning and skills development, but more critically as means through which these are gained and developed; that is, considering assessment experiences as learning and developing the necessary GES for the future. In other words, while they were certainly aware of the importance of achieving LOS, their primary focus was on the long-term, beyond-the-classroom objectives they aimed to accomplish through engaging students in various SAMs. This perspective is illustrated in the following example:

> “We want to assess them to make sure that they have sufficient skills after the graduation, or after the course, what skills they should have, for example, they should have business presentation skills. So, we introduced assessment like seminar or presentation. They need the skill of analysis and Problem Solving so we introduced case discussion, they should have good interpersonal skills, identifying the interpersonal relationship problems and solving them, developing good interpersonal relationships, so we introduced role plays to develop the managerial behaviour, the right type of managerial behaviour, we introduced roleplay, group discussion is introduced as part of improving teamwork, presentation, leadership skills, and video analysis is used to develop their ability of analysis, comprehension and presentation” (David-DBS).

This is also reinforced by Alexander-PSC in the following example who stresses the importance of focusing on the longer term aim rather than the short-term classroom

learning in his ‘Public Speaking’ course, and who sees his role as providing meaningful experiences through SA which students can ‘replicate’ in the future:

> “I don't want to test them whether they can do it in the classroom or not, my hope is that they can transfer this sort of skills into the real field when they join work or, for example, if they are recording a video to post it on their own social media, I want to make sure that they write something in order to publish, to share it with others. I believe that my job involves providing good learning conditions where students can be engaged in real life experiences and then replicate these experiences” (Alexander-PSC).

7.3.2 Theme two: Holistic development

Following from the previous theme which discussed lecturers’ direct responses in relation to the key purposes of SA, lecturers were asked to elaborate on their initial responses, and they were referred to their questionnaire ratings of the extent to which they believed SA was oriented toward preparing students for their careers and professional lives. This theme primarily presents findings connected to how lecturers made sense of the implementation of SA for GED as the ultimate objective of SA as an activity system at UTAS-X. SA as linked to GED by facilitating students’ development of key GESs that are invaluable at crucial stages of their professional lives. Their elaborations and reflections on this aspect of SA reveals significant insights into how they conceptualised this link.

7.3.2.1 <u>Link to transition from university to work</u>

Overall, this theme demonstrates that the SAMs that lecturers implement link to and support students in their entire graduate career rather than just focusing on a specific point in their employment journey. The first stage that lecturers viewed SA to be linked to is the initial stage when graduates begin their search for employment. The types of SAMs that students are engaged in as part of their university experience were

perceived to impact student success in securing suitable employment after graduation. Lecturers considered this stage to be crucial since it marks the critical transitional phase from university to employment, or the moment ‘when they step out of the university’ (Ethan-PSC). Most lecturers here referred to the role of some SAMs in assisting graduates have successful interviews and get selected for the jobs they seek. Significantly, interviews were seen as the ‘first encounter’ (Olivia-PSC), where graduates market themselves to their prospective employers by effectively communicating to them that they are worthy of getting the job, and where each graduate needs to be considering that:

> ‘‘I’m selling myself, I’m selling my services to them, so how am I going to adjust myself, will I be fit, will I be accepted to that company” (John-DBS).

SA was perceived to assist students in this matter in two main ways. First, some types of SAMs aid the development of skills critical to this stage like communication and interpersonal skills. As highlighted by some, ‘during the job interviews the focus is on the personnel presentation skills, leadership skills, capacity to work in a team’ (Robert-DBS), and graduates who effectively ‘present themselves in front of the interviewer are going to succeed’ (Nathan-DBS). Although this set of skills was considered vital by all lecturers throughout a graduate’s career, its significance was especially stressed at this early stage. Following are examples of SAMs being referred to as assisting students develop skills crucial for having successful interviews:

> “Especially for projects, or sometimes at the end of the assignments, we ask them via voce examination, and that gives them the confidence to face answering interview questions” (Victoria-DBS).

Second, a few lecturers significantly mentioned the role of certain SAMs in assisting graduates showcase their achievements during interviews, providing them with a

competitive advantage during interviews and increasing their chances of being selected. These lecturers underlined achievements represented by specific types of SAMs that graduates perform or accomplish as part of their programme assessment schemes, which they can advantageously present during interviews as significant indicators of their job-readiness. For example, one lecturer referred to the project in his course as an assessment component that a student can utilise to show his 'excellency' and 'capability' and to 'demonstrate how industry-fit he is' (George-DEN). Others drew comparisons between the competitive advantage that graduates gain through such achievements and that of the GPA, as both are outcomes of SA. This sentiment is articulated by Jacob-PSC, emphasising to his students the importance of their projects:

> "In the students' minds, I need everything that can put me in a better position to get the job, so the students think that, the higher the GPA, the better position I stand to get the job, until they realise that the GPA is only for you to get called or invited for the interview … [So] I always encourage them, I tell them I want your project here with us to be so good that during the interview you will mention it. And when you mention it, they're likely to ask you to elaborate on it, and I want you to be able to elaborate, when you do that, you are already selecting yourself for that company".

7.3.2.2 Link to maintenance of a successful career

The descriptions provided by lecturers as they reflected on their SAAS further accentuated the crucial concept of the object, as previously discussed, emerging as 'the sense-maker' for members within a specific activity system (Kaptelinin, 2005). Engaging in reflection enabled lecturers to project the new object – the development of GE capabilities – towards its outcome: producing graduates who are employable in prospective professional contexts. This process provided lecturers with enhanced

clarity to identify the qualities of the mediating artifacts or tools necessary for acting on the object to transform it into an outcome.

Once graduates obtain employment, all lecturers perceived the most critical use of SA to be relating to maintaining success and good performance on the job, where graduates or 'young entrants to a company need to show their mettle to their boss' (Edward-DEN). What became evident in lecturers accounts of the associations they made between SA and graduate ability to maintain employment is that the latter was perceived to be largely dependent on the types of SAMs graduates had undertaken. In other words, a graduate who has undergone such SAMs, with the GESs they develop, would be better positioned to have a smooth and successful career performance. Therefore, some of these lecturers highlighted the role of the lecturer in meeting this requirement, using phrases like 'you need lecturers who' and lecturers 'need to know' to emphasise the criticality of harnessing SA as an empowering tool toward maximising graduate career success after graduation. Significantly, failing to attend to this requirement was perceived as 'a big disservice' to graduates (Jacob-PSC), and as 'going around a vicious circle' (Richard-DEN). This is captured in the following quote, citing 'taking minutes' as an example of a practical and meaningful SAMs:

> "You need lecturers who are very passionate, creative and also innovative, who can sit down and say what happens in the workplace, you know that in the workplace people conduct meetings, and then when a student graduates and they are hired and they attend their first meeting at ORPIC and then the manager says 'Abdullah, can you please take the Minutes for us', imagine Abdullah has never heard the word 'minutes', he knows minutes to be five minutes, and the manager is saying Abdullah, you are our new hire, we welcome you, you've been with us for a month, please take the Minutes today, and Abdullah has no idea! You have done Abdullah a big disservice. Not only Abdullah, the employer has to re-educate Abdullah, what was Abdullah doing all those four years you were with him" (Jacob-PSC).

Lecturers talked about how the implementation of certain SAMs would be important and useful for graduates' future careers success in various ways. First, they referred to certain SAMs they implement as resembling the tasks graduates will be required to perform in their future careers, which means engaging them in such SAMs will afford them a chance to practise and become ready for the tasks awaiting them in specific future roles like 'engineers', 'accounting graduates', 'network administrators' etc. This is exemplified in the following quotes:

> "As engineers, they need to prepare a report on the situation that happened, for example, these are the data, based on this data, I came to this conclusion, and this is my inference in this case" (James-DEN).
>
> "Accounting graduates are employed to prepare business scenarios, they can be employed as business analytics or financial analytics, where they give projections and trend analysis of how a scenario of sales of, for example, how 1 million units is going to be translated into profit" (Victoria-DBS).

Beside focusing on future workplace tasks, other lecturers talked specifically about essential GESs and attitudes that certain SAMs help students develop, hence, enable them to perform their roles and function effectively in the various future work environments they will join. To show this link, lecturers used different verbs, for example, this assessment task 'equips', 'develops', 'improves', 'enhances'; and through this, students 'learn', 'obtain' particular key skills or capacities. What is interesting here is the tendency of lecturers to talk about these SAMs as learning tasks rather than merely as tools for measuring learning, a notion that was becoming increasingly evident and crystalised as lecturers went on reflecting on their SA experiences. This is illustrated in the following quotes:

> "We send them to different rooms here on campus to check what hazards can be found in those rooms, so through that gathering itself, we do really equip them with skills, with keys to prepare them for future learning requirements and to be ready to work in any place and to learn from their job environments as well" (Liam-PSC).

> "We can assess the students in such a way that could really help them develop the competencies, because competencies are not only about doing things right, they should also develop the right attitude among the students, trying to maximise their creativity, their imagination and how they're going to make best use of the knowledge they have learnt" (John-DBS).

7.3.2.3 Link to career advancement

Moreover, certain SAMs were deemed crucial for developing a set of skills that act as catalyst for graduate career advancement. Significantly, a few lecturers elaborated on the types of SAMs that would not only help graduates maintain their careers but also advance in them, that is, enabling them to earn the trust of their employers and assume significant leadership roles in their workplaces. These lecturers acknowledged that during early employment, graduates might hold simple jobs before their employers entrust them with leading roles. For instance, David-DBS who teaches 'Management Strategy' refers to a set of skills developed through SAMs that are prerequisite for graduates if they are to become managers in their workplaces:

> "We are trying to implement these assessment methods that are group discussions, case analysis, role plays, presentations, all these methods, and after assessment we find out that their skills are good, that means they will have good employability… without analytical skills, without problem solving skills, without decision making skills they cannot become good managers, they will only become management technicians to do the routine things".

7.3.2.4 Link to general life

Apart from its link to graduates' professional lives, some lecturers had a broad conceptualisation of GE, perceiving some SAMs to have useful application in graduates' general lives. As one lecturer stressed, 'assessment itself prepares them for life' (Henry-DEN). For instance, having mentioned the usefulness of a particular SAM for developing work-related skills, these lecturers emphasised its versatility by

showcasing its benefits for graduates beyond their professional lives. This is exemplified in the following quotes:

> “Assessment where students solve problems is not just for a course, in every aspects of your life, whenever you want to take some decisions, you have to assess yourself, step by step, so if students can have an idea how to solve some problems they can better perform in real life to solve their own problems” (Noah-DIT).

This is reinforced by one lecturer, suggesting that SAMs significantly impact graduates’ holistic preparation and urging fellow lecturers to always consider the critical question of how these SAMs are linked to applications in graduates’ lives more broadly:

> “One question pertains to application in life, are they learning something, not just in terms of preparing them for academics, are they being prepared for the world of work, professionally, personally, so it's more of a bigger faceted in terms of their actual preparation” (Ethan-PSC).

7.3.3 Theme three: Summative exams versus continuous assessment

While the previous theme presented findings relating to how SA linked to GED, this theme focuses on the impact of the two main modes of SA that lecturers identified, summative and continuous, on developing GE capacities. Summative assessment was primarily associated with exams or tests including midterm, final exams, and even quizzes which primarily take a written form. Lecturers identified the other mode as continuous assessment, which included almost all other SAMs that have a formative function, both graded and ungraded. Although various terms were used while talking about this mode like continuous, internal, and formative assessment, as well as coursework, the most frequently applied term was continuous assessment. To avoid confusion while presenting the findings of this theme and to accurately portray the

participants' responses, summative exams (SEs) will be applied to refer to the first category whereas continuous assessment (CA) will be used to refer to the latter.

Overall, all the lecturers interviewed reported both SEs and CA to have an impact on GED, yet with varying degrees. SEs was viewed as the dominant mode of SA as it accounted for most of a course's grade or marks, around 80% in most courses. However, it was perceived to have a smaller contribution to facilitating GED compared to CA which accounted for as less as 20% (see Section **7.4.1** for more details on the impact of this policy on GED). SEs were still perceived to facilitate GED if certain conditions are met.

7.3.3.1 CA has greater alignment with GED than SEs

Responses around this theme revealed that, unlike CA, there are more guidelines regarding midterms and finals. These guidelines detail the format, structure, time and duration of SEs that lecturers are strictly required to abide by, which most lecturers perceived as restricting them from using SEs for the purpose of GED. This was reflected in the terms lecturers used when talking about each mode of assessment and its utilisation to facilitate GED. CA was often associated with having more 'liberty', 'freedom' and 'flexibility', compared to feeling 'restricted', 'limited' and having 'no say' in the case of SEs. Such feelings are illustrated in the following quotes:

> "For the midterm and the final, we don't have a say about it, it's fixed, but for the continuous assessment yes, we can do something and change it" (Olivia-PSC)
>
> "20 marks assignment, you keep it 15 for theoretical work and five marks for a presentation. That could be possible, no nobody's going to stop you, so the flexibility is there" (Charles-DBS).

Due to its greater flexibility, and despite the relatively low percentage of marks allocated to CA, most lecturers felt that CA has a substantial impact on GED. Significantly, CA was perceived as offering lecturers the space they require to enhance the link between SA and GED, which is captured in the following quote stressing that through CA 'we [lecturers] can be more responsive to the employability aspects or probably to the lifelong learning' (John-DBS). Therefore, in their accounts of the type of SAMs crucial for facilitating GED, all lecturers primarily cited SAMs belonging to CA rather than SE, like case studies, projects, assignments etc., whose impact on GED lecturers tended to compare with that made by SEs. This is illustrated in the following quote referring to case study:

> "We prepare our students for managerial cadre, or at least for managing businesses, we think that they should have better presentation skills, human relations skills, analytical skills, and also they should have some domain specific knowledge …, in business, things do not come like examination questions, we understand this, and that's why we try to discuss the things with the help of case studies, for example, how organizations manage the things and if any problem comes, how do they decide, how do they find the solution for that, as a matter of fact, we practice it to increase their analytical skills and developing alternative solutions" (Robert-DBS).

The idea of allowing students time to think, discuss with others and look for various sources of knowledge to solve problems or make decisions about them was continuously described as a distinctive and powerful feature characterising CA and rendering it a more suitable and effective mode for implementing SAMs for GED. This was attributed to the nature of the tasks in which students are engaged during CA methods which bear greater resemblance to professional tasks, being practice-oriented and performed in more naturalistic settings compared to the more theory-based, written tasks of SEs. Such SAMs were described by one lecturer as 'multi-dimensional' (Henry-DEN), stressing the various workplace skills that could be

targeted by lecturers and practised by students within them. To stress this multifaceted feature of CA methods, some lecturers listed the range of skills they focus on during CA methods. For instance, ‘There are a lot of skills that will heighten the way we prepare our students for employment’ (Ethan-PSC), and ‘I counted, three, four skills, so obviously that will contribute to their [students] professional life’ (Charles-DBS). This is further depicted in the following quotations, where phrases like ‘you may not quantify it’ and ‘it is inexhaustible’ were used to emphasise this feature in the context of case studies and conducting interviews, respectively:

> “At least it will improve two or three things, number one, if the students are talking in teams or groups, we are developing their presentation skills, convincing others, reading in group, all these skills improve, so as a matter of fact, you may not quantify it” (Robert-DBS).

> “…, so during the practices in class with the other students, with the lecturer, the students are practicing that skill, confidence, the interview is conducted in English … so the students are learning to communicate in a professional setting, how do you start a meeting, how do you ask a question, how do you interact in a professional setting, so it is inexhaustible” (Jacob-PSC).

This feature of CA methods was also crucially highlighted as affording lecturers the opportunity to decide to which of the various GESs their focus should be directed. To demonstrate this, a few lecturers used phrases like, ‘the focus here is on’ and ‘the aim of the assessment is’. This is exemplified in the following example referring to group discussions:

> “Group discussion is like a mini board meeting, in board meeting they [students] are supposed to discuss, debate on the different issues, and they have to make a decision, here we give a topic on a debatable issue, whether from private or public enterprises, and *the focus here is on* their argument skill, their ability to present, leadership skills and communication skills will be tested, so if they are very good in this, it means they can be successful in this type of meetings in the business life, board meetings in senior level positions. Various skills can be assessed using group discussions” (David-DBS).

Consequently, some lecturers were critical of the disproportionate grade value assigned to SEs compared to CA, or even questioned the necessity of SEs altogether. One lecturer vehemently denounced the use of SEs, expressing concerns that SEs could, in certain cases, hinder the development of key GESs that some courses aim to foster. He cited his 'Technical Communication' course as an example:

> "That will beg the question why do we have final exams, yes, so why do we have those one-time assessment, if it were with me individually, I will not need any student to sit for any final exam, yes, because if you are going to teach communication, this is an ongoing process, if the student knows that what they do *everyday* (emphasis by participant) in class is going to contribute so much to their assessment then everybody will be like, doctor, I will answer that question, as they're doing that what are they benefiting, they are communicating, engaging, the students will know that I want to answer in that class, so I have to study before I go to that class. But if the students know that, aaaah the final exam is coming, I will come and sit in the class right at the back there, fold my hands, the lecturer will point at me one time, I will say what I had, but maybe I will still daydream, what will I lose, nothing, final exam is coming, doctor 'the final exam is going to cover which topics?', he will tell me, 'two days I don't sleep, bring that exam doctor, I hit it, I'm fine'. But, am I confident enough? Have I gained the English-speaking ability? do I know how to engage with my fellow students?" (Jacob-PSC).

7.3.3.2 Summative exams could still play a role

While all lecturers acknowledged the significant role of CA in facilitating GED, many still perceived SEs as contributing to this process. Such feelings were captured in quotes like 'final exam and midterm exam should be there' (John-DBS), and 'both [SE and CA] have equal importance' (Ethan-PSC). This agreement notwithstanding, these lecturers differed greatly on the degree of contribution of SEs to GED and how it could be effectuated. It is important to note that this difference in opinion could be largely attributed to the fact that lecturers' judgement in this matter was based on the nature of the courses they were referring to. An important finding of this theme is that the value of SEs was perceived to be greater when lecturers could envision the connection between the tasks required in SEs and the real-world challenges that students will face

in their future workplaces after graduation. For instance, having been asked whether he thinks exams contribute to GED, this lecturer responds:

> "I believe, yes, because they [students] have to write reports later on, and we deal with the same stuff now [in SEs], we are training them to write reports, different kinds of reports" (Liam-PSC).

This is echoed by another lecturer, explaining that case studies could be used as an effective method to facilitate GED in both SEs and CA, yet whilst focusing on a different skill set in each mode:

> "In the open case study, you are testing their ability to go and search for information, you're testing their ability in communicating with other people, exchanging ideas, you are testing their ability in terms of like trying to find solutions through contacts, Internet, social media, etc, so this is one set of skills that you test there. In the exam, it might be the same question, but different parameters will be tested, time aspect is tested, ability to think critically, quickly, and use the knowledge that they already have so far in order to come up with a solution" (Richard-DEN).

Significantly, for many lecturers the contribution of SEs to GED depends on 'how the questions are written by the paper setters' (Henry-DEN). Asking questions that target the development of HOTS in SEs, 'more than the easy ones which focus on memorisation' was hugely emphasised by most lecturer. Such questions were often described as 'challenging, scenario-based questions' (Charles-DBS), and 'related to critical thinking, problem solving skills' (Daniel-PSC). Moreover, to ensure that such SEs' questions focus on the aforementioned skills more than memorisation, some lecturers emphasised that exams should present new, novel problems 'in which case the answer is not ready made from the text' (Robert-DBS). This is further exemplified in the following quotation:

> Logical thinking will mainly help and also being able to understand real time problems, which are not the same as the ones they practice in every exercise in the classroom (Christopher-DIT)

As outlined in this theme, the effectiveness of SAMs in developing GE may not solely depend on their mode of implementation, but rather on the GESs they can help students develop to enhance their preparedness for workplace tasks. This reiterates the importance of identifying the characteristics of SAMs that support this objective, as discussed in the following theme.

7.3.4 Theme four: Quality dimensions of SA for GED:

This theme will present findings related to the qualities or characteristics which lecturers in this study used to judge the effectiveness of certain SAMs for GED. These SAMs will be organised into groups or categories, hance constituting the subheadings in this theme, due to the following. First, lecturers referred to several SAMs like case studies, presentations, assignments, regular classroom tasks or activities, which called for a way to organise them into groups rather than simply presenting them according to the names participants used to label each SAM. Secondly, the participants had different views about what a particular SAM was good for as they were often used and named differently by different participants. For example, some lecturers referred to assignments as reports and vice versa. Yet what all lecturers seemed to focus on in deeming these SAMs effective for GED was the ways they utilised them to facilitate the development of essential GESs like communication, analysis, decision making and evaluative judgement.

Before presenting these categories, it is important to highlight a few notes. First, most of the SAMs under the different categories were also used by lecturers as teaching and learning methods or activities; that is, lecturers did not only use them to assess students but to enhance their learning and development of GESs. Second, lecturers talked about the four categories as dimensions of quality, whereby they discussed both

effective and ineffective SAMs for developing the GESs within each dimension. Finally, some of the examples of SAMs quoted within this theme may reflect more than one dimension of quality.

7.3.4.1 Assessment informed by real-life work contexts

The first dimension of quality whose importance the majority of lecturers across all four departments stressed is the need to engage students in SAMs that resemble real-life work situations or contexts, which were described using phrases like ‘real-life’, ‘world-like’ ‘scenario-based’, ‘situation-based’. Therefore, these lecturers reported to be implementing SAMs that were informed by real-life work settings like conducting a meeting, reporting an issue; and working or dealing with prospective people within these settings like customers, managers, fellow workmates and team members. A wide range of SAMs were cited under this category like projects, assignments and roleplays, which are implemented to give students ‘the feel when they go there’ and enhance their preparedness to join workplaces. This is fully exemplified in following quote referring to assignments:

> “We also had them contact companies, during the convid-19 issue, one of the assessments in technical communication was we divided students into groups and told them go, choose a company of your interest, choose an issue that you are going to talk about, and you are going to record a meeting with the manager, and you are interviewing them on how they are managing that issue; issues of attendance, things like that. This is to develop students in their lifelong learning capacities, because when they will join a company, maybe, Ahmed will be asked to research on a certain issue, maybe he’s working for bank Muscat, clients are no longer paying their loans, as they used to, what is the problem, Ahmed, we need you to find out, and make a presentation to the manager in Muscat” (Jacob-PSC).

Conversely, SAMs that are not based on practical or real-life work scenarios were generally viewed as poor quality since they will be less useful to graduates in their

future professional roles. This is captured in the following quote, where real-life SAMs are contrasted with ones that are writing-, or theory-based:

> "Because when they [students] go through this assessment, it will give them idea, for example, of what to do, how to improve, I am lacking in this area, I don't know how to present because they are trying to perform, but when they're writing the exam it is not clear, sometimes those people who are not writing properly perform well in the job. So, we should give assessment which resembles their real job in the future. As an HR manager, the students will not be required to write and his performance will not be checked against that, because an HR manager is not asked to write an essay about the problems of the company, that is not happening, their assessment is something different" (David-DBS).

7.3.4.2 Cognitively challenging assessment

The next quality dimension that the majority of lecturers referred to was SAMs that present students with cognitively challenging tasks. Such category, as these lecturers explained, involved implementing tasks requiring students to 'think', which was often identified by lecturers as being 'critical', 'logical', 'scientific' thinking. Some other lecturers also referred to 'Higher order thinking', (HOT) skills which they linked with tasks requiring students to 'evaluate', 'judge', 'design', 'summarise', 'synthesise', 'propose', etc. However, a significant skill mentioned by most lecturers as being an integral component of high-quality SAMs was analysis, where students are asked to analyse 'data/ information/ numbers and figures/ situations/ conditions/ products' toward solving a problem or making a decision. This is exemplified in the following quotes:

> "For example, are we going to choose buying an air condition of Type A or Type B, so they have the ability to choose and with that they'll develop skills in terms of critical analysis, because they have to analyse the data, this one is cheaper than the other, but there are pros and cons" (Ethan-PSC).
>
> "The problem is designing a driverless car, so we are giving this problem to the students to develop a solution for automatic driving, to get the solution

> they have to analyse what are the possible inputs to the car' (Christopher-DIT).

Interestingly, some lecturers stressed specific features about the problem-solving tasks they engage their students in to facilitate GED. One key feature highlighted by some was that such SAMs require 'applying the knowledge that they [students] have learned' (John-DBS) from different sources to come up with a plausible solution or decision about the problem at hand. This is articulated in the following quote referring to case study:

> "They will need to use all the information and the knowledge that they gained from the Internet, from the lectures, from YouTube in order to solve things which are very much relevant to our environment. So, a house having like five bedrooms, and this kind of connection, and there was an electric shock, what might be the reason and how we can mitigate it" (Richard-DEN).

Another key feature that a few lecturers significantly emphasised about such SAMs was offering multiple courses of action for students to consider and employ toward resolving them. Here, lecturers' attention is directed to the process that students follow in reaching such decision or solution, that is, 'the process of developing alternatives' (Robert-DBS), where students 'have to think on their own because there is no right or exact answer' (Edward-DEN). This feature is articulated in the following quote relating to case study:

> "We ask them to develop solutions and alternative courses of action for a particular scenario, they really have to bring out their creativity because there is no definite answer to any of those questions; it's all about how creatively they are trying to solve the problems" (Victoria-DBS).

Conversely, lecturers considered SAMs that do not develop these HOTS as useless or of low quality as they fail to prepare students for their futures. Therefore, most

lecturers emphasised the need to present students with challenging problems and avoid asking questions relying on memorisation. This is captured in the following quote:

> ‘Managers’ life is a complex network of decisions, decisions to solve problems, for example, recruiting, selection, selection is a problem, out of 10 we have to select the best; the focus here is on what decisions we will make, so we give recruitment and selection exercises, decision situation, we give the students the profiles of five candidates, we give the background, then we ask them which one you select in particular business situation, how it is connected to strategy, so this is the types of assessment and exercises we give … [if] we are asking what are the advantages of recruitment, what are the sources of recruitment, do you think selection is important. They memorise the advantages or disadvantages, they write them and get good grades, but they don’t know how to recruit, how to select, how to conduct the interview, then what is the use!’ (David-DBS)

7.3.4.3 Collaborative and communicative assessment

The third dimension of quality that almost all lecturers (23) mentioned was SAMs that develop graduates’ communication and collaboration abilities. In most cases, these two capacities were coupled together as they were perceived by lecturers to be occurring together in workplaces where graduates would be required to work in teams or groups to achieve common objectives. This is summarised in the following quote:

> “No project can be executed single handedly. Most, if not all, projects are executed by a team and everybody in the team will need to contribute to a certain extent towards achieving the task and of course, being able to communicate ideas and knowledge, being able to work within a team, being able to perform within the team is very crucial in terms of like securing a job and maintaining a job” (Richard-DEN).

> “The relevance of is more of how they’re supposed to work as a team, because the work of one in a company is relevant or dependent on the other position, so that is basically how the team should work, you need to discuss it further amongst your team members (John-DBS).

Therefore, lecturers reported implementing a wide range of communicative and collaborative SAMs in the classroom, conducted in teams and groups. One lecturer highlighted that this approach enables students to 'take part, not only in the assessment, but also in the learning and teaching process' (Richard-DEN). The significance of such SAMs for supporting team learning is further demonstrated in the following example referring to group activities:

> "If one of the students in the group knows any concept which others don't have any idea about, that can be shared in that activity, the other students can learn from that student, so this also helps them to learn the skills which they do not have from the student who have that skill" (Samuel-DIT).

Interestingly, some lecturers referred to SAMs involving extensive preparatory work and culminating in a group product like an assignment, report or project. In such SAMs, great attention is directed to the process leading to the submission of the product since it is during this process that the communication and collaboration skills are fostered. This is articulated in the following quote referring to group assignments:

> "I am giving it as group assignments or as group activities, where in they need to somehow have constant communication with each other, coordinate with one another, plan, how they strategize, how they are going to make their group work so that the objective of submitting quality paper is achieved, so it is just more of developing their sense of responsibility for the assigned task" (John-DBS).

On the contrary, less importance was attached by lecturers to SAMs that do not involve and reinforce such skill set. Generally, lecturers contrasted communicative and collaborative tasks with ones that take a written form, which could explain why they mostly favoured CA to SEs, as discussed in the previous theme. To demonstrate, one lecturer crisply called SEs 'one-directional' methods and critically posed the question:

> "What does this give the student? It does not give him the communication skills. Instead, ask the questions, make the students speak, make the student

> present the data, make the student share the information with other students, give them an activity where they go and research something" (Henry-DEN).

Having said this, a few lecturers notably excluded SAMs that are performed individually toward developing graduate self-assessment capacities from this judgement, which will be discussed in the next section.

7.3.4.4 Assessment developing evaluative judgement

The fourth dimension of quality that was highlighted by most lecturers was SAMs that foster graduate capacity for judging and improving their work by generating feedback through self-assessment or self-feedback and through other available sources. Various terms were applied by these lecturers to refer to this capacity like 'self-reflection', 'self-assessment', 'self-judgement', 'self-evaluation', 'peer assessment'. This capacity was considered essential for graduates to be able to improve the quality of the work assigned to them in their future workplaces, which is illustrated in the following quote concerning self-assessment:

> "In terms of self-assessment, before being assessed by other people, you'll need to start assessing yourself, or you need to evaluate yourself based on the standards or tasks you say that you'll need to be able to perform, … So, this is the reason why I ask them to be part of it, in terms of like coming up with the questions and also even assessing themselves and sometimes asking their friends or their peers to assess them" (Richard-DEN).

