Pedagogical Craft: Assessment Beliefs of Those Teaching in Higher Education

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Dedication

To my parents, Frank and Rose Farrell who supported, encouraged and enabled me in the earlier stages of my educational journey and pointed the way forward.

Thank you and miss you.

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Abstract

Assessment is viewed as a central component of the pedagogical pursuit in the higher education context because "it has a range of powerful impacts on what students and teachers do" (Carless, 2015, p.9), directly impacting teaching and learning (Biggs & Tang, 2011), the effects of which students cannot escape if badly designed (Boud, 1995). The study reported on herein aims to examine assessment beliefs of higher education academics as a foundation for informing further research on assessment practices in the Irish context.

This study took a two-pronged approach to the examination of teacher assessment beliefs. Firstly, a scoping review (Arksey & O'Malley, 2005) was conducted to establish a general sense of teacher assessment beliefs in the literature. Data arising was analysed using a thematic synthesis (Thomas & Harden, 2008) approach. From this analytic process, the *5Ps framework*, was developed which can be used to inform further research in subsequent phases of this study and to inform the design and implementation of professional development opportunities. The framework comprises five elements to be considered – ***P****eople* (teachers and students), ***P****urpose*, ***P****rocess*, ***P****lace &* ***P****ositionality*, and ***P****rofessional Development*.

Secondly, those with responsibility for assessment in the Irish higher education context were surveyed to establish their assessment beliefs, specifically in relation to the purpose of assessment. While overall patterns of response indicated general agreement the *assessment makes programmes/modules* and *students accountable*, *improves education* and is *not irrelevant* scales, nuances were evident when subscales were examined. The only respondent characteristic to evidence any level of significant difference in response was that of the discipline with which the respondents identified specifically in relation to those in the education (soft applied) discipline compared to those in the soft pure disciplines as per Biglan's (1973) taxonomy. Class size, types of programmes and experience did not seem to impact beliefs. The one open question in the survey produced a spectrum of responses in terms of aspects of assessment which should be examined further. Of most interest was the lack of explicit reference to professional development as one of those aspects.

While viewed in the literature as central to the pedagogical pursuit of the higher education context, the evidence arising from this study is that even when this fact is acknowledged, there is a systemic disconnect between the willingness and competence of higher education teachers to enact favourable beliefs. This study's contribution to knowledge is two-fold. Firstly, the development of the 5Ps framework provides a point of reference for the design and development of professional development in the field of assessment. Secondly, the use of Brown's (2006) scale provides an overview of teacher assessment beliefs in the Irish higher education context, an aspect of research which has been somewhat neglected heretofore.

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Chapter One: Rationale and Context for Study

1.1 Introduction

Pedagogy incorporates the pillars of curriculum, teaching, learning and assessment; it is also about relationships and values (Nind, Curtin & Hall, 2016). The research reported in this thesis focuses on the perceptions, conceptions and beliefs of teaching academics across disciplines in the higher education (HE) context in relation to one pedagogical pillar - assessment. While assessment is the focus of this study, it is impossible to completely separate it from the other pedagogical elements. In fact, assessment may be viewed as the most important element which, if weak or faulty, renders teaching and learning (T&L) ineffective (Biggs & Tang, 2011). While the Biggs and Tang stance might be considered quite provocative, it does also imply the interconnectedness of teaching, learning and assessment. Assessment is also about relationships, with students and between HE teachers and others working on programmes, whereby what is valued at modular or programme level is communicated in terms of curricular content, role, responsibility, learning and teaching. How those teaching in HE view the purpose and role of assessment matters because it "impacts on the kinds of assessment practice they carry out with their students" (Carless, 2015, p.21).

This chapter provides (a) a rationale for this study, situated in the personal, professional, international and Irish contexts; (b) a brief introduction to the study design; (c) an outline of the focus of the study in terms of the aim, purpose, research objectives and research questions of the study reported herein in the broader context of an intended, longer-term research project; and (d) an overview of the remaining chapters of the thesis. The term *'those teaching in HE'* is used predominantly to refer to those whose beliefs are being explored, although this term is sometimes used interchangeably with teacher, academic or teaching academic depending on context. Using the term *'those teaching in HE*' is intended to encompass all those engaged in teaching others in the HE sector, including those who may not identify or be recognised as HE teachers *per se* e.g. academic developers and possibly others.

1.2 Rationale for this study

This section outlines the rationale for the focus of this study. First, the place of assessment in the HE context generally is considered followed by assessment specifically in relation to the Irish HE context. The theoretical framework guiding this research, the aims of the research and the structure of the overall thesis are then outlined.

1.2.1 Assessment in the international higher education context

Assessment is a persistent feature of HE with which all students and most staff are required to engage but is one of the least satisfying aspects of the student experience while those teaching in HE may view assessment as directing students' attention towards grades rather than learning (Carless, 2017). The profound impact of assessment on students' experience and the implication for their wellbeing is sometimes provided as the reason for excessive caution when change is proposed (McArthur, 2018). While assessment practices may be traditionally slow to change, the onset of the COVID-19 pandemic and the resultant pedagogical flip to the online environment, forced reconsideration of all pedagogical pillars, including assessment, with those teaching in HE reacting in a spectrum of ways from those who made minimal adjustments to existing assessments to those who innovated new assessment approaches quite easily (Mottiar, Byrne, Gorham, & Robinson, 2024). The recent proliferation of artificial intelligence (AI) tools may also result in increased pace of change and review of assessment practices, albeit arising from fear of plagiarism and the threat to valid certification of students rather than a systemic concern over quality of assessment practices (White, 2023). Systemic change in assessment will require academics to innovate and reflect on this element of their pedagogical practice but this "buy-in ultimately comes from the belief that proposed methods are enhancements of present practice that brings benefits to students, teachers and other stakeholders" (Murchan, 2014, p.186). Understanding academics' beliefs underpins any attempt to enhance practice (O'Sullivan, 2014) and indeed, to understand practice.

Unlike the primary and post-primary education sectors, many of those vested with pedagogical responsibility in the HE sector may never have envisaged themselves in a teacher role (Nevgi & Lofstrom, 2015). Moreover, the HE context has traditionally required academics to engage in research and administrative duties as well as teaching (Whitchurch, 2013), all of which lay claim on time and workload as well as identity. The researcher role of the academic persona is often encouraged, developed and fostered within the HE system at an individual level whereas, the teacher role may require the academic to fit into an existing system with little or no attention paid to development of individual needs in this aspect of HE work (Becker & Denicolo, 2013).

Academics are usually employed because of their subject or disciplinary expertise, which is characterised by depth in one or two aspects. They tend to identify with their discipline (Clegg, 2008) and value deep expertise as do HEIs themselves. However, all teachers have a theory of what pedagogy is or should be and, while they may be unaware of their own philosophical views, it impacts

on everything they do in the learning environment they inhabit, influence and create (Biggs & Tang, 2011). Assessment is just one aspect of the pedagogical duties in the HE context. Academics also develop curricula in the form of programmes and modules; lead students and other staff in relation to various aspects of the rollout of the curriculum; respond to and develop relationships with students; and manage the administrative aspects of programmes.

Internationally, the HE context has changed rapidly in the last two decades or so, changing how HEIs are viewed and how academics view themselves (Teixeira, Magalhaes, Veiga & Rosa, 2019) with significantly increased participation rates, student diversity, number and range of professional programmes and the introduction of the Bologna Process which required HEIs to clearly stipulate expected learning outcomes across and within programmes (Biggs & Tang, 2011). The pressure to achieve institutional excellence in relation to research profile has increased in tandem with pressure to compete for new students and to develop programmes which, combined with the changes above, have somewhat changed the research-teaching balance of the academic identity. These tensions are mirrored in the Irish context, some of which are outlined in the following section.

1.2.2 Assessment in Irish Higher Education

Across the compulsory Irish education sector, assessment has been to the forefront of discussions at primary and post-primary levels. For example, at primary level, the national curriculum is under revision, with explicit reference being made to the centrality of assessment for and of learning within the curriculum itself (National Council for Curriculum and Assessment [NCCA], 2023; Lysaght, Scully, Murchan, O'Leary & Shiel, 2019). At post-primary level, assessment practice has been at the centre of heated debate for the last number of years with the governmental intention of moving from examination only to a blend of school based continuous assignments and examinations at junior cycle, with the former accounting for majority weighting in terms of grades awarded and both of which were to be graded within the school (Department of Education and Skills [DES], 2012; NCCA, 2011). However, this was met with significant resistance within the post-primary sector because of the change in the role of teacher as assessor leading to certification (Dermody, Lysaght & O'Leary, 2020). This culminated in a reversal of governmental policy (DES, 2015) which maintained the blended approach of continuous assessment and terminal examination but (a) two in-school assignments to be marked by those teaching students using quite a simple grade descriptor rubric which does not contribute to the overall grade received for the subject at the end of the third year; and (b) a written reflection on the two tasks worth 10% plus terminal examinations worth 90% to be marked externally. Recent proposals for senior cycle certification are currently being met with the same level of

resistance, with post-primary teachers very reluctant to take the responsibility for marking their students' work for certification purposes (Riegel, 2022).

In contrast, the Irish HE sector has long accepted its remit/responsibility to teach and assess its own students without recourse to external bodies albeit that some programmes must be accredited by professional bodies such as *An Chomhairle Mhúinteoireachta* (teaching) and *An Bord Altranais* (nursing). In 2011, a seminal policy document, the *National Strategy for Higher Education to 2030: Report of the Strategy Group* (Hunt, 2011), was published. It was commissioned by the Irish government and presents a "vision of an Irish higher education sector that can successfully meet the many social, economic and cultural challenges that face us over the coming decades, and meet its key roles of teaching and learning, research, scholarship, and engagement with wider society" (p.4). The report makes a number of recommendations for Irish HEIs in relation to T&L including systems to capture student feedback on teaching; parity of esteem for teaching and research; preparation of first-year undergraduate students for their HE journey; and ensuring that "all teaching staff are both qualified and competent in teaching and learning, and should support ongoing development and improvement of their skills" (p. 62). It also recommends that HEIs should ensure alignment between learning outcomes, assessment and pedagogy in the design of programmes. While the thrust of this recommendation is admirable, the separation of learning outcomes and assessment from the concept of pedagogy hints at a system-level understanding of this term whereby pedagogy seems to be associated with T&L while curriculum and assessment sit outside this conceptualisation, thereby ensuring they are not, in fact, aligned. Furthermore, most of the report's recommendations focus on the structure of HE, consolidation and funding. While the executive summary discusses programmes for teachers and the scholarship of T&L (SoTL), the recommendations do not explicitly address these aspirations. In fact, most of the T&L recommendations relate to student learning apart from the one quoted above despite a very strong statement earlier in the report:

> It is not sufficient for academics to be experts in their disciplinary area; they also need to know how best to teach that discipline. They need to have an understanding of learning theories, and how to apply those theories to their practice. They need to appreciate what teaching and learning approaches work best for different students in different situations (Hunt, 2011, p.59).

While not explicitly referred to here, it might be extrapolated that the thrust of this statement encompasses assessment as well as T&L although that is not a given considering the disconnect in the language of the report as outlined above.

There has been increased national attention on SoTL over the last two decades particularly. O'Sullivan, Gibney, Guerin, Staunton and Kalaitzake (2015) systematically reviewed Irish SoTL publications between 1990 and 2015, using a predetermined thematic framework. They highlighted the steady increase in SoTL output from 1998 with a significant increase evident from 2008 onwards, most of which were journal articles with a disciplinary focus. Of the 2,275 items identified, 185 (8%) related to assessment and were included within the course design theme. However, considerable attention has been paid to assessment in the Irish HE context at a more systemic level (e.g. National Forum, 2016a; 2017; Quality Qualifications Ireland [QQI], 2018; 2020; 2022), some of which will be explored in more detail in the next chapter.

In line with international trends, Irish HE has increased its awareness of and focus on the role and importance of T&L at a systemic level. This can be seen in the growth of units within individual HEIs which support the pedagogical mission of the institution and the establishment of the *National Forum for the Enhancement of Teaching and Learning in Higher Education in Ireland* (hereafter referred to as the National Forum) in 2012 which had four key priorities - (a) the professional development of all those who teach, (b) teaching and learning in a digital world, (c) teaching and learning enhancement within and across disciplines, and (d) student success (www.teachingandlearning.ie/about/). While a review of the National Forum (Henard, 2017) criticised its unclear focus, it did endorse one of the National Forum's outputs - the professional development (PD) framework for staff teaching in HE in Ireland (National Forum, 2016b) which was developed following a scoping exercise (National Forum, 2015) and extensive consultation with those working in the field (National Forum, 2016c).

The framework (National Forum, 2016b) comprises five domains including self, professional identity, communication, skills and knowledge regarding T&L, and digital capacity. There are references to undefined terms such as pedagogy, teaching and learning with these terms used interchangeably throughout. For example, one of the aims of the framework is to "enhance and develop the pedagogy of individual disciplines" (p.1). Later, it is stated that "all five domains refer to the activities that staff engage in as part of their teaching (including assessment and feedback activity)" (p.3). Domain 4 focuses on professional knowledge and skills in teaching and learning where it is stated that the domain focuses on "disciplinary knowledge and disciplinary approaches to teaching (disciplinary pedagogies) … moving towards partnership in the teaching and learning process … staff's capacity to design and implement innovative and creative teaching and learning approaches at different levels of the curriculum … the importance of assessment and feedback is emphasised" (p.6). Here, there seems to be an alignment between teaching and 'pedagogies', although it is unclear how the plural version of this term impacts its meaning. However, there is explicit reference to assessment and albeit that the

relationship between assessment and pedagogy is unclear, it does signify an intention to explicitly focus on assessment practices as part of an overall PD framework.