However, notably, fewer lecturers (6) spoke about self-assessment compared to engaging students in SAMs where they generate feedback collaboratively drawing on useful sources available to them like classmates. One reason for this could be that lecturers were considering future work settings where graduates will be expected to use valuable feedback resources to accomplish tasks and to work collaboratively rather than individually, as outlined in the previous section. As one lecturer

commented, in workplaces, if students ‘think that they know everything, this is not a good indicator’ (Olivia-PSC). Thus, some lecturers explained the importance of engaging students in SAMs that develop such capacity by listing the feedback sources graduates will be required to utilise in their future workplaces:

> “They know they got more than one source of feedback, they got themselves, they got their colleagues at work, they might get a superior like a line manager or a mentor. So, I think that the way they get that comprehensive view would make their work quality better” (Alexander-PSC).

Equally as important as engaging in the act of giving and receiving feedback is graduates’ attitude toward feedback. Some lecturers stressed that it is crucial that graduates are trained through SAMs to embrace the ‘culture of inviting criticism and providing criticism’ or feedback (Alexander-PSC). This means, since graduates will be working with and producing work for different people in their workplaces, they should view giving and receiving feedback as a common and essential practice, which is captured in the following quote:

> “Not only to be able to share the things but also to accept things from other people. Because I might be willing to share my ideas, but if the recipients are not willing to listen and to gain, then well I gained the knowledge and gained the skills, but I was not able to convey this knowledge to the second party or to the recipients, so at some point, you will need to give information and give knowledge and at some point, you will need to receive information and receive knowledge, and by doing this you’re like grooming the whole team to be ready for whatever task they might be facing in the future” (Richard-DEN).

Conversely, neglecting the development of this capacity in students through relevant SAMs was perceived by a few lecturers to have adverse consequences on graduates’ future employability, an issue that all lecturers need to address immediately. Such note of concern is conveyed in the following quote:

> "In the future our students will definitely submit work, they will definitely write reports, write emails, they will do tasks and they will receive feedback whether feedback from their line manager, their team leader, or the director, or whoever. If they don't know how to accept feedback, they will suffer in the future. This is something that is developed gradually through time, I know, but it starts here, now!" (Olivia-PSC).

7.4 Research Question Three: What Are the Key Barriers and Enablers Impacting Lecturers' Implementation of SA for GED?

The themes presented in the preceding sections demonstrate that all lecturers recognise the critical role that SA plays in the process of GED. Lecturers reported implementing a wide range of SAMs to accomplish this objective. The SAMs that were perceived as conducive to GED fell into four interrelated categories: resembling real-life work contexts, being intellectually challenging, involving collaboration and teamwork, and developing evaluative judgment capacities. However, lecturers' accounts of how they integrate these characteristics into SA revealed various challenges and barriers restricting the effective integration of these characteristics.

This section addresses RQ3: "What are the key barriers and enablers impacting lecturers' utilisation of SA for GED?". It includes four themes: 'Rules and regulations', which describes the impact of some SA policies on the implementation of SAMs for GED; 'Managerial support', which focuses on the management's role in supporting lecturers in this process; 'Internal dialogue', which discusses the importance of engaging students in a dialogue about SAMs for GED, 'External dialogue', which discusses the role of engaging workplaces and employers in SA. The factors within each theme were viewed as either hindering or facilitating lecturers' implementation of SAMs for GED based on whether they are overlooked or addressed by lecturers as

well as each of the other concerned members of the SA community, namely, the university's management team, students and employers.

7.4.1 Theme five: Rules and regulations

The findings of this theme address the challenges that lecturers reported to be facing in relation to the SA rules and regulations at UTAS-X. The participants responses regarding the main rules and regulations obstructing an optimal implementation of SAMs for GED were connected to two major rules: being accountable for following course learning outcomes (CLOs) that are not well aligned with GED and mark distribution policy leading to the dominance of SEs. Before presenting these restrictive rules, a brief account of how lecturers described them will be provided.

Being held responsible to strictly abide by such assessment rules and regulations, the majority of lecturers perceived the current affair of governing SA at UTAS-X to be restricting their endeavours of implementing SAMs for GED. Although all lecturers, as the previous themes showed, reported implementing a range of SAMs toward this objective, all, except 3, lecturers felt that more could be accomplished if these presently enforced SA rules and regulations did not curtail their freedom and creativity in this regard. Such feeling is illustrated in the following quotes:

> "Here in the university, we are having some troubles, just because we are following certain guidelines" (John-DBS).

> "We are limited, with time limits, policy limits, we cannot go beyond, we cannot change" (Margaret-DIT).

> "The guidelines, rules, some quality rules, so many things are coming, they [the management] are putting all these things, they are putting boundaries for implementing our strategies, so even though we feel something is good, we are not in a position to implement it" (Edward-DEN).

Consequently, a few of these lecturers alarmingly reported feeling alone in this endeavour and being compelled to forgo implementing SAMs they find critical for GED. This sentiment is illustrated in the following quote:

> Yes, this is what is happening, I tried to implement all these things, but what happens was that after one or two semesters students started complaining that HR subject is very difficult, they started to stop selecting HR specialisation and all started going marketing and accounting, the number of students in HR started to come down, so at the end we stopped doing this assessment and we started asking normal questions that give marks, that's all (David-DBS).

7.4.1.1 The challenge presented by CLOs

The first rule impacting lecturers' implementation of SAMs for GED is having to abide by CLOs that have been prescribed for every individual course they teach. All lecturers realise that they are obligated to observe these CLOs while teaching and assessing, which could explain why most lecturers referred to CLOs achievement as one objective behind implementing SA (see Section **5.3.1**). This is not surprising as the QAM presents LOs as a crucial mechanism through which the university maintains academic standards and 'make[s] the learning associated with particular modules, units and programmes more accessible to students, employers and any other interested parties' [p. 90). The following section demonstrates the importance placed on programmes and courses' LOs by UTAS-X, which:

> "Aim to produce graduates who meet the needs of the labour market and are fully capable of entering employment in Oman or elsewhere. If this is to be achieved, employers must be confident that such graduates have achieved a standard in technological understanding and skills that is guaranteed by the certificate they have been awarded… It is therefore extremely important, both for the College itself, and for the community it serves, that courses and programmes should be designed and delivered according to high standards, and that those students are certificated as having passed them should genuinely have achieved the relevant learning outcomes" (Quality Assurance Manual Version, p. 60).

However, these lecturers' concern does not solely stem from the requirement to abide by these CLOs, but rather centres on the content or focus of these CLOs, which subsequently define and direct how they should teach and assess their students. Despite what the university states in its formal documents about the role CLOs play in guiding the process of GED, as outlined above, most lecturers viewed these LOs as constituting the first barrier against harnessing SA for the purpose of GED. Such perspectives were associated with two major factors. Most importantly, LOs were perceived as lacking integration of key GESs that graduates need to acquire in order to become employable. This is exemplified in quotes like:

> "The outcomes are limited, so we are not giving more input to the students" (Christopher-DIT).

> "Those outcomes that are directly related, that are important and have more bearing on the graduate attributes development should be given more weightage, but this is now lost" (Henry-DEN).

Some of these lecturers' quoted examples from the CLOs of their courses, demonstrating that instead of integrating the skills and the tasks that graduates will be primarily required to perform in their future workplaces, most LOs focus on aspects that are less useful. This is illustrated in the following quote in relation to 'manufacturing process' course:

> "Where is the role, it is on analysis, because engineer means, he can identify where the strength will lack, or where the strength is more required, or which metal I can choose, this is the thing I have to teach them, but what is there in the outcome, students can define, students can draw" (George-DEN).

The other factor aggravating this situation was expressed by one lecturer stating that 'even though we know it [an outcome] is not very good, we are not able to change it!' (Edward-DEN). Such rigidity of LOs was further articulated by another lecturer, using the metaphor 'our hands are basically tied':

> “My action is basically derived from the outcomes that has been given to us. There will be an outcome, so that has been given to us and the focus of our goal as a lecturer is primarily to achieve those outcomes or objectives that are on the Delivery plan, those that are sent from the specialization committee and, just like I’ve said, in as much as we want to do something more our hands are basically tied or our actions are limited” (John-DBS).

7.4.1.2 Mark distribution causing dominance of SEs

Besides the LO-related issues, lecturers identified another interrelated rule– mark distribution – as inhibiting their implementation of SAMs for GED. Mark distribution refers to the university’s policy that dictates how grades are allocated for each course across various programmes. Although there are a few exceptions, most courses adhere to a common grading pattern. This policy is outlined in one of the key documents addressing university policies and regulations, the Bylaws, which states that:

> “The final mark for each course includes continuous assessment such as quizzes, oral, written or practical tests, homework, and projects. This should not exceed 30% of the final mark. The final mark … represents the sum of the marks obtained in course work/continuous assessment and the final examination” (article 62-63, p. 44).

This means that SEs, in terms of final and mid-term exams, occupy most of a course’s grade, which is not less than 70 % in most courses. The allocation of such considerably huge percentage of a course’s grade to written exams, was a cause for concern to most lecturers for three key reasons. Firstly, despite the huge mark allocated to SEs, which most lecturers perceived to be less conducive to GED (see Section **5.3.3**), lecturers have less control over the content and design of SEs. That is, they must contain certain types of questions. This is illustrated in the following quotes:

> “You have to follow the protocol of the university, their assessment has to include, for example, multiple choice at the beginning and then short Questions, then long questions like this, this method or this distribution of questions is a must, it's not up to me to choose” (William-DEN).

Secondly and most importantly, the significant weightage of SEs in the overall mark adversely affects students' engagement with alternative SAMs. Perhaps understandably, students tend to allocate time and effort to SAMs proportionately according to the grades they carry. Therefore, lecturers find it challenging to engage and motivate students in SAMs like role plays, case studies, and presentations, which they implement as formative or graded CA tasks during regular class time. This difficulty arises because, in these cases, such SAMs carry either no or relatively little grade value. Many lecturers elaborated on this challenge, as shown in the following quotes:

> "If they see 5% they don't pay attention, because their idea, their rationale is, anyway, I have mid-term, I can do so much in the midterm, for example, at one peculiar setting,10 marks for presentation, five or six students out of 25 did not bother to make a presentation, because they think it's just 10 marks, they can make for the 10 marks when they prepare well in the final exam" (Ethan-PSC).

> "When I tell my students that 30% is allocated to practical assessment, I feel small before them because they consider it very little, and they don't give much attention to it. So, I feel like that I am belittling my own work" (Henry-DEN).

Consequently, some of these lecturers emphasised the urgent need to diversify SAMs to enable them to cater for the various GESs through implementing a 'balanced type of assessment', and to avoid overreliance on a single 'tool', referring to SEs, which they primarily associated with 'academic preparation' and gaining disciplinary 'knowledge'. Such calls are conveyed in the following quotes:

> "We want really to come up with a balanced type of assessment, so that at it's not just more on academic preparation; there must be some aspects that would cater to the needs of the students in terms of their future career" (Ethan-PSC).

> "We have to use the tools which assess something beyond the knowledge level, like you can give them presentation, seminar, or ask them to do some

> course-oriented projects … rather than using only one tool for 80% of marks" (George-DEN).

Thirdly, most lecturers find the mark distribution policy challenging because it applies to almost all courses, regardless of their nature and the GESs they should develop, except for a few practical courses like workshops and lab courses. Lecturers discussed specific SAMs they believe are essential for developing key GESs, but they felt the policy restricts these methods, forcing them to use others with little impact on GED. These sentiments are reflected in the following quotes:

> "There should be flexibility given to different types of courses. It should not be standardized, only then the relevant and related skills will be allowed to develop" (Henry-DEN).

> "We have short answer, long answer-questions which are suitable only for very limited courses, not for all courses, but this is happening because it is required by the management. Even though you are spending 70% of the course on practical, you still have to ask short and long answer-questions" (Samuel-DIT).

To address this challenge, most lecturers suggested that grade distribution for each course should be determined based on the GESs the course aims to cultivate. Accordingly, appropriate SAMs should be selected to align with these objectives. They proposed moving away from a predetermined and uniform grade distribution pattern applied to all courses indiscriminately. These suggestions are reflected in the following quote:

> "For example, we should teach how to conduct interviews, we should show the videos for that, and they should conduct an interview or mock interviews, and we should assess that and give marks, if we really give marks based on what they will do in the future, definitely they will show some skills based on what we are assessing" (David-DBS).

The findings of this themes clearly show that the aforementioned SA rules and regulations are limiting the implementation of SAMs for GED. To address this current

situation, lecturers demanded more support from the management of the university so that they could be empowered to implement more effective and diversified SAMs that cater for GED, an issue presented in the next theme.

7.4.2 Theme six: Managerial support:

This theme focuses on lecturers' perceptions of the managerial support needed for effective implementation of SAMs for GED. While few lecturers felt encouraged by university management, the majority expressed dissatisfaction with the support they received. They expected greater involvement from both departmental and university management in three key areas: monitoring SA practices, establishing a healthy SA culture, and providing training.

7.4.2.1 Engagement of the management

The first key area where most lecturers demanded increased support to be provided by the management was in terms of monitoring how SA is conducted in the classrooms and whether it aligns with key university objectives, like the attainment of GAs and the cultivation of employable graduates. Subsequently, this was reported to motivate lecturers to value and direct increased attention to aligning SAMs effectively with GED, as captured in the following quote:

> "The management from time to time has to keep the lecturers reminded that their assessments are being watched and analysed; their assessment is not finishing up the assessment and giving the students their marks, no, their assessment itself is evaluated, checked whether they are in line with the graduate attributes, they serve the purpose or not, if that item is missing, then lecturers will do the assessment, but the purpose of the assessment is forgotten" (Henry-DEN).

Without monitoring and guidance, it was believed that some lecturers might simply take the 'easier and less complicated option' Richard-DEN, especially that such SAMs

were perceived by most lecturers as time-consuming and not easy to implement. This is articulated in the following quote:

> "There are some lecturers who think probably there are too much responsibilities …, so instead I'm going to simplify my work, so instead of giving this more creative and innovative assessment, I just rely on the quiz, now here comes the intervention from the University, the head of the section can intervene, for example, by evaluating the course delivery plan which includes the assessment, and commenting on the assessment criteria or probably instructing the lecturer, do you have any other assessment methods that will, for instance, develop student-centred learning" (John-DBS).

7.4.2.2 Transforming the SA culture

In addition to emphasising the role of the management in monitoring the alignment of SAMs and GED, some lecturers highlighted the critical and leading role the management should play in enhancing lecturers' awareness and understanding of this process by fostering a healthy 'culture' of discussion and innovation about how SAMs could be harnessed toward facilitating GED. Beside 'culture', terms like 'system', 'modality', 'framework', and 'mindset' were used by lecturers to express the primacy of transforming the whole approach toward SA, a vital process in which the management need to take a leading role and lecturers become actively engaged. This is fully illustrated in the following quote:

> "Lecturers should be part of the decision making process, they should be invited to take part in research like this one, where they know that their opinions, reflections are valued and heard, and they should be engaged in some sort of discussion forums, similar to this one, where they see that they are given permission by the management of the university, who need to establish a culture of, for example, research, innovation, bringing innovation to the place, or entrepreneurship, bringing industry to the place. By establishing these cultures and mindset from the top management, I think, we will make an impact, and then maybe we could infuse these in the policy and then in the system" (Alexander-PSC).

This is also echoed by another lecturer who, having been engaged in the reflective process, affirmed that such healthy dialogue about SA is currently missing and

stressed that change needs to be initiated by the management to transform the current 'conventional modalities':

> "We are just going on by the conventional modalities, but there is a need to bring in some kind of changes to the conventional type of assessment where you can incorporate something which will be useful and which will develop all these kind of skills, for example, instead of writing an essay, let them prepare some video presentation in group, give them an issue, let them do some research, come out with some solutions, and give a presentation for about five minutes on the issue. That will definitely help the students to develop so many things like exploring new ideas, doing research, working together, and while working together, they will be sharing their knowledge, so there are so many benefits … if you just go by conventional methods, then you have to work within that framework" (Daniel-PSC).

7.4.2.3 Providing training

As part of exhibiting increased engagement and creating a healthy culture of SA, some lecturers required the management to arrange for providing training to lecturers which would enhance their understanding about the design and implementation of SAMs for GED. However, it is interesting to note here that most of lecturers' accounts about the need for training primarily concerned SEs preparation, which could signify some critical points. First, SEs, as currently implemented, is the most problematic mode of SA in terms of alignment with GED (see Section **7.3.3.2**). Second, given that SEs constitute a significant portion of a course's grade (see Section **7.4.1.2**), these lecturers believe it is crucial to maximise SEs' potential in facilitating GED. Participants' demands for training in this mode of SA were demonstrated through citing examples where some lecturers unwittingly fail to incorporate key GESs. This is exemplified in the following response relating to 'critical thinking':

> "For example, we have a practice of giving students scenarios to develop websites, but what happens is that this is the classwork that we teach them in the classroom. When you go for the exam we will give them the same scenario, but we will just change the name of that website so we are asking the same thing, we are not asking them any critical thinking questions or to

> decide which concept to be used …, the only difference is that instead of apples you are using bananas, so we cannot expect the students to develop" (Samuel-DIT).

Nonetheless, other lecturers did speak broadly about the importance of training provision in all aspects of SA to enhance its contribution to GED. This highlights a significant aspect of SA design and implementation – while lecturers try their best to implement effective SA as experts in their disciplinary fields, SA is a rather technical and complex field that requires sufficient understanding and expertise to be done effectively. Unfortunately, presently, it is mostly left to lecturers to grapple with individually, a situation conveyed by the following lecturer who crisply described her experience of teaching a new course using the metaphor 'throwing a ball into the fire':

> "Lecturers need to be trained to do that, not just given, as if you are throwing a ball into the fire, they don't have experience, I myself don't have experience, what I've done is based on my own reasoning, my own reflection, I see what I do at work, I noticed that I attend meetings, I write emails, sometimes reports, I analyse sometimes data, but this is my own experience, and I tried to put what I've learned into this, but I think we need somebody who is specialised in this" (Olivia-PSC).

The urgency of providing training is further emphasised by another lecturer who identified key areas in SA where lecturers would benefit from receiving specialised training:

> "They [lecturers] should be given training, they should be attending workshops about at least, let's say, bloom's taxonomy, higher order thinking skills, lower order thinking skills, …, teaching methodologies, courses on framing assessments, forming assessment, types of assessments, a lot of education needs to be done in that aspect" (Richard-DEN).

7.4.3 Theme seven: Internal dialogue

This theme presents the challenges lecturers faced in relation to the most important internal stakeholder group, students undergoing SA. Most lecturers complained about students' lack of motivation and engagement, attitudes that make the task of implementing SAMs for GED more difficult and challenging. Lecturers cited various examples of classroom efforts to implement such SAMs, noting that students often display minimal engagement and, at times, resistance to active participation. This is exemplified in the following quotes referring to participation in scenario-based discussions and Q&A sessions in presentations:

> "We are also using a small scenario that could be used in the classroom for the sake of classroom discussions, but somehow again the engagement of the students is somehow minimal" (John-DBS).
>
> "Sometimes if a student is giving a presentation, having somebody from the audience to ask a question is perceived as if they are punishing the presenter, that's why my students refrain, or they try to avoid it" (Richard-DEN)

Due to such attitudes, a few lecturers reported feeling compelled to forgo or modify their SAMs due to student disengagement, despite their belief in the benefit of such SAMs to GED. This is captured in the following quote concerning case study, where this lecturer described the decision of having to modify this method as liquidating 'the quality':

> "I used to give some case study in the name of assignment, but the response was not good, initially I gave then I changed the methodology because there was no output from the students, we're giving challenging or critical thinking questions, but there is no output, one time or two times I gave, then I tried to give something which I can get an output, I had to liquidate the quality" (Edward-DEN).

A few other lecturers raised a critical concern regarding a significant consequence that lecturers who persist in implementing such SAMs might eventually face, leaving them

with the dilemma of either forgoing or continuing despite the potential negative outcomes. While lecturers may decide to continue implementing such SAMs due to their positive impact on GED, students often hold a different viewpoint as they tend to perceive these SAMs as demanding significant effort on their part. This sentiment is reflected in the following quote concerning the low ratings lecturers may receive in the 'Student Evaluation of Teaching' survey:

> "This could also be room for retaliation, you know we want the best for our students, however, some students might view such initiatives as if we are making it hard for them to study, and in the end, it is the lecturer who will suffer because the evaluation is low" (John-DBS).

This is echoed by another lecturer addressing another adverse consequence, being reported to the management:

> "It is a big challenge for me to be honest, because as soon as I start telling the students, this is our plan for this course throughout the whole semester, I'm expecting from you A, B, C, you will be expected to do W,Y, Z, and it's not only about midterm and final, you will need to search, find, give reasons, do all these things, the students start comparing and complaining; comparing with other courses they took before, and they are currently taking with me and complaining to the management – everybody is doing so but Dr Richard is doing so many different things; it is challenging!" (Richard-DEN)

Notably, some lecturers associated students' negative attitude toward such methods with their tendency to be grade oriented. This link is often observed because many of these SAMs demand significant effort from students, as indicated in the above quotes, yet they are often allocated minimal or no weightage in the final grading. As these lecturers suggest, most students decide the degree of engagement in any SAM based on how much it contributes to the overall grade of the course, rather than the skills it may help them develop. This is exemplified in the following quotes:

> "When it comes to assessment, they just look for grades and marks and they really don't understand the value of this, which might really help them later" (Victoria-DBS).

> “Students are concerned about their GPA; other than the knowledge they are more interested in getting the marks. They want marks rather than knowledge” (Catherine-DIT).

However, while some lecturers expressed concerns about students’ primary focus on grades, significantly more lecturers suggested that this could stem from students’ lack of understanding and awareness regarding the significance of these SAMs for their GED, or as one lecturer pointed out, students ‘do not understand the value of what we are doing today to their future’ (Victoria-DBS). Furthermore, a few lecturers regarded this attitude as natural whilst emphasising the need for the entire SA community, especially lecturers, to collaborate in guiding students and raising their awareness about the value of these SAMs. Jacob-PSC, while describing SAMs in his ‘Technical Communication’ course, aptly articulates this process as taking students ‘out of their comfort zone’:

> “Students do something when they know that it is part of the assessment, and there is no way out, so if a student has to go and interview somebody in a company, naturally, the student would be a bit uncomfortable, but my job is simply to get the students out of their comfort zone, so they can grow” (Jacob-PSC).

In order to take students out of their comfort zone, most lecturers emphasised that a dialogue must be established with students to show them how the SAMs they undertake presently link to and carry crucial implications on their future success. Crucially, such dialogue could be created when lecturers consider students as key members of the SA system. This is articulated by Alexander-PSC who states that creating a rapport with students is necessary:

> “I think if the students like the lecturer, believe in him, see that the lecturer is a good model, helping them to get a job in the future, makes it clear that this course is one of the keys to get you a very prestigious job, if they can see how much the lecturer is caring about them, they would like the course. So, creating a rapport with them, not only just telling them that you must do this because of these criteria and assessment, we must show them why the

> assessment is there, what is the point of the assessment, how they can take it with them in the future" (Alexander-PSC).

Subsequently, lecturers highlighted the paramount importance of raising students' 'awareness', 'understanding'; giving 'training', 'orientation'; and the need to 'explain', 'show', 'enlighten' students, and make them 'realise' 'appreciate' and 'understand' this link, which could enhance student motivation and uptake of SAMs for GED. Significantly, without this dialogue, the value of such SAMs and lecturers well-intentioned efforts could continue to be misinterpreted by students, as the following quote fully illustrate:

> "Lecturers need just to bring this awareness more to the students. To make them appreciate why this is happening, lecturers have a responsibility to communicate the graduate attributes to the students at the beginning of the course successfully. Then when the assessment technique comes the students don't have a problem, following up with that, but if they have not understood, then it becomes an issue, they feel like oh see how they want to fail us, they want our GPA to go down" (Jacob-PSC).

7.4.4 Theme eight: Engagement of external stakeholders.

This theme focuses on the significance of engaging one of the key external stakeholders, workplaces and employers, in the process of implementing SAMs for GED, hence, extending the dialogue with crucial partners outside the university walls as they represent the world that students will join after graduation. It is important to note here that a few lecturers addressed the need to involve other external stakeholders like alumni and other HEIs, yet these groups will not be emphasised in this theme as they were minimally mentioned by lecturers. Also, lecturers emphasised the crucial role of industry employers, compared to state workplaces, in enhancing students' workplace readiness and transition. This reflects the University's emphasis

on producing graduates for technology and applied sciences fields, where most graduates find employment.

Before delving into how lectures perceive the role of workplaces in aligning SA with GED, it's crucial to illuminate their perspective on the current university-industry link concerning GED. Some lecturers referred to two main programmes or activities implemented at UTAS-X to engage employers in preparing students for the workforce. The first is STEP, a biennial one-day meeting where university representatives, involving managers, lecturers, and students, convene with employers to discuss aligning academic programmes with work requirements. However, some lecturers raised concerns about the effectiveness of this programme in preparing graduates for their professional roles. A major issue they highlighted was the programme's infrequency, as it occurs only once every two years. Lecturers perceived this as problematic, emphasising the need for a strong, continuous, and sustainable relationship. This is captured in the following quote:

> "We have conducted previously the industry and academia meet that was three, four years ago if I'm not mistaken, however, this activity was not being followed up, there is no follow ups, and this must be continuous, there should be continuous interaction, continuous partnership with the industry" (John-DBS).

Another key issue raised by a few lecturers who participated in this programme pertained to the destiny of recommendations and suggestions provided by employers. As the following quotes suggest, these inputs are not properly enacted, or are merely treated as tick-box activities:

> "These recommendations were forwarded from the college to the management, but we don't know, ultimately the management has to take the decisions, I saw that there were so many inputs given by the industry" (Nathan-DBS).

> "We had open discussion, and we identified the gaps, but still, it is not added to the course outcomes, they are not renewed, … so we need to improve a lot in this aspect" (Christopher-DIT).

The other programme mentioned by some lecturers is the mandatory placement programme known as On-the-Job Training, undertaken by all students towards the end of their study programmes. This programme entails an eight-week training period in a workplace relevant to their field of study. However, concerns were raised regarding the organisation and assessment of this placement programme, which significantly diminishes its benefits for students. Issues such as the quality of placements, lack of assessment mechanisms, and instances of plagiarism were highlighted by lecturers, as exemplified in the following quotes:

> "I'm not happy, because I looked at the writing students produce in their OJT reports, you know what they do, they copy from each other, copy and paste, they submit, and they are awarded marks for that, unfortunately!" (Olivia-PSC).

> "There is no such mechanism like when they finish the internship we assess them, whether they learn something or not … They submit some reports, without reflecting on them. Currently, the student comes from any organisation, takes the report from other students, just change it and submit it. It should not be like that; as a lecturer and that supervisor there, we should sit together, make some assessment collectively and with that assessment we can understand whether they practically did something, or they just wasted their time" (Noah-DIT).

Having identified the absence of a healthy relationship with employers as a challenge toward implementing SAMs for GED, most lecturers suggested ways to establish or improve the current relationship with workplaces, enabling effective engagement in various aspects of students' preparation for the labour market. Lecturers used a variety of terms and phrases to stress the need for maintaining a robust and sustainable link with work organisations. For instance, they emphasised the need for 'tie-ups', 'continuous interaction', 'continuous partnership', and 'collaboration' with industry; as

well as staying ‘in close contact with organizations’ and ‘connected to the employers’. As most lecturers highlighted, establishing a strong and sustained link with employers is critical for engaging them in enhancing SAMs and aligning them with workplace requirements, achievable through various means. Firstly, workplaces could share their expectations regarding the GESs they anticipate graduates to develop through their academic programmes, as succinctly captured in the following quote:

> “We should be very dynamic and responsive, that is the most important thing, being responsive to the needs of the ones that we are sending our students to” (Jacob-PSC).

Once the key competences and skills demanded by employers are identified, lecturers suggested that this information would assist them in devising learning and assessment activities tailored to meet industry requirements. Without this crucial understanding, it was noted that lecturers might struggle to design effective tools to help students maximise their preparedness for the tasks and roles awaiting them in their future workplaces. This sentiment is succinctly captured in the following quote:

> “So once we were able to identify what those competencies are, then that will be a good start to determine which appropriate assessment methods or criteria we could devise in order to show the industries that, hey, our graduates possess these competencies … we need to make sure that competencies will be there before we send our students to the industries because again it is their competencies that can realize the objectives of these companies” (John-DBS).

In addition to enabling lecturers to identify the requirements of workplaces and design SAMs accordingly, some lecturers highlighted the need for direct involvement of employers in reviewing SAMs currently implemented at the university. Through such kind of collaboration and engagement, the university could obtain valuable feedback about the suitability of the SAMs conducted at the university to students’ future roles and professions. This is captured in the following quote:

> “For example, they may see some questions and say they look too simple, or don’t assess the outcomes of the course, or that this type of assessment is related or not related to what we do in the industry. If these questions are part of the work they are doing at industry, then we should be proud because through the way we are asking and assessing we can know if the students are ready for the industry” (Henry-DEN).

Furthermore, some lecturers mentioned engaging employers in suggesting or supplying SAMs they consider instrumental for well-functioning in professional work environments, as the following quotes demonstrate:

> “What I’d like to have more industry involvement in our materials. If they provide us with the type of the things they do at work, the reports they write, or the projects they supply or some of the tasks that their employees do, … I’d like to have more of those managers, with high positions, come and address our students, or maybe teach a class, something related to their majors, and then maybe students reflect on this, write a reflective writing on this visit” (Olivia-PSC).

> “They could, for example, tell us what the current trends are, what kind of assessment they are doing in their organisations which they could suggest to help our students” (Catherine-DIT).

Other lecturers also indicated that some SAMs could be implemented collaboratively with people from workplaces who could enrich the process of assessing student work. This idea is captured in the following quote:

> “We can include the people from industry to assess the students. For example, to conduct mock interviews, to assess the presentations, or the final if it is a 50-marks business plan, in entrepreneurship we can select industry people to assess or senior managers from banks or industry, they can assess whether a business plan is drafted professionally” (David-DBS)

Nonetheless, while proposing these various ways of involving employers in enhancing SAMs for GED, lecturers remained mindful of the potential challenges that might arise during the initiation of this process. A few lecturers highlighted specific difficulties related to engaging employers, such as their busy schedules and expectation of monetary incentives. This perspective is reflected in the following quotes:

> “The major challenge we have been facing in roping the industry people, they do not have time and that's a major drawback” (Victoria-DBS)
>
> “They should be given proper remuneration; industry people won’t come just for free” (Edward-DEN).

Therefore, most lecturers emphasised the leading role that the management should play in initiating, enacting and sustaining this engagement, a task that cannot be achieved by lecturers alone, meaning it ‘should be done at the institutional level’ (Daniel-PSC). This reinforces the crucial role of the support that lecturers demanded from the management, as discussed in the previous theme. This is captured in the following quotes:

Therefore, most lecturers emphasised the leading role management should play in initiating, implementing, and sustaining this engagement, highlighting that such a task cannot be achieved by lecturers alone. As Daniel-PSC stated, it ‘should be done at the institutional level’, underscoring the need for support from management, as discussed in the previous theme. This sentiment is echoed in the following quote:

> “That should be done from the higher authority levels, not from the individualistic levels, like me, and you, it should be a collectively taken decision, then only it can happen, so continuous interaction must be required between the industry and the academy” (Nathan-DBS).

7.5 Summary

This chapter presented the themes generated from the findings of the interviews and documentary evidence. The findings regarding how lecturers implement SA for GED revealed that lecturers at UTAS-X acknowledged the paramount role of SA in facilitating student learning and developing key employability skills. Although most

lecturers initially associated SA with achieving LOs, further probing clarified that they also recognised GED as a central purpose of SA. Consequently, SA was perceived to be linked to key stages in graduates' professional lives, including transitioning to work, maintaining employment, and advancing to leadership roles. Additionally, lecturers associated SA with general life preparation, thus supporting graduates' holistic development.

Exploring how SA is currently utilised to facilitate GED at UTAS-X revealed that assessments within the CA mode were more aligned with GED compared to SEs, primarily due to the restrictive nature of written exams compared to the more naturalistic settings of CA. Lecturers described high-quality SAMs conducive to GED as those informed by real-life scenarios or tasks, cognitively challenging, fostering communication and collaboration, and developing evaluative judgment abilities.

The findings addressing the barriers and enablers of implementing SA for GED showed that lecturers face four key challenges, whose resolution could facilitate the adoption of high-quality SA methods. First, lecturers highlighted the challenge of the university's SA rules concerning LOs and mark distribution policy, which lacked alignment with GED. Second, lecturers perceived a lack of support from the university management, particularly in terms of guidance, training, and fostering a conducive culture for implementing GED-oriented SA. The third challenge was students' lack of engagement in SA processes and their focus on grades, underscoring the need for dialogue with students to enhance their understanding of the role of these certain SA methods in developing employability skills and increasing their engagement. The fourth critical challenge was the poor link between the university and employers, with lecturers calling for more sustainable and strong partnerships to aid in the design and implementation of SA for GED.

The insights gained from the study's interviews and analysed documents added depth and complemented those from the preliminary questionnaire presented in the previous chapter. The next chapter will provide a comprehensive discussion of the findings within the context of the study's theoretical framework, addressing the research questions and illustrating the study's contribution to the existing literature and body of knowledge.

CHAPTER 8: DISCUSSION

8.1 Introduction

This chapter aims to discuss the findings of the study presented in the previous chapters (six and seven), which sought to understand the relationship between student assessment (SA) and graduate employability development (GED) in HE, focusing on a group of HE lecturers at one university campus in Oman. By synthesising the participants' contextual accounts, key literature issues, and theoretical positions outlined in the methodology chapter, the chapter strives to provide meaningful answers to the primary research questions. Ultimately, a model elucidating how the study's findings can contribute to enhancing the alignment of HE student assessment practices with the imperative of GED is presented in Chapter **9**. The objective is to assist HE lecturers and leaders in systematically and effectively implementing this imperative. Grounded in a comprehensive approach that considers all key stakeholders' perspectives, this model offers an alternative collaborative pathway to aligning SA with GED and addresses the challenges faced by HEIs and HE lecturers in this domain.

In addressing the research questions of the study, the forthcoming discussion sections draw upon the two theoretical frameworks that have influenced this research: Boud et al.'s (1985) model of reflection (BMR) and activity theory (AT), as discussed in Chapter **4**. The amalgamation of these two models and their application to the study of SA in HE represents an original and innovative contribution to the literature. This synthesis is expected to significantly enrich the field of SA in HE by providing practical examples and illustrations derived from the data, elucidating central concepts from both frameworks. The insights gained offer practical strategies for leveraging SA as a potent

tool for GED and effectively addressing the associated challenges. While certain concepts from BMR will be highlighted, particularly reflective processes and outcomes of reflection, the majority of the discussion focuses on AT, viewing the primary activity system under examination in this study as the utilisation of SA to facilitate the development of GE capabilities among students.

One important AT concept discussed in light of the study's findings is the concept of the object of an activity system (see Section **4.3**). This concept was used to conceptualise the central objectives or purposes guiding SA as an activity system (SAAS), wherein the system's subjects, the lecturers, acknowledge a current or 'given' object operative at UTAS, which is the measurement and certification of current learning, guiding most of the system's operations. However, lecturers were able to identify a new or 'emerging' object for their SAAS, namely the development of GE capabilities, based on an arising need or 'a developing need state' they have identified (Miettinen, 2005, p. 57). This was proposed by lecturers as the object towards which all the system's processes need to be oriented.

The identification of GED as the emergent object signified the lecturers' recognition of systemic contradictions, which are defined as structural tensions that have built up over time within the SAAS. While these tensions impede the realisation of the emergent object, they can serve as enablers when addressed collaboratively. This recognition marked the identification of a tertiary contradiction within the system. Subsequently, secondary contradictions were identified between this emerging object and other components of the system, namely the system's tools, rules, community, and division of labour. Building on the explanation provided in section **4.4** regarding the key concept of systemic contradictions in AT, Table **8.1** outlines the types of

contradictions discussed in this chapter, along with a brief description and their corresponding sections.

Contradiction Type	Description	Discussion Section
Tertiary Contradiction	Contradiction between the existing **object** and emergent **object** of SA activity system.	**8.2.2**
Secondary Contradictions	Contradiction between the emergent **object** and SA activity system's **tools**.	**8.3.1**
	Contradiction between the emergent object and SA activity system's **rules**.	**8.4.1**
	Contradiction between the emergent object and SA activity system's **community**.	**8.4.2**

Table 8.1 The types of contradictions discussed in Chapter **8**, with a brief description and their corresponding sections.

To augment the findings from the qualitative methods presented in Chapter **7**, this chapter draws, where applicable, on the questionnaire results presented in Chapter **6**, which involved all internal stakeholders (leaders, students, and lecturers). This approach facilitates data triangulation, highlighting areas of agreement between the quantitative and qualitative methods, while also enriching the data by assessing how the qualitative dataset can provide further insights beyond those obtained from the questionnaire alone (Greene et al., 1989; Flick, 2017).

In terms of organisation, the chapter is structured as follows: section **8.2** aims to answer **RQ1**, examining the alignment of GED with SA at UTAS. Following this, section **3.3** focuses on answering **RQ2**, exploring lecturers' perceptions and experiences concerning the utilisation of SA as a tool for GED. Next, section **8.4** addresses **RQ3**,

discussing the barriers and enablers that influence lecturers' utilisation of SA for GED. section **8.5** offers a summary of the chapter.

8.2 Research Question One: To What Extent is Graduate Employability Development an Objective of Student Assessment at UTAS?

RQ1 aimed to investigate the extent to which GED is aligned with SA practices at UTAS. Through the AT framework, the thesis conceptualised SA as an activity system, wherein lecturers were recognised as pivotal community members. Although other members of the community of the SAAS are also vital, this study attempted to include some of these only in its initial exploratory stage, survey data collection phase. The primary focus during the second phase was directed at examining the SAAS at the setting from the perspective of lecturers exclusively through interviews and document analysis (see Chapter **5**). This focus on lecturers stemmed from their critical role in driving the system's object-oriented processes and actions. Existing literature identifies them as the primary point of contact, the custodians, and the catalysts in developing key GE capabilities (Radloff et al., 2008; Sarkar et al., 2020; Amiet et al., 2021). This emphasis aligns with the survey results of this study, which included key internal stakeholders at UTAS. These results overwhelmingly reinforced the view that lecturers bear a key responsibility in GED. Stakeholders consider it critical that lecturers become competent in implementing methods and strategies required for this purpose. Notably, stakeholders perceived lecturers' facilitation of GED through SA tasks to be as impactful as other teaching and learning activities facilitated by lecturers (see Table **6.2**).

Collectively, the survey data collected as part of the study show a moderate level of alignment between SA and GED. The reflective interviews that followed revealed that

the lecturers in this study perceived SA as intricately linked to and playing a pivotal role in facilitating GED. This finding aligns with the research of Kinash et al. (2018), who similarly noted that HE lecturers, in comparison to students, alumni, and employers, emerged as the most prominent stakeholder group in associating SA with GED. Viewed through the lens of AT (Engeström, 1999), the lecturers in the current study identified the cultivation of GE capabilities as the central object or 'ultimate goal' within SAAS (Koh, 2011). This realisation was facilitated by engaging lecturers in a reflective process informed by Boud et al.'s (1985) model of reflection (BMR) and second-generation AT concepts, as discussed in Chapter **4**. Through the application of AT aided by reflective processes, this study offered a diagnostic analysis of the object or central objective driving the processes of SAAS, including the actions of its participants. This analysis provides significant insights into how the lecturers in this study interpreted and made sense of contradictory assessment purposes, identifying GED as the object to which the whole SAAS should be oriented.

8.2.1 Making sense of assessment purposes

SA in HE serves a multitude of purposes, which are acknowledged to be intricately complex, interrelated, and often contradictory (Boud, 2000; Price et al., 2011). This diverse array of purposes increases the complexity of conceptualising and comprehending assessment (Havnes, 2013). Bloxham (2014) offers a useful classification of SA purposes, delineating four main objectives: measuring and certifying performance, ensuring academic standards through quality assurance processes, supporting current learning within the academy, and facilitating lifelong learning capacities extending beyond academia. Some scholars categorise these objectives into summative purposes, focusing on assessment of learning, and

formative purposes, associated with assessment for learning (Boud, 2000; Price et al., 2011). In this study, the category associated with lifelong learning and personal growth is considered most relevant to GED as it underpins the enhancement of GE capabilities beyond the university. This aligns with a growing body of literature that explicitly recognises preparing work-ready graduates as a key function of SA (Koh, 2011; Kinash et al., 2018; Zainudden et al., 2022). For instance, Kinash et al. (2018) assert that 'the primary objective of assessment has shifted from generating classroom competent students to fostering employment-ready graduates' (p. 303), while Koh (2011) describes it as 'the ultimate goal' of SA.

However, it is often noted that most HEIs place more emphasis on the measurement and accountability purposes of assessment, with purposes linked to the development of lifelong learning and employability capabilities receiving less attention (Bloxham, 2014; Fuller et al., 2015; Medland, 2016). This situation is perpetuated by a 'testing culture' that prioritises the former set of purposes, dominating the assessment discourse in HE (Price et al., 2011; Medland, 2016; Villarroel et al., 2018; Chan and Chen, 2023). The HEI setting where this study was conducted appears to be no exception. This emphasis was reflected in the internal stakeholders' ratings regarding the purposes served by SA at UTAS. As revealed by the survey findings, all stakeholders perceived SA's alignment with measuring and certifying performance to be the strongest aspect. In contrast, the weakest alignment was perceived to be with purposes associated with supporting future learning requirements and preparation for professional lives (see Table **6.4**).

Moreover, lecturers' rich accounts collected through interviews initially revealed varying understandings among them regarding the central purpose or object of SA.

While most lecturers associated SA with short-term goals, such as measuring performance and certifying that students have attained the specified outcomes for their courses, only a minority expressed awareness of lifelong purposes associated with developing the capabilities required for work and life (see Section **7.3.1**). These initial interview responses from lecturers align with the findings of Postareff et al. (2012), who found that academics in their research context struggled to articulate SA purposes consistently and demonstrated varying understandings of them. Only a minority perceived assessment in terms of 'transformational' purposes, which the authors associated with fostering students' deep learning through the stimulation of higher-order cognitive processes.

To understand the disparity in lecturers' responses regarding the ultimate object of their SAAS, with the majority initially associating it with short-term assessment goals, the study employed the lens of AT. Activity theorists argue that the object of an AS may manifest in various ways to different actors and at different stages of the activity's lifecycle (Foot, 2002; Nicolini, 2012; Dann, 2014). Consequently, Kaptelinin (2005) describes it as challenging to comprehend or articulate and prone to misunderstanding. Hence, one interpretation for lecturers' initial difficulty in identifying the ultimate object of SAAS, could be attributed to the nature of objects of activity systems. Operating as a moving target, it served as a means for lecturers in this study to establish 'conscious short-term goals' essential for maintaining their actions within the system (Engeström, 2001). Subsequently, when questioned about their reasons for assessing students, most lecturers' focus remained on the immediate action-oriented goals driving their individual actions, such as achieving learning outcomes, assigning grades, and determining student success or failure, rather than the 'ultimate reason' or object underlying these goals. Engeström (2001) cautions against conflating

these goals with the activity's object, as it risks reducing it to merely serving these goals.

Through exploring the central object of SAAS, this study facilitated the delineation of a 'conceptual map' outlining the primary areas to which lecturers' thinking or attention was directed (Cole and Engeström, 1993). Hence, I contend that the short-term goals expressed by most lecturers regarding the orientation of their SAAS can be viewed as a reflection of the prevailing SA culture and discourse within the setting, shaping its interpretation by community members. Activity systems evolve through various cultural and historical cycles, with residues from these cycles continuing to influence their development (Kuutti, 1996). In a specific context, 'the dominant discourse and underlying culture of assessment will serve to guide the "goal" and ultimate influence of assessment' (Medland, 2016, p. 82). As outlined in section **7.4.1.1**, the official documents of UTAS outline the achievement of learning outcomes as the primary purpose of assessment. This understanding, conveyed to lecturers, became widely shared among SAAS community members.

Furthermore, this perception was reinforced through other integral components of SAAS, such as the prevalent use of summative exams (SEs), emphasising a discourse centred on measurement and grading, as discussed in the section **5.2.1.3**. Additionally, enforced rules standardise assessment to ensure accountability and allocate higher grade percentages to SEs, further reinforcing this perspective. Moreover, the actions of key community members, particularly leaders, focus on measurement and accountability purposes, as detailed in the section **5.2.2.2**. These components act as mediators, influencing lecturers' perceptions of the objectives to be achieved and consequently shaping their alignment of assessment tools with this understanding.

Considering the impact of such mediating components on the actions of community members, the thesis stress the importance of examining the object-oriented, artifact-mediated SAAS as a whole, encompassing all its key components, as advocated by Fletcher (2021). Hence, the study adopted this holistic approach to examine the underlying objectives influencing the actions of members within SAAS.

8.2.2 Identification of GED as the ultimate object of SAAS

Evidently, the mediational relationships or interactions between the systems' components, discussed earlier, are the very features that render the systems' object to be both 'given and emerging' (Jones, 2013, p. 594). Such interactions allow the system's subjects or actors to identify its internal contradiction and reconceptualise the object toward embracing 'a radically wider horizon of possibilities than in the previous mode of the activity' (Engeström, 2001, p. 137). In this study, identifying the systemic contradictions within SAAS required lecturers to undergo a process of reflection and sense-making (Miettinen, 2005). Hence, the study involved lecturers in reflecting on the capabilities required of SA to develop in graduates and then working backward to align other components of the system with this "emerging" object. This process led lecturers to depart from the long-established ways of operating as members of SAAS and to distinguish the "given" short-term goals from the ultimate object of SAAS. Such insights were articulated by some of the participants in this study using phrases stressing what the object is, or should be, like:

> "I don't want to test them whether they can do it in the classroom or not, my hope is that they can transfer this sort of skills into the real field when they join work" (Alexander-PSC),

> "How they can contribute their knowledge when they are going for their profession, this is actually the aim" (Edward-DEN).

The need to engage lecturers in reflecting upon their SAAS arose as an attempt to break the perceived ‘stagnation’, or lack of transformation, within the system and instigate a fresh cycle of ‘expansive learning’ (Engeström and Miettinen, 1999), thus imbuing the study with an interventionist dimension. I argue that such reflective processes were essential to catalyse transformation within the SAAS at the setting. This is because systems devoid of such reflective engagement risk remaining ‘nonexpansive’, merely perpetuating existing patterns without meaningful change (Engeström, 1999, p. 35). Consequently, reflection enabled lecturers to pinpoint a crucial ‘tertiary contradiction’ within their SAAS. This prompted them to ‘introduce the object and motive of a culturally more advanced form of the central activity’ (Engestrom, 2015, p. 70), thereby reorienting the SA activity system towards this more advanced object. This shift is evidenced by lecturers’ recognition of GED as the object of SAAS and their articulation of how SA serves as a facilitator of GED, as shown earlier. The following quote vividly illustrates the entrenched stagnation within the SAAS setting as well as lecturers’ recognition of the pressing need for transforming SAAS:

> “We are doing a routine process, I forgot that this relates to student employability. There has never been a discussion about the skill sets that students need to get employed that we as lecturers have to develop, no one has discussed this before, only we are doing the routine processes of coming, teaching and preparing assessment, but not how to prepare exams and what factors are important in preparing assessment … now after our discussion definitely I’m going to think about it and I’m going to definitely relate my assessments to graduate employability – the skills required to get a job. You created this spark in me, and now I’m going to work on that” (Samuel-DIT).

Reflected in the above quote is the profound shift in lecturers’ perceptions of assessment within their SAAS, where they began to recognise its pivotal role in preparing students for life beyond graduation (Race et al., 2005). This shift is one of

the outcomes of reflection, as indicated by Boud et al's (1985) model of reflection (see Section **4.5**). By aligning their SAAS with GED, lecturers demonstrated a sophisticated understanding of employability, echoing the comprehensive definition discussed in the literature chapter of this study. They perceived SA as a means to facilitate lifelong learning and the enhancement of capabilities crucial for employment, contributing to personal, economic, and social well-being (Harvey, 2005; Oliver, 2015). This conceptualisation of GE resonates with the survey findings, where stakeholders predominantly associated GE with the development of essential employability and lifelong learning capabilities, emphasising the holistic nature of student development. Notably, the aspect least associated with GE was students' attainment of high grades upon graduation (see Table **6.1** – questionnaire findings).

This understanding was further elucidated by lecturers, who associated assessment for GED with various stages and facets of students' professional and social lives (see Section **7.3.2**). Firstly, SA was recognised for fostering the development of essential capabilities transferable to professional contexts (Bloxham and Boyd, 2007; Villarroel et al., 2018), and for nurturing attitudes and personal attributes highly valued by employers, such as responsibility and accountability (Deeley, 2014; Harland et al., 2015). Secondly, it was believed to provide students with opportunities to engage in tasks mirroring real-life situations, both physically and socially (Gulikers et al., 2004). Hence, assessment was perceived as 'a proxy of the real world' (Ajjawi et al., 2020), reflecting the complexities of real-world environments and enhancing students' awareness and readiness for professional challenges (McArthur, 2011; Fung, 2017; Montano et al., 2023). Moreover, lecturers demonstrated a sophisticated understanding of how these capabilities are interconnected with various stages of graduates' careers, from initial job search to career advancement. These insights

affirm authentic assessment tasks as crucial ‘boundary objects’ (Ajjawi et al., 2020) and ‘epistemological tools’ (Choy, 2009) aiding students in their transition to professional life.

8.2.3 The significance of framing student assessment as an activity system

Conceptualising SA as an activity system with GED as its ultimate object through the AT framework provides educators with greater clarity and coherence. Rather than viewing assessment purposes as equally important and potentially conflicting, as discussed in section **8.2.1**, AT allows for a recognition of their multi-layered nature. This shift in perspective can alleviate the confusion surrounding SA purposes and their contradictory functions. It has the potential to mitigate the complexity surrounding SA among various stakeholders (Havnes, 2013), and provide a means to reconcile perceived contradictions (Boud, 2000; Price et al., 2011). Such understanding can function as ‘a step to homogenise the objectives of all those involved’, (Bayat and Naicker, 2012, p. 897), benefitting the assessment field by promoting clarity and coherence in assessment practices.

Therefore, I contend that without securing the commitment of all lecturers, and eventually engaging other stakeholders, in embracing the notion that the primary aim of SAAS is to enhance the employability of graduates, and that all SA practices should be directed towards this end, SA will persist in merely serving short-term objectives, often with conflicting or contradictory nature (Boud, 2000; Price et al, 2011). Consequently, the overarching object among members of the community, spanning leaders, educators, and students, will remain obscured. This is not to diminish the significance of such short-term goals; rather, they must be evaluated in light of their

contribution to the attainment of the ultimate object. In alignment with this perspective, Boud (2000), a pioneering advocate for leveraging SA for lifelong learning and development, proposes that no other purpose should undermine the achievement of this ultimate aim of student learning and growth; instead, all purposes should complement and align with it.

In essence, short-term goals are significant only when they contribute to the accomplishment of the ultimate object, as it is through this object that the collective activity gains its meaning and significance (Nicolini, 2012). For example, an assessment task should not solely aim for factual recall of disciplinary knowledge; rather, this knowledge should be applied and linked by the student to practical or real-life situations. In other words, memorisation should not be considered an end in itself (Villarroel et al, 2018). Similarly, the practice of lecturers grading students' work becomes more meaningful when students negotiate their marks with the lecturer after engaging in the practice of self-assessment based on a provided rubric, as this facilitates students' development of argumentation and persuasion abilities (Deeley, 2014).

Nonetheless, it's essential not to perceive GED as static or fixed object (Engeström, 2001). I argue that identifying GED as the ultimate object in this transformed version of SAAS within the context of UTAS-X, as highlighted in this study, does not imply that it cannot or should not be further modified, enhanced, or even replaced in future iterations based on newly emerging needs. Engagement in discussions, reflections, and responsiveness to evolving cultural, social, and professional demands are essential for the continual evolution of SA practices. Therefore, it is imperative that lecturers continue to engage in collective discussions and reflections on their SAAS

alongside other stakeholders (Boud et al., 1985). This ongoing dialogue is vital for transforming activities and avoiding stagnation or lack of expansiveness.

8.3 Research Question Two: How Do Lecturers at UTAS-X Perceive and Use Student Assessment as a Tool to Facilitate Graduate Employability Development?

The aim of the second research question was to investigate the perspectives and experiences of lecturers regarding the utilisation of SA tools for GED. In line with this objective, the findings chapter endeavoured to uncover how this group perceives the application of SA methods or tools in fostering the employability capabilities of their students, while also offering rich contextual accounts of their practical implementation of these approaches. Through a close examination of the thematic patterns unearthed in the findings chapter vis-à-vis the existing literature and the theoretical underpinnings of the study, this section will draw conclusions on how SA tools can be best employed by HE lecturers to facilitate GED.

8.3.1 Aligning the system's tools with the emerging system's object

Section **8.2** explored the concept of the object-orientedness of SAAS. This section now examines another significant notion: SAAS being artifact mediated. A crucial implication of SAAS community members recognising the development of GE capabilities as the new or emerging object of SAAS, as discussed earlier, was the necessity to embrace novel courses of action and fresh paths of artifact creation conducive to achieving this object (Miettinen, 2005). In essence, the articulation of the central object of SAAS led to embracing a significantly broader range of possibilities compared to the previous approach to the activity (Engeström, 2001, p. 137). A critical aspect of effecting these new possibilities relates to the artifacts or tools that lecturers

deemed necessary for operating SAAS and mediating it towards the accomplishment of its object. Havnes (2013), who similarly applied AT to the study of SA, suggests that orienting SA as an activity system to its evolving object demands that:

> "Content, timing, and modes of communication need to be altered, compared to assessment framed as a tool for certification or control of what has been learned" (p. 96).

The concept of cultural artifacts or tools is central in AT as it is through these artifacts that members in activity systems participate in the artifact-mediated, object-oriented activity. As Lund (2008) suggests, by characterising SA as a collective activity system, with an intricate interplay of cultural artifacts serving as the conduit for the mediation of SAAS, the focal point of assessment shifts from the mere individual to the dynamic intersection where individual efforts intertwine with collective endeavours. Drawing from the framework of AT, I argue, as discussed in relation to RQ3, that individual lecturers' actions as they utilise these tools cannot be understood in isolation from other community members who produce or use these tools, the rules governing their use, and the roles assigned to various members concerning different aspects of their use. All these components of the collective activity dynamically influence or mediate this usage. Therefore, these artifacts are central to understanding how activities are carried out and how they shape human behaviour within the socio-cultural context of UTAS.

As an artifact-mediated activity system, SA encompasses both physical or material and symbolic or abstract artifacts (Maimaiti et al., 2023). The first category includes assessment instruments such as tests, assignments, rubrics, scoring guides, and answer sheets. These can also manifest in electronic or virtual forms like software used for online assessments, grading software, and plagiarism detection tools. The

latter category comprises tools that may have a material form but carry significant symbolic meanings, such as academic standards, learning objectives, comments, grades, feedback, and the language used by SAAS community members to communicate assessment values, beliefs, and priorities.

Comprehending SAAS necessitates an examination of the evolution and integration of various assessment tools into the system across its historical developmental cycles, ultimately utilised by lecturers as mechanisms to fulfil the object of assessment as a social practice (Nardi, 1996, p.14). To elucidate this aspect of lecturer tool utilisation, the study employs two significant concepts of AT: internalisation and externalisation (Jonassen and Rohrer-Murphy, 1999; Engeström, 1999). Lecturers embark on this process of internalisation or enculturation upon joining their respective departments, wherein they commence learning and acquainting themselves with the implementation of various assessment methods and approaches within their local SAAS cultures, adhering to historically and culturally established rules and conventions within UTAS. The internalisation of such elements and modes of operation facilitates the sustainability of SAAS as it becomes culturally reproduced (Engeström, 1999).

However, lecturers' recognition of the tertiary contradiction, discussed in section **8.2.2**, which led to the recognition of GED as the object of SAAS, signalled the initiation of a process of externalisation (Engeström, 1999), marking the expansive transformation of SAAS. This study demonstrated this process through the various SA methods or tools that lecturers were, or hoped to be, able to adopt to align their assessment actions or practices with GED. While the adoption of such new artifacts introduces a new form or structure of SAAS as part of envisioning a redefined version of the object, it simultaneously generates secondary contradictions within the system, resulting from

the interactions that take place between its various components, or corners (Engestrom, 2015). The resolution of these contradictions becomes critical for establishing the smooth functioning of the new expanded version of SAAS (Engeström, 1999).

The first secondary contradiction identified by this study was between the emerging object and the tools that the adoption of this object necessitates. Accepting GED as the object of the new SAAS version prompted lecturers in this study to contemplate 'new directions of actions, new trajectories of artifact construction' and new capabilities that need to be nurtured at both the individual and collective levels to facilitate working on GED (Miettinen, 2005, p. 53). This is partially evidenced by the quotes provided earlier in section **8.2.2** as outcomes of reflection. The rest of this section discusses next the assessment tools identified as necessary for accomplishing GED within the expanded, ideal version of the SAAS. Other systemic secondary contradictions between the arising object and other components of the SAAS are addressed in relation to **RQ3**.

Upon identifying the ultimate object of SAAS and guided by the reflective process lecturers started to apply a central criterion for judging the quality of assessment tools needed to accomplish this object which is the degree of their alignment with or feasibility for the realisation of the object: developing GE capabilities for future learning and personal development. Based on this understanding, assessment tools that were not fit for the achievement of GED were considered of questionable value (e.g. those solely encouraging memorisation or learning of subject knowledge). Subsequently, lecturers who fail to make this link were described as doing a 'big disservice' to students and 'going around a vicious circle' (see Section **7.3.2.**). This was the same

criterion based on which various authors in the literature have rendered many of the currently dominant traditional assessment tools to be inappropriate for GED and advocated for the adoption of more innovative and fit-for purpose assessment tools (Bryan and Clegg, 2006; James and Casidy, 2018; Morley and Jamil, 2021; Montano et al., 2023).