The National Forum (2017) explicitly focused on developing a conceptual framework for assessment practices in the Irish HE context. First, a range of module descriptors and the findings of the national student survey (www.studentsurvey.ie) were examined in an attempt to ascertain the nature of assessment practices carried out across the Irish HE sector. The study found (a) that there was considerable variation in transparency of assessment approaches, (b) year-long modules had fewer assessment tasks than modules based entirely in one semester, and (c) students are more likely to engage in behaviours which enable them to assess their own learning at the end of a programme than at the beginning. The National Forum subsequently formed expert groups and provided assessment guidance (O'Neill, 2019) including the development of a conceptual framework for the Irish HE sector. It also facilitated professional development courses for those teaching in HE to upskill in developing assessment practices at a programme level which attract a digital badge in recognition of learning. This work was carried out over a number of years and indicated a concern on the part of the National Forum for assessment practice.

The focus on the National Forum on assessment is mirrored by that of QQI which has published two related green papers leading to the development of a policy document on assessment standards. The first is a detailed document, focusing on assessment approaches and strategies (QQI, 2018) wherein a range of core issues are identified, some of which are outlined below:

1. Teachers have a tacit understanding of assessment which is not necessarily clear, based on evidence or up-to-date.
2. Institutions find it difficult to articulate how learning will be supported to reach learning outcomes and often, assessment is not considered at a programme level.
3. Writing and interpreting learning outcomes is difficult and requires skill.
4. Providers find it difficult to articulate assessment strategies that align with learning.
5. Designing assessment involves making assumptions about learners which may not be accurate and therefore, may affect the reliability and validity of the assessment process.
6. High frequency, granular summative assessment may cause discrete elements of a programme to compete with each other, detracting from the overall aims of the programme.
7. The fairness and consistency of grading systems within and between institutions needs to be considered, especially in the context of reliability and validity of assessment measures.
8. There is a need to understand how organisations conclude an individual is competent to assess and how they support individuals in this aspect of their work.

The issues raised by QQI (2018) are concerning, appear to be embedded across the system, and mirror the concerns of teachers working in the post-primary sector which underpinned their determination not to become involved in the assessment processes leading to certification of their own students. These issues highlight the multilayered complexity of assessment and the difficulty of enacting espoused assessment principles in practice at a systemic, institutional and individual level. Approaches to assessment underpin a second green paper published by QQI (2020) in relation to qualifications wherein it is stated "the reliability and validity of the assessment of candidates for qualification is a critical success factor in building and maintaining trust in qualifications" (p. 9).

The publication of revised policy on assessment and standards (QQI, 2022) is based on standards and guidelines for qualifications in the European higher education area and takes into account many of the issues raised in the previous QQI (2018, 2020) papers. At its core are six key principles (QQI, 2022, pp. 6-8):

1. Learners are responsible for demonstrating learning achievement.
2. Assessment supports standards based on learning outcomes.
3. Assessment promotes and supports both effective learning and teaching.
4. Assessment procedures are credible.
5. Assessment methods are reviewed and renewed as necessary to adapt to evolving requirements.
6. Learners are well informed about how and why they are assessed.

The principles are underpinned by a recognition of the diversity of learners; the importance of assessment competence on the part of those who teach in HE; clear alignment with learning outcomes and criterion referenced standards; and the role of management in assessment particularly at programme and institutional levels. However, there do appear to be some inconsistencies in the guidance. For example, while advocating for criterion referenced assessment there seems to be a built-in caveat in terms of 'minimum' learning outcomes to be achieved and the inclusion of clear guidance with regard to regulations around compensation which may militate against the notion of criterion referenced assessment practices. Further, the focus of the guidelines in relation to institutional responsibility seem to focus on summative assessment purposes only, thereby creating a schism between summative and formative purposes of assessment at the highest level in the organisation.

The focus on assessment practice from both the National Forum and QQI is somewhat at odds with the lack of attention it garnered in terms of Irish SoTL (O'Sullivan et al., 2015). However, it does

imply a systemic policy and practice focus on assessment practices, further strengthening the importance and timing of this study.

1.3 Irish Higher Education Context

Participation of young people in HE in Ireland rose from 5% in 1960, to 20% in 1980, to 65% in 2011 (Hunt, 2011), falling slightly in 2022 to 62.8% (Department of Education and the Department of Further and Higher Education, Research, Innovation and Science, 2024). The increased demand for participation in HE is mirrored by a general consensus across political parties and policy makers that a strong HE system is a key factor in the successful economic and social development of the country (Clancy, 2015; Hunt, 2011). In the international context, Ireland has quite high levels of progression to tertiary level education with 47% of the working age population (25-64 years) having attained a higher education qualification compared to the OECD average of 38% (Houses of the Oireachtas, 2019). The changing student demographic of Irish HE in recent decades reflects the worldwide trend of increased participation and massification in HE (QQI, 2018). Irish participation rates are predicted to increase further over the next few years, particularly in relation to mature learners (Irish Universities Association [IUA], 2018). The Irish HE sector "will need to innovate and develop if it is to provide flexible opportunities for larger and more diverse student cohorts" (Hunt, 2011, p. 10). However, this may be challenging as the student-academic ratio specifically and the student-staff ratio generally worsened (Clancy, 2015).

The current HE landscape in Ireland is characterised by structural differentiation comprising state-funded universities, Institutes of Technology (IoTs) and colleges as well as private providers. The Hunt Report (2011), which arguably had a greater impact on HE practice in Ireland than any other policy document (Clancy, 2015) since the 1960s, has enacted the greatest level of change on that landscape, mainly in relation to the amalgamation and consolidation of institutions. Sahlberg's (2012) review of the initial teacher education (ITE) sector amplified Hunt's restructuring recommendation for that specific discipline within the wider HE context. The key structural changes in the Irish HE landscape include (a) the incorporation of three independent colleges of education into an existing university in 2016; (b) the amalgamation of a number of colleges and IoTs to create five new technological universities since January 2019; and (c) the transformation of a medical college into a university in its own right. In June 2020, a Minister for Further and Higher Education, Research, Innovation and Science was appointed for the first time and a specific governmental department was established under his authority, seemingly acknowledging the ongoing systemic changes in the HE

sector and a heightened level of import placed on the HE sector by the new government, signalling likely further changes and innovations.

Higher education in Ireland is generally state-funded at undergraduate level. State funded HEIs include thirteen universities, six of which are technological universities established since January 2019. Two IoTs and four colleges remain as independent entities, with awards accredited by partner universities and/or directly by HEA or QQI. All state-funded HEIs also provide programmes at postgraduate level for which students must pay fees themselves, with a very small number of postgraduate courses also state-funded. There are also a number of private providers in the Irish HE context. A range of organisations exist to support, administer and/or regulate the sector as outlined in Table 1.1.

Table 1.1: *Support bodies in the Irish HE sector*

Name	Remit
Higher Education Authority (HEA) www.hea.ie	Statutory responsibility for the governance and regulation of the state-funded higher education sector in Ireland. Central oversight role. Lead agency in the creation of a coordinated system of higher education institutions Exercises functions in respect of funding, accountability, quality of outcomes, policy advice, knowledge management, advocacy, coordination of interaction between public bodies and the HE system
Higher Education Colleges Association (HECA) www.heca.ie	Association representing 12 independent colleges
Irish Universities Association (IUA) www.iua.ie	Established in 1972 as a forum for discussion for universities. Formulates and influences policy mainly in relation to research but also in relation to pedagogy. Membership includes seven established universities and one of the new universities established since 2019
Quality and Qualifications Ireland (QQI) www.qqi.ie	Independent state agency responsible for promoting quality and accountability for education and training providers. Promotes, maintains and develops the National Framework of Qualifications.

	Approves programmes offered in a range of schools, colleges, further and higher education and training organisations. Regulates and promotes quality of programmes. Ensures providers (directly accredited by QQI) enable high-quality learning experience. Manage national quality assurance scheme for English language services.
National Forum for the Enhancement of Teaching and Learning in Higher Education (National Forum) www.teachingandlearning.ie	Established in 2013 to support the professional development of all those who teach in the Irish HE sector. Supports the use of technology to enhance teaching and learning. Enhancement of teaching and learning across the disciplines. Incorporated into the HEA in January 2022
Department of Further and Higher Education, Research, Innovation and Science www.gov.ie/en/organisation/department-of-higher-education-innovation-and-science/	Established August 2020 Funds and creates policy for the higher and further education and research sectors. Oversees the work of the state agencies and public institutions operating in these areas.

Table 1.1 highlights the layered structure of the Irish HE sector and the very recent and significant changes in the amalgamation of a range of smaller organisations to create new universities, the nuance of which was important to take into consideration in the design of the study.

1.4 Study Design

This section provides an overview summary of the approach taken to the study design. First, the theoretical framework guiding design decisions is outlined. This is followed by the purpose, aims, questions and objectives of the research. The detail of each part of the study design is provided in Chapter Three.

1.4.1 Theoretical framework guiding the research

The focus of this study is on the assessment pillar of pedagogy. The first line of this chapter refers to Nind et al's. (2016) conceptualisation of pedagogy. The exact quote is provided below:

> Simply put, pedagogy is about teaching and learning. It incorporates the following elements: teaching, learning, curriculum and assessment. It also concerns relationships and values. Pedagogy is fundamentally concerned with what people perceive to be meaningful, important and relevant as they engage in teaching-related activity and develop competence and expertise in a practice (p.9).

My own approach to teaching in recent years has been significantly influenced by Nind et al's. (2016) publication, and this definition in particular, in terms of trying to nail down the slippery concept of inclusive pedagogy, a contested term which is at the core of my work and fundamental to the expectations placed on my students in terms of their engagement on teacher education programmes and classroom practice. It has enabled me to consider pedagogy in a way that mirrors the demands on a teacher in any educational setting and while I believe curriculum, teaching, learning and assessment are interwoven and interconnected (Burke & Lehane, 2023), I also believe they can, and should, be examined individually so that the nuances of each are clear. This has been important in my teaching practice in terms of communicating the concept of inclusive pedagogy in that each pedagogical pillar can be critically examined in terms of possibilities for inclusion and, by default, exclusion of some learners.

Nind et al. (2016) consider pedagogy and associated research through three lenses (a) pedagogy as art (what teachers do), (b) pedagogy as craft (what teachers believe and/or know), and (c) pedagogy as science (what is effective/what works). Depending on the pedagogical lens, the ontological stance and epistemological approach of the researcher is influenced in terms of the questions asked and methodologies employed; I outline this in more detail in Chapter Three. I thought about pedagogy from each angle and rather than privilege one over the other, I reflected on how each might impact this research when looking specifically at the assessment element of pedagogical practice. The framework seemed to form a continuum as a result of my epistemological reflections whereby considering assessment as craft seemed to be the first step in a long-term research journey. Rather than design a study for the purposes of the EdD programme only and consider potential further research routes at the end of the EdD thesis process, I used the art, craft, science framework of pedagogical practice and research to develop the arc of a longer-term research project from the outset, with the first step embodied in this thesis with the intent of exploring assessment practice through the craft lens i.e. what teachers believe and/or know.

1.4.2 Aim, purpose and research questions

The aim of this doctoral study is to examine the assessment beliefs of those teaching in the HE context from an overall, international perspective leading to exploration of assessment beliefs in the Irish context. The purpose of this study is to contribute to the scholarly knowledge base of HE as a

discipline in its own right by enhancing understanding of those teaching in the HE sector specifically in relation to assessment. Further, it is intended that this study will inform assessment practice in the HE context generally, and specifically in the Irish HE context.

The first research question guiding this doctoral study is *What patterns can be found in international literature on assessment beliefs of those teaching in HE?* A scoping review of international literature was conducted to address this question. Arising from this review, the second question guiding this study is *What are the beliefs of those teaching in Irish HE contexts in relation to the purpose of assessment?* A survey was used to address this research question. Chapter Two provides a context and rationale for each of the questions above.

1.5 Structure of Thesis

The thesis comprises six chapters reflecting the key stages of the research journey. This current chapter provides an overall introduction to the study in terms of rationale for the study situated in the policy and literature. Chapter two is a narrative review of the literature pertaining to HE assessment generally, the assessment perceptions, conceptions and beliefs of those teaching in HE and specifically in relation to what is currently known about assessment in the Irish HE sector, leading to the development of the research questions which guide this study. Chapter three outlines the methodological approach to and design of the study to appropriately address the research questions.

Chapter four provides the results of a scoping review focusing on the perceptions, conceptions and beliefs of those teaching in the HE sector internationally. Chapter five outlines the findings of a survey of those teaching in Irish HE institutions, which sought to establish their beliefs about assessment processes and practices. In both chapters, the findings are discussed in relation to the literature and policy outlined in Chapter Two. Chapter Six draws some conclusions and considers the implications for assessment practice in Irish HE and beyond

Chapter Two: Literature Review

2.1 Introduction

The aim of this review is to support the subsequent empirical study (Lim, Kumar & Ali., 2022) by (a) reporting on recent literature in a thematic manner (Grant & Booth, 2009); (b) providing context and substance for the study (Kastner et al., 2012); and (c) clearly establishing questions to guide the phase of the research outlined in this thesis, situating the narrower issues addressed in this study in a broader context and leading directly to the methods employed (Creswell & Creswell, 2018).

This review achieves the aims outlined above in two ways. Firstly, the literature context is set in terms of HE generally, exploring assessment in that sector from an international perspective, leading to a discussion on teacher beliefs. Secondly, assessment in the Irish HE context is explored in relation to policy and publications in the scholarship of T&L (SoTL), with specific reference to assessment practice. This section also maps some of the generality of the international literature onto the specificity of the Irish context.

2.2 Section One: Assessment in higher education

"Assessment is a critical aspect of undergraduate education because it has a range of powerful impacts on what students and teachers do" (Carless, 2015, p.9) and likely what they decide not to do. While Carless refers to undergraduate education here, I contend that this statement holds true for all levels of HE programmes, including this doctoral journey I have undertaken. Assessment events can be emotionally charged resulting in increased status and accolades while the corollary is also true with some seeing themselves defined by the assessment experience (Clegg & Bryan, 2006) and may feel vulnerable to the perceived authority of the academics involved (McArthur, 2018). Certainly, my own perception of the doctoral process in relation to the thesis made me very hesitant to embark on this journey in the first place and is something I have grappled with throughout my thesis journey. As an academic myself, I have felt the duality of my assessment role in terms of assisting students while simultaneously judging their work (Carless, 2015) and the impact on my credibility in terms of fair and reliable assessment processes (McArthur, 2018).

Assessment occupies a central place in the pedagogical environment of HE. From a student perspective, while it may be possible to elude or evade the teaching practices and approaches of HE academics, "they are unequivocally compelled to participate in the assessment processes" (Sambell, Brown & Graham, 2017, p. 140). Assessment is generally designed and implemented by academics, with consistent evidence to show that this aspect of the HE experience attracts the greatest levels of student dissatisfaction (Carless, 2017; Sambell et al., 2017). From a teaching perspective, assessment can be seen as a harmful influence on the learning process, leading students to attend to grades rather than meaningful learning progress, thereby failing in the quest of higher education for students to attain higher order learning outcomes as well as being a time-consuming endeavour, attracting unwelcome quality assurance processes (Carless, 2017).

As outlined in the previous chapter, "pedagogy … incorporates the following elements: teaching, learning, curriculum and assessment. It also concerns relationships and values" (Nind et al., 2016, p.9). The tensions inherent in the assessment process are explored below in terms of the other pedagogical elements of learning, curriculum and teaching, imbued with consideration of relationships and values throughout.

2.2.1 Assessment and CURRICULUM

While curriculum in compulsory education tends to be developed at a national level in the first instance, it develops somewhat differently in the HE sector. Indeed, in HE, the term curriculum is used in an often-undefined manner and usually is associated with programme content and structure (Hicks, 2018). Laurence Stenhouse, arguably one of the most influential educationalists of the twentieth century, is also somewhat synonymous with the concept of curriculum (Elliott & Norris, 2012). He defined curriculum, albeit tentatively, as "an attempt to communicate the essential principles and features of an educational proposal in such a form that it is open to critical scrutiny and capable of effective translation into practice" (Stenhouse, 1975, p.4), comprising principles for selection of content, teaching strategy, sequence, diagnosis (assessment) of individual student strengths and weaknesses, and evaluation of both teacher and learner progress. Developing curriculum is not a neutral process (Freire, 1970); rather, curriculum decisions may be seen as "eminently political matters" (Ball & Goodson, 1984, p.4), communicating the values i.e. the choices of the creators (Harland & Pickering, 2010). Given the role of those teaching in HE in developing curricula, it is important to understand the role of teacher beliefs in this context.

While some of the curricular characteristics identified by Stenhouse may exist in programme and module descriptors, they are often absent also. For example, "assessment is often taken as a separate part of the course design process and the distorting influences of assessment activities on study patterns and the effects of the positioning of tasks in a semester is underplayed" (Boud et al., 2018, p.1109). Programme level decisions are often made well in advance with significant committee-type oversight and are generally unresponsive to change, with institutional values more concerned with the rigour of credentialing (Dawson et al., 2013) than appropriateness and efficacy of assessment design. There can be considerable variation in assessment practices and patterns across programmes and institutions (Jessop, El Hakim & Gibbs, 2014). Modularisation, coupled with semesterisation has compartmentalised learning at the planning stage, fragmenting knowledge within modules (Harland, McLean, Wass, Miller & Sim, 2015). It also compartmentalises the potential for interaction between teachers and students and between teachers themselves. Feedback, which explicitly enables communication between teacher and student, is generally not a focus of programme design at all (Winstone & Boud, 2022). Indeed, it is probably fair to say that assessment generally is rarely clearly outlined at a programme design level because programme leaders rely on individual staff to design modules which are then collated as a programme, resulting in weak coherence of assessment design and fragmentation of student assessment experience (Jessop et al., 2014). Even at modular level, assessment design may be confined to articulation of basic information such as intention to use assignment or examination procedures.

Assessment needs to be directly related to programme learning outcomes in the first instance, rather than module learning outcomes with marking rubrics at different stages overlapping in terms of interactive engagement with skills and concepts as students progress through a programme if student achievement is to be genuinely tracked, assessed and certified (Boud, 2018). This implies assessment design that is part of an overall programme design approach, with consistency of detail, language, tone, timing of submission and feedback, and alignment with standards and criteria (Jessop et al., 2014). While there is usually light-touch external oversight this tends to be enacted at a programme level rather than institutional or sectoral levels and therefore, it is unlikely that a degree qualification in one HEI is exactly equivalent to that of another HEI; a situation which is very different to the highly regulated post-primary sector (Murphy, 2006). Some of the key issues relating to assessment in HE include fairness, cheating and disciplinary context (Carless, 2015). Diversity of assessments may go some way towards meeting the many purposes of assessment but timing, information, feedback, self-evaluation and other elements of the assessment context need to be considered also, suggesting that assessment processes and procedures should be designed at a programmatic level in the first instance (Boud, 2017). This has implications for the relational aspects of the assessment endeavour. Firstly, it requires a willingness on the part of teaching staff to collaborate and agree on an overall and

probably iterative, assessment design across subject areas and over time, something which is likely more challenging depending on the length of the programme. Secondly, the outcome is likely to impact the relationship between students and staff, particularly if the feedback element is built into assessment design, enabling explicit connections between both.

2.2.2 Assessment and LEARNING

The purpose of the assessment process may be conceptualised from (a) the perspective of measurement of learners whereby the degree of what they know and/or understand is viewed as quantifiable or (b) from the perspective of reaching a named standard whereby the focus is on mastery of one or more skills or concepts (Biggs & Tang, 2011). The former tends to create a process within which students are compared to each other and assessment is considered separately to teaching whereas in the latter, judgement focuses on performance rather than the person; understanding may be evidenced through different performances; and tends to be closely associated with the T&L process (Biggs & Tang, 2011).

Carless (2015) identifies three core purposes of assessment - to support student learning, to judge the quality of achievement and to enable the requirement for the institution to be accountable. Sambell et al. (2017) determine four purposes of assessment - certification, quality assurance, learning and the development of lifelong-learning skills. McConologue (2020) pinpoints quality assurance, employability, addressing equality and diversity and meeting the needs of stakeholders as the purpose of assessment. Biggs and Tang (2011) identify the purpose of assessment as selecting students, controlling or motivating students, public accountability, provision of feedback and grading; summarising these into two overarching purposes - formative and summative - each of which produces results which are used for different reasons. Formative assessment is used for generating feedback during learning while summative assessment is used to grade at the end of a course of work (Biggs & Tang, 2011); the fundamental double duty of assessment (Carless, 2015). The insights above point to some overlap in the understanding of assessment purposes in amongst scholars, yet there are significant differences also and that mix of perspectives likely mirrors reality on the ground amongst practitioners.

The role of grades as objective indicators of learning outcomes is rarely questioned (Hailikari et al., 2014) perhaps because HEIs are afraid to experiment with assessment too much in case of declining standards (Gibbs, 2006) and/or grade inflation. Assessment needs to help teachers and students to

understand standards and to bridge the gap between current and desired performance (McConologue, 2020). Clear rubrics can help to evidence the attainment of the intended learning outcomes (Biggs & Tang, 2011). However, Prosser (2014) differentiates between criteria (characteristics of performance) and standards (level of attainment), a nuance that can be elusive when using rubrics. Averaging marks within an assessment can be problematic because it ignores standards if more than one learning outcome is addressed (Boud, 2017) thereby, assuring that some learning outcomes are only half attained if at all. Potentially, this threatens an important aspect of the university - the pursuit of excellence (Biggs & Tang, 2011) - replacing it with the intent of ensuring mediocrity or at worst, inferiority depending on how the average mark computes.

All teachers are involved with assessment (Carless, 2015) in some capacity. However, the double duty role of assessment (Boud, 2000), addressing certification and learning simultaneously, creates complexity in terms of assessment design, innovation and administration. There is a relationship between (dis)trust and the perceived purposes of assessment whereby teachers may not trust students to engage ethically with assessments while students do not feel able to trust teachers to mark fairly and in an unbiased manner (McArthur, 2018). This lack of trust is at the heart of the preoccupation of HEIs with use of technology to detect plagiarism and more recently, the use of proctoring technology to surveil students taking examinations remotely during the COVID-19 pandemic which has ethical implications particularly relating to privacy and may have disadvantaged some groups of students (Conijn, Kleingels, Matzat & Snijders, 2022). Plagiarism and attacks on academic integrity have existed for centuries but the pace of technological development in recent years has made it much easier to enact and more difficult to detect (Foltynek, Meuchke & Gipp, 2019). Ironically, an alternative way of combating cheating is to shift focus from the summative purpose of assessment to the formative one, whereby relationships may be built between students and teachers (McArthur, 2018) within the assessment process. However, the time available for engaging meaningfully with both the formative and summative purposes of assessment is usually limited (Boud, 2014) and is something which needs to be designed into the overall curriculum.

The backwash effect of assessment principles and procedures is that students learn what they think they will be assessed on (Biggs & Tang, 2011). Assessment communicates what is valued (Carless, 2015), frames students' learning and what they study (Gibbs, 2006) and influences how they spend their time (Sambell et al., 2017). The purpose or focus of assessment may not be perceived in the same way by students and teachers and may even be at odds with each other (Entwistle & Karagiannopoulou, 2014). Students tend to voice dissatisfaction with assessment practices in HE generally (Carless, 2017) with feedback being a particularly vexatious issue (Sambell et al., 2017).

Assessment ignites affective responses in students (Carless, 2015) and can be highly charged and well-remembered (Clegg & Bryan, 2006). Indeed, the prior experiences of teachers when they were learners can often be a point of reference when developing assessment practices and procedures (Bearman et al., 2017; Boud, 2014). Students are most concerned about fairness of assessment (Sambell et al., 2017). However, that may differ from person to person because fairness is a perception (McArthur, 2018) which seems to be related to how the task aligns with their learning and a challenge for the validity and reliability of assessment in this context is that those teaching in HE often view assessment as something that is separate from teaching and learning (Hailikari, Postareff, Tuonnonen, Raisanen & Lindblom-Ylänne, 2014).

2.2.3 Assessment and TEACHING

There are multiple expectations placed on those teaching in HE (Whitchurch, 2013) including having a deep knowledge of the subject; supporting and engaging learners; willingness to foster wider participation in HE; being conversant with a wide range of pedagogical approaches; enhancing student employability; and leadership (Sambell et al., 2017). This means that academics are expected to display a high level of professionalism across multiple functions. Pedagogical professionalism may be inhibited if teaching is not valued at an institutional or unit level compared to research which may be most valued (Van Lankveld, Schoonenboom, Volman, Croiset, & Beishuizen (2017). However, historically there has been an assumption that academics have an automatic ability to teach and assess with the HE system only relatively recently recognising the need to upskill to enhance professional pedagogical practice (Elton, 2006).

The European University Association's (EUA) most recent *Trends* report (Gaebel, Zhang, Bunescu & Stoeber, 2018) indicates a significantly increasing focus on teaching strategies and structures since Elton's (2006) observation. For example, out of 300 European HEIs, the authors found that 86% have a strategy or policy relating to T&L including a focus on staff development and exchange opportunities, while two thirds are now systematically encouraging SoTL. The report also highlights a steady rise in the focus on and use of learning outcomes implying, although not explicitly evidencing, revision of course content and assessment. The authors also found that bottom-up practice tended to be the main dynamic for change, but the effectiveness and maximisation of that change is dependent on institutional and systemic support and coordination. Lack of funding was seen as a key barrier to further development in this area with the second problem identified as lack of recognition of pedagogical practice for career progression; a reality that is likely to influence motivation of

individuals to initiate bottom-up innovations in the first place. The following section considers teacher identity in the HE context.

2.2.3.1 Identity and the teacher role

"For many academics, being a teacher is something that they have neither aspired towards nor have been educated for" (Nevgi & Lofstrom, 2015, p.53). The possible exception to this contention may be teacher educators who often come to academia with a clear teacher identity while their researcher identity tends to be more difficult to acquire (O'Brien & Furlong, 2015), requiring more institutional support to develop (MacPhail & O'Sullivan, 2019). The researcher identity of the academic is associated with the traditional university identity formed at a disciplinary level (Clegg, 2008) and tends to be explicitly developed institutionally in comparison to the teacher role which often requires individuals to fit into existing structures (Becker & Denicolo, 2013). Much of the literature in the field of teacher identity in HE refers to the notion of a loss in terms of academic freedom, disciplinarity and security (Barrow, Grand & Zu, 2022) perhaps because the identity of HE itself or more specifically, the university, is changing rapidly as the number and type of institutions grow along with the number of students, leading not just to questions of who the university is for but what it is for (Collini, 2012). As the disciplinary foundations of the university expand (Clegg, 2008), generating a more dynamic context (Boyd & Smith, 2016), the roles and responsibilities of the academic are being revised, creating more fluid, expanded identity development (Billot, 2010).