8.3.2 Diversifying assessment tools: meeting the demands of GED

Lecturers' critical evaluation of the existing assessment tools, as part of the externalisation process discussed earlier, started by assessing the value of the current assessment modes and methods, tools, to the object, GED, and outcome of SAAS to be realised, production of employable graduates. Most lecturers were critical of written exams, which have culturally established themselves as the dominant assessment tool at UTAS, becoming the main method of SA in almost every module at the setting (see Section **7.3.3**). Consistent with the study's findings and with the AT's notion seeing tools as a critical constituent of cultural, historical activity systems, some commentators refer to written exams as being heavily 'influenced by longstanding cultural practices in the academic disciplines' (Boud, 2008, p. 29), while others critically view them as tools for enculturating students into academic, rather than real world, practices and procedures (Herrington et al., 2004; Jones et al., 2009).

As traditional assessment tools, written exams faced criticism from lecturers for their perceived lack of relevance to the skills and capabilities that students will require upon graduation (Sokhanvar et al., 2021; Montano et al., 2023; Segbenya et al., 2023). As detailed in section **7.3.3**, accounts from Jacob and Robert highlight concerns that written exams do not adequately facilitate essential GE capabilities, such as

communication and critical analysis, which are highly sought-after in many workplaces (Jorre de St Jorre et al., 2021). Others, like George, have raised issues regarding the physical conditions of exams, such as the lack of sufficient time and the prohibition of external sources, which fail to reflect real-world tasks and contexts (Gulikers et al., 2004). Notably, some lecturers have emphasised that real-world problems do not present themselves in the same format as examination questions. These findings are consistent with other studies that criticise exams as the dominant assessment tool, highlighting their perceived lack of meaning and relevance to real-world scenarios (Struyven et al., 2005; Sokhanvar et al., 2021; Montano et al., 2023).

In contrast, assessment tasks conducted in more realistic settings, which were referred to as continuous assessment (CA), were considered more oriented to the realisation GED. Such assessment tools were evaluated using the same criterion which is their potential for enhancing GE capabilities. At times, lecturers enumerated the capabilities or skills that such tools facilitate, stressing that they can be ‘inexhaustible’ (Jacob) like communication, teamwork, problem solving and decision making. The assessment tools or methods cited for possessing such potential or characteristics were consistent with those observed by researchers in the literature like oral presentations (Deeley, 2014; Sotiriadou et al., 2020), collaborative projects (Ehiyazaryan and Barraclough, 2009; Kohnke et al., 2021), and simulated case studies (Schonell and Macklin, 2019; Dyki et al., 2021; Way et al., 2021; Connolly et al., 2023). Additionally, it was observed that the naturalistic setting inherent in CA, in contrast to the controlled environment of SEs, offered valuable chances for students to apply a diverse array of pertinent GE capabilities. This approach was thought to serve connecting theory with practice rather than exacerbating the gap between the two (Archer et al., 2021).

Significantly, despite the overwhelming consensus on the need to reduce reliance on written exams as a tool for achieving the object of SAAS, some lecturers did perceive value in written exams for GED. However, these lecturers did so while considering the need to utilise written exams as a proxy for real-world scenarios, such as incorporating problem-solving and case analysis questions (Ajjawi et al., 2020). As demonstrated in section **7.3.3**, most lecturers did not indiscriminately advocate for ruling out the use of written exams for GED. They argued for a thorough examination of the relevance they could bear to the tasks that students would face in their prospective future roles. For example, written reports were deemed essential in certain professional contexts. This perspective aligns with authors who advocate for evaluating the value and relevance of specific assessment tools or tasks in the context of specific study programmes, which may differ in crucial respects (Forsyth and Evans, 2019). This involves assessing them against the 'criterion situation in professional life,' informing the design of the assessment task (Gulikers et al., 2004).

Upon examining how lecturers portrayed the two primary assessment modes – summative exams (SEs) and continuous assessment (CA) – and their plea for allocating a greater proportion of grades to CA tools (as shown in Section **7.4.1**), the study underlines the imperative to diversify the approach to conducting summative assessment within SAAS. This entails reducing reliance on written exams and integrating, or replacing them with, tools such as projects, live or recorded presentations, and case studies as mainstream summative assessment techniques. Instead of solely advocating for formative assessment, which received less emphasis due to students' lack of engagement (as discussed in Section **7.4.3**), there is a need to enhance the utility of summative assessments in fostering GE capabilities among graduates by augmenting its formative functions (Su, 2015). This resonates with

numerous studies, which focused on innovating summative assessment practices while retaining their graded nature. For instance, Arsenis et al. (2022) substituted individual written assignments with group video assignments, Kohnke et al. (2021) replaced essays with authentic projects, and Dyki et al. (2021) exchanged business reports for video-recorded group presentations followed by interactive sessions. Moreover, a recent study has demonstrated a positive correlation between the integration of such methods as part of summative assessment and GED (Segbenya et al., 2023). The authors notably recommended assigning greater weight to such assessment tools in grading, asserting that:

> "The more graduates are exposed to these types of assessments instead of the sit-down examination, the better their chances of acquiring employability skills" (p. 821).

8.3.3 Characteristics of the assessment tools for integration into SAAS

Having advocated for the introduction of variation and innovation in the array of assessment tools within the new version of SAAS, the study facilitated lecturers in identifying the essential features or characteristics that these tools must embody to fulfil the object of the transformed version of SAAS. Often, this involved comparing the potential effects of appropriate and inappropriate tools on GED, as illustrated at the end of each quality dimension (see Section **7.3.4**). Overall, lecturers' descriptions of these assessment tools within the context of UTAS aligned with the features used in the literature to define 'authentic assessment' (Gulikers et al., 2004; Villarroel et al., 2018). This resonates with the significant emphasis placed by various authors in the literature on the importance of implementing AA as a key approach to GED (Bosco and Ferns, 2014; Berger and Wild, 2017; Sotiriadou et al., 2020; Schultz et al., 2022;

Collins, 2022). This section now discusses the four categories of qualities that the study asserts are essential for the tools utilised to achieve GED.

8.3.3.1 Emulating real-world scenarios

The first critical feature identified as a characterising element of assessment tools deemed appropriate for realising the object of SAAS was ‘realism’ (Villarroel et al., 2018; Boud and Ajjawi, 2019). Lecturers perceived an assessment task as realistic when it was performance-based and embedded within a professional context relevant to their students’ study programmes (Villarroel et al., 2018). This understanding emerged from lecturers’ ability to envision the prospective professional roles, tasks, or individuals with whom students would interact, along with the requisite capabilities and attitudes students would need to demonstrate for success. This notion aligns with the physical context suggested by Gulikers et al. (2004). For example, some of the assessment tasks identified as ‘real’ by lecturers were centred around specific professional roles, such as HR manager or bank employee, along with descriptions of tasks that graduates in these roles would be expected to perform effectively. These tasks included activities such as recording a meeting with a manager or clients in a relevant workplace to address a problematic issue, or engaging in role-playing scenarios where students act as salespersons convincing customers to purchase a product. Lecturers frequently contrasted these realistic assessment tasks with those considered ‘unreal’, such as traditional exams or essays, to illustrate their limited utility and relevance within professional contexts. Further discussion on the characteristics of real-world scenarios or problems is provided in section **8.3.3.3.**

8.3.3.2 Promoting communication and collaboration

The next feature of the tools considered vital for advancing GED is assessment methods that cultivate graduate communicative and collaborative capabilities, aligning with the 'social context' dimension of AA emphasised by various authors (Gulikers et al., 2004; Koh, 2017; Care and Kim, 2018). Many lecturers attributed significant importance to such assessment tools, recognising that the application of these social capabilities in many workplaces is often 'the rule rather than the exception' (Gulikers et al., 2004, p. 74). Notably, assessment tasks that involve collaborative project or assignment completion were perceived as providing students with valuable learning experiences, nurturing their maturity for lifelong learning and growth (Su, 2015; Carless and Boud, 2018). As Richard-DEN articulated in section **7.3.4.3**, such assessment tasks enable students to actively engage in the teaching and learning process, thereby empowering students for future employment opportunities. In other words, they make 'learning, teaching, and assessing become mutually constitutive of knowledge building' (Lund, 2008, p. 33).

In this study, lecturers consistently supported the perspective of assessment as a social practice, emphasising its future-oriented processes. Notably, assessment tasks such as group projects or assignments were highlighted for their potential to target the development of a range of collaborative capabilities as students engage in the process leading to the submission of a final group work. As revealed in section **7.3.4.3**, alongside fostering student interpersonal skills through 'constant communication', these collaborative assessment tools were seen as promoting other relevant skills and attitudes such as planning, coordination, responsibility, and feedback exchanges to improve the final product. The strong emphasis on such assessment methods

stemmed from their ability to provide students with valuable opportunities for ‘collaborating with peers in a socially supportive learning environment over an extended period’ (Koh, 2017, p. 5), in contrast to written exams, which lecturers described as ‘one run,’ ‘one go,’ and ‘one setting assessment [requiring] one sleepless night’.

Moreover, these collaborative affordances provide lecturers with the opportunity to focus on assessing and developing capabilities that may be difficult to address through individual assessment methods (Virtanen and Tynjälä, 2019; Jorre de St Jorre et al., 2021). Some lecturers voiced criticism in this regard, describing individual assessment methods as ‘one-directional,’ emphasising their limitation in facilitating the crucial multi-directional flow of dialogic interactions between lecturers and students, as well as among students themselves (Carless et al., 2011). This highlights the heightened authenticity of collaborative methods, which mirror the social context of real tasks in many professional work environments (Gulikers et al., 2004). By placing emphasis on the social dimension in assessment, the perspective of assessment as a social practice, adopted in this study, is further reinforced. This viewpoint is essential as it necessitates a reassessment of how all stakeholders perceive assessment. Here, assessment processes are valued equally with the assessment products they generate, reaffirming the understanding of assessment as both ‘a product and a (future-oriented) process … hence must be brought into the learners’ horizon as an opportunity for development’ (Lund, 2008, p. 36).

However, despite these positive features, lecturers provided minimal mention of the issues associated with group activities, particularly free-riding, which can significantly impact the development of key capabilities and attitudes targeted by such tasks

(Further discussion of why students may exhibit such tendencies is presented in Section **8.4.2**). Free-riding, defined as 'individuals benefitting but contributing less than their fair share of the assessment tasks' (Maiden and Perry, 2011, p. 452), has been extensively discussed in the literature concerning collaborative assessment methods such as group video presentations or reports (Dyki et al., 2021; Arsenis et al., 2022) and live case studies (Schonell and Macklin, 2019; Archer et al., 2021). These authors have proposed various strategies to address this challenge and maximise the benefits for all students from such assessment tasks in skill development. Arsenis et al. (2022), for example, utilised peer assessment as a means to counteract this concern, wherein students evaluate each other's contributions to the task achievement. In this approach, a smaller percentage of the total mark is allocated to individual peer-assessed performance, while a larger percentage is assigned to the lecturer-assessed group work.

In the context of live case studies, Schonell and Macklin (2019) assigned team members the responsibility of supplying reports about each member's contribution, while Archer et al. (2021) required individual reflective essays alongside the final group submission. In all cases, students were provided with clear rubrics and instructions on how both group and individual performance would be assessed. This combination of tools confirms the complexity of developing GE capabilities and the challenges involved, which necessitates the simultaneous application of various assessment tools. The absence of mention of the free-riding issue by lecturers may stem from the scarcity of communication and collaboration-enhancing assessment tools implemented within the setting. This scarcity could be partially attributed to the limited grade value assigned to such assessment modes, thereby reducing the opportunities for lecturers to encounter and address such challenges. Consequently, the study

accentuates the imperative of embedding this crucial characteristic into SAAS assessment tools, while concurrently addressing obstacles hindering its integration (further discussed under **RQ3**).

8.3.3.3 Stimulating higher-order cognitive processes

Assessment tools involving students in communicative and collaborative tasks were frequently highlighted, often in conjunction with the application of challenging or higher-order cognitive processes, which represents the third feature characterising high-quality AA tools. As revealed through lecturers' reflective accounts, nearly all other quality dimensions discussed included mention of students resorting to communication and collaboration. This association appears logical since, as Boud (2000) explains, 'the more complex learning is, the less likely that it can be accomplished in isolation from others' (p. 162). Additionally, communicative and collaborative abilities are crucial for authentic problem-solving tasks, as such tasks depend on processes of deliberation and justification among team members while attempting to arrive at the most feasible solutions or decisions addressing issues at hand (Koh, 2017).

In alignment with such perspectives, lecturers identified various skills that assessment tools presenting students with cognitively challenging tasks are expected to cultivate, including critical thinking (Conklin, 2011; Rear, 2019), higher-order thinking (Sadler, 2016; Mohamed and Lebar, 2017), problem-solving, and decision-making (Virtanen and Tynjälä, 2019). Occasional references were also made to Bloom's taxonomy as a valuable framework for ensuring the integration of such skills into these types of assessment tasks (Conklin, 2011). While emphasising the significance of conducting these tasks in teams, some lecturers also recognised the value of occasionally

administering them individually, particularly within the context of written exams, especially in the form of case or scenario-based tasks. This approach was justified by one lecturer who highlighted that in certain professional settings, students may be required to independently and promptly provide solutions or make decisions regarding problematic issues.

However, a notable characteristic stressed by most lecturers regarding tools that nurture higher-order cognitive capabilities is their minimisation of memorisation, or what some lecturers referred to as lower-order thinking skills (LOTS), except in cases where recalling fundamental concepts or laws is deemed necessary. The shift away from prioritising memorisation, as highlighted by lecturers, resonates with arguments advanced by several authors in the literature. They contend that excessively assessing factual knowledge may now be considered redundant, particularly in light of technological advancements that facilitate rapid and dependable retrieval of information (Conklin, 2011; Lynam and Cachia, 2018; McTighe et al., 2020).

Thus, the study highlights a few critical features of assessment tools aimed at supporting students' development of HOTS while avoiding the emphasis on memorisation as the sole focus of assessment tasks (Villarroel et al., 2018). Firstly, these tasks must encourage students to apply and reconstruct theoretical or disciplinary knowledge obtained from various sources in their studies into new contexts, thereby fostering the creation of new knowledge forms (Cumming and Maxwell, 1999; Mohamed and Lebar, 2017). This process involves students processing data, information, or inputs to solve problems or make decisions about specific issues or scenarios, which necessitates the application of cognitive processes such as analysis, synthesis, and evaluation. The learning modes promoted by these

assessment tasks align with ‘knowledge production’ or transformation associated with HOTS, as opposed to ‘knowledge reproduction’ (Samuelowicz and Bain, 2002).

However, despite advocating for a reduction in emphasis on memorisation, a note of caution is due here as lecturers’ narratives appeared to lack a comprehensive grasp of the requisite extent of memorisation. As evident from the preceding discussion, students require a foundational understanding of background or disciplinary knowledge to effectively apply their HOTS. This underlines the need for the recall of relevant information to serve as the foundational material for cognitive processing and the generation of novel insights. Furthermore, while technology can play a pivotal role in the educational landscape, educators cannot simply overlook the significance of information recall by assuming that technological aids can entirely replace traditional memorisation methods (Myrzabaev, 2022). It is essential for students to possess a robust foundation of fundamental disciplinary knowledge encompassing laws, principles, procedures, etc, pertinent to their field of study (McDermott, 2021). This raises intriguing questions concerning the requisite extent of foundational knowledge students must acquire before engaging in advanced cognitive processes. These considerations open avenues for future research, which are further discussed in section **9.5**.

Another crucial aspect reiterated by some lecturers within this category of assessment tasks is the imperative for these tasks to mirror real-life scenarios beyond the classroom, discussed in section **8.3.3.1**. In this context, they stressed the importance of presenting students with fresh, non-repetitive, or unfamiliar problems or scenarios in assessment tasks aimed at developing HOTS (Koh, 2017; Mohamed and Lebar, 2017). Such problems were characterised by some lecturers as often lending

themselves to multiple solutions or courses of action rather than fixed or singular ones. In such instances, the emphasis shifts towards the process of students' formulation and justification of proposed solutions, thereby fostering the development of multiple skills concurrently (Kreber, 2014; Kift, 2019). Hence, the study affirms that integrating these features into assessment tasks is essential for mirroring real-life problems, including those found in professional settings. Authors often describe such problems as 'ill-structured' (Koh, 2017), 'wicked' (Knight and Page, 2007), and involving 'multidimensional and interdependent' problems (Kreber, 2014).

8.3.3.4 Cultivating evaluative judgement

Besides their critical importance for developing students' HOTS, AA tools were associated with the development of another relevant capability: evaluative judgment. Lecturers referred to evaluative judgment as students' ability to assess both their own work in individual tasks and that of their peers in collaborative settings (Tai et al., 2018). Some lecturers emphasised the significance of this capacity by critiquing a graduate's reliance on others, particularly superiors, to evaluate their work, viewing it as a sign of incompetence in many professional settings (Tan, 2007; Fastré et al., 2013; Ajjawi et al., 2020). Remarkably, the study noted that most lecturers placed significant importance on students actively engaging in collaborative feedback generation with their peers during group assessment tasks. In fact, this emphasis on peer-generated feedback surpassed that of self-generated feedback or self-assessment conducted independently by students, as section **7.3.4.4** shows.

One possible explanation for lecturers' emphasis on collaborative feedback exchanges is the value they attribute, as discussed earlier, to scaffolding students' communicative and collaborative capacities. This approach aligns with complex

learning processes (Boud, 2000) and with professional work environments, where team projects and problem-solving are commonplace (Gulikers et al., 2004; Koh, 2017). So, this led lecturers to give precedence to feedback generated within teams over self-assessment or self-generated feedback. Consistent with the other previously discussed assessment characteristics, lecturers here strived to harmonise their assessment tools with the evolving object of SAAS. They achieved this by envisioning the essential aspects of feedback generation requirements in workplaces to inform the implementation of assessment tasks at the university level. These descriptions correspond with recent research endeavours focused on incorporating insights from workplace feedback processes into academic assessment practices (Noble et al., 2020; Joughin et al., 2021).

Lecturers' visualisation of the feedback behaviours expected from graduates in professional workplaces included the ability to utilise available resources such as peers and online materials while minimising reliance on superiors. This position aligns with the insights of Boud and Ajjawi (2019), who emphasise that excessive dependence on superiors in workplaces can undermine an individual's sense of autonomy and competence. Nurturing such independence was exemplified by John-DBS, who integrated real-world dynamics into group assignments. In this approach, he assumed the role of a supervisor in a workplace, intentionally positioning himself as a last resort for feedback.

In addition to actively participating in giving feedback, lecturers emphasised the importance of students learning how to receive and process feedback effectively to enhance the quality of their work. These aspects align with critical attitudes associated with student feedback literacy, such as 'appreciating feedback' and 'taking action'

based on received feedback (Carless and Boud, 2018). Furthermore, lecturers highlighted the significance of students learning to manage their emotions and 'maintain emotional equilibrium' when receiving critical feedback. This skill is deemed essential for future success, as emphasised by Olivia-PSC, who noted that failure to cultivate this ability during academia could lead to significant hardships in professional settings (Carless and Boud, 2018).

Nevertheless, the study observed that while many lecturers emphasised the significant role of AA tools in developing evaluative judgment as part of nurturing GE, few provided specific examples of how this capacity is enhanced through assessment strategies in practice, unlike other quality dimensions. In other words, lecturers' discussions on this capability tend to be more aspirational or prescriptive, emphasising what should happen rather than focusing on practical implementation. Moreover, there was also very little mention by lecturers of the use of rubrics (Fraile et al., 2017; Tai et al., 2018) and almost no mention of the use of exemplars (Handley and Williams, 2011; Chan and Chen, 2023) as assessment strategies that could be utilised to stimulate such feedback processes. This was accompanied by a lack of mention of engaging students in discussing quality standards or criteria, another key principle in the development of evaluative judgment (Tia et al., 2018).

Notably, the absence of mention of such crucial tools was reflected in the ways most lecturers addressed the topic of assessment strategies implemented to develop evaluative judgment and feedback processes. In many instances, lecturers would mention a specific strategy, only to follow up with statements such as 'students will take the feedback from others' (Catherine-DIT), or expressions of acknowledgment that suggested current practices were lacking, like 'this could be improved' (Victoria-

DBS) or ‘this can be a learning method, but we don’t do it here’ (Robert-DBS). These remarks imply that the responsibility for engaging in feedback processes is primarily left to students, with little proactive effort from lecturers to ensure appropriate actions are taken. This situation, where lecturers prioritise assessment tasks that foster evaluative judgment without practical implementation, may partially explain ongoing criticisms directed at HEIs from employers who often accuse institutions of neglecting to adequately cultivate graduates’ capacities for collaboratively identifying and producing quality work in unfamiliar situations (Boud and Ajjawi, 2019).

Moreover, this contradiction between lecturers’ professed beliefs about the importance of such capabilities and the practical assessment strategies implemented in practice may explain the significant discrepancy in mean ratings of the survey between lecturers and students regarding the extent to which assessment practices at UTAS reflect ‘authentic feedback’ and ‘evaluative judgment’ development (see Table **6.5**). Considering this finding, the study concludes that there is a notable lack of understanding among lecturers at UTAS regarding the key strategies that can be implemented to nurture evaluative judgment, disadvantaging students in relation to this critical capability. The study stresses the urgency of enhancing lecturers’ capacities (discussed further in Section **8.4.2.1**) to equip prospective graduates with this essential capability demanded in modern workplaces. Expecting students to develop this capability solely through collaborative assessment activities, which are already scarce as discussed earlier, or to take on this responsibility independently, is insufficient without actively engaging them in relevant AATs involving analysing and negotiating assessment rubrics and exemplars to recognise quality standards and utilise them to improve their own work.

8.4 Research Question Three: What are the Key Barriers and Enablers Impacting Lecturers' Utilisation of Student Assessment for Graduate Employability Development?

The third research question of this study explores the challenges and barriers encountered by lecturers as they endeavour to employ the tools perceived as pivotal in achieving the emerging object of SAAS, the development of GE capabilities, alongside the facilitators or enablers of this object. Through the lens of AT, the study associates the challenges faced by the lecturers as they worked towards achieving the evolving object with the notion of systemic contradictions, which occurred at different operational levels of SAAS (see Chapter **4**). During lecturers' reflection on their SAAS, several systemic contradictions were identified. These contradictions served as impediments to lecturers' implementation of appropriate assessment tools to achieve GED. The preceding sections identified two main systemic contradictions within SAAS: the first being the tertiary contradiction occurring as lecturers identified the emerging object for the version of SAAS they aspired to establish. The second was the secondary contradiction between the tools currently implemented and this emerging object. This section will focus on other secondary contradictions identified by the study within SAAS, specifically those between the rules, community, division of labour, and the emerging object. The objective is to comprehensively analyse and interpret these contradictions to facilitate their collective resolution by the members of the SAAS community.

The identification of systemic contradictions was fundamental in studying SAAS due to their dual function (Kuutti, 1996; Engeström, 1999; Yamagata-Lynch, 2010). Firstly, they act as barriers experienced by lecturers, obstructing the process of using certain

assessment tools to develop GE capabilities. Concurrently, they have the potential to serve as enablers of this process once these contradictions have been identified by the system's members and innovative mechanisms are proposed accordingly as part of the new form or version of the activity's functioning. This was partially illustrated in the preceding section where lecturers identified a host of AA tools necessary for the accomplishment of the emerging object, as part of addressing the first secondary contradiction between the evolving object and tools within SAAS. The recognition of such contradictions places lecturers, as agentic participants, in a better position to redirect their efforts towards the essential task of addressing these contradictions by working on 'reorganising and expanding the activity' (Engeström, 2000, p. 153).

The analysis of SAAS has revealed that these contradictions are not instantaneous occurrences but rather 'historically accumulating structural tensions' (Engeström, 2001, p. 137), manifesting over a prolonged period. This is evident in the multitude of structural contradictions reported by lecturers within SAAS and their endeavours to mitigate them. So, rather than arising exclusively during moments of reflection, the reflective process aided lecturers in pinpointing these issues, directing their focus towards systemic contradictions and exploring potential resolutions. Moreover, lecturers' narratives affirm the need for collective, collaborative action beyond the capacity of individual lecturers alone, highlighting collectiveness as a defining characteristic of activity systems (Engestrom, 1987; Fletcher, 2021). During analysis, this emerged as a central theme of this study highlighting the structural tensions arising from dynamic interactions among the various components of SAAS, which necessitates collaborative efforts from all involved community members for their resolution.

Furthermore, Havnes (2013) suggests that investigating SA at an activity level entails examining it at both the action level, considering the actions undertaken by individuals or members of the assessment community (e.g., lecturers or students) towards realising the system's object, as well as the broader factors influencing the entire activity system; for instance, 'how cultural, institutional, and collegial contexts constrain and afford assessment practices' (Havnes, 2013, p. 97). Hence, while lecturers have identified some effective tools to be incorporated into the current SAAS, as section **8.3** outlined, I argue that this adoption will remain constrained without addressing the systemic contradictions materialising between the other components of SAAS – rules, community, and division of labour – and the emerging object. In essence, achieving seamless integration of the new set of necessary tools necessitates aligning all system components with this objective. The next section now addresses the first of these contradictions.

8.4.1 Systemic contradictions between the rules and object of SAAS

The new set of assessment tools proposed by lecturers for mainstream adoption in the SAAS appears to conflict with established system rules. As demonstrated in the discussion of **RQ2**, lecturers identified a range of AA tools deemed necessary to support the realisation of the emerging object, a necessity they found challenging to fulfil under existing rules or policies. Section **7.4.1** revealed expressions of annoyance and frustration among lecturers regarding these policies, with some finding themselves reluctantly abandoning certain assessment tools, despite their strong belief in their effectiveness for GED. For example, employing collective pronouns to confirm the communal nature of SAAS, (Edward-DEN) referred to one of the restricting rules,

saying ‘we are not able to change it!’ while (John-DBS) used a strong metaphor, stating ‘our hands are basically tied’.

These findings align with existing literature indicating that lecturers’ implementation of AA tasks or tools can be significantly hindered by institutional policies (Yorke and Vidovich, 2014; Ferns et al., 2019; Sotiriadou et al., 2020). These authors underscore the importance of instituting more flexible rules and regulations to empower lecturers to adopt innovative assessment tools, thereby facilitating their seamless integration into SAAS. Lecturers in this study perceived these rules as exacerbating the challenges of employing such tools, which they already recognised as inherently difficult to design and implement (Price et al., 2011; Vu and Dall’Alba, 2014; Litchfield and Dempsey, 2015; Schultz et al., 2022).

Three key rules were identified by lecturers to be significantly thwarting their efforts in implementing AA tools aligned with GED, as section **7.4.1** demonstrated. Lecturers’ accounts highlight the pivotal role of these rules as mediators (Fletcher, 2021), shaping their actions in relation to assessment tools’ use and influencing the overall progress towards achieving the emerging object within SAAS. Many lecturers expressed concerns about being accountable for assessing students based on the priorities outlined in the LOs of their respective courses while highlighting a lack of ‘constructive alignment’ (Biggs, 2003) between the LOs, which serve as the guiding framework for assessment practices, and GE capabilities encompassed in programme outcomes and university GAs.

The mismatch between LOs and GE capabilities was evident in the poor integration of essential GE capabilities into LOs. So, rather than supporting the implementation of

AA tools aligned with GED, most course LOs perpetuated the reliance on traditional modes of assessment taking the written form and depending primarily on testing factual and disciplinary knowledge. This was illustrated through examples of LOs lecturers provided, and verified in the delivery plans they shared, which were vaguely written and predominantly required students to define, list, describe etc, rather than activating higher-order cognitive processes associated with GED (Sadler, 2016; Mohamed and Lebar, 2017; Villarroel et al., 2018). The detrimental impact of such LOs was exacerbated by the inflexibility of the rules governing LOs. This rigidity obligated lecturers to strictly adhere to the predetermined LOs for all learning and assessment tasks, even when lecturers recognised their shortcomings, as detailed in section **7.4.1.1**. This resonates with the situation described by Harland et al. (2015) in their study, where 'lecturers were aware of better practices but felt trapped by circumstances' (p. 528). These findings indicate that such rule-related issues acted as impediments negatively mediating the realisation of the systems' emerging object.

Although none of the lecturers reported active participation in formulating these LOs, suggesting they are passive receivers of them, a few lecturers did mention their engagement in a practice known as 'mapping LOs with GAs'. However, the data shows that this activity occurs at a very limited level. Only a small number of representatives from each academic department are chosen to participate, thereby restricting full engagement of lecturers in identifying and formulating LOs closely aligned with GED. In addition to discouraging lecturers from addressing essential graduate capabilities and attributes, this study maintains that the lack of lecturer involvement in such design processes can diminish lecturers' sense of ownership and confidence in their assessment practices (Bloxham and Boyd, 2007).

The other rule that the study found to be significantly constraining lecturers' utilisation of appropriate AA tools was linked to grade distribution policies at the setting. Most courses at the university are evaluated through summative exams, which must adhere to a specific format and set of questions, constituting no less than 70% of the course's grade. As discussed in section **7.4.1.2**, this proved to be a significant source of frustration for many lecturers, as they were unable to modify the exam format, which mandated a predefined set of questions and answers, nor replace written exams with more authentic summative methods such as projects or case analyses conducive to GED (Segbenya et al., 2023). Additionally, the substantial percentage of grades allocated to summative exams left little room for the implementation of AA tools within the continuous assessment mode. The study showed this to be problematic because students showed less engagement in such tasks, given their relatively lower grade weight. Consequently, students understandably prioritised the dominant and more significant written exams in terms of grade value, leaving them preoccupied with 'the "wrong" type of activity in the time they had available' (Harland et al., 2015, p. 537).