The nature of academic identity is complex (Clegg, 2008), fragmented and filled with tensions (Kaasila, Lutovac, Komulainen & Maikkola, 2021), comprising disparate allegiances (Billot, 2010) to discipline, department, faculty, students, academic roles and so on. The primary tensions appear to be constructed around the teaching-research nexus (Kaasila et al., 2021) and is unstable, complex and not well researched (McCune, 2021), with existing research on academic identity tending to be limited in scope with most studies focusing on one discipline and/or one context (Barrow et al., 2022). Published papers remain the key currency of the HE sector and therefore, create a breeding ground for identity conflict (Perkins, 2019) so that even those espousing a teacher identity feel like they are battling a status quo (McCune, 2021). Some may juggle the competing demands by subverting the research part of their identity but still acknowledging its primacy (Boyd & Smith, 2016).

The HE context directly shapes academic identity, with nested identities evident at organisational and academic levels (Borlaug, Tellmann & Vabo, 2023). In the Irish context, O'Byrne (2015) found that

the general belief that the IoTs were something less than other HEIs such as universities impacted directly on the institutional identity in turn influencing the self-perception of those working within. The programme context may also influence teacher identity particularly for those teaching professional programmes like teaching and nursing, who may feel a sense of responsibility to ensure they produce effective and reliable professionals in the field (Lopes, Boyd, Andrew & Pereira, 2014). If HEIs value teaching, it positively influences that aspect of the academic identity, if not, teaching identity and development may be constrained (Van Lankveld et al., 2017). The introduction of the *Teaching Excellence Framework* (TEF) in the UK provides a formally recognised platform for excellent teachers to demonstrate their contribution but likely creates conflict for many who do not prioritise the teaching aspect of their role (Perkins, 2019). Interactions with colleagues and students influences teacher identity (Nevgi & Lofstron, 2015) with teacher identity developing after a few years of teaching experience (Van Lankveld et al., 2017).

Neary and Winn (2016) contend that the concept of academic identity does not deal with the real nature of work in capitalist society, merely illuminating the concerns relating to academic work leading to a sense of helplessness rather than proffering possible solutions. However, the truth probably lies somewhere in the middle; how academics identify with the various aspects of their roles is shaped by and, in turn, shapes how the diverse demands of the role are developed, viewed and supported within whatever context they may find themselves operating. While the thrust of this discussion has been on academic identity, particularly in terms of teacher identity, the following section considers the academic's assessor identity specifically.

Academic identity is 'a dynamic and slippery construct' (Billot, 2010, p.719), of which teaching identity is just one aspect. Generally, the tensions within academic identity seem to centre around the dual requirements of teaching and research which can be viewed a double bind because often teaching is not associated knowledge production and research (Lopes et al., 2014; tensions which are aggravated by the HE sector prioritising research over teaching (Mula-Falón, Caballero, & Domingo Segovia, 2021). Even when increased attention is paid to the teaching aspect of the academic role at a systemic level, it may actually increase the existing sense of internal conflict in the individuals working in the HE sector because of raised expectations which further illuminate perceived gaps in their own competence (Perkins, 2019).

The focus of identity, academic and teaching, is obviously on the individual and therefore, much of the discussion in this field considers the ways in which individuals might be enabled to enhance their

identity. While the disciplinary context may be viewed as a factor in teaching identity, some individuals may feel constrained by disciplinary norms preferring instead to broaden their teaching approaches beyond existing practices (Kreber, 2010). Reflexivity (McCune, 2021) and reflection (Kreber, 2010) aid illumination of current beliefs and practices with the view to developing teacher identity and practice. However, to really provide support for testing ideas and practices on which to base reflections, a more hand-on, practicum type approach may be necessary to direct and speed up teaching development (Kaasila et al., 2021). The emotional facet of teaching development needs to be taken into account also (Trautwein, 2018). Van Lankveld et al. (2017) identify five psychological processes associated with the development of teacher identity: (a) sense of appreciation, (b) sense of connectedness, (c) sense of competence, (d) sense of commitment and (e) imagining a future career trajectory. Anxiety and risk are experienced when trying something new but there is evidence of individuals willing to tolerate it to develop as teachers (Bennett, 2017). So, there appears to be a deep complexity to the concept of academic identity generally and teaching identity specifically. The consideration of identity tends to focus on the individual and therefore raises a sense of powerlessness and crisis without examination of academic life itself and the demands therein (Neary & Winn, 2016).

Further, the use of the word 'teaching' may add to the complexity in terms of what it does or does not include. If considered in terms of Nind et al.'s (2016) conceptualisation, teaching is just one element of pedagogical practice along with curriculum, learning and assessment, each of which present different demands on the individual academic. The next section examines the notion of assessment identity in HE; another complex and 'slippery' concept.

2.2.3.2 Identity and the assessor role

The relationship between teacher identity and the role of assessor is blurred, even though it requires pedagogical skills and knowledge (Wood, 2018), further adding to the complexity of the concept of identity. The notion of teacher assessment identity is a relatively new one with the term introduced by Adie (2013). Therefore, unsurprisingly perhaps, there appears to be a lack of research on the professional identities of teachers in their role as assessors (Leonardsen, Utvær, & Fjørtoft, 2022), with most of that which does exist focusing on compulsory education. Indeed, assessment role and identity can be differentiated in terms what teachers do and who they are respectively (Mockler, 2011). Assessment identity is dynamic and ever-changing, shaped by the teachers' knowledge, skills and beliefs about assessment (Looney, Cumming, Van Der Kleij & Harris, 2018), weaving "systemic and local assessment contexts with disciplinary assessment knowledge and conceptions (including beliefs and values)" (Adie, Wyatt-Smith, Finch and De Luca, 2024, p.1) and therefore, socially

constructed (Van Lankveld et al., 2017), mirroring teacher identity. However, the influences on assessor identity are likely circular in that identity, in turn, influences and shapes assessments practices and beliefs (Xu & Brown, 2016). Indeed, Estaji and Ghiasvand (2023) suggest that identity as an assessor has existed behind the curtain of assessment conceptions, literacy, self-efficacy and disposition but actually comprises these elements of assessment as well as hands-on practices such as grading, developing rubrics, designing assignments and so on.

Teachers in HE are in the unusual position of designing and standardising their own assessment tasks, procedures and protocols. At a systemic level, oversight of assessment practices is facilitated through external examination by peers which can sometimes be considered quite a light-touch process (Murphy, 2006). At individual and systemic levels, engagement in these processes assumes the presence of skills. However, while academics spend a lot of time on the assessment aspect of the job there is usually very little training in assessment practices (McConologue, 2020) and therefore, they may not have the competence to assess in a valid manner (Hailikari et al., 2014) to ensure assessment design actually assesses what it purports to assess. Task descriptors and rubrics are not enough as they are difficult to construct well without sufficient understanding and are open to different interpretations (McConologue, 2020; Prosser, 2014). The assessor's role may be quite emotional, whereby they may feel exposed in every judgement made; fear colleagues challenging marks awarded; experience deflation when assignments do not evidence the learning expected; powerlessness of being dependent on what has been submitted; guilt when advice given has not been used well; and overall loneliness of the assessment process (Becker & Denicolo, 2013). Students may consistently fail to address a task as specified, often focusing on subject matter rather than higher-order analytical skills, resulting in frustrated, disappointed assessors who then alter intended criteria and marking processes to reflect the "steady stream of pedestrian works that do not attend to the set task and represent only lower-order cognitive processes" (Sadler, 2014, p.152).

Assessment knowledge and skills relating to teaching practice, accompanied by the use of evidence to inform teaching, learning and report achievement may be seen as comprising at least some of the elements of assessment literacy (Looney et al., 2018). The term, assessment literacy, was introduced by Stiggins (1991) who saw "assessment illiterates" (p.535) as lacking the "tools to be critical consumers of assessment data" (p.535). Arising from a scoping review of 100 studies, Xu & Brown (2016) identify four key elements of teacher assessment literacy in practice: (a) a knowledge base of curricular content and the assessment process, (b) their own conceptions of assessment in terms of cognition, learning and affective domains, (c) making decisions and taking action in practice, and (d) the (re)construction of assessor identity. They too recognise that assessor identity is not static,

changing over time as assessors make sense of their assessment work and role with social, contextual factors influencing the development of assessor identity as well as cognitive factors as teachers learn more about assessment in practice, and develop their assessment skills and literacy.

The notion that there is one way of being an assessor is problematic; teachers engage with the role of assessor in different ways depending on the context, circumstances and specific demands (McDowell & Harman, 2008). The multiple discourses around assessment which have developed in a short timeframe are also problematic, comprising different starting points and epistemological histories, assumptions and practice implications, are also problematic (Coombs & DeLuca, 2022). In many cases, different terminology is used interchangeably and without adequate definition (Koh, Burke, Luke, Gong & Tan, 2018) causing confusion. Awareness and examination of assessor identity allows biases to be illuminated and considered which is essential for fair assessment and consideration of learners who may otherwise experience systemic marginalisation during the assessment processes they experience (Acheampong, Bresciani Ludvik. & Lundquist, 2022). Assessor identity when the space is offered to interrogate the multifaceted elements of the baseline assessment knowledge and when these begin to converge into practice" (Doyle, Conroy Johnson, Donlon, McDonald, & Sexton, 2021, p.65). While referring to student teachers here, Doyle et al.'s contention is likely relevant to teachers at any stage of their careers including those in the HE context. In fact, even though much of the literature around assessor identity emanates from studies rooted in compulsory education contexts, the basic principles are likely to apply to the HE context also. However, the lack of focus on this aspect of the HE pedagogical endeavour is concerning especially as those teaching in that sector have a wide range of assessment responsibilities and demands from assessment design to implementation.

2.2.4 Conclusions - Section One

Assessment is "a complex, multi-faceted, sensitive and highly contested process" (Sambell et al., 2017. p. 141) with lots of different stakeholders and subject to pressures from policy and bureaucracy (Dawson & Henderson, 2017). The inherent complexity of assessment can imply that it is resistant to change (Boud, 2017; Dawson & Henderson, 2017; McArthur, 2018). Having said that, looking back forty years, assessment has seen significant change including a shift from (a) unseen, end-of-year exams to continuous, (b) confidential weightings and process to transparency of criteria and rubrics and (c) the concept of assessment for learning rather than of learning, albeit that this has recently shifted to an assumption that all assessment should 'count' in terms of accumulation of marks and grades (Boud, 2014). These changes may be attributed in part to an increased focus on HE as a

disciplinary area in its own right, with assessment one aspect of that focus. Incremental moves towards standards such as the focus on learning outcomes and graduate attributes, have moved the assessment conversation somewhat towards consideration of what students can do rather than what they know (Boud, 2014). In this context, the debate regarding the nature of assessment has focused on issues such as the importance of authentic assessments which mirror real-life, problem-solving contexts (McConologue, 2020; Murphy, 2006); the explicit, constructive alignment of teaching, learning outcomes and tasks (Biggs & Tang, 2011; Sambell et al., 2017); provision of learning-oriented feedback which enables student engagement (Winstone & Carless, 2020); and, inclusive assessment practices which address diversity (McConologue, 2020).

Assessment may be viewed as a high-risk activity especially as within disciplines, there are likely to be established ways of thinking, investigating and communicating (McConologue, 2020) which carry assumptions and expectations in terms of the nature of assessment of knowledge and understanding and how that manifests itself in practice. “Across disciplines and professions, academics have worldviews or perspectives, and have their own epistemic bases for conducting assessments in particular ways” (Ashworth, Bloxham & Pearce, 2010). Changing assessment practices requires reimagining or redeveloping existing practices, therefore sometimes threatening comfortable ways of working (Tai et al., 2023) and indeed, thinking.

The field of assessment itself has been influenced by a “limited number of perspectives” (Boud et al., 2018, p.1107) with every specific discourse foregrounding some assessment realities while simultaneously rendering others almost invisible (Ajjawi, Bearman & Boud, 2021). For example, there is a deep field of research in lots of aspects of assessment such as formative assessment (Nicol & Macfarlane-Dick, 2006), feedback (Boud & Molloy, 2013; Nicol, 2018), self-assessment (Panadero, Brown & Strijbos, 2016), peer assessment (Topping, 2009), authentic assessment (Ashford-Rowe, Heatherington & Brown, 2014). However, while each of these aspects may be explored in depth, the limitations of exploration tend to be related to the aspects of assessment which cannot or are not explored. Obviously, from a research perspective, it is important to have a clear focus when embarking on a study. However, from a practitioner perspective, those teaching in HE, if interested in and motivated to ensure their assessment practice is evidence based, will likely be engaging with multiple elements of the assessment process and therefore are presented with the challenge of navigating many subfields of study to create for themselves a cohesive and comprehensive understanding of assessment.

Insight into individual academics' perspectives is a necessary step to understanding assessment decision, design and change (Deneen & Boud, 2013). The term 'conception' seems to be associated with the assessment pillar of pedagogy whereas the term 'belief' tends to be associated with the teaching, learning and curriculum pillars (Opre, 2015). Moreover, while 'conception' is the favoured term, words such as perception and belief creep into the discourse from time to time. Given the centrality of the term 'belief' across the pedagogical realm and its centrality to assessment pedagogy as craft, the next section attempts to explore that term.

2.3 Section Two: Teachers' Beliefs

While teachers' beliefs have been studied for some time, there has (arguably) been an increased research interest in the field over the last thirty years or so (Ashton, 2015). Initially, the focus was on teachers' beliefs in relation to content and curriculum, moving then to the relationship between beliefs and the art of teaching, and then to the obstacle posed by teachers' beliefs to change and curricular reform (Skott, 2015). Researching teachers' beliefs has been associated with the imperative of changing practice (Buehl & Beck, 2015), with the measurement of beliefs seen as a prerequisite for helping teachers to understand how they influence learning outcomes and pedagogy (Hoffman & Seidel, 2015) and the arising understanding of those beliefs allowing for more targeted feedback and support in the context of PD (Levin, 2015).

2.3.1 Researching teacher beliefs

Research in the field of teacher beliefs allows for enhanced understanding of (a) types of beliefs; (b) the factors that influence those beliefs; (c) whether beliefs change over time; (d) the complexity and interaction of teachers' knowledge with beliefs; and (e) provision of baseline to explore enactment of beliefs in practice (Levin, 2015). However, these strengths are counterbalanced by challenges inherent in researching this field, many of which relate to research methodology. There is an over-reliance on surveys (Hoffman & Seidel, 2015; Levin, 2015) which generally do not allow for deep understanding of teachers' beliefs especially as beliefs are introspective, precarious and often difficult for practitioners to articulate (Skott, 2015), quantify or describe (Hoffman & Seidel, 2015). Many studies are small-scale and lack participant diversity with no longitudinal studies evident and a lack of theoretical or conceptual frameworks underpinning studies in the field (Levin, 2015). The disagreement about descriptions of beliefs relating to teaching and learning (Fives, Lacatena & Gerard, 2015) and the diversity in how teachers' beliefs are conceptualised has resulted in significant variance in terminology used in this research domain (Fives & Buehl, 2012) resulting in the key construct of the field (belief) being ill-defined (Skott, 2015), thereby rendering comparison of results

difficult (Levin, 2015). There can be a tendency to focus on beliefs relating to teaching rather than learning (Fives et al., 2015). Moreover, there is often an inherent assumption in belief research that teachers' beliefs need to be understood so that they can become open to change and therefore, enable change in practice even though there is a lack of clear theoretical, empirical, or ethical rationale for why teachers' beliefs should change (Fives et al., 2015). For the purposes of this study, the benefits and limitations of belief research were reflected upon, leading to the development of a research plan taking account of the complexities over a long-term period as well as specifically in terms of the element of the research plan outlined in this thesis (see Chapter Three).

Fives and Gill's (2015) seminal work in the field – *The International Handbook of Teachers' Beliefs* – comprises 27 chapters arising primarily from systematic reviews of literature relating to a range of contexts and foci including research in the field and impact of beliefs on practice. However, two contexts/foci appear to be less researched than others. Firstly, none of the chapters relate to the HE context save for passing references in a few chapters. It is not clear why this is so; perhaps it is associated with the complexity of teacher identity both within and without the HE sector where it is viewed as just one element of the academic identity (Billot, 2010; Whitchurch, 2013). Secondly, taking the definition of pedagogy, provided in Chapter One for the purposes of this study into account (Nind et al., 2016), only one chapter in this book focuses on the assessment pillar of pedagogy and that is in the context of the primary school sector (Barnes, Fives & Dacey, 2015). This lack of focus on assessment beliefs reflects that in the HE literature wherein beliefs relating to teaching are focused upon much more than those relating to assessment (Postareff, Viratenen, Katajavuori & Lindblom-Ylänne, 2012).

2.3.2 Key findings from the field of belief research

One of the key insights of research in the field of teacher beliefs is that they are the main determinant of teaching actions (Skott, 2015) and that teacher behaviours are founded on beliefs about learners and their own capacity to teach (Tschannen-Moral, Salloum & Goddard, 2015). Fives and Buehl (2012) identify three main functions of teachers' beliefs: (a) to filter information and experiences, (b) to frame problems and tasks, and (c) to guide action. Viewed as a filter, beliefs are seen as a device for interpreting and transforming curricular intentions (Skott, 2015), albeit that the beliefs of those developing curricular intentions and policy appear to rarely be under scrutiny, almost as if these things are developed in the educational equivalent of a clean room in a laboratory. Viewed as an epistemological frame, beliefs structure a detailed, ongoing understanding and interpretation of what is happening in the classroom regarding teaching and learning (Lunn, Walker & Mascardi, 2015). The

guiding influence of beliefs on teaching actions is somewhat disputed. While some see beliefs as precursors to practice, others hold the view that beliefs are not related or are misaligned to practice (Buehl & Beck, 2015), suggesting that the mismatch between beliefs and practices may actually be a misalignment of beliefs to teaching rather than learning (Fives et al., 2015). Teachers hold many beliefs simultaneously about knowledge, themselves, students, subject content and context (Fives & Buehl, 2012; Levin, 2015).

While there is some evidence to show that beliefs are deeply embedded (Fives et al., 2015) and resistant to change (Skott, 2015) there is other evidence to indicate that beliefs may be changed over time as a result of experiences in practice (Buehl & Beck, 2015) and teacher education (Fives et al., 2015). The role of values and emotion in beliefs is not well understood but may explain why some beliefs are resistant to change even in the face of evidence (Zembylas & Chubbock, 2015). Teachers who view knowledge as tentative and comprising multiple perspectives, tend to use approaches to learning that enable meaning-making and require genuine enquiry and problem solving so that students, in turn, develop an epistemological understanding that knowledge is constructed rather than reproduced (Lunn et al., 2015). This belief is important for all aspects of pedagogy, but especially assessment if it is to be used to enable learners to construct knowledge and understanding.

The one chapter in Fives and Gill's (2015) edited publication which focused explicitly on the pedagogical pillar of assessment in relation to teachers' beliefs (Barnes et al., 2015) drew from systematic analysis of 28 articles and mirrored the overall findings of reviews on teacher beliefs generally; they are seen to influence the assessment practices employed in the classroom and filter how teachers interpret information about new innovations in assessment. The articles in the Barnes et al. (2015) systematic review identified the purpose of assessment along a continuum. At one end of the continuum, conceptions of assessment purpose were based in pedagogy whereby teachers saw assessment as serving to regulate teaching and learning; to provide opportunity for teachers and students to be exposed to subject content; to evaluate and inform instruction; to gauge student engagement; to account for teachers' decisions and actions; to feedback to students about their learning; and, to group, manage or identify students who might require additional support. At the other extreme of the continuum of teachers' beliefs were about the usefulness of assessment for accountability purposes, both in terms of low-level accountability in reporting progress to parents and high-level accountability in terms of school evaluation. In the middle of the continuum are those who hold mixed beliefs which traverse pedagogical and accountability purposes. Brown (2004; 2006) also identifies a fourth conceptualisation of the purpose of assessment held by teachers - the belief that it is

irrelevant, ranging from the idea that it interferes with teaching to the notion that it is of little use because the assessment tool is faulty.

2.3.3 Beliefs and conceptions

Barnes et al. (2015) highlight that in relation to assessment, the term conception is more prevalent than belief and tends to subsume "knowledge and belief into a singular construct and provides a framework for describing teachers' overall perception and awareness of assessment" (p.285). However, this explanation further confuses terminology, with the introduction of the terms perception and awareness. Assessment conceptions may be considered to encompass all that a teacher thinks about the nature and purpose of assessment processes and practices (Brown, Lake & Matters, 2011). Brown and Remesal (2015) define conceptions as "the organised subjective sum of individual beliefs, which, in turn, are understood as assumptions about objects and phenomena that people take as true" (p.333). They then go on to differentiate between primary, central, strong beliefs and secondary, peripheral and easily challenged beliefs. For the purposes of this study, the terms conception and belief are used interchangeably as is the case in the literature.

Brown (2004) developed the *Teachers' Conceptions of Assessment-III* (full version) which was validated with a large sample of primary teachers in New Zealand. Subsequently, an abridged version was validated with large samples of primary and post-primary teachers in Queensland, Australia (Brown, 2006), containing four key conceptions (see Appendix A for details):

1. Assessment improves teaching and learning (improvement).
2. Assessment makes students accountable for learning (student accountability).
3. Assessment demonstrates the quality of schools and teachers (school accountability).
4. Assessment should be rejected because it is invalid, irrelevant, and negative (irrelevance).

Brown's scale has been used many times since in primary and post-primary schools, sometimes adapted to suit specific contexts (e.g. Brown & Michaleades, 2011; Remesal & Brown, 2015), on occasion accompanied by a second method to balance the limitations of the scale by identifying conceptions which fall outside the scale and/or establishing connections between some of the conceptions (e.g. Harris & Brown, 2009). While there was general agreement between primary and post-primary teachers that assessment was used for improvement purposes, post-primary teachers were more likely to agree that assessment should be used to hold students accountable for their own

learning progress (Brown, 2011). Further, social context seemed to have an impact on conceptions, especially in societal and cultural contexts which were extremely exam driven such as Egypt (Gebril & Brown, 2014) and China (Brown & Gao, 2015).

In the HE context, while academics' conceptions of teaching have been relatively well studied, there has been less focus on conceptions of assessment, wherein teaching is often examined without reference to assessment (Postareff et al., 2012). Again, this may point to the importance of considering the pedagogical pillars of curriculum, teaching, learning and assessment (Nind et al., 2016) even when examining just one of these pillars so that at least contextual links can be made even if not examined explicitly.

2.3.4 Conclusions - Section Two

It is evident researching teacher beliefs in any context is quite challenging conceptually and methodologically. The notion of belief is difficult to define clearly, and related terminology is used interchangeably. While the term conception tends to be used in the assessment context instead of belief, the two terms are often used in the same studies, sometimes with other terms such as perception appearing also. While authors present their own definitions with supporting rationale on occasion, it is not clear upon what basis they are creating the definition of the terminology. The term belief also appears to be interrogated more in related literature rather than conception. It is also more usually related to the idea of craft knowledge.

Beliefs and conceptions about assessment generally seem to be less well researched than those relating to teaching and learning. Moreover, the focus of any such existing research is usually on the compulsory school context with little in the HE realm. Yet, there seems to be general consensus that teachers' beliefs are crucial to understanding pedagogical practice and influence decision making and therefore, albeit challenging, need to be researched to really understand practice.

2.4 Section Three: Assessment in the Irish Higher Education Context

As outlined in Chapter One, this study is part of a longer-term research project focusing on assessment practices in the Irish HE context. This section examines relevant Irish SoTL literature to set the scene going forward and to contextualise the broader HE assessment literature.

In line with international trends, Irish HE has increased its awareness of and focus on the role and importance of T&L at a systemic level. The Gaebel et al. (2018) *Trends* report seems to show that the Irish HE system has quite a strong focus on T&L compared to other European countries with 71% of Irish HEIs reporting explicit coordination of SoTL via a specific T&L unit charged with such responsibility. The highest rates of student satisfaction with teaching were recorded for Ireland (84%). Those teaching in HE in Ireland, Italy and Germany seem to have much higher rates of autonomy than colleagues in other European countries. This is likely a strength in terms of academic freedom and opportunity to enact innovative practices; however, it may also be a factor in the more fragmented approach to curricular design.

The thrust of the *Trends* report (Gaebel et al., 2018) in relation to Ireland is evidenced in the growth of units within individual HEIs which support the pedagogical mission of the institution and the establishment of the National Forum in 2012 which had four key priorities - (a) the professional development of all those who teach, (b) teaching and learning in a digital world, (c) teaching and learning enhancement within and across disciplines, and (d) student success (www.teachingandlearning.ie/about/). The National Forum has approached its remit in a range of ways including consultation with key stakeholders, development of institutional advice, provision of PD opportunities many of which attract accreditation in the form of badges on completion and conducting and/or funding research in the field of HE. This section explores some of the National Forum's output particularly in relation to assessment.

2.4.1 Irish SoTL Research

In 2015, the National Forum published the findings of a systematic review of T&L research in Irish HE (O'Sullivan et al., 2015). Research output from 1990 to 2014 was sourced from published research, review of national and international conferences and research produced by identified experts in Ireland. Ultimately, 2,275 items were included, consisting of journal articles (45%), conference proceedings (27%), conference papers (16%), book chapters (7%), reports (2%), books (1%), theses (<1%), and other types of items (2%) [percentages rounded]. A pre-existing framework developed by Tight (2012) was used to analyse the included publications. In general terms, the review highlighted some interesting patterns.

1. There was a steady increase evident in SoTL output from 1998, with a significant increase from 2008 onwards.
2. Most items included were journal articles written from a disciplinary perspective.

3. Less than 1% of the items included were theses, indicating perhaps a dearth of interest in researching pedagogical practices in HE and therefore, a lack of expertise in the field.
4. STEM related research outputs accounted for one quarter of the items included.
5. Output relating to the importance of technology in enhancing learning accounted for a further one third of the items included.
6. Identifying appropriate items for inclusion was hampered by the lack of clarity in terms of titles and keywords with a number of relevant articles found following hand searches of relevant journals; again, this may point to authors identifying more with their discipline rather than the scholarship of T&L per se and therefore, not considering the range of possibilities for pedagogical signposts so that the research can be accessed by those outside the discipline.