The study also identified a third policy issue that mediates lecturers' actions when implementing more AA tools. As shown the section **7.4.3**, some lecturers had to forgo certain tools due to their perceived negative impact on their student evaluation of teaching, which typically occur toward the end of each semester. Lecturers who advocate for the implementation of methods believed to be valuable for GED run the risk of receiving low ratings on their teaching evaluations. While this may be partially attributed to students' grade orientation (Meyer et al., 2019), it also highlights other crucial issues in assessment design (Discussed further in Section **8.4.2.3**).

These findings highlight the importance of increasing the allocation of grades to more AA tools (Segbenya et al., 2023) to foster a perception among students that such tools merit the additional investment of effort and time. Moreover, the thesis advocates for programme-level assessment planning (Oliver, 2013; Sotiriadou et al., 2020; Hains-Wesson et al., 2020), and the adoption of a whole-institution assessment strategy, where overarching assessment design principles apply uniformly to all programmes and courses (Kinash et al., 2016; Alexander et al., 2019). I argue that this approach can enhance student awareness and engagement with AA tools while ensuring a deliberate and systematic approach to assessment. It can also mitigate the risk of important decisions being left to lecturers' individual preferences or impulses, potentially disadvantaging those who aim for creativity in their assessment practices.

Additionally, the analysis asserts that it is critical to adjust assessment rules in a manner that provides lecturers with a wider array of assessment tools to choose from in their courses (Knight and Yorke, 2003; Jorre de St Jorre et al., 2021) and allocate grade value based on the importance of the assessment method in terms of the capabilities it develops, which should build upon students' disciplinary knowledge (Villarroel et al., 2018; Tai et al., 2018). This may involve introducing new assessment tools and omitting those with little capability-development value, especially written exams, to make room for other authentic methods and avoid excessive assessment (Knight and Yorke, 2003). Crucially, the inclusion or exclusion of assessment tools in a particular course should be judged based on the degree of the assessment task's relevance and the capabilities it develops for success in real-life contexts (Savery and Duffy, 1995; Forsyth and Evans, 2019). Furthermore, I contend that it is essential to align other policies with the ultimate object of SAAS, such as staff appraisal and

recognition. These policies can serve as motivators for creativity, innovation, and diligence in how lecturers approach SA (Ferns et al., 2019; Amiet et al., 2021).

8.4.2 Systemic contradictions between the Community and Object of SAAS:

This section discusses the systemic contradictions between the community within SAAS and its emergent object, GED. The analysis reveals that these contradictions primarily stem from two key issues: first, the insufficient involvement of crucial community members in the processes of SAAS, and second, the inadequate management and distribution of essential roles and responsibilities within the community. These issues result in a misalignment between the community's actions and the object of GED. Beyond merely identifying the stakeholders within SAAS, a comprehensive examination of the community necessitates a detailed consideration of the perspectives held by its diverse members (Lockley, 2016). This entails engaging them not only in the selection and utilisation of assessment tools but also, critically, the evaluation and alignment of the system's rules and the distribution of roles among its members in a manner conducive to facilitating GED. By examining the intricacies of community dynamics and the interplay of roles within SAAS, this approach provides a holistic understanding from the lens of AT, enriching our comprehension of the multifaceted processes underlying SAAS. Alongside lecturers, the study argues for the active engagement of three key community groups within SAAS: leaders, industry representatives, and students.

8.4.2.1 <u>Engagement of leaders</u>

The analysis of lecturers' reflective accounts has unearthed systemic contradictions between the community and the emerging object, GED. The first contradiction arises

in relation to department and programme leaders, who are integral members of the SAAS community. Lecturers expect these leaders to engage primarily by recognising GED as the central purpose guiding SAAS, to which all other activity components should align. However, lecturers' accounts indicate that most leaders are presently adhering to the dominant, 'given' object, which prioritises measurement and accountability (section **7.4.2**). Additionally, lecturers reported leaders' neglect in aligning these LOs with GE capabilities and noted that leaders seemed to intervene in assessment matters primarily when students complained about the difficulty of exams and grading issues.

Leaders were expected to focus on aligning the rules (discussed in Section **8.4.1**) with GED. Initiating processes such as aligning programme and subject LOs, reducing the dominance of SEs, enhancing the variety of assessment methods, and adjusting grade allocation, were strongly believed to fall within the purview of this group of SAAS's community. Leaders were also expected to demonstrate certain actions and attitudes that could convey to other community members, especially lecturers, the importance of adopting tools that facilitate the realisation of GED. The data indicates that, without leaders' intervention, many lecturers may choose to continue implementing traditional assessment methods, which they may find more comfortable to use (see Section **7.4.2**), especially since more authentic and innovative tools were considered more demanding and challenging (Schonell and Macklin, 2019; Schultz et al., 2022).

The thesis suggests that lecturers' actions within the SAAS are not only mediated by established rules but are also significantly influenced by the actions of key members holding leadership roles. This influence, in turn, shapes the collective efforts of lecturer groups towards aligning assessment tools with the overarching object. The impact of

this mediation became evident as some lecturers acknowledged feeling compelled to forego certain assessment tools, despite recognising their value, when they observed inconsistencies in their implementation by their peers and lack of support from both leaders and fellow lecturers. As one lecturer aptly expressed, ‘of course, this is not supportive if these methods are not implemented and not systematic across the whole spectrum’ (Richard-DEN). This situation has led to a poignant acknowledgment among lecturers of being entrenched in ‘conventional modalities’, yearning for ‘permission from the management’ to break free from the current state of ‘stagnation’ engulfing SAAS (Engeström and Miettinen, 1999).

This plea for change prompted lecturers to call upon leaders to foster a conducive environment that encourages open dialogue, critical reflection, innovative practices, and collaborative endeavours (Higgs, 2014). Indeed, some participants viewed their involvement in the current study as an invaluable opportunity to represent their voices, express concerns, and advance their professional practices within the context of SAAS. These sentiments were eloquently captured by Alexander-PSC:

> “Lecturers should be part of the decision making process, they should be invited to take part in research like this one, where they know that their opinions, reflections are valued and heard, and they should be engaged in some sort of discussion forums, similar to this one, where they see that they are given permission by the management of the university, who need to establish a culture of, for example, research, innovation, and industry engagement. By establishing these cultures and mindset from the top management, I think, we will make an impact, and then we could infuse these in the policy and the system” (Alexander-PSC).

In alignment with this finding, several authors in the literature emphasise the pivotal role of assessment leaders in reshaping institutional assessment practices. Fuller et al. (2015), in their exploration of institutional assessment cultures, delineated a significant contrast between assessment conducted with a focus on measurement,

certification, and accountability, as opposed to assessment conducted primarily to enhance student learning and development. Drawing from the perspectives of institutional leaders, their study characterises the former as potentially contributing to a ‘negative’ assessment culture associated with fear, compliance, or misunderstanding, while aligning the latter with a positive assessment culture. The authors identified three key recommendations that institutional leaders provided for fostering a positive assessment culture:

> “(A) clarity of assessment’s purpose, (b) open, trustworthy engagement of respected colleagues and leaders, and (c) open dialogue about tensions between assessment and accountability”.

These recommendations were echoed by another recent study, which underlined the significance of establishing a ‘shared purpose’ of assessment among all stakeholders, while also highlighting the importance of managing the tension between assessment for learning and development and assessment for measurement and accountability (Simper et al., 2022).

Consistent with these recommendations, the study proposes several practical measures for assessment leaders at UTAS to consider, as reflected in lecturers’ accounts. First, leaders should actively monitor or oversee all assessment practices, which is anticipated to yield numerous advantages beyond merely observing ongoing assessment events. Besides evaluating the alignment of lecturers’ assessment practices with GE capabilities and attributes, the study suggests that this can offer valuable opportunities for establishing much-needed dialogue with lecturers. Such dialogue is particularly crucial for uncovering lecturers’ beliefs about assessment and its role in students’ continuous learning and growth, which is essential for assessment reform (Samuelowicz and Bain, 2002; Radloff et al., 2008). These measures can

enhance lecturers' understanding regarding the university's desired standards of quality in assessment methods and processes, providing them with a clear sense of direction and motivation for improving their assessment practices (Fuller et al., 2015). I argue that such leadership attitudes are likely to set the tone and emphasise to lecturers the importance of their classroom assessments in facilitating GED, as they signal the active engagement of this crucial subgroup within the SAAS community in the system's operations.

Moreover, demonstrating increased engagement and attention in lecturers' assessment practice can provide leaders with valuable insights about lecturers' training needs to enhance their application of assessment methods suitable for GED. Indeed, lecturers' desire for leaders to step in can signify their acknowledgment that the activity of aligning assessment with learning and GED is formidable (Price et al., 2011; McNeill et al., 2012; Sadler, 2016). This research demonstrates that understanding and implementing this activity require support from leaders, along with their intervention to connect lecturers with experts in the field who can share their expertise and assist in this endeavour. The current lack of providing training in assessment matters was crisply described by one lecturer as 'throwing a ball into the fire' (Olivia-PSC). This reflects the scarcity of training opportunities provided to lecturers in assessment at the setting, highlighting lecturers' urgent need for professional development as they may lack necessary expertise in such a specialised area of HE operations (Vu and Dall'Alba, 2014; Jessop and Tomas, 2017; Russell and Kay, 2019; Sarkar et al., 2020; Asonitou, 2022). From the perspective of AT, the study demonstrates how the identification of GED as the emerging object of SAAS has demanded a reassignment of the 'division of labor and utilization of a variety of specialized expertise' (Miettinen, 2005, p. 53).

It is noteworthy that the qualitative data within this sub-theme offers deeper insights into the support lecturers expect from their leaders concerning GED, which appears to slightly contradict the responses of lecturers from the seven UTAS campuses provided in the initial survey of this study (see Table **6.3**). In the survey, lecturers rated the support they received, such as training and professional development, in relation to GED as good (mean score of 4.05), with lecturers from UTAS-X rating it even higher (mean score of 4.16). However, this inconsistency could be attributed to the fact that the survey asked lecturers to rate their overall experience of support, while their reflective interviews specifically focused on the support and training needed in the area of assessment. Additionally, I contend that the robustness of the AT framework combined with reflective interviews enabled a deeper probing of lecturers' views and experiences regarding the challenges encountered.

8.4.2.2 Engagement of workplace representatives

Consistent with AT, which recognises that the pursuit of GED as the central object of SAAS may necessitate the adoption of new assessment tools and the assimilation of 'new forms of practices which are not there yet' (Engeström, 2001, p. 138), the study emphasises the necessity of collaborating with a vital stakeholder group within the SAAS community: workplaces or their representatives. This emphasis is supported by lecturers' accounts, as detailed in section **7.4.4**, which highlight perceived deficiencies in existing university initiatives aimed at fostering robust partnerships with workplaces to facilitate students' participation in AA activities and support their transition into the workforce. Two main initiatives were critiqued for their shortcomings in this regard. Firstly, the 'Industry-Academia Meeting' was deemed inadequate due to its infrequent occurrence, held once every two years, with limited participation of lecturers.

Secondly, the ‘on-the-job training’ (OJT) placements were also criticised for lacking adequate monitoring of student engagement, absence of appropriate assessment mechanisms, and insufficient opportunities for student reflection. While the study endorses the need for enhancing these initiatives, this finding highlights the inadequacy of relying solely on infrequent connections with workplaces and offering work placements to enhance GED (Rowe and Zegwaard, 2017; Schonell and Macklin, 2019; Collins, 2022). Concurrently, it stresses the importance of augmenting such programmes with learning and assessment practices integrated into students’ routine classroom experiences (Van den Berg, 2004; Sadler, 2016; Rear, 2019).

In response to this imperative, the reflective component of the interviews prompted lecturers to delineate their envisioned roles and levels of engagement for workplace representatives within SAAS. Initially, they anticipated robust and enduring connections with workplaces, fostering continual communication and collaboration between the two community groups. Such interactive platforms were deemed essential to facilitate workplaces in articulating their expectations regarding the qualities they seek in university graduates and subsequently aligning assessment tools with these desired capabilities in collaboration with educators. As outlined in section **7.4.4,** this collaboration would involve workplace representatives becoming acquainted with the SA tasks implemented at the institution, providing feedback on them, suggesting additional assessment tasks, and aiding in the implementation and assessment processes.

This collaborative approach highlights lecturers’ perception of workplace representatives as ‘knowledge brokers’ (Fettes et al., 2020, p. 191), who play a crucial role in enhancing assessment relevance in professional contexts by reducing the

disconnect between academic procedures and real-world applications (Archer et al., 2021; Twyford and Dean, 2023). Markedly, the analysis considers it paramount that workplace representatives perceive these collaborations as mutually advantageous for all members of the SAAS community (Hanna et al., 2015). This perception is vital as it enables them to solidify their stakeholder role in assessment procedures, hence, actively contribute to shaping graduate professional identities prior to graduation.

Moreover, the study suggests that with the advent of technology, the impact of this partnership can be significantly enhanced, as workplace representatives may not always need to be physically present at the university to maintain collaboration (Orrell, 2011; Natoli et al., 2013). For instance, online meetings between internal stakeholders, including students, and workplace representatives and alumni can be conducted, and student projects can be recorded and shared with them or streamed live from the classroom for assessment and feedback, as demonstrated in the study by (Schonell and Macklin, 2019). Aligned with AT, I conceptualise technology in this context as an 'auxiliary' tool that can facilitate the implementation of primary assessment tools within SAAS.

Having said this, it is crucial to acknowledge the significant challenge HEIs face in aligning SA tasks with GED, particularly given the diversity of workplaces and their varying operational scopes (e.g., state versus private sector employment, organisations of different sizes, and distinct organisational cultures). This challenge is further compounded by the rapid and continuous evolution of workplaces, which are becoming increasingly complex and sophisticated, necessitating HEIs to adapt their SA tasks accordingly (Williams, 2013; Nilsson, 2017; Roche, 2017; Jääskelä et al., 2016). The tasks graduates perform vary widely as they are shaped by the specific

contexts and demands of their work environments (Hager, 2006; Nilsson, 2017). Brown and Souto-Otero (2020) found that employers in the UK value job-ready graduates who can contribute immediately, as reflected in job advertisements that outline detailed specifications of skill sets tailored to specific work contexts. Interestingly, this thesis suggests that an effective approach to address this issue is to design SA tasks aligned with broad quality dimensions, as discussed in section **3.4**. These tasks emphasise developing transferable skills – such as communication, evaluation, and higher-order thinking – which empower graduates to engage in continuous learning and adapt to dynamic, unpredictable environments (Kember and Leung, 2005; Cassidy, 2006; Boden and Nedeva, 2010; Dumford and Miller, 2017; Suleman, 2018).

8.4.2.3 Engagement of students

As revealed in section **7.4.3,** one of the reported challenges faced by lecturers regarding student engagement with AA tools, revealing another systemic contradiction between the SAAS community and GED. The study examined the issue of students' lack of engagement with these tools, offering insights into the underlying factors contributing to this phenomenon. The study advances the argument that the existing systemic arrangements within SAAS constrain students to passive roles, impeding their active participation as expected. Addressing this issue, described by some lecturers as the need to change the 'student mentality', requires more than just introducing new AA tools; it necessitates a re-evaluation and reorganisation of other components within SAAS (Silseth and Gilje, 2019). Resolving the systemic contradictions highlighted in preceding sections, particularly concerning overarching rules and community dynamics, constitutes essential steps in undertaking these

systemic rearrangements. Nonetheless, concurring with Bourke (2018), I argue that this transformation requires a fundamental paradigm shift in how students are perceived. Rather than viewing students solely as assessment recipients, they should be seen as active participants who enhance their capabilities through self-assessment and reflection. This perspective, which empowers students to autonomously regulate their future learning, is notably underexplored in the Omani HE literature. This finding from the study accentuates this gap, highlighting the need for greater emphasis on students as partners in their learning.

The perspective of most lecturers in this study resonates with the notion that students' lack of engagement may not be deliberate but rather indicative of their rudimentary epistemological development, coupled with a limited understanding of how knowledge is acquired and learning transpires (Lombardi and Oblinger, 2007). Viewing AATs as pivotal 'boundary objects' (Ajjawi et al., 2020) and 'epistemological tools' (Choy, 2009) essential for students' transition to the workplace, the study emphasises the importance of enabling students to perceive AA methods in this light. Given the subjectivity of authenticity, authors suggest that significant disparities may arise between lecturers' and students' perceptions of these assessment tools (Gulikers et al., 2004; Ajjawi et al., 2020).

In line with such observations, some lecturers in the current study indicated that students often interpreted the insistence on implementing such tools as an attempt to lower their grades or even fail them. Consequently, this perception led students to exhibit a form of 'retaliation', as demonstrated in section **7.4.3**, particularly evident when they had the opportunity to evaluate their lecturers. The disparities in perceptions of assessment authenticity between lecturers and students are also

captured by the survey results of this study. The survey revealed a significant gap of 0.68 between the mean scores that lecturers (4.24) and students (3.56) at UTAS gave (see Table **6.6**). These scores are significant (p-value of < 0.001) and reflect their perceptions of assessment authenticity, measured through rating statements such as 'assessment corresponds with the activities students will have to perform in their future professions'.

Hence, the study argues for the critical role of fostering 'discursive interactions' with students regarding the functionality of AA tools, which can serve as an essential insight facilitator, mediating students' uptake of these tools. This aspect is crucial due to the inclusion of challenging cognitive processes within these assessment methods, necessitating increased support from lecturers (Vu and Dall'Alba, 2014). These discursive interactions are pivotal in guiding students towards the conviction that their learning and development, both within and beyond the university, largely hinge on their uptake of such tools (Kreber, 2014). Merely 'telling' students, as stressed by one lecturer, is insufficient. Instead, engaging them in conversations and demonstrations regarding how specific assessment tools are interconnected with and impact broader objectives concerning their future careers and ongoing growth is imperative (Jorre de St Jorre et al., 2019; Miller and Konstantinou, 2022). As noted by Herrington and Herrington (2006), guiding students to this realisation necessitates enhancing their perceptions of the 'cognitive authenticity' of AATs, thus illuminating their relevance and significance.

The lecturers in this study highlighted the critical importance of expanding discursive interactions with students through the incorporation of profound expressive concepts. This endeavour aimed to guide students towards a deeper 'understanding',

‘enlightenment’, and ‘appreciation’, as delineated in **7.4.3**, regarding the integration of these tools within SAAS. Notably, Alexander succinctly advocated infusing these dialogues with a compassionate approach and ‘creating rapport’, emphasising the necessity to show students ‘what is the point of the assessment; how they can take it with them in the future’ (Alexander-PSC). One lecturer recounted an instance where students eventually recognised and valued his commitment to utilising these tools despite encountered challenges, illustrating the potential for students to grasp the long-term benefits of specific assessment tools. Richard-DEN provided a compelling example of this transformative process, transitioning from a state where students were ‘rebelled’ by his assessment, to fostering a positive rapport with them, wherein they developed ‘good chemistry’. Importantly, students came to believe that his methods were implemented for the betterment of their learning and overall development.

These findings underline the importance of inducting students into the types of assessments they will encounter throughout their academic journey as an integral component of curriculum and assessment design (Ehiyazaryan and Barraclough, 2009; Collins, 2022). Such provisions should ideally be integrated through a comprehensive institutional approach aimed at embedding GED from the outset, encompassing a range of awareness-raising strategies such as videos, induction programmes, and recurring awareness sessions (Schultz et al., 2022; Alexander et al., 2019). As asserted by Miller and Konstantinou (2022), enabling students to recognise the links between assessment tools and their future aspirations is imperative, as well as ‘equipping them with the language to talk about the importance of such links’ (p. 10). These recommendations advocate for a repositioning of students as active members within the SAAS community, demanding a paradigm shift wherein assessment is conceived as a collaborative social practice conducted in partnership

with and for students rather than being applied on them (Lund, 2008; Silseth and Gilje, 2019). Within this perspective, assessment is viewed as:

> "An ongoing activity in which the meaning and function of the activity are negotiated by lecturers and students in and across changing contexts and situations" (Silseth and Gilje, 2019, p. 30).

Based on these findings, we can see that a transformed version of the SAAS, centred around GED, can be established by addressing the systemic contradictions discussed earlier. This version, I argue, has the potential to catalyse a shift in students' actions and attitudes, moving them away from a mere focus on grades towards a more profound emphasis on learning and capability development. This transformation is facilitated or mediated by ensuring alignment among tools, rules, roles, and actions across all key community members with respect to GED. The ideal version of SAAS, conceptualised through an Activity Theory-based diagram, is presented in the next chapter, followed by an original model for collaborative engagement in GED-oriented assessment.

8.5 Summary of Discussion Chapter

This chapter has discussed the primary findings of the study concerning the optimal alignment of SA with GED. The discussion confirms the robustness of the theoretical framework used in this study for addressing the primary objective of understanding the link between SA and GED. The chapter demonstrated how Activity Theory effectively captures the complex interactions and contradictions within the existing SAAS and its alignment with GED, which is identified as the ultimate object toward which all assessment processes should be oriented. Additionally, the chapter illustrated how

combining AT with Boud et al.'s (1985) model of reflection guided lecturers in reflecting on their experiences within the SAAS, offering nuanced insights into the use of SA as a tool to facilitate GED. This process involved critiquing the current state of the SAAS by identifying key contradictions that hinder the system's alignment with GED.

Beyond enhancing our understanding of the SA-GED link by revealing how the SA activity system can be oriented to better facilitate GED, the chapter also highlighted the framework's role in improving lecturers' practices concerning this link. This was particularly evident through the reflective processes enabled by BMR, which led to changes in lecturers' perspectives on the SA-GED alignment process and stimulated intentions and commitments to further enhance this alignment within their setting, as illustrated in section **8.2.2**. Notably, these intentions and commitments can be effectively guided by the GED-oriented assessment model presented in section **9.2**, which the study proposes for adoption by practitioners.

In section **8.2**, I stressed the analytical capacity of AT as a lens for assessing the state of SAAS regarding its overarching goals and alignment with GED. The section elucidated how involving lecturers in reflective processes served as a crucial intervention, providing them with an opportunity to scrutinise the prevailing goals guiding SAAS, namely grading or certifying student performance and ensuring accountability of assessment processes. The data showed that these goals significantly influenced the selection of assessment tools by lecturers, resulting in a stagnation within the system, confined to a narrow range of assessment practices dictated by these goals. Through this analysis, I illustrated how lecturer engagement in reflective activities aided in identifying a tertiary contradiction, leading to the recognition of GED as the ultimate object. I asserted that this emerging object should guide SAAS, ensuring that all SA practices align with it rather than contradict or

overshadow it. Therefore, a key argument of this section is the imperative of framing SAAS as a social activity system, as demonstrated by the study. Furthermore, I argued that involving educators in the process of identifying the true object of SAAS through reflection can facilitate sense-making, offering clarity and coherence regarding the various goals or purposes within the SA system. These purposes should be perceived as complementary rather than contradictory, with all stakeholders working towards the central object of developing GE capabilities.

Section **8.3** builds upon the preceding discussion where GED emerged as the central object of SAAS. Here, I explored lecturers' perspectives and experiences regarding established SA tools at UTAS, examining their alignment with GED. Through reflective assessment, lecturers came to the realisation that written exams, the predominant assessment tool within SAAS, primarily serve the purpose of certifying performance and ensuring accountability rather than facilitating GED. This recognition marked the identification of the first secondary contradiction between the tools employed within the system and the emerging object. The section discussed lecturers' efforts to address this contradiction, advocating for diversifying assessment tools to better meet contemporary workforce demands. Additionally, it outlined four essential characteristics for SAAS alignment with GED: simulating real-world scenarios, promoting communication and collaboration, stimulating higher-order cognitive processes, and nurturing evaluative judgment.

The discussion in section **8.4** focused on the challenges hindering lecturers' implementation of AA tools. Utilising AT, I conceptualised these challenges as systemic secondary contradictions related to the rules, community, and division of labour within SAAS. I demonstrated how these contradictions constrain lecturers' utilisation of

various AA tools identified in section **8.3** as critical for achieving the emerging object of the system, GED. I argued for the critical importance of viewing SAAS as a collective system, as merely identifying appropriate tools is insufficient for seamless integration and implementation. Rather, it is necessary to align these essential components of the system with the central object by resolving their contradictions with the object. This ensures smooth functioning of the system, which is a central theme throughout this section. This finding constitutes a significant contribution to the current literature on AA (e.g. Gulikers et al., 2004; Ashford-Rowe et al., 2014; Villarroel et al., 2018), which appears to narrowly focus on identifying features of AA while neglecting broader institutional and contextual aspects crucial for achieving authenticity in assessment. Consequently, educators' efforts in aligning SAAS with GED continue to face hindrances. Hence, a core argument of the section is that achieving GED, alongside implementing appropriate assessment tools aligned with this emerging object of SAAS, demands the active involvement of all key internal and external community members, each with clearly defined roles and responsibilities. It is inherently challenging for lecturers alone to effectuate a transformation within SAAS and transition towards an activity version geared towards GED if the actions of other pivotal stakeholders diverge from this object.

CHAPTER 9: CONCLUSIONS AND IMPLICATIONS

9.1 Introduction

This thesis aimed to understand the relationship between student assessment practices and graduate employability development. Using Activity Theory and Boud et al.'s Model of Reflection as theoretical frameworks, it explored the alignment of SA practices with the objective of facilitating GED from the perspectives of HE lecturers in the Omani context. This chapter summarises the key findings and contributions of the thesis. Building on the previous discussion chapter, it introduces an original model for collaborative engagement in GED-oriented assessment and presents the study's recommendations and implications for policy and practice. It also highlights the main contributions of the thesis to the body of knowledge. The chapter concludes by outlining the study's limitations and offering suggestions for future research.

9.2 Model for Collaborative Engagement in GED-oriented Assessment

The previous chapter addressed crucial factors for aligning SA with GED through the analysis of systemic contradictions within SAAS at UTAS-X, employing the lens of AT and referencing existing literature. In doing so, the study has facilitated lecturers' participation in expansive learning (Engeström and Miettinen, 1999), envisioning a redefined version of their SAAS. It demonstrated how GED emerged as the ultimate object of a culturally more advanced SAAS. The explication of this transformed version included the tools that should be utilised: varied, authentic tools; the key community members that should be actively engaged alongside lecturers: leaders, community representatives, and students; and the roles and responsibilities to be assumed by each of these community groups. Hence, based on the discussion of the key findings,

the following two AT-based diagrams are offered to depict the components of the current **(Figure 9.1)** and the proposed transformed or ideal **(Figure 9.2)** versions of SAAS. The figures illustrate the transformative cycle that SAAS is expected to undergo upon integrating GED as its ultimate object.