Tight's (2012) framework, consisting of four themes, was used to map the substantive focus of each research item: (a) research on course design (1406 items); (b) research on teaching and learning (1181 items); (c) research on quality (663 items); and (d) research on student experience (356 items). Output focusing on assessment was included within the *course design* theme with 185 included items attributed to this code. Within this code, studies focused on how assessment drives learning; the potential of technology for managing assessment; student writing; or, provided 'how to' guides for staff. The biggest sub-theme within the overall course design theme was *technology enhanced learning* which accounted for 30% of all output coded to this theme with the authors highlighting the 'notable overlap with technology enhanced learning and assessment, and many studies examined or proposed the use of online or computerised assessments for summative, formative or peer assessment' (p. 31). The remaining three key themes as listed above did not include specific reference and/or sub codes associated with assessment.

In terms of the overall number of research items included in this systematic review, 185 focusing on assessment and feedback accounts for just over 8% of the total number of research outputs included in this study. This does not seem to align with Biggs and Tang's (2011) view of the centrality of assessment which, if faulty, undermines T&L, nor with Carless' (2015) assertion that assessment has a powerful impact on what students and teachers do. Perhaps compared to changing other aspects of pedagogical practice such as learning outcomes, designing learning activities, resistance to changing or developing assessment practices is stronger (Deneen & Boud, 2013) and therefore, less focused upon by those academics researching their own practice or that of others. It is also possible that a different methodological approach may have produced different results. Certainly, Tight's (2012) framework predetermined where studies focusing on assessment might be categorised (course design). In addition, the authors admit that the review is potentially limited by their use of abstracts only to

make decisions about the key focus of each research item. Given the overall pattern of these items coming from and being published in disciplinary contexts, it is highly likely that authors may have omitted key information relating to HE pedagogy in favour of more discipline-based information in the abstracts.

It is also interesting to note that assessment was included in the *course design* theme rather than the *teaching and learning* theme when you might expect assessment to be explicitly aligned with teaching and especially with learning. Having said that, ultimately the assessment process is associated with the expected learning outcomes identified in a module or programme descriptor. Moreover, assessment could and should be considered at a programme level. However, separating teaching and learning from assessment creates a strange dichotomy. Terminology, which is deeply embedded in the HE context, may be shaping the philosophical stance at a systemic level. The term 'teaching and learning' is simultaneously too broad and too narrow thereby open to varying interpretations. Taking the Nind et al. (2016) definition of pedagogy to include the pillars of teaching, learning, curriculum and assessment might be a more helpful framework through which to view the related practices in the HE context, particularly as the actors therein have total responsibility for the design, enactment and evaluation of each of these pillars for their own schools, departments and institutions as well as acting as external examiners for each other. Further, the report raises the question - to what extent has this body of research informed practice in Irish HE settings? That notwithstanding, the fact that assessment and feedback accounts for only 8% of the research outputs included in this study suggests it is an area worthy of further examination in the Irish context.

Shortly after the publication of the systematic review outlined above, the National Forum (2016a) published a report on assessment practices in the Irish HE sector. The introduction to the report opens with the following statement:

> Assessment is at the heart of teaching and learning. Assessment methods, content and strategies reflect many of the key features and values of a programme and have a fundamental influence on student learning experiences (p.3).

Two key sources of data were used: (a) module descriptors (n=487) from 30 randomly selected undergraduate degree programmes across the Irish HE sector and (b) first year (n=14,076) and final year (n=10,650) response data from the *Irish Survey of Student Engagement* (ISSE) in 2016. The following outlines the key findings from this report:

1. The level of information and transparency available on assessment within modules seemed to depend somewhat on the institutional templates provided for module design including the language used therein. For example, the terms 'continuous assessment' and 'examination' were often used to distinguish between assignments and formal examinations but did little to illuminate the nature of the task demands placed on students enrolled in the module.
2. There were no patterns in terms of module size, with modules examined varying from 3 ECTS credits to 55 ECTS. However, it does appear that students engaging in single semester modules tended to engage with a much higher number of summative assessments compared to modules which were year-long even when the number of ECTS credits were the same or greater. The average number of assessments completed per 10 ECTS in single semester modules was 4.5 compared to 2.6 for year-long modules with 10 ECTS.
3. The number of assessments differed between fields of study.
4. Additionally, the range of assessment types used differed across disciplines.
5. Examinations were the main assessment type outlined in 296/487 descriptors (60.8%).
6. Provision of feedback was more prevalent in some disciplines than others and fourth years seem to receive more feedback than first years.
7. Students are more likely to engage in behaviours which help them to assess and monitor their own learning towards the end of their studies than at the beginning.

Jessop et al.'s (2014) contention that there is generally considerable variation in assessment patterns across and within programmes was mirrored in the findings of this study. The lack of assessment detail in module descriptors is perhaps because the emphasis in the descriptor templates is on content and topics to be studied and staff may not have developed the assessment when submitting descriptors for publication on the institutional online system. Semesterisation also seems to have a more obvious impact on the number of assessments than modularisation *per se*. Further, most of the conclusions about assignments and summative assessment were drawn from the module descriptors analysed whereas most of the insights regarding assessment for learning (AfL) and assessment of learning (AoL) were drawn from the ISSE survey data. This would seem to indicate that when assessment information is included in a module descriptor, the focus is on AoL, while AfL and assessment as learning (AaL) are not considered at a curricular design level. Designing a module is essentially the act of engaging in curriculum design. Unlike teachers in primary and post-primary sectors who usually develop their teaching plans to align with some sort of state curricula and/or programme, teachers in HE design their own curricula from the outset in the form of programme and module descriptors. And from the outset, it might be implied that such curriculum development communications the principles and features of each related educational proposal (Stenhouse, 1975) as much as by what is excluded as included, communicating the values of the creators (Harland &

Pickering, 2010) whether they realise it or not. Given the findings of this study, the lack of attention to assessment and its alignment with teaching and learning is systemic and begins at the point of curriculum development, implying the need to consider the perspectives and viewpoints of those charged with this responsibility. Moreover, only module descriptors were analysed in this study; there is no mention of programme descriptors which may not exist at all in the same manner as module descriptors.

Around the same time, the National Forum began a consultation process with staff nominated as key stakeholders from all HEIs in Ireland with a view to agreeing some key assessment terms across the Irish HE system, culminating in a short explainer document (National Forum, 2017) which was utilised as a point of reference for later research projects and publications. Below are the key terms included in that document and the agreed systemic understanding of each.

1. AoL (Summative) - the primary purpose is the demonstration of the achievement of student learning.
2. AfL (Formative) - the primary purpose is to give feedback on teaching and student learning. Students and teachers are learners in a dialogue to improve their learning or their teaching.
3. AaL (Formative) - the primary purpose is to empower students to self-regulate and critically evaluate their learning and performance.

The guidance highlights commonalities and differences between each definition, some of which might be viewed as contentious. For example, AaL is described as a form of ungraded assessment, with the rare exceptions of graded self-assessment. Perhaps this fits with the definition of AaL above, however, the authentic assessment approach might fit in well with the idea of assessment as a learning process in itself which could lead to the award of a grade. All three are conceptualised as facilitating students in their learning journeys and having a greater systemic understanding of each term "should allow for a more effective and efficient design of learning experiences" (National Forum, 2017, p.3). The development of this publication indicates a very clear attempt and intent to tackle the language of assessment at a systemic level resulting in a document which is clear, accessible and succinct.

In 2018, the National Forum funded a study which examined how those teaching in HE use technology to enhance assessment (TEA) (Keirsey, Devitt & Brady, 2018). A systematic review of relevant literature was carried out culminating in the inclusion of 65 articles published between 2012 and 2018. Quality assessment protocols were used in the process of identifying suitable articles. The authors also developed six case studies of practitioners considered to have assessment expertise and good practices. The authors identified four themes arising from the review.

1. Assessment design (30 papers) - the authors state that specific models of assessment design were not explicitly referred to, so the review focused on motivations framing decisions regarding assessment design. However, it is unclear what the authors mean by 'specific models of assessment design', a term that is not defined in the report. In terms of motivation to use TEA practices, the authors developed the sub themes of (a) fostering collaborative learning, (b) stimulating reflective learning, (c) structured tasks to scaffold learning. Where the emphasis was to scaffold learning, the emphasis was on the development of AaL skills although usually, at a lower order level. The case study practitioners used technology in assessment to develop critical skills and had a broader understanding of AaL whereby they aimed to enable students to engage meaningfully with and extend their understanding of the key concepts.
2. Staff efficiencies (46 papers) - particularly in terms of time, workload and encouragement of student autonomy were identified within this theme. However, those efficiencies were not always realised with perceived issues relating to reliability and workload of managing the technology. The studies included all focused on early adoption of technology enhanced assessment approaches and therefore, the review lacks longitudinal data from which to extrapolate conclusions of long-term effectiveness. The perspectives of the case study staff mirrored the findings of the review here, albeit they seemed to place more emphasis on the potential limitations in terms of workload, staff knowledge and understanding of the technology.
3. Approaches to plagiarism (20 papers) - this theme focused primarily on AoL in terms of preventing or identifying plagiarism. The case study participants tended to focus primarily on prevention of plagiarism by designing assessments which negated the need to cheat. The case study participants tended to use technology in assessment to promote learning rather than check knowledge, and from that perspective, the case studies tended to focus primarily on AfL and AaL.
4. Learning environments (32 papers) - were conceptualised quite broadly to include institutional policy, PD, financial investment, time and so on. The review found that technology enhanced assessment was most effective in institutional settings which explicitly supported its development. None of the studies evaluated supports but did provide some indicators of the nature of support needed. In contrast, the case study participants all indicated that they had chosen to use TEA without any reference to their context; rather, their engagement emanated from an intrinsic interest in developing their assessment practices and their own comfort levels with technology.

Apart from providing insights into the use of TEA, the findings of the review also seem to indicate that systemically, those teaching and assessing in the HE context tend to do so without much reference to evidence based assessment literature but rather rely on personal experience, motivation and development of skills by trialling innovations. This is all the more concerning when one might assume that all 65 articles were of a high quality and presumably authored by people who are interested in enhancing their own assessment practices. The inclusion of the five case study participants provided an interesting foil to the review findings, sometimes aligning and sometimes not. The report itself, while providing some interesting insights, is not itself embedded in the assessment literature, particularly in relation to 'models of assessment' which were referred to but not elaborated upon. Further, while the focus of the review was to examine staff experiences of TEA approaches in terms of AoL, AfL and AaL, the depth of examination through each lens is questionable, for example, AoL is really only considered in terms of plagiarism. Moreover, while the authors shifted from focusing on models of assessment to motivation for particular technology decisions, they did not examine the perspectives the HE staff involved brought to those motivations and decisions.

O'Neill (2019) moved the assessment focus of the National Forum forward by examining assessment of/for/as learning from a programmatic perspective. Drawing from a range of included commentaries, case studies and 'how to' resources, the publication aims to provide evidence-based, practical guidance to enable design of assessment at a programmatic level. The rationale underpinning the programmatic assessment design approach is to address the complexity of assessment arising from its different purposes and stakeholders, particularly it might be assumed on longer, full-time, undergraduate programmes. The author acknowledges that "whereas staff may be familiar with their role as teachers in the classroom context, the additional skills required for designing assessment across a programme may require further professional development" (O'Neill, 2019, p.118).

In 2021, the National Forum published a report arising from review and reflection on the implications of the COVID-19 pandemic moving forward across the Irish HE sector (National Forum, 2021a). A supplementary collection of short publications was also produced one of which outlined ten key learnings in relation to assessment arising from the pandemic experience (National Forum, 2021b). Two of these related to terminal examinations; however, the remaining eight could be viewed as relating to the importance of collaborative practice – with students, between staff and within programmes. The overall conclusion in this document is that the Irish HE sector was shocked into thinking about assessment in new ways and highlighted the importance of partnership between those involved. The role of the pandemic in stimulating discussion and new thinking was referenced across other publications in this collection e.g. National Forum (2021c) which also highlighted the fact that

increased diversity in the student population due to massification had not resulted in a comparable diversity in the range of pedagogical approaches including those related to assessment.

2.4.2 Irish SoTL Research with a Focus Other Than Assessment

To ensure a comprehensive view of assessment in the Irish context, some other key documents, published or commissioned by the National Forum were examined. While not explicitly focusing on assessment, they do provide a broader, contextual insight into the status of assessment practice in the Irish HE context. These documents are critically examined in the following section.

Moore-Cherry, Quin and Burroughs (2015) explored student non-completion by surveying HEIs, examining internal reports and exit data between 2011 and 2014. They found five key factors influencing students to leave - course difficulty, personal reasons, financial difficulties, health and family reasons. Course difficulty was the main factor with students indicating that they chose the wrong course; their expectation of the course was different to the reality once enrolled; and some other related issues. This push factor was overwhelmingly the main reason for non-completion in the university sector but less so in the HECA sector where financial difficulties seemed to be the key factor for early dropout. While course difficulty was the key factor across the HE sector, there was no explicit reference to assessment practices although one might assume difficulties around assessment are implied. However, despite this, the report makes 21 recommendations, one of which explicitly recommends "review of assessment feedback and academic support structures with particular focus on the first three months of a programme, thereby creating an 'academic early warning system" (p.63). Given that course difficulty is a key reason for attrition across the HE sector and particularly in universities, it is important that programme demands, usually associated with students demonstrating their understanding, are considered carefully. As evidenced above (National Forum, 2016a), that consideration is almost non-existent at the point of programme and module inception when programme curriculum is being developed and the time available for meaningfully implementing assessment processes for both formative and summative purposes is limited (Boud, 2014). Moreover, if the recommendation above was to be meaningfully implemented, it would have to be addressed at a programmatic level to ensure the totality of the students' experience was captured in those first three months on a programme.

O'Farrell (2019) drew from national HE policy documents, student survey responses (n=1,041) and institutional strategic plans and published graduate attribute documents to identify enablers of student

success in the Irish HE context. She identified six themes within which specific actions could be taken to enable student success. The importance of student partnership was highlighted in terms of fostering relationships between staff and students and ensuring that curricula are relevant to the student population. Professional development opportunities for staff were also highlighted as a key enabler of student success, particularly in terms of what O'Farrell terms is the "changing nature of pedagogy" (p.16) and the right of students to experience "high impact educational practices" (p.18). Evidence based decision making was also identified as a key enabler of student success, particularly in relation to staff using data to design T&L environments. The development of institutional policies and practices to explicitly address student success was also recommended especially in relation to careful alignment of policies and procedures to ensure they are student-centred, fit-for-purpose and clearly communicated. Supporting transitions and cultivating belonging was also identified as an enabler of student success. The sixth theme, assessment and feedback, is of interest in terms of this study. The specific enablers leading to student success identified within this theme are provided below:

1. Foster a common understanding of assessment terminology and purposes among staff and students (i.e. assessment literacy).
2. Identify opportunities for reducing institutional reliance on summative, high-stakes forms of assessment.
3. Enhance meaningful engagement through development of authentic assessment and programme approaches to assessment.
4. Review and optimise assessment practices at programme level to:
    a) avoid overloading students.
    b) encourage diversity of assessment methods.
    c) develop coherent approaches.

(O'Farrell, 2019, p.25).

While laudable intentions, many of these enablers are likely complex to achieve and imply deep reflection, knowledge, skill and expertise at systemic, institutional, programme, disciplinary and individual levels. Further, as beliefs can be seen as the main determinant of pedagogical actions (Skott, 2015, Tschannen-Moral et al., 2015) they need to be considered in terms of suggested changes to practice.

The written nominations from students for a national HE teaching award were analysed to identify key characteristics Irish HE students perceived to be embodied by exceptional teachers (National Forum, 2019). There is no explicit reference to assessment practices in this report which once again,

would appear to contradict the assumption that assessment is central to T&L (Carless, 2015); perhaps the nominating students and/or those analysing the data conceived of assessment within the T&L umbrella. However, there was a pattern in terms of overall perceptions of excellent teachers as exemplified by the quote below:

> Students value skills which enhance teaching such as communicative, organisational, professional, and knowledge-based abilities. Skills, however, are not sufficient in and of themselves; they need to be complemented with particular behaviours and human characteristics. Exceptional teachers are entertaining-interesting, kind and caring, supportive, inspirational, passionate and approachable. They are helpful, encouraging, generous with their time and go 'above and beyond'. They help students to learn, to develop, to progress, to be successful. They make a difference to students' learning and their lives (National Forum, 2019, p.12)

The behaviours and human characteristics outlined above are indicative of a particular philosophy and set of values regarding education and the role of the teacher in the HE context which may not just complement the skills, knowledge and professional competence of exceptional teachers as suggested above; they may actually determine the level to which skills, knowledge and competence are achieved. What teachers believe about learning, teaching, education, success and possibly most importantly, their own role vis-a-vis each of these elements is not referred to in any meaningful way in this study nor in many of the other National Forum studies generally in relation to pedagogy or specifically in relation to assessment.

One of the first things the National Forum did was to map the possible PD pathways to "recognise, enhance, inform and sustain excellent teaching practice that supports/enhances student learning in a diversity of contexts" (National Forum, 2015, p.2). Potential domains for a PD framework were identified as:

1. Professional practice / skills - reflective practice, integration of research with T&L, and online pedagogy.
2. Professional knowledge - theories of education, scholarship of T&L, and digital literacy.
3. Professional values / attributes - inclusive pedagogy, commitment to civic engagement, and leadership.

The report also goes on to say that the progression of teaching competence is more complex than the linear conceptualisation of moving from novice to expert. The term 'pedagogy' is used twice across the suggested domains above, in both cases velcroed to other terms which themselves are complex, layered and disputed. Assessment is not mentioned at all, presumably assumed once again, to fall

within the broader phrase of 'teaching and learning'. Again, the invisibility of assessment in documents such as this belies Carless' (2015) notion of the centrality of assessment in HE.

The development of a conceptual model for PD for those who teach in the Irish HE sector was published the following year (National Forum, 2016c) and comprised five domains including the self at the core with identity, communication, digital capacity, and knowledge and skills radiating from that core. Again, assessment is not explicitly referred to in the body of this document; however, an appended document provides detailed explication of each domain and here, there is explicit reference to both assessment and curriculum development within the *Professional Knowledge and Skills* domain along with aims focusing on teaching, communicating disciplinary knowledge effectively, critical evaluation of T&L and so on. The term 'pedagogy' is used within this domain descriptor also, again attached to another term - disciplinary pedagogy.

The finalised national framework for PD (National Forum, 2016b) retained the five domains above but provided much more guidance in terms of expectations within each. The centrality of the individual staff member is captured in the core domain (*personal development: the self in T&L*) and includes the intent to reflect on personal characteristics such as values, perspectives and emotions which motivate and challenge teaching, ultimately impacting student learning. It is also intended that PD participants would articulate a personal philosophy of teaching and examine how that philosophy aligns with the institutional, national and international contexts and associated values. That personal philosophy is further mapped onto T&L within the professional identity, values and development in T&L domain. In fact, the individual is central to the conceptualisation of the PD framework throughout and clearly there is an expectation that the philosophical beliefs of the individual will be unpacked, explored and explicitly addressed on the PD journey. The *professional knowledge and skills in T&L* domain includes specific reference to curriculum development as well as assessment and feedback competence. The purpose of this domain is defined as:

> This domain emphasises the importance of both disciplinary knowledge and disciplinary approaches to teaching (disciplinary pedagogies), while also drawing on interdisciplinary experiences and approaches. It supports an active student role in the learning process, moving toward a partnership in the teaching and learning process, essential in the higher education environment. It incorporates staff's capacity to design and implement innovative and creative teaching and learning approaches at different levels of curriculum. The importance of assessment and feedback is emphasised, in particular the move to a more learner-oriented and dialogic feedback approach for students and balance in the assessment of/for/as learning. The role of underpinning theories of learning and staff's knowledge and contribution to teaching and learning policies, procedures and scholarship is also highlighted (National Forum, 2016b, p.6).

This description most closely aligns with my own working definition of pedagogy, adopted from Nind et al. (2016), because it refers to curriculum, teaching, learning and assessment, and alludes to policies and procedures which likely imply the necessity to develop relationships and make values visible. But, it highlights the complexity of assessment itself and how it relates to other pedagogical aspects. The HE teacher is at the centre of this conceptualisation and the implications for practice are layered and complex. And, in the first instance, it must be recognised that the academic is not coming to this complexity as a blank slate but rather as someone who has already had experience of each of the pedagogical pillars in some way and therefore will likely perceive new information through a pre-existing belief system which will likely impact how they conceptualise new input and information arising from PD.

2.4.3 Conclusions – Section Three

The publications above were deliberately chosen because they provide a good overview of and insight into what is currently known about assessment in the Irish HE context. The National Forum (2016a) leads with the claim that assessment is at the heart of T&L, which mirrors similar assertions internationally (Biggs & Tang, 2011; Carless, 2015). However, their findings regarding the dearth of detail relating to assessment at module design level would seem to belie that assertion and raises the question as to why assessment is not actually central in module design. The uneven patterns of assessment load depending on modularisation and semesterisation may indicate the creation of boundaries which keep those teaching on programmes corralled away from each other, creating relationships which are distant or even non-existent which is likely influencing the assessment patterns. The O'Sullivan et al. (2015) study indicates that assessment is not actually at the heart of T&L with only 8% of the identified research outputs focusing on this aspect of pedagogy. Given the systemic perception that assessment is core to the T&L experience, one might expect a much higher level of research focus therein. The ubiquity of the T&L term in terms of what it does and does not include may perhaps be shifting the focus away from the assessment pedagogical pillar. The lack of focus on assessment in terms of research and design practice is at odds with the systemic interest in this aspect of pedagogy (National Forum, 2017).

The lack of reference by academics to evidence-based literature relating to assessment practice (Keirsey et al., 2018) implies beliefs are generally not informed. Indeed, the report itself is not embedded in relevant literature, with key concepts remaining unexplored and unexplained. The authors' finding relating to increased assessment skill following trialling of innovations provides an interesting insight into the development of competence. However, the report did not examine the

beliefs the teachers brought to trialling TEA and the impact they may have had on the individuals involved. O'Neill's (2019) observation of the gap between the familiarity of academics with their teaching role in comparison to their role as assessor led her to conclude that they needed specific PD support in the pedagogical demands of assessment, particularly in the context of programmatic assessment. This adds a layer to the professional identity of academics beyond the teaching and research roles and is likely a particularly important consideration when one considers that assessment design is the responsibility of those same academics. Further, programme focused assessment will likely require a belief in that approach to assessment and in turn, bringing others to that same belief also.

2.5 Overall Conclusions

On the one hand, assessment is viewed as central to the educational experience of students and teachers in the HE sector. On the other hand, there appears to be a dearth of knowledge, understanding and research in the field generally and specifically in the HE context. Where research is focused on assessment it manifests in a fragmented manner shining a light on one aspect while simultaneously casting a shadow over others (Boud et al., 2017; Ajjawi et al, 2021). Moreover, the field of teacher belief research has not attended to assessment in the same way as it has with other aspects of pedagogy; this is certainly evident in the National Forum publications which sometimes refer to academics' beliefs in passing but not in depth. Yet, there seems to be a general consensus that understanding teachers' assessment beliefs is necessary to critically consider assessment practice, change and development (Carless, 2015; Xu & Brown, 2016). Therefore, the first research question guiding this doctoral study is *What patterns can be found in international literature on assessment beliefs of those teaching in HE?* Arising from the findings of the research approach developed to answer this question, a second question was generated to guide research in the Irish context – *What are the beliefs of those teaching in Irish HE contexts in relation to the purpose of assessment?*

Chapter Three: Methodological Approach and Study Design

3.1 Introduction

As discussed in the preceding chapter, how academics conceive assessment impacts on practice (Carless, 2015) and understanding assessment conceptions seems to be a necessary step to understanding resistance to change (Deneen & Boud, 2013). However, while HE teachers' conceptions and beliefs about teaching have been relatively well studied, there has been less focus on assessment (Postareff et al., 2012). This lack of research focus on assessment practice in HE generally seems to be mirrored specifically in the Irish HE context where only 8% of SoTL research outputs between 1990 and 2014 focused on assessment (O'Sullivan et al., 2015). Moreover, researching teacher beliefs is challenging not least because the core construct itself is ill-defined (Skott, 2015).

The approach and design of this research study was informed by the concerns above. This chapter describes the nature of and rationale for the decisions taken in the design and implementation of the research study. First, the philosophical stance underpinning the research approach is explicated, including my own positionality in the context of the study's aims and focus and the theoretical framework guiding the study design and decisions. This is followed by a detailed description of the study design process, including sequence, sampling, data collection and analysis. Then, ethical considerations are explained. Finally, the strengths and limitations of the study are discussed in terms of (a) the research approach, (b) the manifestation of that approach in the study design and methods chosen to answer the research questions, and (c) the reliability, trustworthiness, validity of the study as a whole and its unique contribution to knowledge.

3.2 Philosophical stance underpinning research design and decisions

This section outlines my underpinning philosophy in relation to research design and enactment. In this section, I outline my own personal and professional positionality in the research context. This is followed by an explanation of the overall approach taken to the research and the theoretical framework which guided the process.

3.2.1 Personal and professional positionality in relation to research

In the compulsory school context, identifying as a teacher is recognised as playing an important role in how teachers teach, garnering increasing research attention (Olsen, Buchanan & Hewko, 2023);

however, many of those in academic roles in HE may never have aspired to being a teacher with the requirement to teach viewed as one small part of a much broader job description (Nevgi & Lofstrom, 2015). While teaching in HE is distinguished from that of primary and post-primary education by the assumption of the integration of research with T&L (Hunt, 2011), I identify with my HE teaching role much more than I do with my research and/or administrative personae (O'Brien & Furlong, 2015). At times, this may appear to personify a rejection of the traditional research role associated with academic life in higher education (Lopes et al., 2014). I qualified as a primary teacher in the 1980s and since then taught in a variety of settings including primary, post-primary and special schools. I have four teaching/education qualifications, one at undergraduate level and three at postgraduate level. I am aware that I bring that teaching background to the HE context which influences my pedagogical decisions and views.

I have been teaching in HE since 2001, in a college of education initially until its incorporation into a university in 2016. When I first started out in the HE sector, my teacher identity was not reshaped, so I did not see myself as a 'real' HE academic (O'Brien & Furlong, 2015) in that I did not engage nor see a role for myself with research endeavours of any significance. However, changes in my own institution increased my awareness of the research aspect of my role and I actively sought to partake in research projects (e.g. Douglas et al., 2009; Ware et al., 2007; 2009). Moving into the university context has changed the focus on research again, highlighting in relation to my own discipline especially, the challenging importance of the repositioning of teacher education to be research driven while simultaneously reacting to demands for innovative, relevant and imaginative teacher education programmes (MacPhail & O'Sullivan, 2019). It also had a huge impact on my identity and that of others, often negative in the first few years of the incorporation, although that has evolved and changed as the years have passed (Borlaug et al., 2023). The importance of research-driven teacher education is usually considered in reference to teachers working in the compulsory sector; however, from my point of view, it is equally, if not more important for those of us teaching in the HE sector, especially as "the study of higher education is itself a relatively new field, systematic study of the academic profession - the key actors in the higher education enterprise - is an even more recent phenomenon" (Clancy, 2015, p. 133).