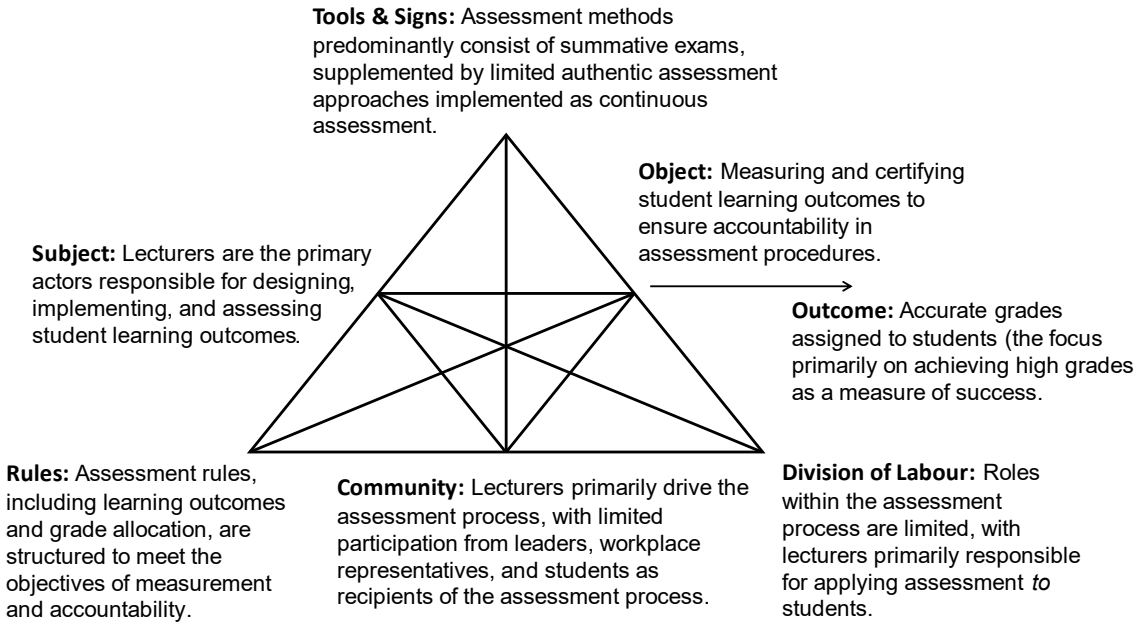

Figure 9.1 The existing version of SAAS at UTAS-X

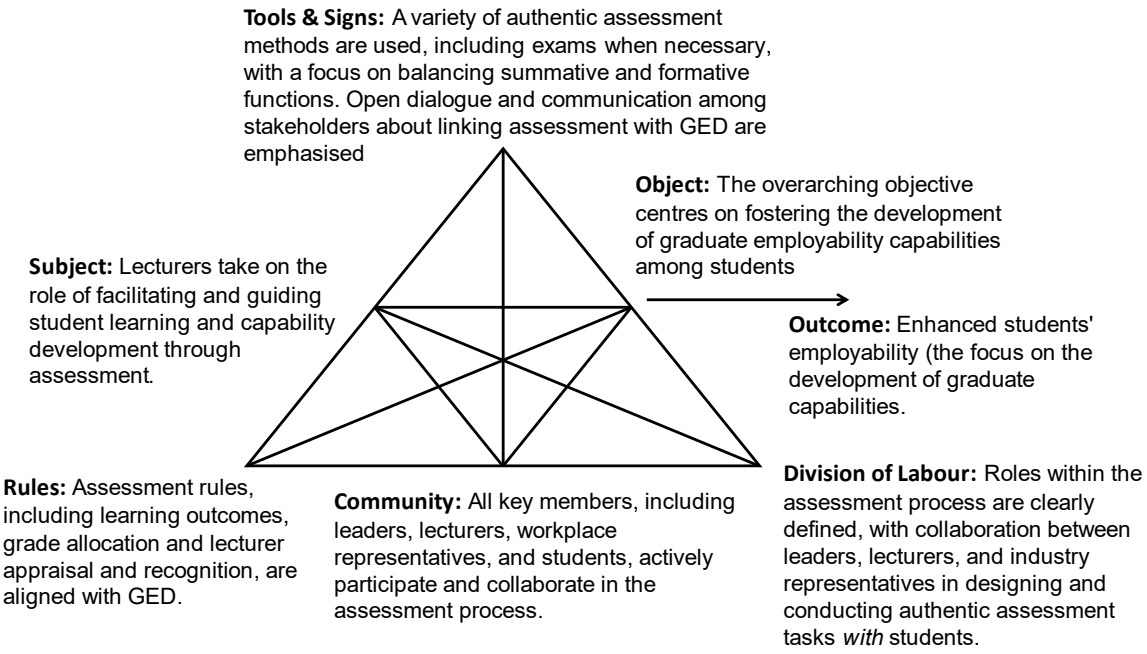

Figure 9.2 The transformed version of SAAS at UTAS-X, with GED as its object

Building on the expanded version of SAAS (Figure **9.2**), the thesis contributes to the literature by presenting an original model, represented in Figure **9.3**, that illustrates the essential functioning mechanisms of an ideal SAAS oriented toward facilitating GED. In line with the study's objectives, the model focuses on providing effective, authentic assessment to students to facilitate the development of their GE capabilities. It delineates specific roles for key community members – leaders, lecturers, students, and workplace representatives – essential for achieving this central object, as described in section **8.4.2**. While teachers are the primary community group entrusted with implementing AA tools characterised by realism, cognitive challenge, collaboration, communication, and evaluative judgment, as outlined in section **8.3**, the model underlines the collaborative roles assumed by other key members in effectively implementing assessment with these characteristics. This collaboration is illustrated by the curved arrows linking each community group with the next group most crucial for enabling its active engagement.

Workplace representatives' engagement through the responsibilities described for them is primarily facilitated by the leaders of the HEI. Beside initiating and sustaining the involvement of workplace representatives, leaders play a crucial role in guiding, providing feedback, and empowering lecturers in the process of implementing GED-oriented assessment through extending a dialogue with them about the purposes of SA as well as aligning the HEI's policies with GED, as discussed in section **8.4.1**. Through such empowerment and sustainable, leader-facilitated collaborative partnerships with workplaces, lecturers are likely to be in a better position to implement authentic assessment tasks, as argued in section **8.4.2**. In this collaborative process, students are positioned as key partners and critical players, actively participating with lecturers in conducting assessment with the desired authenticity characteristics. As the thesis postulates in section **8.4.2.3**, the alignment of all the components of SAAS with GED, is expected to transform students' approach to assessment, stimulating them to engage with assessment in a more active, reflective and critical manner as they realise how assessment can contribute to their learning and employability development.

Moreover, upon joining workplaces as graduates, students initiate a new cycle of facilitating GED-oriented assessment as they commence assuming the important role of representing workplaces. Based on the study's findings, it is reasonable to assume that students who go through such assessment experiences in their university lives, realising the value and impact of assessment on professional lives, are more likely to maintain connection with academia and collaborate with educators to enrich future graduates' experiences. Crucially, the success of the entire process hinges on ongoing dialogue among community members about linking SA with the imperative of GED. While such dialogue must primarily be initiated between each community and the next

group most crucial for enabling its active engagement, as represented by the model (i.e., workplace representatives – leaders, leaders – lecturers, lecturers – students), placing all the community groups within the dialogic cycle implies that such interactive channels can extend between any community group and another.

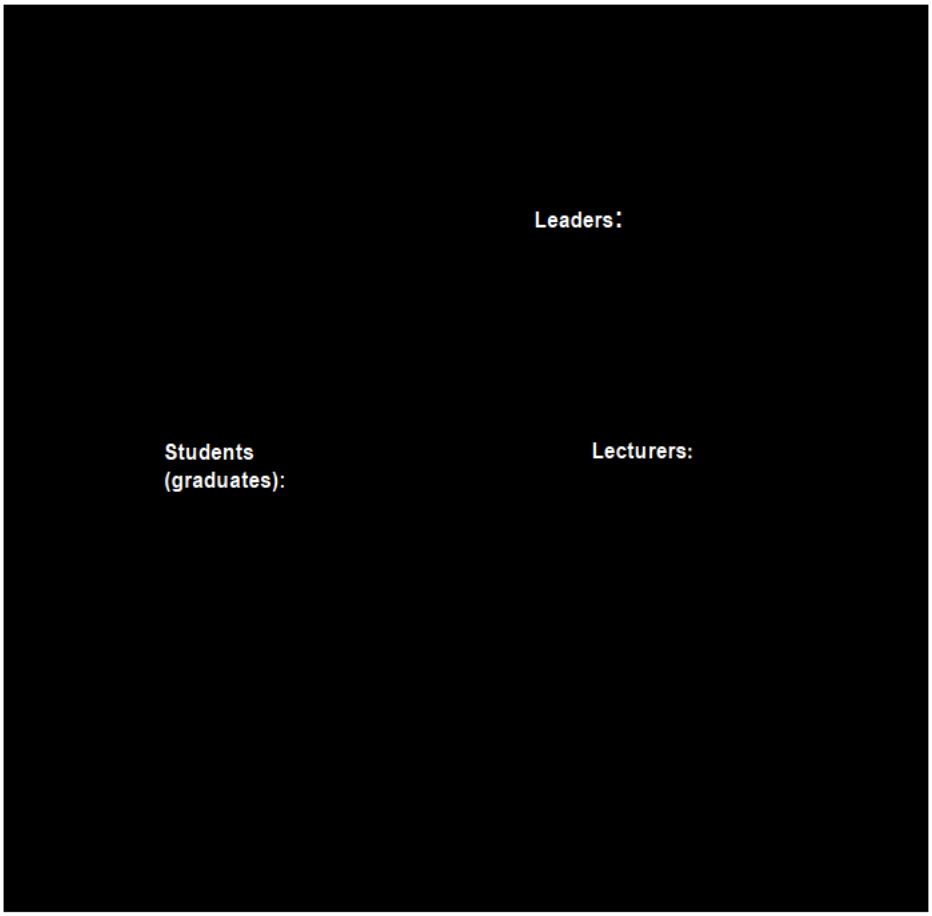

Figure 9.3 A Model for collaborative engagement in graduate employability-oriented assessment.

9.3 Recommendations and Implications for Policy and Practice

The discussed findings of this study offer valuable insights and recommendations for policymakers, institutional leaders, workplace representatives, educators, students, and researchers aimed at understanding and enhancing the alignment between SA and GED. These recommendations hold potential benefits not only for the specific HEI under study, UTAS, but also for other HEIs in Oman and abroad that share similar contextual features.

For state-level policy makers: The study confirmed the significance of collaborations between workplaces and HEIs, a link presently identified as deficient within the study, further reinforced by other research conducted in the Omani context (see Chapter **2**). Considering that HEIs in Oman are already mandated by the accreditation authority (OAAAQA) to establish strong ties with workplaces (see Chapter **2**), this suggests that the observed lack of collaboration between workplaces and HEIs can be largely attributed to the absence of a policy mandating workplaces to maintain increased collaboration with HEIs. As underlined in section **8.4.2.2**, current workplace collaboration primarily involves occasional participation in HEIs' events and providing student placements. Consequently, the study recommends that state-level policy makers should prioritise addressing this issue, recognising its crucial role in preparing graduates for work. In addition to existing initiatives, the state should exert more pressure on employers to contribute further to key HE processes, particularly learning and assessment activities, thereby demonstrating a heightened commitment to achieving the national objective of enhancing GED.

For university-level policy makers: As discussed in section **8.4.1**, the current study reveals a significant disproportion in the grade allocation between continuous assessment, which predominantly involves authentic assessment, and written exams at UTAS, as stipulated in the university bylaws – with a ratio of 20% for continuous assessment and 80% for written exams, including quizzes. Therefore, the study recommends policy makers at the institutional level, notably the governing university council, to review this policy to better correspond with the greater positive impact of SA methods other than written exams on GED. While the university has taken initial steps to address this issue by modifying the grading scheme in selected modules (e.g., entrepreneurship and research methodology), a broader approach is necessary to incorporate more authentic tasks into SA across various courses. However, this transition may pose challenges such as increased difficulty and time required for implementing AATs. Therefore, it is crucial for the university council to guide educators in designing assessments at a programmatic level to mitigate potential issues such as increased workload for lecturers and over-assessment of students. This approach also ensures that lecturers and students understand how individual modules contribute collectively to the assessment and development of GE capabilities.

For institutional leaders: The study stresses the pivotal role of HEI leaders, including department and programme leaders, in actively engaging to align SA with GED, as demonstrated in section **8.4.2.1**. Fundamentally, leaders must regard their active engagement in SA processes as foundational rather than complementary to their roles and duties within the university. They should initiate constructive dialogues, particularly with lecturers, to clarify assessment purposes and address tensions within the HEI context. This dialogue should aim to foster a shared understanding and purpose among all stakeholders regarding SA and GED alignment. Leaders should also

actively engage in the assessment process by monitoring lecturers' implementation, providing constructive feedback, and offering professional development opportunities. Moreover, collaborative efforts between leaders and lecturers are required to align assessment-related policies with GED. This alignment should encompass aspects such as lecturer appraisal and rewarding policies to incentivise creativity and innovation in SA practices. Additionally, leaders should facilitate comprehensive engagement among all lecturers in reviewing and mapping course learning outcomes with GED objectives. This collaborative effort must ensure that SA practices are harmonised with the broader institutional objectives and priorities they endeavour to achieve.

For workplace representatives: As the thesis highlighted, it is imperative for workplace representatives to actively engage with HEIs. This involvement should extend beyond the conventional model, where they sporadically participate in key events, serve as guest lecturers and offer student placements. Significantly, they should play a proactive role in the design and implementation of SA at HEIs. This entails familiarising themselves with the assessment tasks employed at HEIs, providing constructive feedback, offering examples of suitable assessment tasks, and assisting in their implementation, as discussed in section **8.4.2.2**. As argued in this section, it is crucial for workplace representatives to recognise the value of maintaining such partnerships with HEIs, viewing them as significant opportunities to influence the employability of potential employees and address the commonly reported issue of graduates' skills gap. This is particularly important considering the substantial impact of SA on GED, as the study demonstrated.

For lecturers: The study emphasised the pivotal role that lecturers play in aligning SA with GED. Given the significant impact of AATs on fostering GED, lecturers should consistently endeavour to integrate them into all assessment activities. Considering the prevalence of written exams in many HEIs, lecturers should also aim to include AA elements in exams, particularly scenario-based questions that prompt students to apply higher-order cognitive skills in processing knowledge form their fields of study. Furthermore, lecturers should actively engage in constructive dialogues with students to enhance their understanding of the vital connection between AA and essential workplace skills, motivating students to embrace AATs irrespective of their grading weight.

Moreover, it is imperative for lecturers to participate in discussions and dialogues with their peers, allocating time from their schedules for reflective and communicative spaces where they can exchange ideas on classroom assessment and address implementation challenges collaboratively. Lecturers should also feel empowered to raise challenges beyond their individual capacity with their leaders and work together to find solutions. Additionally, lecturers should cultivate a habit of reflecting on their classroom assessment practices and maintaining a critical mindset regarding the value of assessment approaches and their impact on student learning and development. As evidenced in this study, through reflection, communication, and collaboration with stakeholders, lecturers can address tensions and challenges within the SA system, ultimately leading to its transformation.

For students: the study revealed that students' disengagement with AATs poses a significant challenge to their integration, partially due to the perceived difficulty and lower grade value of such tasks compared to written exams. Remarkedly, this

challenge was further compounded by students' rudimentary epistemological development, which influences their prioritisation of time and effort based on assessment grade rather than the learning process itself. While acknowledging the pivotal role of lecturers in mitigating this challenge, the study recommends students to engage in reflective practices aimed at comprehending the underlying rationale behind the various assessment tasks they undertake throughout their academic journey, prioritising engagement in tasks that contribute to their learning and capability development. This is especially vital given the profound influence that fostering such capabilities has on enhancing their employability, contrasting with the limited role that grades, as highlighted in the study, play in showcasing advanced employability. Students are also advised to initiate discussions on unclear assessment matters with peers, lecturers, or university leaders to clarify concerns and deepen understanding. If necessary, they should pursue collaborative efforts with stakeholders to replace problematic assessment tasks with those that hold greater relevance and meaning for their future professional and social endeavours.

9.4 Contributions to Knowledge

A significant theoretical contribution of the current study lies in its innovative application of the amalgamation of the second-generation Activity Theory model with Boud et al's (1985) model of reflection (BMR) to explore the relationship between SA practices and GED. While AT has been utilised in a few studies of SA in HE, this study marks the first instance, to the best of my knowledge, of its integration with BMR to investigate the connection between SA and GED. This unique amalgamation represents an original contribution to the field, enhancing conceptual clarity in the examination of these vital constructs, which respectively represent a pivotal process

and a key outcome of HE, as supported by the findings of this study. Therefore, the study significantly enriches the body of knowledge, impacting not only the Omani context but also extending its influence internationally by providing significant insights into the relationship and process of alignment between SA and GED.

As established earlier, the novel theoretical treatment of these constructs has been instrumental in enhancing our comprehension of HE student assessment processes in relation to GED, which offers valuable implications for both theory and practice. As argued in section **8.2**, conceptualising SA as a social activity system with GED as its central, long-term objective provides several benefits. Firstly, the thesis demonstrated the critical importance of this conceptualisation, specifically in light of the conflicting purposes SA often serves, with GED sometimes receiving less emphasis compared to other purposes. In such instances, these conflicting purposes can divert lecturers' attention away from the central objective, especially when they are accountable for fulfilling multiple purposes simultaneously and when other key community members, such as leaders, prioritise purposes other than GED, such as focusing on accountability in assessment processes. Therefore, by regarding GED as the ultimate objective, supported by other goals, we not only eliminate the contradictory nature between these purposes but also refocus the attention of educators and other community members on the central purpose, thus homogenising their actions towards the achievement of this central objective.

In addition to providing clarity regarding the purposes guiding SAAS, this study illustrates the utility of conceptualising SA as an activity system in addressing its systemic contradictions and identifying pathways for its enhancement. Thus, another theoretical contribution of this study to the field of HE assessment pertains to highlighting the essential factors necessary for aligning SA tools or approaches with

GED. As outlined in section **8.3.3**, the study delineated four key characteristics of GED-aligned SA, which are supported by existing literature on AA. Significantly, by addressing systemic contradictions within SAAS, the study emphasised another vital dimension essential for designing AATs, often overlooked in current literature.

The thesis contends that while identifying and integrating authenticity characteristics is crucial, it may prove ineffective without accounting for the perspectives and active engagement of key SA community members in pivotal considerations. Firstly, beyond the involvement of lecturers, activating the roles of two key internal members, currently involved primarily in minor aspects of SA processes, is imperative. Leaders must assume a pivotal role in clarifying objectives, guiding, and inspiring lecturers in the implementation of AA, while ensuring active student engagement is essential to maintain alignment between their perceptions of AA and those driving its design and implementation.

Secondly, apart from internal community members, active engagement of another key external member, workplace representatives, is essential in aligning SA with GED. It is crucial for this community group to participate actively in designing, reviewing, and potentially implementing SA, serving as knowledge brokers between HEIs and workplaces and providing valuable perspectives on AA. Given that these tasks aim to prepare students for professional responsibilities, overlooking the input of workplace representatives may exacerbate the tendency for HE assessment tasks to prioritise academic over professional contexts. Therefore, fostering collaboration with this external group is essential for ensuring the relevance and effectiveness of assessment practices in bridging the gap between academia and professional spheres.

Significantly the study has encapsulated these profound insights within a theoretical model that delineates the process of aligning SA with GED (see Figure **9.3**). This model represents an original contribution to the literature in both SA and GED domains within HE. As illustrated in section **9.2**, this model enhances our comprehension of how community members within SAAS can collaborate to design and implement assessment tools tailored to enhance the employability of HE graduates. It necessitates a holistic consideration of the various components of SAAS, resolving the contradictions between them collectively and systematically. Thus, the model contributes to knowledge by consolidating fragmented systemic components into a cohesive framework, facilitating the transition from the current state to an ideal scenario of aligning SA processes with the objective of facilitating GED.

Besides the theoretical contributions, the study has provided tangible, practical contributions to the context by offering lecturers at UTAS-X a valuable opportunity for reflection on their SA activity system. This opportunity was deemed crucial by many lecturers due to the lack of prior discussions and interactions regarding their SA practices, which had led to a sense of stagnation within their SAAS. Lecturers' reflective engagement yielded various outcomes, as articulated by some, including gaining new perspectives on the relationship between SA and GED, as well as expressing intentions and commitments to pursue collaborative actions with their peers in this regard. This significant practical contribution to the context is akin to conducting action research with the research participants arising with concrete positive outcomes. Furthermore, in light of the scarcity of related studies in the Omani HE SA context, compounded by the pressing national concerns regarding the graduate skills gap and associated unemployment (see Section **2.6**), the insights gleaned from this study not only contribute to the academic literature in Oman within the realms of SA

and GED but also provide valuable practical and policy implications for addressing these challenges, as outlined in section **9.3**.

9.5 Limitations and Suggestions for Future Research

The aim of this study was to understand the alignment process between SA and GED in undergraduate HE courses. Employing a sequential case study design, the study gathered both quantitative and qualitative data to address its central research questions. Despite meticulous care and attention at every stage of the research process, it is imperative to acknowledge that the study was affected by some limitations. This section will delineate the methodological, practical and theoretical limitations faced by the study, while also suggesting potential avenues for future research.

This study employed a sequential case study design integrating four primary methods: focus groups during its pilot phase, questionnaires, document analysis, and interviews. While this design proved robust in generating valuable insights into the research topic, the addition of observational methods could have further enriched the data triangulation regarding the alignment between SA and GED at the research site. Unfortunately, the onset of the Covid-19 pandemic disrupted this possibility, as all teaching and assessment activities were transitioned online. The inclusion of classroom observations would have provided deeper insights into how lecturers implement AATs, particularly in stimulating higher-order cognitive processes, promoting their evaluative judgement abilities – areas identified as problematic in the study. Additionally, classroom observations could have shed light on students' responses to such tasks, given lecturers' reports of a general lack of student engagement with AATs.

Therefore, future research should consider employing observational methods to better understand lecturers' classroom practices in aligning SA with GED. Researchers may opt to video-record classroom sessions and subsequently conduct interviews, or employ the stimulated recall method, where researchers discuss lecturers' thoughts or practices in light of recorded classroom footage. These steps are essential for enriching the discussion on teachers' actual classroom experiences, supplementing interview data. Nonetheless, it is noteworthy that efforts were made to mitigate the absence of observations in the current study by collecting relevant assessment documents prior to interviews. This strategy enhanced the trustworthiness of lecturers' reflective accounts, as they were guided to reference these documents during interviews to support their arguments and opinions with examples from their respective courses.

Another potential limitation of the study is the exclusion, particularly, of internal stakeholders, namely students and institutional leaders, from the qualitative data collection phase. This decision was made due to constraints in time and resources, given the small scale of the study conducted as part of a PhD project by an individual researcher. The aim was to focus the research efforts on lecturers, who play a pivotal role in directly influencing students and fostering key GE capabilities through teaching, learning, and assessment activities. However, it is worth noting that the involvement of these two community groups could have provided additional depth to the insights gained on the research topic, rather than examining the issue solely from the perspective of lecturers. As revealed in the study, lecturers described students' primary orientation toward grades as a key factor contributing to their limited engagement with authentic assessment. Including students in the interviews to compare their perceptions or experiences with those of their lecturers, or to identify the underlying

reasons for such attitudes, could have enhanced the study through triangulation of perspectives (Flick, 2017).

Moreover, the inclusion of institutional leaders in the study interviews could have enriched the insights gained. Lecturers in this study highlighted leaders' lack of engagement in student assessment, describing their behaviours as primarily aligned with grading purposes and accountability of assessment practices. Future research could benefit from examining the perceptions and experiences of institutional leaders, particularly programme leaders, regarding the alignment of key institutional processes such as learning and assessment with GED. Given that GED is a central objective of the institution, leaders bear primary responsibility for its accomplishment. Exploring their views on the challenges highlighted by the lecturers in this study, as well as the challenges they encounter themselves, particularly in relation to connecting with workplaces, providing training on assessment, and actively engaging in assessment processes, could provide valuable insights.

In addition to the previously mentioned methodological and practical limitations, there is a theoretical limitation that may have influenced the study's findings. The present study employed the second-generation activity theory framework to investigate the alignment between SA and GED (see Chapter **4**). This choice was made to prioritise the examination of SA as a central activity system, delving into its various components and the contradictions between them. The study's premise was that comprehensively understanding the dynamics of SAAS is crucial before exploring its interactions with other activity systems. While this focus significantly contributed to insights into the current state of SAAS and its potential transformation toward GED-oriented practices, one limitation of this framework is its inappropriacy to examine how SAAS interacts

with neighbouring systems such as teaching, quality assurance, lecturer appraisal, and professional development.

Therefore, future research can apply third-generation AT to explore the interactions between SAAS as the central activity system and neighbouring systems at UTAS, which influence or mediate the actions of its community members in aligning all components with its ultimate objective, GED. In essence, it is vital for the smooth operation of SAAS that its community members address ‘quaternary contradictions’ (Engestrom, 2015) arising from interactions with neighbouring systems as a result of the adoption of GED as its evolving ultimate objective. One potential area of investigation is the interaction between SAAS and the curriculum activity system at UTAS. For example, lecturers may face tensions in utilising authentic assessment tools within SAAS due to the division of labour within the curriculum system, where they are required to cover a fixed amount of disciplinary content in a semester. Examining these inter-system contradictions will enhance our understanding of SAAS dynamics and the process of resolving its contradictions with other activity systems as it evolves.

Another theoretical limitation pertains to the application and integration of the two models, CHAT and BMR. While the amalgamation of these models is a key contribution of this study, it was not without challenges. A primary issue arose during the semi-structured interviews (see Section **4.6** for further details). Initially, I planned to conduct the interviews with lecturers in two stages. The first stage would focus on lecturers’ descriptions of their SA experiences and the analysis of the SAAS components, while the second stage would centre on identifying systemic contradictions as lecturers revisited and re-evaluated their experiences, leading to

reflections and expansive learning. This two-stage approach could have provided a critical gap between the stages, allowing for deeper analysis of lecturers' experiences and resulting in a richer discussion of systemic contradictions and tensions in the later stage. However, conducting the entire process in one session became necessary due to the difficulty of scheduling two separate sessions for all 24 lecturers and to avoid the risk of participants not attending the second session. This decision ensured full engagement in the reflective process but limited the potential depth of analysis. Therefore, future researchers may benefit from employing a two-stage interview process when using these models to study SA or other activity systems. Such an approach would provide sufficient time between stages to identify potential systemic contradictions or challenges, likely leading to more comprehensive findings.

Due to the aforementioned limitations, the generalisability or transferability of the findings of this study may be limited to Omani HEIs and contexts sharing similar educational circumstances. This study focused primarily on lecturers, with only limited involvement of leaders and students in the exploratory survey, and no inclusion of workplace representatives. As such, the perspectives of these stakeholders were not explored in depth. Additionally, the study concentrated on four broad fields of study: Engineering, information technology, business studies, and English language teaching. Future research could benefit from broader inclusion of lecturers from diverse HE specialisations and the incorporation of other key stakeholders such as leaders, students, and employers to provide a more comprehensive understanding of aligning SA with GED. Moreover, comparative studies contrasting the Omani HE context with international counterparts on this important topic are warranted.

In addition to suggestions for future research resulting from the study's limitations, mentioned earlier, the study suggests exploring other areas for research arising from some of its current key findings. As suggested earlier in section **9.3**, the implementation of the proposed model, represented in Figure **9.3**, can have a positive impact on students' engagement in authentic assessment tasks and eventually enhance their propensity for maintaining links with HEIs once they join workplaces as alumni. This is premised on initiatives such as establishing a dialogue with students about the SA-GED links and actively involving them in authentic assessment which provides enriched cognitive and social experiences, as outlined in section **8.3.3**. This perspective is further supported by the findings of Souto-Otero et al. (2024), which underlines the importance of students' social and emotional experiences during university, linked to 'relational contracts' (see Section **3.2.2**), in influencing their engagement with HEIs post-graduation.

However, as mentioned earlier, it was beyond the scope of this study to include either students or workplace representatives in the interview data collection to explore these aspects. Future research in the Omani context could focus on workplace representatives, investigating issues such as their perceptions, challenges, and motives, as well as incentives for engaging with HEIs, particularly in areas like the design and implementation of student learning and assessment tasks. Additionally, researchers can aim to conduct action research informed by the suggested model of this study, where a balanced diet of authentic assessment methods is implemented while reducing the emphasis on written exams. This can be followed by examining students' experiences, focusing on the impact of the introduced initiatives on the development of target skills and the challenges encountered.

In section **8.3.3**, the study described four crucial characteristics of authentic assessment pivotal for aligning assessment with GED. While lecturers provided insights and examples of assessment tasks aiming to integrate these characteristics into their assessment practices, the study unearthed certain problematic facets in their narratives, necessitating further investigation. Specifically, as delineated in section **8.3.3.3**, lecturers emphasised the significance of fostering higher-order thinking (HOT) processes in students while discouraging rote memorisation. However, they concurrently underscored the necessity for students to assimilate disciplinary knowledge or information to generate novel insights. This juxtaposition suggests that students must first acquire a foundational understanding (e.g., of laws, principles, field-specific procedures) through memorisation or information recall before engaging in HOT processes. These accounts thus reveal discrepancies or omissions regarding the interplay between memorisation and HOT processes. Future research can explore the extent of memorisation students undertake to acquire background knowledge, the strategies educators employ to ascertain students' acquisition of sufficient knowledge before introducing HOT processes, and variations in educators' approaches to these processes across different programmes and academic levels. Such inquiries can enrich understanding of the interplay between memorisation and HOT processes in student learning and skill development.

Another crucial area warranting further research is the development of assessment tasks aimed at fostering evaluative judgement. As discussed in section **8.3.3.4**, lecturers emphasised the significance of this capacity for GED, yet they failed to offer practical strategies for its cultivation. This disparity between educators' beliefs and actual assessment practices underscored the need for focused professional development in this domain. Therefore, it is imperative to direct research efforts toward

addressing this gap at the setting. Future studies could design interventions or action research initiatives that engage educators in professional development sessions aimed at enhancing their abilities to design and implement assessment tasks targeting evaluative judgement. Lecturers could be guided through semester-long implementations of such tasks, involving students in activities like rubric discussions, analysis of exemplars, and participation in self and peer assessment of their work. Subsequent exploration of lecturers and students' experiences, including their perceptions of these assessment tasks and encountered challenges, along with evaluations of their impact on student development of evaluative judgement, would provide valuable insights.

Finally, the present study draws upon the framework of 'the sequence of learning actions in an expansive learning cycle' (depicted in Figure **9.4**), as a heuristic for understanding collective learning processes within activity systems (Engeström and Sannino, 2010, p. 8). Following the authors' acknowledgment that the cycle of expansive learning does not adhere to a universally applicable formula of distinct phases or stages, the current study utilised this framework to assess the current stage of expansive learning within SAAS at UTAS. At this juncture, the study has progressed to designing a model for GED-oriented assessment (Figure **9.3**) intended for adoption by community members at UTAS and potentially other local or overseas HEIs. While the introduction of this model reflects an ongoing expansive learning cycle within the lecturer community at SAAS, completing the full cycle of learning necessitates additional essential stages, including the implementation of the collaborative model by the entire SAAS community at UTAS. Hence, this comprehensive, institution-wide model presents numerous opportunities for collaborative action research. While one of my key future research objectives is to disseminate this model and the findings of

this study to the academic community through future academic and professional publications, I encourage other researchers to assess the effectiveness and resilience of this model by involving all members of the SAAS community in its application. Following implementation, community members can engage in iterative reflection and adjustment of the model, initiating a new cycle of expansive learning, as depicted in Figure **9.4**.

Figure 9.4 The sequence of learning actions in an expansive learning cycle (adapted from Engeström and Sannino, 2010, p. 8).

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Appendices

Appendix A: Semi-structured interview guide with lecturers at UTAS-X

Semi-structured Interview Guide

Stage one: Returning to experience
Subject:

1. Could you please briefly introduce yourself (specialisation, experience etc)?
2. What interests you in HE? What do you like the most about teaching in an HEI?
3. Can you tell me briefly about your past experiences with assessment (e.g., as an undergraduate student), how was it like? What type of impact does this experience have on the way you assess your students now?
4. What can you tell me about your current experience with student assessment at your department? Have you noticed any changes or developments in the way student assessment is approached since you joined, what are they?

Outcome:

5. Why do you assess your students, what do you want to achieve? Are there any specific capacities, attributes you target, what are these? (Reference to questionnaire (Q) reg assessment purposes: Based on your questionnaire, you reported that e.g., student assessment at your department develops both lifelong learning and graduate employability capabilities, could you please elaborate on this in relation to the course you are teaching? Do you see any link between these two purposes, how?)
6. How do you view an employable graduate from your field (e.g., networking / marketing)?
7. Does the assessment of this course contribute to developing such graduate qualities / attributes, how? (Reference to courses delivery plan, objectives, and graduate attributes)
8. Based on the Q, you (dis)agreed that as a HE teacher you have an impact on the GE of your students through assessment, can you elaborate on this?

Object & Tools:

9. Refer to Q reg “The implementation of appropriate assessment methods and practices” at department and ask, what type of assessment methods / strategies do you implement in this course for the purpose of developing your students GE? Could you please give me an example from the assessment materials you shared with me?
10. Are these methods / strategies implemented as both formative and summative assessment, how, why?
11. What do you work / focus on with your students during such assessment methods / strategies, how? What outcomes do you intend for your students to gain through such assessment (attributes, attitudes, skills etc)? Could you please give me an example from this module’s assessment of such outcomes?
12. Does your focus differ between the different assessment types or methods, for example between summative and formative assessment, how?
13. Refer to Q in relation to the areas of authentic assessment, future learning, assessment feedback and evaluative judgement; and ask, for instance, the following:
    a. Do you see a link between these assessment methods / strategies and GE development, how?
    b. You stated that assessment at your department always / often “corresponds with the activities students will have to perform in their

future professions", can you give me an example from this module's assessment?

c. Can you elaborate on your response regarding the focus of assessment on both memorisation and higher order thinking skills?
d. What type of feedback do you provide your students on their assessment tasks, how do you do this? How does engaging students in giving and receiving feedback enhance their GE?
e. Are there any instances in this module where students are engaged in judging the quality of their work or that of their peers, how? How does this help in enhancing the employability of students?

Rules:

14. What guidelines, policies etc regulate student assessment in this course? Where do these guidelines come from? Are they written or communicated to you in a certain way? Are there any guidelines or policies that specify certain types or methods of assessment for the purpose of developing GE and lifelong learning, what are they?
15. What degree of freedom or flexibility do you have to implement your own assessment tasks/ methods? Did it happen at any point during this course when you needed to implement an assessment task/method that is not part of the assessment plan, how, why did you want to do this? Could you please share with me some of these activities or tasks?

Division of labour:

16. What is your role in implementing assessment methods and strategies appropriate for developing GE? Does your role differ between the different assessment methods and types? Where do you find yourself playing a more active role in developing GE? Do the other responsibilities you have to carry out as a teacher affect you in performing this role effectively, how?

Community:

17. Who else is involved in deciding the assessment types / methods appropriate for developing GE, how? What type of collaboration exists between these concerned entities or people, how? Based on the Q, you responded that students (do not) take an active role in improving the way they are assessed, does this apply to you and to the assessment of this course, how?

Stage two: re-evaluating experience

Outcome: Do you feel the importance given to the various purposes of assessment is proportional, how? Do you think these purposes currently complement or contradict each other, how? Do you think more attention or importance should be directed to any particular purpose, why? What challenges should be addressed toward achieving this?

Object: In the current assessment methods and tasks, do you think you are focusing on developing the right skills and attributes in students toward enhancing their employability? How can this be achieved across the different types of assessment, e.g formative and summative assessment? How do you think we can improve our focus on such skills and attributes, what are the current challenges that need to be addressed to make this happen?

Tool: What assessment methods, strategies or ways should we add/ remove or maybe modify to enhance our graduates' employability, how? Does this apply to both summative and formative assessment, how? What challenges are involved?

Rules: Do you think that the current assessment guidelines or policies are supporting or restricting the development of GE, how?
What other procedures or guidelines should we introduce to align student assessment with GE development?

Division of labour: How do you feel about your current role in implementing appropriate assessment methods, strategies for GE development? What do you think should be done to afford teachers a more active role? What challenges are involved?

Community: Who else do you think should be involved / have greater involvement in student assessment toward enhancing the capacity of assessment to develop GE, why and how? How could we enhance the collaboration among the concerned entities to achieve this? What about students' involvement? (Refer to Q reg students playing an active role in improving assessment) What are the challenges involved?

Stage three: Outcomes of reflection

I will deliberately ask the participants if they have, based on the reflection they underwent, any intentions to take any future actions, or have developed new perspectives. These might also occur naturally during the interview, so they might be identified during the analysis of the interview.

Appendix B: Academic staff questionnaire (Leaders and lecturers)

INTRO.

An investigation of the impact of assessment practices on the development of graduate employability at UTAS, Oman

My name is Younus Al Zaabi. I am a PhD student at the University of Birmingham, UK. This study is part of my PhD degree thesis aiming to investigate the impact of assessment practices on developing student graduate employability (GE). Agreement to participate in this study involves completing this questionnaire which will take about 15 minutes to fill out. At the end of this questionnaire, you will find a section where you can provide your contact details if you would like to be included as a participant in the interview part of this study. Your data will remain confidential and will not be used for reasons other than research purposes. Should you require any further details about any other aspect of the study either before or after giving your data, you can contact me or my supervisors using the following email addresses:

Researcher:
Younus Al Zaabi, email:
Supervisors:
Dr Celia Greenway,
Dr Ben Kotzee,

CONSENT.

Please be reminded that participation in this study is completely voluntary. If for any reason you decide to withdraw from this study while filling out the online survey, you may do so by closing the browser before finishing the survey. This questionnaire is applicable to all academic staff members at UTAS with management or teaching positions including ELC post-foundation staff. It does not apply to foundation staff.

If you have read the information above and you agree to participate with the understanding that the data you provide will be processed accordingly, please check the relevant box.

- (●) Yes, I agree to participate.
- ( ) No, I don't agree to participate.

UNDERSTANDING. Part A: A.1. Understanding of graduate employability (GE)

To what extent do you agree with the following statements?

The employability of a higher education graduate is represented by

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. having the skills required for getting employed after graduation	○	○	○	●	○
2. being prepared for after-graduation life including social and professional life	○	○	●	○	○

3. having the capacity to continue learning and responding to new learning requirements after graduation	○	○	○	◉	○
4. achieving a high grade-point average (GPA) upon graduation	○	○	◉	○	○
5. having specialisation-specific knowledge and skills	○	○	○	◉	○
6. having graduate attributes like Effective communication, teamwork and innovation	○	○	○	◉	○

ROLE.

A.2. Understanding of the role of academic staff in graduate employability (GE) development

To what extent do you agree with the following statements?

In general, a higher education teaching staff member

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. is responsible for developing the employability of his/her students	○	◉	○	○	○
2. is responsible for teaching specialisation-specific knowledge and skills only	○	◉	○	○	○
3. impacts the employability of his/her students through the teaching and learning strategies (s)he implements	○	◉	○	○	○
4. impacts the employability of his/her students through the assessment methods and techniques (s)he implements	○	◉	○	○	○
5. is required to be competent in implementing the methods necessary for developing the employability of his/her students	○	◉	○	○	○

EXPERIENCES.

A.3. Experiences of graduate employability (GE) development

Based on your actual experience at your academic department(s) / ELC, how would you rate the following aspects in relation to GE development?

	Excellent	Good	Average	Poor	Terrible
1. The support provided to teaching staff for developing GE like receiving relevant professional development	○	○	◉	○	○
2. The alignment of GE requirements with student programme goals / course learning outcomes	○	○	◉	○	○
3. The implementation of appropriate teaching and learning strategies	○	◉	○	○	○
4. The implementation of appropriate assessment methods and practices	○	◉	○	○	○
5. The extracurricular activities organized for students	○	◉	○	○	○
6. The On-the-job training provided to students	○	○	◉	○	○
7. The course materials provided to students like textbooks and reading materials	○	◉	○	○	○

8. The general approach adopted by the department to support GE development	○	◉	○	○	○

DEFINITION. Part B: The link between graduate employability and student assessment

Student Assessment (SA) is a broad concept that has different meanings. In this questionnaire, it refers to "Any activity in which evidence of learning is collected in a planned and systematic way, and is used to make a judgment about student learning". Thus, it includes assessment methods like: mid-semester and final exams, short quizzes, project reports, presentations, assignments and practical activities.

PURPOSES. B.1. Purposes of student assessment

To what extent does student assessment at your academic department(s) / ELC serve each of the following purposes?

	Always (100%)	Often	Sometimes	Rarely	Never (0%)
1. Measuring and certifying student performance	◉	○	○	○	○
2. Ensuring and documenting the quality of teaching and learning processes	◉	○	○	○	○
3. Supporting student academic learning and development	◉	○	○	○	○
4. Preparing students for future learning requirements by developing their lifelong learning capacities	○	○	◉	○	○
5. Preparing students for their career and professional lives	○	○	◉	○	○

AUTHENTICASSESSMENT.
B.2. Experiences of student assessment (SA)

To what extent are the following statements true about the design and implementation of student assessment (SA) at your academic department(s) / ELC?

B.2.A. Assessment authenticity

	Always (100%)	Often	Sometimes	Rarely	Never (0%)
1. Assessment corresponds with the activities students will have to perform in their future professions like solving real-life challenges	○	○	◉	○	○
2. Assessment criteria are clarified to students as part of understanding their assessment requirements	○	◉	○	○	○
3. The circumstances in which students are assessed resemble the working conditions of their future professions	○	○	◉	○	○
4. Assessment reveals students thinking processes; for instance, when they are asked to make certain choices	○	○	◉	○	○
5. Students need the competences required to pass their assessment in other (professional) situations as well	○	◉	○	○	○

CURRENTLEARNING. B.2.B. Effects of assessment on current learning

	Always (100%)	Often	Sometimes	Rarely	Never (0%)
1. Assessment has a positive effect on student learning	○	◉	○	○	○
2. Assessment activities are valuable instances of learning in their own right	○	◉	○	○	○
3. Students learn new things while preparing for their assessment	○	○	◉	○	○
4. Students understand things better as a result of doing their assessment	○	◉	○	○	○
5. Assessment helps students to identify and set goals to learn the points they do not understand	○	◉	○	○	○

FUTURELEARNING. B.2.C. Effects of assessment on future learning

	Always (100%)	Often	Sometimes	Rarely	Never (0%)
1. Assessment motivates students to continue learning	◉	○	○	○	○
2. Assessment helps students to self-direct their own learning processes	◉	○	○	○	○
3. Assessment tasks are geared towards the retention of student competencies in the longer run	◉	○	○	○	○
4. Assessment requires students to use higher-order thinking skills like solving problems and making decisions	◉	○	○	○	○
5. Assessment tests what students had memorised rather than what they understood	◉	○	○	○	○

AUTHENTICFEEDBACK. B.2.D. Assessment Feedback

	Always (100%)	Often	Sometimes	Rarely	Never (0%)
1. Students receive assessment feedback showing clearly what they have and have not yet mastered	○	◉	○	○	○
2. Students receive assessment feedback showing clearly how they can improve their work	○	○	◉	○	○
3. Students are given sufficient time to improve and resubmit their work after receiving assessment feedback	○	○	○	◉	○
4. Assessment engages students in collaborative activities like working in pairs or in groups	○	◉	○	○	○
5. Assessment requires students to seek and utilise feedback from a variety of sources (e.g., from teacher, peer, etc)	○	◉	○	○	○

EVALUATIVEJUDGEMENT. B.2.E. Evaluative judgement

	Always (100%)	Often	Sometimes	Rarely	Never (0%)
1. Students judge their own work using their knowledge of the provided assessment criteria	○	○	◉	○	○

2. Students judge their peer's work using their knowledge of the provided assessment criteria	○	○	○	◉	○
3. Assessment requires students to monitor and reflect on their own work	○	○	◉	○	○
4. Assessment requires students to use the provided criteria/ standards to improve their own work	○	○	◉	○	○
5. Students play active roles in the assessment process like suggesting to improve assessment criteria or assessment tasks	○	○	◉	○	○

ADDITION.
If you would like to add anything else about the impact of student assessment on graduate employability development, please provide it in the following space?

CAMPUS.
Demographic information

1. Campus of UTAS:

- ○ University of Technology and Applied Sciences - HCT
- ○ University of Technology and Applied Sciences - Al Musanna
- ◉ University of Technology and Applied Sciences - Shinas
- ○ University of Technology and Applied Sciences - Nizwa
- ○ University of Technology and Applied Sciences - Ibri
- ○ University of Technology and Applied Sciences - Ibra
- ○ University of Technology and Applied Sciences - Salalah

POSITION.
2. Position / main responsibility:

- ○ Dean/ Assistant Dean
- ○ Head of Academic Department
- ○ Head of Quality Assurance Department
- ○ Head of English Language Centre
- ○ Head of section
- ○ Quality Assurance Coordinator / Officer
- ◉ Teaching staff member

DEPARTMENT.
3. Academic Department / Centre

- ○ Engineering
- ◉ Business Studies
- ○ Information Technology
- ○ Applied Sciences
- ○ Pharmacy
- ○ Fashion Design
- ○ Photography
- ○ English Language Centre
- ○ Quality Assurance

HEEX.
4. Years of experience in higher education

- ○ 1-5 year(s)
- ○ 6 - 10 years
- ○ 11 - 15 years
- ◉ 16 - 20 years
- ○ 21 - 25 years
- ○ More than 25 years

INDUSTRYEX.
5. Years of industry experience

- ○ No industry experience
- ◉ 1-3 year(s)
- ○ 4 - 6 years
- ○ 7 - 9 years
- ○ 10 - 12 years
- ○ 13 - 15 years
- ○ More than 15 years

AGE. 6. Age range

- ○ 25 - 30
- ○ 31 - 35
- ○ 36 - 40
- ◉ 41 - 45
- ○ 46 - 50
- ○ 51 - 55

- ○ More than 55

QUALIFICATION.
7. Qualification

- ○ Bachelor's degree
- ○ Master's degree
- ◉ PhD or Doctorate degree

INTEREST. Please provide your contact details if you are happy to participate in the semi-structured interviews of this study which will involve a discussion of the link between student assessment and graduate employability.

Name:

CONTACT. Contact details (Telephone number / Email address):

Location Data

Location: (24.74299621582, 56.470199584961)

Source: GeoIP Estimation

Appendix C: Students questionnaire, translated into Arabic

INTRO.

استبيان الطالب

في جامعة التقنية والعلوم التطبيقية (Graduate employability) دراسة تأثير ممارسات التقييم على تطوير قابلية توظيف الخريجين

اسمي يونس الزعابي، طالب في جامعة برمنغهام بالمملكة المتحدة. هذه الدراسة جزء من أطروحة درجة الدكتوراه والتي تهدف إلى دراسة تأثير ممارسات التقييم على تطوير قابلية توظيف الخريجين، أو ما يسمى أحيانا مهارات توظيف الخريجين، في جامعة التقنية والعلوم التطبيقية. تتضمن الموافقة على المشاركة في هذه الدراسة إكمال هذا الاستبيان الذي سيستغرق ملؤه 15 دقيقة تقريبا. في نهاية هذا الاستبيان ستجد قسمًا يمكنك فيه تقديم تفاصيل الاتصال الخاصة بك إذا كنت ترغب في أن يتم تضمينك كمشارك في جزء المقابلة من هذه الدراسة. ستبقى بياناتك سرية ولن يتم استخدامها لأسباب أخرى غير أغراض البحث. إذا احتجت إلى مزيد من التفاصيل حول أي جانب آخر من جوانب الدراسة سواء قبل أو بعد تقديم بياناتك فيمكنك الاتصال بي أو بمشرفي باستخدام عناوين البريد الإلكتروني التالية

الباحث:
Younus Al Zaabi, email: [redacted]
المشرفون:
Dr Celia Greenway, email: [redacted]
Dr Ben Kotzee, email: [redacted]

CONSENT.

أود التأكيد على أن المشاركة في هذه الدراسة اختيارية تمامًا. لذلك، إذا قررت لأي سبب الانسحاب أثناء ملء الاستبيان عبر الإنترنت، فيمكنك القيام بذلك عن طريق إغلاق المتصفح قبل الانتهاء من الاستبيان.

إذا كنت قد قرأت المعلومات الواردة أعلاه ووافقت على المشاركة، فيرجى تحديد المربع المناسب:

- (●) نعم، أوافق على المشاركة
- ( ) لا، لا أوافق على المشاركة

UNDERSTANDING.

إلى أي مدى تتفق مع العبارات التالية؟

تتمثل قابلية توظيف خريج التعليم العالي في الجوانب التالية المتعلقة بالخريج

	أتفق بشدة	أتفق	محايد	لا أتفق	لا أتفق بشدة
1. امتلاك المهارات اللازمة للحصول على وظيفة بعد التخرج	○	○	○	●	○
2. الاستعداد لحياة ما بعد التخرج بما في ذلك الحياة الاجتماعية والمهنية	○	●	○	○	○
3. امتلاك القدرة على مواصلة التعلم والاستجابة لمتطلبات التعلم الجديدة بعد التخرج	○	●	○	○	○
4. الحصول على معدل تراكمي مرتفع عند التخرج	○	○	●	○	○
5. امتلاك المعارف والمهارات الخاصة بالتخصص	○	●	○	○	○
6. امتلاك سمات الخريجين مثل الاتصال الفعال والعمل الجماعي والابتكار المحددة لجميع الطلاب من قبل مؤسساتهم التعليمية	○	●	○	○	○

ROLE.
إلى أي مدى تتفق مع العبارات التالية؟

بشكل عام، المحاضر أو الأستاذ الجامعي

	أتفق بشدة	أتفق	محايد	لا أتفق	لا أتفق بشدة
1. مسؤول عن تطوير مهارات توظيف الخريجين لطلابه	○	◉	○	○	○
2. مسؤول عن تدريس المعارف والمهارات الخاصة بالتخصص فقط	○	○	◉	○	○
3. يؤثر على مستوى إكتساب طلابه لمهارات توظيف الخريجين من خلال طرق التدريس والتعلم التي يستخدمها	○	○	○	◉	○
4. يؤثر على مستوى إكتساب طلابه لمهارات توظيف الخريجين من خلال أساليب وأنشطة التقييم التي يستخدمها	○	◉	○	○	○
5. يجب أن يكون قادرًا على تطبيق الأساليب والطرق اللازمة لتطوير مهارات توظيف الخريجين لطلابه	○	◉	○	○	○

EXPERIENCES. بناءً على خبرتك الفعلية في قسمك الأكاديمي، كيف تقيم مدى اسهام الجوانب التالية فيما يتعلق بتطوير مهارات توظيف الخريجين لدى الطالب

	ممتاز	جيد	مقبول	سيئ	سيئ جدا
1. إدراج ومواءمة متطلبات تنمية مهارات توظيف الخريجين مع أهداف البرامج والمقررات الدراسية للطالب	○	○	◉	○	○
2. اختيار وتنفيذ طرق التدريس والتعليم المناسبة	○	◉	○	○	○
3. اختيار وتنفيذ أساليب وأنشطة التقييم والاختبار المناسبة	○	◉	○	○	○
4. الأنشطة اللا صفية التي ينظمها القسم للطالب	○	○	◉	○	○
5. التدريب على رأس العمل الذي يقدمه القسم للطالب	○	○	○	◉	○
6. المواد الدراسية كالكتب الدراسية ومواد القراءة المستخدمة في تدريس المقررات الدراسية	○	○	○	◉	○
7. النهج العام الذي يتبعه القسم لتطوير مهارات توظيف الخريجين لدى الطالب	○	○	○	◉	○

DEFINITION.

تقييم الطلاب هو مفهوم واسع له معان مختلفة. في هذا الاستبيان، يتم استخدام هذا المفهوم للإشارة إلى "أي نشاط يتم فيه جمع الأدلة حول تعلم الطلاب بطريقة منظمة ومنهجية ويتم استخدامها لاتخاذ قرارات بشأن عمليات تعلم الطلاب". بالتالي، يشتمل تقييم الطالب على أنشطة وعمليات تقييم متنوعة مثل: اختبارات منتصف الفصل الدراسي الامتحانات النهائية والاختبارات القصيرة وتقارير المشاريع والعروض التقديمية والواجبات والأنشطة العملية.

PURPOSES. إلى أي مدى تخدم أنشطة وعمليات تقييم الطلاب في قسمك الأكاديمي كلًا من الأغراض التالية؟

	دائماً (100%)	غالباً	أحياناً	نادراً	أبداً (0%)
1. قياس أداء الطالب من خلال رصد الدرجات واعتمادها	○	○	◉	○	○
2. ضبط جودة عمليات التدريس والتعلم وتوثيقها	○	○	◉	○	○
3. دعم وتحفيز عمليات التعلم والتحصيل الأكاديمي للطالب	○	○	◉	○	○
4. إعداد الطالب للتعلم المستقبلي من خلال تنمية قدراته على التعلم مدى الحياة	○	○	○	○	◉
5. إعداد الطالب لحياته العملية والمهنية	○	○	◉	○	○

AUTHENTICASSESSMENT.
إلى أي مدى تنطبق العبارات التالية على تصميم وتنفيذ أنشطة وعمليات التقييم في قسمك الأكاديمي؟

أ. أصالة و واقعية أنشطة التقييم

	دائماً (100%)	غالباً	أحياناً	نادراً	أبداً (0%)
1. تتوافق عمليات التقييم مع أنشطة الحياة الواقعية التي سيتعين علي القيام بها في مهنتي المستقبلية مثل تحليل المشكلات وحلها	○	○	○	◉	○
2. يتم توضيح معايير التقييم لي حتى أتمكن من فهم متطلبات التقييم الخاصة بي	○	○	○	◉	○
3. الظروف التي يتم تقييمي فيها تشبه ظروف العمل في مهنتي المستقبلية	○	○	◉	○	○
4. تكشف أنشطة التقييم عن عمليات التفكير الخاصة بي؛ على سبيل المثال، عندما يُطلب مني اتخاذ خيارات أو قرارات معينة	○	○	◉	○	○
5. الكفاءات المطلوبة لكي أجتاز أنشطة تقييمي مفيدة أيضًا في مواقف أخرى (مثل المواقف المهنية)	○	◉	○	○	○

ب. تأثير التقييم على التعلم الحالي *CURRENTLEARNING.*

	دائماً (100%)	غالباً	أحياناً	نادراً	أبداً (0%)
1. أنشطة التقييم لها تأثير إيجابي على عمليات التعلم الخاصة بي	○	◉	○	○	○
2. أنشطة التقييم تعتبر أمثلة قيمة للتعلم في حد ذاتها	◉	○	○	○	○
3. أتعلم أشياء جديدة أثناء التحضير لأنشطة التقييم والامتحانات الخاصة بي	◉	○	○	○	○
4. أفهم مواضيع دراستي بشكل أفضل كنتيجة لأداء أنشطة التقييم والامتحانات	○	◉	○	○	○
5. تساعدني أنشطة التقييم في تطوير قدراتي على تحديد النقاط التي لا أفهمها و وضع الأهداف لتعلمها	○	◉	○	○	○

ج. تأثير التقييم على التعلم المستقبلي *FUTURELEARNING.*

	دائماً (100%)	غالباً	أحياناً	نادراً	أبداً (0%)
1. تحفزني أنشطة التقييم على المثابرة ومواصلة التعلم	○	◉	○	○	○
2. تساعدني أنشطة التقييم على تطوير قدراتي لقيادة عمليات التعلم الذاتي الخاصة بي	○	○	◉	○	○
3. تسهم أنشطة التقييم في تعزيز كفاءاتي وقدراتي والاحتفاظ بها على المدى الطويل	○	○	○	◉	○
4. تتطلب أنشطة التقييم مني استخدام مهارات التفكير العليا مثل حل المشكلات واتخاذ القرارات	○	◉	○	○	○
5. تركز أنشطة التقييم على اختبار قدرتي على الحفظ بدلاً من التركيز على الفهم	○	◉	○	○	○

د. أصالة و واقعية التغذية الراجعة (Feedback) المرتبطة بالتقييم *AUTHENTICFEEDBACK.*

	دائماً (100%)	غالباً	أحياناً	نادراً	أبداً (0%)
1. يقدم لي أساتذتي تغذية راجعة تبين بوضوح ما أتقنته وما لم أتقنه على أنشطة التقييم التي يطلب مني القيام بها	◉	○	○	○	○
2. يقدم لي أساتذتي تغذية راجعة تبين بوضوح كيف يمكنني تحسين أدائي في أنشطة التقييم التي تطلب مني	○	◉	○	○	○

3. أُعطي الوقت الكافي لتحسين أدائي في أنشطة التقييم التي تطلب مني وإعادة تسليمها بعد تلقي التغذية الراجعة	○	◉	○	○	○
4. أنشطة التقييم تتطلب مني المشاركة في عمليات التعلم التعاوني مثل العمل مع أحد زملائي أو في مجموعات	○	◉	○	○	○
5. أنشطة التقييم تتطلب مني البحث عن التغذية الراجعة من مصادر متنوعة والاستفادة منها (على سبيل المثال، من أساتذتي أو زملائي أو الخبراء في تخصصي)	○	○	◉	○	○

ه. تطوير القدرة على التقييم الذاتي *EVALUATIVEJUDGEMENT.*

	دائماً (100%)	غالباً	أحياناً	نادراً	أبداً (0%)
1. عند أداء أنشطة التقييم يُطلب مني تقييم أعمالي وأنشطتي الدراسية بشكل ذاتي بناءً على معرفتي بمعايير التقييم	◉	○	○	○	○
2. عند أداء أنشطة التقييم يُطلب مني تقييم الأعمال الدراسية لزملائي بناء على معرفتي بمعايير التقييم	○	◉	○	○	○
3. عند أداء أنشطة التقييم يُطلب مني استخدام المعايير المتوفرة لتحسين عملي بشكل ذاتي	○	○	◉	○	○
4. تسهم أنشطة التقييم في تطوير قدرتي على المراقبة الذاتية والتفكير في الأعمال الدراسية التي أقوم بها	○	◉	○	○	○
5. 5. أُعطى دورًا نشطًا في عملية التقييم كتقديم الاقتراحات لتحسين معايير أو أنشطة التقييم	○	○	◉	○	○

ADDITION.

إذا كنت ترغب في إضافة أي شيء آخر حول موضوع تأثير أنشطة تقييم الطلاب على تنمية مهارات توظيف الخريجين لديهم، فيرجى تقديمه في المساحة التالية؟

CAMPUS.

المعلومات الديموغرافية

1. فرع جامعة التكنولوجية والعلوم التطبيقية:

- ○ جامعة التقنية والعلوم التطبيقية - مسقط
- ○ جامعة التقنية والعلوم التطبيقية - المصنعة
- ○ جامعة التقنية والعلوم التطبيقية - شناص
- ○ جامعة التقنية والعلوم التطبيقية - نزوى
- ◉ جامعة التقنية والعلوم التطبيقية - عبري
- ○ جامعة التقنية والعلوم التطبيقية - إبراء
- ○ جامعة التقنية والعلوم التطبيقية - صلالة

STUDYLEVEL.

2. مستوى الدراسة

- ○ المرحلة التأسيسية

- (●) دبلوم
- ( ) دبلوم عالي
- ( ) بكالوريوس

DEPARTMENT.
3. القسم الأكاديمي

- (●) Engineering
- ( ) Business Studies
- ( ) Information Technology
- ( ) Applied Sciences
- ( ) Pharmacy
- ( ) Fashion Design
- ( ) Photography

CONTACT.
يرجى تقديم تفاصيل الاتصال الخاصة بك إذا كنت سعيدًا بالمشاركة في المناقشات الجماعية لهذه الدراسة والتي ستشمل مناقشة الارتباط بين أنشطة التقييم وتنمية مهارات توظيف الخريجين

الاسم:

EMAIL.
تفاصيل الاتصال (رقم الهاتف / عنوان البريد الإلكتروني)

Location Data

Location: (23.234405517578, 56.500595092773)

Source: GeoIP Estimation

Appendix D: Examples of questionnaire pilot respondents' suggestions

Item section /number	Original item	Suggestion	Improved item
Part A: A.1. Understanding of GE / 2	Preparedness for life after graduation, where having a successful career is one aspect	Is it life after graduation: personal life or professional life?	being prepared for after-graduation life including social and professional life
Part A: A.1. Understanding of GE / 4	Overall GPA a s/he achieves upon graduation	Although this ought to be understood by all who take the survey, it is possible that some may need it explained for them. I suggest giving the long form with the first use.	Achieving a high grade-point average (GPA) upon graduation
B.1. Purposes of student assessment	Always, Most of the time, About half the time, Sometimes. Never,	Better to use rarely after sometimes, and also to put percentages. 'Would it be worth considering including a percentage of the time in brackets'	Always (100%) Often Sometimes Rarely Never (0%)
A. 3. Experiences of Graduate	The provision of the required support and guidance (e.g	We cannot combine all the points for a common answer since the components have different impacts. I think you can give them	The support provided to teaching staff for developing GE

employability / 1	professional development, policies and guidelines).	as part of the statement, no need for e.g.	like receiving relevant professional development
B.2.C. Effects of assessment on future learning / 4	Assessment reveals students thinking processes; for instance, when they are asked to make certain choices	Good, may be given as 'thinking and decision-making processes'	Assessment requires students to use higher-order thinking skills like solving problems and making decisions
Demographic information / '1. Campus of UTAS' and '2. Position'	College Dean Assistant Dean	These two questions, when combined, make it easy to identify an individual. Is this likely to affect the answers that a respondent might give if realise that they are not anonymous. I would suggest that, from what I understand of the political and cultural factors in Oman, not being anonymous might affect the data that is given, at least by some people. They might answer what they think you want to hear or based upon what they would like you or others to think about them.	Both positions were merged and given as one choice using a slash 'Dean/ Assistant Dean'

Background used in Qualtrics		As I mentioned in my comment in the survey itself, I recommend considering changing the background. It does look nice, but I found that the background picture made it uncomfortable to read the text, especially in this section.	The background was changed and made clearer
Part C: The role of student assessment practices in developing graduate employability.	NA	I'm not sure whether you are planning to include the foundation program or not. Many of the points do not relate to the foundation program. In the ELCs, only teachers who have/had experience with the post-foundation programs will be able to provide you with accurate answers	Foundation teachers were excluded from the study
	NA	Is there a way to make the scale labels move down in the e-form? Because you are using three different labels for the scale, I found it difficult to remember which one I was answering. In this section in the e-form, I had to scroll up few times to double	All the items in part c were divided and grouped into sections of no more than 5 items, with each section showing

		check which scale label is being used. This isn't very important, but it can make it easier. Or maybe you can keep the questions divided into sections.	the scale at the top.

Appendix E: Details of the pilot interviews and examples of participants' suggestions for improving the interview guide.

	Name / Department / Duration in Minutes	Reflections
1.	Participant A; PSC (Post foundation); 58 minutes	• The interview was well-structured as I was able to reflect on my experiences and express my thoughts. However, we did not discuss the term employability, so I suggest that you include some questions at the beginning to allow your interviewees to come to an understanding of what is meant by GE.
2.	Participant B (Post foundation); 68 minutes	• The questions were clear, but bear in mind that it is highly likely that most participants will be unfamiliar with the topic of the interview, SA-GED link, so I suggest you make the purpose of the interview very clear to them through the participant information sheet. • Regarding the length of the interview, I don't think time matters here because your target is to explore this, relatively new, topic in depth, so give your respondents ample time to reflect on it as

		long as they are fine sparing as much time as possible for investigating the topic.
3.	Participant C: (Post foundation); 28 minutes	• The questions and themes are well-constructed and well-thought of, they have great potential for obtaining rich data about the topic. • It would be good if you take verbal consent from your participants before starting the interview. • Make sure that the layout of the interview schedule is easy to follow because presently the way you are organizing your questions is cramped and might make it difficult to move from one question to the next and to tick the ones that were addressed and focus on the ones left. • You have included different ways of asking one question; I suggest you avoid that or at least not to write alternative questions on the interview schedule where you need only one question, so be specific and brief. If you need to rephrase the question, you can do that during the interview itself. There are also some leading questions like number 6, so try to avoid that; I suggest that you ask specific questions which you would explore further using probes and prompts based on the interviewees' responses. • Try to avoid yes/no questions which you could rephrase by simply changing them to what, why, how questions.
4.	Participant D; Business	• Questions are clear and understandable.

	Studies; 69 minutes	• Be careful in selecting your interviewees; you could ask the Head of department to help you select the right candidates. • You could add questions to explore how SA links to developing students' GE attitudes
5.	Participant E: Business Studies; 69 minutes	• All the questions were clear, and the focus of the interview is very important to us as it could help us improve our assessment practice. However, I feel conducting the interview in a semi-structured way will be challenging when it comes to analysis, so I suggest reducing the degree of unstructuredness in conducting the interviews.
6.	Participant F: Business Studies; 52 minutes	• Excellent coverage of the topic, but it would be better if you structure the interview in a similar way as the questionnaire or link them together.
7.	Participant G: Engineering; 77 minutes	• Bear in mind that most teachers view SA in terms of making students understand the course and pass or fail; they might not link it to GED, so be careful about how to deal with that. I suggest that you formulate your questions carefully and precisely in order to obtain the data you require. • Try to choose different candidates who teach courses that have different assessment schemes to get different perspectives from the various experiences with SA. • Ask your questions while considering the courses taught by teachers because there are courses that are more linked to GED, like project courses, and others that are less linked. • At some points, your voice went down so I couldn't hear you; you need to look into this technical issue and fix it.

Appendix F: Details and characteristics of the recruited interview participants, with pseudonymised names.

	Dept / Centre	Pseudonymised Name	Gender	Degree / qualification	Years of experience in HE	Years of Industry experience (IE)	Age
1.	Engineering	William	M	Master's	16 - 20	No IE	41 - 45
2.		James				1-3	
3.		Richard		PhD/ Doctorate	11 - 15	No IE	36 - 40
4.		George					
5.		Edward			<25	1-3	<55
6.		Henry					51 - 55
7.	Business Studies	Charles	M	Master's	11 - 15		46 - 50
8.		Nathan				4 - 6	51 - 55
9.		Robert		PhD/ Doctorate	21 - 25	No IE	46 - 50
10.		John				1-3	
11.		Victoria	F		16 - 20		41 - 45
12.		David	M				

13.	Information Technology	Catherine	F	Master's	6 - 10	No IE	31 - 35
14.		Margaret				10 - 12	36 - 40
15.		Noah	M		11 - 15	No IE	
16.		Benjamin			16 - 20	1-3	
17.		Samuel			21 - 25	No IE	46 - 50
18.		Christopher		PhD/ Doctorate	11 - 15	1-3	36 - 40
19.	ELC – Post foundation	Olivia	F	Master's		NA	31 - 35
20.		Liam	M		6 - 10		41 - 45
21.		Jacob			16 - 20		
22.		Alexander			21 - 25		
23.		Ethan		PhD/ Doctorate	16 - 20		46 - 50
24.		Daniel			<25		51 - 55

Appendix G: Sample letter (email) to the Deans of the seven campuses of UTAS

Dear Dean of Higher College of Technology (UTAS)

My name is Younus Al Zaabi. I received a scholarship from the Ministry of Higher Education to pursue a PhD degree at the University of Birmingham in the United Kingdom. I am currently in the second year of my program and part of my PhD thesis involves collecting data from seven branches of UTAS, previously the Colleges of Technology. I have been granted permission to collect data from your College (*See the attached approval letter from the Vice Chancellor Office*), so I am seeking your support in this process.

My project is titled: **An investigation of the impact of assessment processes on the development of graduate employability at UTAS, Oman**. The study aims at understanding how graduate employability is perceived by the University management teams, academic staff and students and how these perceptions and understandings inform the design and implementation of assessment processes that are conducive to the enhancement of graduate employability. You can find further details about the nature of the study, its purposes, its values, what type of data is required and how it will be dealt with in the information sheet attached to this email.

I am writing this email to you to seek your support to distribute two questionnaires: **Academic Staff Questionnaire** to be distributed to ***all academic staff at the academic departments and Post-foundation teachers at the ELC*** and **Student Questionnaire** to be distributed to ***all students at the college***. Here are the links to the two questionnaires, which can be filled using mobile phone or computer:

Link to Academic staff Questionnaire:
https://bham.qualtrics.com/jfe/form/SV_3DCV3ZnsjHkkFyC

Link to Student Questionnaire:

https://bham.qualtrics.com/jfe/form/SV_8dpnNAcw3hymlHU

Should you require any further details, please contact me using the following contact details:

Email address:

UK mobile number:

What's app number:

Attachments provided are as follows:

- Data access permission letter from the Academic Affairs Department
- Study information sheet

Yours faithfully,

Younus M S Al Za'abi

PhD postgraduate researcher

University of Birmingham, UK

Appendix H: Semi-structured interview participant information sheet – lecturers

Participant Information Sheet

Title of the Project: An investigation of the link between student assessment and graduate employability development at UTAS, Oman

Name of the Researcher: Younus M S Al Za'abi

Position: PhD postgraduate researcher, University of Birmingham, UK

Supervisors: Professor Celia Greenway and Dr Ben Kotzee

Description of the proposed study:

You are invited to participate in this study which is part of my PhD degree thesis. The study aims at exploring the experiences of academic staff of the student assessment system at UTAS, with a view to enhancing the link between student assessment and graduate employability development. The study findings will hopefully assist in providing a solid, research-evidenced basis for the design and implementation of assessment with enhanced alignment with the national HE aspirations and goals of nurturing HE graduate employability. The conclusions and recommendations the study is expected to provide could be used by both policy makers and practitioners at the university to inform policy and practice in this under-researched area of Higher Education.

What participation involves:

You will be required to participate in a **semi-structured interview** preferably via ZOOM videoconferencing, or any other platform more convenient to you. The interview is going to be video recorded (around 60 minutes) during which we will discuss and reflect on your experiences of the student assessment system at your department /centre: its design, implementation and the factors that exert an impact on the effectiveness of this system toward delivering its anticipated, ultimate outcomes. The objective of the interview is to explore what happens and how you, as HE academics, go about implementing the assessment system, rather than looking for specific things that you should have or have not done. Therefore, please be reminded that as a researcher I view no perspective as right or wrong and that I fully acknowledge each discipline or specialisation to have its own established norms and conventions of conducting student assessment – I will be there to learn from you about these established ways of assessing students and how through reflection we could possibly come up with some suggestions to improve this practice. At some points during this interview, I will refer to the questionnaire results that you participated in to enrich and inform our discussion.

To make the interview more focussed, our discussion will often centre around one course you are currently teaching whose assessment-related documents I will ask you to share with me beforehand. The documents I will request you to share are as follows:

1. The delivery plan of one course you are currently teaching,
2. The programme description and objectives that this course is part of,
3. The course's assessment plan (in case it is not included in the delivery plan)
4. The assessment tasks or activities you have used so far including mid-term, quizzes, assignments, projects and any assessment activities you have personally developed for this course (both graded and ungraded).
5. Any other assessment related documents that you think could enrich our discussion.

Participation and Withdrawal:

Participation in this study is completely voluntary, so you should feel under no compulsion to participate. You should also rest assured that there are no consequences for deciding not to participate or to withdraw at any point during the data collection. The deadline for withdrawing from the study is 4 weeks after you provide your data. If you inform me about your withdrawal decision within this period, I will ensure that your data is excluded and securely destroyed.

Confidentiality/Anonymity and Data Security

Data collected for the purpose of this study will be treated as extremely confidential and will not be used for reasons other than research purposes. All participant data will be assigned a code and stored securely in the researcher's password-protected laptop, personal encrypted flash memory disc, as well as on the Research Data Store (RDS) provided by the University of Birmingham. Reference to individual participants within the text of the thesis, and any publications resulting from the study, will be pseudo-anonymised and will be identifiable only to the researcher and his two supervisors.

Funding: I am sponsored and funded by the Omani government via the National Postgraduate Scholarship Programme represented and supervised by the Ministry of Higher Education.

Further information: If you wish to have further information about any aspect of this study or to receive any feedback about its findings, you may contact me or my supervisors any time prior to or after providing your data using the following contact details:

Email address:

What's app telephone number:

Supervisors contact details:
Dr Celia Greenway Email address:
Dr Ben Kotzee Email address:

Appendix I: Interview participants consent form

Lecturer Consent Form (Semi-structured Interviews)

The title of the study: **An investigation of the impact of assessment processes on the development of graduate employability at UTAS, Oman**

This information is being collected as part of a PhD degree thesis investigating the potential of the use of assessment practices in developing student graduate employability. The information you supply will be assigned a code and stored securely in the researcher's password-protected laptop, personal encrypted flash memory discs, as well as on the BEAR Research Data Store (RDS) provided by the University of Birmingham. Reference to individual participants within the text of the thesis will be handled using pseudonyms and will be identifiable only to the researcher and his two supervisors. The information will be retained by the University of Birmingham and will only be used for the purpose of research, and statistical and audit purposes. By supplying this information, you are consenting to the University storing your information for the purposes stated above. The information will be processed by the University of Birmingham in accordance with the provisions of the Data Protection Act 1998. No identifiable personal data will be published.

I confirm that I have read and understand the participant information sheet for this study. I have had the opportunity to ask questions if necessary and have had these answered satisfactorily.

- I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. If I withdraw my data will be removed from the study and will be destroyed.

- I understand that my personal data will be processed for the purposes detailed above, in accordance with the Data Protection Act 1998.

- Based upon the above, I agree to take part in this study.

Name of participant ..... Date.....
Signature.....

Name of researcher Younus Al Za'abi Date.....
Signature.....

Appendix J: Letter of approval for conducting the project by the Humanities and Social Sciences ethics committee at the University of Birmingham

UNIVERSITY OF BIRMINGHAM

Research Support Group
C Block Dome
Aston Webb Building
University of Birmingham
Edgbaston B15 2TT
Tel: [redacted]
Email: [redacted]

11th May 2021

Dr Celia Greenway
Vice Chancellors Office/School of Education
University of Birmingham

Dear Dr Greenway,

Re: "An investigation of the impact of assessment processes on the development of graduate employability at the Colleges of Technology (UTAS), Oman"
Application for Ethical Review ERN_21-0472

Thank you for your application for ethical review for the above project, which was reviewed by the Humanities and Social Sciences Ethical Review Committee.

On behalf of the Committee, I confirm that this study now has full ethical approval.

I would like to remind you that any substantive changes to the nature of the study as described in the Application for Ethical Review, and/or any adverse events occurring during the study should be promptly brought to the Committee's attention by the Principal Investigator and may necessitate further ethical review.

Please also ensure that the relevant requirements within the University's Code of Practice for Research and the information and guidance provided on the University's ethics webpages (available at https://intranet.birmingham.ac.uk/finance/accounting/Research-Support-Group/Research-Ethics/Links-and-Resources.aspx) are adhered to and referred to in any future applications for ethical review. It is now a requirement on the revised application form (https://intranet.birmingham.ac.uk/finance/accounting/Research-Support-Group/Research-Ethics/Ethical-Review-Forms.aspx) to confirm that this guidance has been consulted and is understood, and that it has been taken into account when completing your application for ethical review.

Please be aware that whilst Health and Safety (H&S) issues may be considered during the ethical review process, you are still required to follow the University's guidance on H&S and to ensure that H&S risk assessments have been carried out as appropriate. For further information about this, please contact your School H&S representative or the University's H&S Unit at healthandsafety@contacts.bham.ac.uk.

Yours sincerely

[redacted]

Mrs Susan Cottam
Research Ethics Manager

Appendix K: Data access approval letter from UTAS's Vice-chancellor's Office

Sultanate of Oman
University of Technology and Applied Sciences
Vice Chancellor Office

سلطنة عمان
جامعة التقنية والعلوم التطبيقية
مكتب الرئيس

No. 1124.32 /2021
DATE: 15 - 11 - 1442
DATE: 24 - 06 - 2021

الرقم: ع-ت/١١ ٤٣٢
التاريخ: ١٥ - ١١ - ١٤٤٢هـ
الموافق: ٢٤ - ٦ - ٢٠٢١م

Respected Deans of University of Technology and Applied Sciences (CoTs)

الأفاضل/ عمداء الكليات التقنية بجامعة التقنية والعلوم التطبيقية المحترمين

After greetings,

السلام عليكم ورحمة الله وبركاته وبعد،،،

Subject: Facilitating Research Task

الموضوع/ تسهيل مهمة باحث

This is to certify that we have no objection in allowing Mr. Younus Mohammed Al-Zaabi to pursue the field application of his research:

يرجى التكرم بالعلم بأنه لا مانع لدينا من إجراء الباحث/ يونس بن محمد الزعابي للبحث الميداني لدراسته العلمية عن:

An investigation of the impact of assessment processes on the development of graduate employment of graduate employability at the colleges of technology UTAS, Oman.

تأثير عمليات التقييم على تطوير توظيف الخريجين لتوظيف خريجي الكليات التقنية في السلطنة

In order to fulfill the requirements of attaining (PhD) in education from University of Birmingham, United Kingdom.

حسب الجدول المرفق. وذلك استكمالا لمتطلبات نيل شهادة الدكتوراه من جامعة برمنجهام في المملكة المتحدة.

We kindly ask you to provide all the required facilities that the researcher needs through filling in the required information at the following information (attached table).
For more details, please contact the researcher via email: [redacted]

آملين منكم التكرم بالإيعاز للمعنيين لديكم تقديم التسهيلات اللازمة التي يحتاج إليها الباحث من خلال تعبئة البيانات المطلوبة. ولمزيد من التفاصيل يرجى التواصل مع الباحث على البريد الإلكتروني التالي [redacted]

وتفضلوا بقبول فائق الاحترام والتقدير،،،

Sincerely,

[redacted]

Dr. Aflah Zaher Al Shaqsi
Director of Academic affaires

[redacted]

د. افلح بن زاهر الشقصي
مدير دائرة الشؤون الاكاديمية

ص.ب: ٧٤ ، الرمز البريدي: ١٣٣ الخويـر ، سلطنة عُمان ، هاتف: ٢٤٤٧٣٦١١ ، فاكس: ٢٤٤٧٨٤٠١
P.O. Box: 74 Al-Khuwair , Postal Code: 133 , Sultanate of Oman , Tel.: 24473611 , Fax: 24478401

Appendix L: An extended sample of the coding scheme (Codebook, exported from NVivo qualitative data analysis software) applied to the data.

Interview codes (24 participants)			
Number	Name	Files	References
1.	❖ Challenges of implementing assessment for graduate employability (AFGE)	0	0
2.	▪ A view of the T as the primary feedback provider	2	2
3.	• Feedback viewed in terms of grades	1	2
4.	▪ Cultural aspects	5	9
5.	• Memorisation seems to be inevitable	2	2
6.	• Weak foundation; lack of soft skills	4	11
7.	♦ Over reliance on teachers	1	2
8.	▪ Difficulty of measuring the impact of AFGE on future GE	1	3
9.	• difficulty of anticipating skills needed	2	2
10.	• It depends on sts career choices	1	2
11.	▪ Insufficient teamwork assessment	2	4
12.	• Group and teamwork done to save time	4	5
13.	▪ Lack of constructive alignment	6	11
14.	▪ Lack of resources	1	3
15.	• Labs to create real-life environment	5	9
16.	♦ Workshops and machines	1	1

Interview codes (24 participants)			
Number	Name	Files	References
17.	• Short semester	9	19
18.	▪ Lack of understanding of summative assessment guidelines	2	5
19.	▪ Students language abilities could be a barrier	4	6
20.	▪ Management's focus on QA purposes	3	8
21.	▪ Mindset of students	0	0
22.	• A matter of establishing a dialogue with sts	13	31
23.	♦ Grades still speak louder	2	3
24.	♦ Making the link to the world of work visible	6	14
25.	• Grade oriented	12	37
26.	♦ Employers lead to this attitude	4	8
27.	♦ Grade vs learning process oriented	1	2
28.	♦ Using grades strategically	5	6
29.	• Lack of competition among sts	1	2
30.	• Sts complaining to management	5	7
31.	♦ positive complaints	1	1
32.	• Sts might not see the point of AFGE	9	20

Interview codes (24 participants)			
Number	Name	Files	References
33.	♦ Lack of interest and aptitude	5	12
34.	• Sts see the point eventually; it is a gradual process	4	5
35.	♦ Resistance to AFGE is a natural response	2	2
36.	▪ No streamlining for sts from different specialisations	2	4
37.	❖ Community	0	0
38.	▪ Engagement of alumni	3	5
39.	▪ Engagement of industry	22	48
40.	• It starts with knowing the industry requirements	3	5
41.	▪ Engagement of local community	1	1
42.	▪ Engagement of other HEIs	4	4
43.	▪ Engagement of professional bodies	3	4
44.	❖ How assessment is used to develop GE capacities	0	0
45.	▪ Assessment preparing students for future real-life situations	13	27
46.	• AFGE should be done systematically and collaboratively	1	6
47.	♦ Attaining a teaching qualification could help	1	1
48.	♦ Need for expert opinion	5	7

Interview codes (24 participants)			
Number	Name	Files	References
49.	♦ Need for providing training to Ts	4	10
50.	♦ The role of the management in implementing AFGE	11	29
51.	➢ Guiding and monitoring	5	11
52.	• Providing clarity about good assessment	5	9
53.	➢ If AFGE is not prescribed Ts might go for the easy option	5	9
54.	➢ Trusting teachers with assessment; they are the experts	10	16
55.	• But some do not feel so	1	2
56.	• Focus on skills and graduate attributes	10	15
57.	♦ Assessment should be made current	10	21
58.	➢ and relevant	1	3
59.	♦ Assessment should cater for entrepreneurial skills	6	8
60.	♦ Assessment should develop ability to search for the right information	5	6
61.	♦ Assessment should develop effective attitudes for GE	9	17

Interview codes (24 participants)			
Number	Name	Files	References
62.	➢ Implementing assessment that develop ability for self-learning	4	5
63.	➢ working independently	4	6
64.	♦ Focus on problem solving	9	19
65.	♦ Implementing assessment that develop ability to communicate ideas	19	38
66.	➢ Challenge; using marks to encourage sts to share ideas	4	6
67.	➢ To develop confidence to face people	1	2
68.	♦ Providing authentic assessment experiences	7	15
69.	➢ Assessment should be authentic	3	4
70.	➢ Assessment should be sustainable	2	2
71.	➢ Assessment should reflect the messiness of reality	5	9
72.	➢ More chances for on spot-assessment, formative	1	1
73.	♦ The grade should reflect sts skills	9	20
74.	➢ Considering individual differences	5	8

Interview codes (24 participants)			
Number	Name	Files	References
75.	➢ Prioritising sts achievements	5	6
76.	• T's understanding and believing in AFGE purposes	2	5
77.	♦ AFGE is a bonus for Ts and Sts	3	3
78.	♦ Assessment does not guarantee skills acquisition	1	1
79.	♦ Believing in sts abilities	7	7
80.	➢ Inspiring sts	1	1
81.	♦ Futility of not emphasising AFGE	4	6
82.	♦ Industry-academia dilemma	5	6
83.	♦ Ts link lifelong learning to further education	4	5
84.	♦ Ts strive to deliver the best assessment	4	8
85.	➢ despite curriculum limitation	1	2
86.	➢ within the time constraints they have	1	3
87.	• Variation of the Object or focus of the assessment activity	8	13
88.	♦ Multi-dimensional assessment tasks	9	22

Interview codes (24 participants)			
Number	Name	Files	References
89.	♦ Variation based on study level	5	7
90.	▪ Developing job finding skills	2	5
91.	▪ Engaging sts in peer assessment and collaborative learning	13	26
92.	• AFGE does not have to be graded (unofficial)	3	3
93.	♦ Sts might not be motivated though	1	2
94.	• Challenging sts	1	1
95.	• Exchanging feedback is a must for teamwork success	1	1
96.	• Group discussions are joyful	4	6
97.	▪ Engaging sts in the assessment process (self-assessment)	12	26
98.	• As teachers we know what is best for our sts	1	1
99.	• Providing detailed feedback to improve future work	8	10
100.	• Providing feedback to scaffold thinking processes	5	5
101.	• Providing rubrics to sts	3	3
102.	• Shallow understanding of peer & self-assessment	8	23
103.	• Sts are given no role currently	3	6
104.	♦ or a minimal role	2	4

Interview codes (24 participants)			
Number	Name	Files	References
105.	▪ Relationship of Learning outcomes (LOs) and AFGE	1	1
106.	• Achievement of LOs is decided by the form of assessment implemented	2	2
107.	• LOs (curriculum) should be linked to the market needs	5	7
108.	♦ It all depends on the LOs	7	20
109.	• Skills development depends on assessment methods used	7	12
110.	♦ Variation of assessment methods	6	11
111.	➢ To create the right balance	2	3
112.	• Teaching vs assessment	6	8
113.	♦ Assessment decides how to teach	1	1
114.	♦ Assessment drives learning	3	5
115.	▪ Through formative assessment (FA)	1	1
116.	• Creating curiosity through questioning techniques	2	2
117.	• FA plays a more important role	8	12
118.	• Ts' have a higher degree of freedom in conducting FA	10	29
119.	♦ focus should be on the learning process	3	5

Interview codes (24 participants)			
Number	Name	Files	References
120.	♦ Giving freedom might not be a good idea	2	2
121.	• Linking formative and summative assessment	3	4
122.	• Sts asking real-life questions	3	5
123.	• Use of case studies and scenario-based assessment	6	15
124.	♦ They are good to avoid memorisation	1	1
125.	♦ They focus on analysing sources and making judgements	10	16
126.	♦ They link sts to real life issues	1	3
127.	♦ They require longer time to implement	4	5
128.	♦ They simulate future work situations	9	25
129.	• Use of exemplars	3	6
130.	• Use of projects	9	18
131.	♦ and assignments	3	7
132.	➢ which focus on analysis and making decisions	5	9
133.	♦ By allowing sts freedom to be creative	2	3
134.	♦ By involving sts in doing research	5	7

Interview codes (24 participants)			
Number	Name	Files	References
135.	♦ Develop leadership skills through working in groups	2	2
136.	♦ Incremental process toward a final product	2	3
137.	• Use of reports about site visits	2	3
138.	• Use of role plays	2	4
139.	▪ Through summative assessment	1	3
140.	• Asking intellectually challenging questions	5	8
141.	♦ Case-based questions	1	3
142.	♦ Focus on creativity	6	8
143.	• Asking novel questions	8	13
144.	• Avoiding memorisation	11	19
145.	♦ Some memorisation is necessary	7	10
146.	➢ Provided that it is coupled with understanding	1	3
147.	• Exams are a necessary evil	4	5
148.	♦ Exams are less effective for GE development	7	9
149.	♦ So, yet in rare cases, they are replaced by final reports	1	2
150.	• Focus on analysis, critical thinking (applying Bloom Taxonomy)	14	31

Interview codes (24 participants)			
Number	Name	Files	References
151.	• Instant judgement is unfair	5	12
152.	• Summative assessment is important	9	10
153.	♦ But not enough	2	2
154.	▪ T's motives for implementing AFGE	1	1
155.	• It feels like the right thing	3	4
156.	♦ Concern for sts future	4	9
157.	♦ T's amount of [industry] experience matters	5	6
158.	• It is in line with the mission & vision	1	1
159.	• It requires agentic teachers	11	25
160.	♦ Keeping touch with the world of work	8	22
161.	♦ Reflecting on practice	5	14
162.	❖ Purposes of assessment	0	0
163.	▪ Assessing st ability to apply	6	8
164.	• Assessment train sts to work within a time limit	3	5
165.	• Preparation for life and work	20	37
166.	♦ Through applying professional body's assessment	1	4
167.	▪ Decide your teaching approach	1	1

Interview codes (24 participants)			
Number	Name	Files	References
168.	▪ Evaluating (mirroring) my teaching	4	5
169.	▪ Evaluating learning outcomes achievement	9	9
170.	• Assuring GA attainment	1	2
171.	• Evaluating skills attainment	4	4
172.	• Measuring sts level of understanding	5	7
173.	▪ Grading students	3	3
174.	• Classifying sts	1	1
175.	▪ Supporting future learning requirements	2	3
176.	• By enabling sts to communicate and share ideas	1	1
177.	• By involving them in practical experiences	1	1
178.	• By involving them in research	2	4
179.	❖ Rules regulating assessment	1	1
180.	▪ AFGE is time-consuming	13	27
181.	• And not an easy task	2	11
182.	• But fun	1	2
183.	• Yet time is not a barrier	8	8
184.	• It needs to be well-planned	2	3
185.	• that's why lifelong learning is important	1	1

Interview codes (24 participants)			
Number	Name	Files	References
186.	▪ Assessment schemes approval process	1	1
187.	▪ Current assessment regulations are not supportive of AFED	16	52
188.	• AFGE contradicts with current LOs	3	3
189.	• Applying Bloom's taxonomy could help	1	6
190.	• Limiting assessment to certain material	8	22
191.	♦ which does not develop lifelong learners	2	3
192.	• Need to focus on linking theory to practice (authentic assessment)	5	7
193.	♦ On the Job Training (OJT) is pointless	3	6
194.	• Same level of assessment for all study levels	3	3
195.	• The way marks are divided	5	12
196.	♦ Passing percentage	1	3
197.	• Ts talents are not exploited well	1	1
198.	▪ Feedback sessions are optional	4	6
199.	• No time for feedback	2	2
200.	▪ Moderation policy: easy, average and challenging	14	34

Interview codes (24 participants)			
Number	Name	Files	References
201.	• The main focus is on memorisation	2	3
202.	• Vagueness of applying the policy	7	11
203.	♦ Changing mark allocation to suit sts abilities	1	1
204.	▪ Practical vs theory policy	6	11
205.	▪ Standardisation of assessment	3	3
206.	• Different courses demand different assessment	12	30
207.	• Negative	6	14
208.	• Positive	4	5
209.	♦ It solves the problem of having too many perspectives	1	1
210.	• Ts have to stick to a specific format	15	44
211.	▪ Ts are consulted	14	25
212.	• But it is not enough	2	4
213.	• Ts suggestions are heard	5	8
214.	▪ Unwritten rules	9	18