My discipline is education. Specifically, I operate within the sub-disciplines of special and inclusive education (SIE) and teacher education (TE). Both terms in the SIE label are contentious and defined differently depending on perspective. I teach across a range of undergraduate and postgraduate programmes in relation to this field of education as well as researching in the area. However, since 2009, I have actively pursued engagement in the T&L activities of the college, and now the university,

in which I work. So, I now find myself operating across three sub-disciplines within education - SIE, TE and HE, with reference to pedagogical practice. This has changed how I see myself and how others see me. It has also allowed me to develop my own pedagogical skills in the HE context and those of others. I have presented, researched and published in relation to pedagogy in HE including (a) strategies to enhance engagement in large class cohorts (Logan & Farrell, 2018a; 2018b); (b) using universal design for learning (UDL) as a pedagogical frame (Farrell, 2019; Farrell, 2021); (c) peer observation of teaching (O'Keeffe et al., 2021); and (d) researching the sudden move from the face-to-face to online context at an institutional level as a result of the Covid-19 pandemic (Buckley et al., 2021; Farrell et al., 2021; Glynn et al., 2021; Smyth et al., 2021). Moreover, in collaboration with a colleague, I recently established a regular symposium to enable teachers of large HE classes to share practice (see www.phelc.ie for details).

Based on student feedback (invited and spontaneous), I am quite confident that the teaching-learning dynamic in my classes results in active learning on the part of most students both in the face-to-face and online contexts. I do not find it difficult to implement teaching and learning strategies to maximise student engagement and enjoyment even with very big groups. However, while feedback on my assessment approaches is also positive for most modules, developing, administering and managing assessment remains challenging on multiple levels. Revisions to my teaching approaches are generally easier to achieve than assessment revisions, which I view as more complex, requiring much more thought, planning and investment of time, particularly as many of my classes comprise cohorts of 400+ students so changing practice means changing at scale. I have been heavily involved in developing assessments and associated materials such as rubrics, moderation processes and so on. I have worked closely with individuals and teams in relation to assessment design and implementation which has allowed me to experience a myriad of views and beliefs about assessment across modules, programmes, personnel and time.

I have also found that approaches to assessment are very varied within and across programmes, even within an education faculty context, where almost all of those teaching have an education background. From my perspective, this impacts the student experience across a range of programmes, usually negatively (Carless, 2017). As an academic working in the field of teacher education, I am also acutely aware that teacher educators "occupy a unique territory; everything they do, as well as everything they say, models the practice that they are attempting to nurture" (Hallett, 2010, p. 437). Therefore, I tend to review my pedagogical approaches and strategies regularly because I want to explicitly model good practice, and I seek feedback from students in relation to their learning experiences with a view to informing my practice going forward. Over the years, I have become more

explicit regarding my pedagogical approach, explaining my rationale for my pedagogical decisions relating to the design of their learning experience when engaging with my modules, in the hope that my students may benefit from my teaching experience with them to, in turn, inform their own teaching.

Making decisions about assessment is challenging because of class size; provision of appropriate and helpful feedback; and consideration of assessment integrity. While I have employed a range of strategies such as authentic assessment (Ashford-Row et al., 2014), I feel I am still on a learning curve when it comes to assessment despite my teaching qualifications. Having said that, the application of an authentic assessment approach with my final year BEd students has resulted in the publication of one assignment (Bolger et al., 2018) and the development of a pilot website comprising student-made resources for fellow student teachers. However, while I have quite strong beliefs about the potential of assessment to transform learning and student engagement, and I have transformed my own assessment practice in many modules, the overall impact of this work is lost at a programmatic level (Carless, 2015) and more widely. Some staff have come to me to seek advice about my approach to assessment. I have successfully worked with some others to link and align assessments although others appear more reluctant citing incompatible foci, disciplinary integrity, and time. And this occurs within the education discipline at subspecialist levels even within as well as across modules.

Throughout my teaching career, I have valued collaboration with colleagues. Collaborative practice is a requirement placed on teachers in the compulsory context in Ireland (e.g. Department of Education and Skills, 2017a; 2017b; 2017c; 2017d) and I believe it is important for teacher educators to model collaboration in terms of their own pedagogy. I have also always valued the educational experiences of my students when in my care and in receipt of my services as a teacher. However, when I worked in the compulsory education sector, I tended to have much more contact with my students than I do in the HE context. Further, the number of students and indeed, staff, I work with in the HE context is far, far greater than experienced in compulsory education, so enacting my pedagogical beliefs and values in a meaningful, effective manner is more challenging.

So, these personal and professional experiences on this element of my work, both positive and negative, have caused me to reflect on assessment beliefs in the HE space. I have wondered about the beliefs of individuals who have and have not agreed to collaborate on assessment design and how they influence assessment practice individually and collectively. I have also reflected on the assessment

practices of my own disciplinary context (education) and wondered to what extent they manifest across disciplinary fields in the wider HE context.

Throughout this doctoral process, I knew that I would bring my own positionality to bear on each stage of the journey in terms of experience (Cresswell & Cresswell, 2018) and values (Greenbank, 2003). I was conscious that this positionality would likely impact decisions taken throughout and therefore, as a 'functioning constituent' in the environment under investigation, I felt the need to be reflexive as I developed as a researcher in line with the development of the research itself (Attia & Edge, 2017). However, while the intent here is to be transparent as to the influences guiding my decisions and actions during the research process, I also acknowledge potential limitations of including positionality statements in that they are themselves likely impacted by the very positionality they describe and are not substitutes for reflexivity particularly in terms of methodological rigour (Savolainen, Casey, McBrayer & Schwerdtle, 2023).

3.2.2 Research approach

Coe (2012) outlines a typology of aims of the research endeavour including (a) the scientific aim which sets out to find knowledge or test a theory, (b) the political aim whereby it is intended that the research study will cause change, (c) the therapeutic aim whereby the researcher hopes that the study will help the participants in some way, and (d) the aesthetic aim to express or represent human experience. While presented as different or discrete, each of these permeated my consciousness throughout the research journey, overlapping and shifting in importance constantly. Consideration of each of these aims resulted in an initial idea in which I intended to carry out a study which was too big and onerous for the purposes of the EdD thesis, and which necessarily had to be honed to ensure manageability and clarity of focus. However, the original, overambitious yet important idea remained with me, resulting in the development of a long-term research plan, the first stage of which is outlined in this thesis.

Ultimately, the final composition of the study presented in this thesis is probably best described as meeting the first and fourth aims of the research endeavour as outlined above (Coe, 2012), finding knowledge and representing experience respectively, although the other two aims were still there in the background, influencing decision-making during the research process as well as intended extensions of this study into the future. There is somewhat a juxtaposition between science and aestheticism, hence, the methodological approach to the study reflected that duality with the adoption

of a mixed methods research design. Intuitively, a mixed methods approach made sense, not just for this phase but for the long-term research plan, because examining the issues from more than one angle would necessarily enrich my ability to draw conclusions (Mertens, 2010). My own experiences, reflections and practices, influenced my ontological viewpoint as I considered the overall approach to this research.

Ontology refers to an individual's beliefs about social reality and can be considered from two perspectives, (a) a constructivist perspective whereby the individual believes that social reality is constructed by human agency and therefore, contains multiple realities and (b) a realist perspective wherein an individual believes that the social world contains stable features and relationships which can be objectively measured (Denscombe, 2010). I subscribe primarily to the constructivist perspective, most likely because my own educational and professional experience influences my research perspective (Waring, 2012), and because in my own teaching practice I have tried to think beyond the confines of the familiar particularly in relation to assessment. Furthermore, I graduated from a *Master's in Education and Training Management* programme in 1998 which comprised three groups of students: (a) those working in the field of education such as teachers, principals and school inspectors, (b) nurse educators who had responsibility for pre- and in-service education of nurses at a time when on-site hospital training was moving into the universities, and (c) personnel managers in industry contexts who might today be referred to as human resource managers. Those of us in the education cohort very much identified with a relativist perspective, those in industry generally situated themselves in the realist domain while the nurse educators tended to have a foot in both camps. Engagement in that programme influenced my epistemological approach from thereon. While I still have a relativist ontological perspective, I tend not to engage with the binary quantitative versus qualitative epistemological arguments, preferring instead to blend aspects of each perspective depending on the research focus and context.

As the field of conceptions and beliefs regarding assessment practices of those teaching in HE in the Irish context is relatively unknown territory as outlined in Chapter Two, I felt it was important to establish an overview of the features and relationships before examining their application, hence this first phase of a longer study. From a pragmatic worldview perspective, I felt it was important to prioritise the research problem and to use all processes available to help understand the tensions therein (Creswell & Creswell, 2018) before examining more complex processes of the impact on practice and to mitigate the possibility of my own viewpoint influencing my epistemological approach.

3.2.3 Theoretical research framework

The first line of this thesis contains reference to the term pedagogy attributed to Nind et al. (2016) which identifies assessment as one of four pedagogical pillars along with curriculum, teaching and learning, all of which are influenced by and create the necessity for relationships and values. Nind et al. (2016) use this conceptualisation of pedagogy as a point of reference throughout their publication to situate various facets of pedagogical research. I personally own very few academic texts - this is one of those few. The authors' conceptualisation of pedagogy resonates with my own experience across a wide range of teaching contexts as outlined in chapter one. The term pedagogy is (mis)used in a myriad of ways - sometimes aligned with teaching only; sometimes used in the plural (pedagogies) which, when examined, usually refers to teaching strategies. Nind et al. (2016) do not just define the term, they examine every facet of pedagogical research to explicate the implications of their conceptualisation of the term with breadth and depth. Once again, I have provided their definition of pedagogy, this time with keywords highlighted. This definition shapes my thinking in relation to my own pedagogical practice generally and to the philosophical approach taken in this study specifically.

> Simply put, pedagogy is about teaching and learning. It incorporates the following elements: **teaching, learning, curriculum** and **assessment**. It also concerns **relationships** and **values**. Pedagogy is fundamentally concerned with what people **perceive to be meaningful, important and relevant** as they engage in teaching-related activity and develop competence and expertise in a practice (Nind et al., 2016, p.9).

They further examine the notion of research in the field of education and therefore, pedagogy, in terms of art, craft and science:

> In education, theory and research is variously positioned as an art (Eisner, 1979), a craft (Brown & McIntyre, 1993) or science (Kornbeck & Jensen, 2009). Understanding pedagogy within and across these positions has particular implications for our understanding of what counts as research, the methods we use and what we need to consider in our designs (Nind et al., 2016, p.50).

The conceptualisation of pedagogy and therefore, pedagogical research, through the lens of art, craft or science influenced reflection on and development of the research approach throughout, in terms of the phase of the study reported here and also the longer-term research intention. Table 3.1 provides a summarised overview of Nind et al.'s (2016) conceptualisation of pedagogy as art, craft or science; the implications for research generally; and the application of both to this study.

Table 3.1: *Mapping the art, craft, science framework onto the development of this research (adapted from Nind et al., 2016)*

Pedagogy as Craft **(pp. 59-60)**	**Pedagogy as Art** **(pp. 64-65)**	**Pedagogy as Science** **(pp. 54-55)**
Role of Researcher		
An explorer at the heart of naturalistic enquiry recording, interpreting and forming new understandings. An interpreter of each unique study context.	Understanding their role as part of a particular community of practice. Explorer of pedagogy through a focus on relationships, interactions, emotion and expression. Acknowledging that they may already have emotional investment in the products and process of previous pedagogy.	An objective investigator, testing hypotheses informed by previous research positions. A producer of findings that can be replicated elsewhere.
Typology of Research Questions		
What do teachers know as a result of their experiences? How can personal practice be better understood? What is the nature of daily classroom practice? How do the teacher, the practice and the values and beliefs interact? How does practical and applied knowledge develop?	What do teachers do? What is the nature of the relationships and interactions around teaching and learning in a living and live community of practice?	What is good or effective pedagogy? What models, frameworks or toolkits can be developed? What can be known about quality and causality by implementing interventions and quantifying change?
Goal of Research		
Knowing how … Interpreting individual experience in a social world. Depicting evolving practice.	*Knowing why …* Exploring the relational aspects of pedagogy. Exploring the role these relational aspects play in teaching and learning.	*Knowing that …* Addressing a problem or gap. Widespread and general improvement of pedagogy through the development of generic and transferable models

Understanding pedagogy in context.	Examining how these change over time through a focus on histories of participation.	or principle of effective pedagogy. Explaining pedagogy as measurable. Isolating the 'here and how' under research from the history and context of the practice.
Application of the framework to this research i.e. assessment pillar of pedagogy		
To explore … … the nature of beliefs about assessment re those teaching in HE … what those teaching in HE know about assessment as a result of their experiences … how does assessment practice/knowledge evolve … how do context and assessment interact	*To understand …* … what those teaching in HE do in relation to assessment … why they employ particular assessment practices (or not) … the nature of relations between those teaching in HE themselves and between them and students in relation to assessment … what is the implication of those relationships for assessment practice	*To investigate …* … what models of assessment are effective in relation to student learning … what works in terms of PD in assessment practice for those teaching in HE
Phase 1 **Exploration** of assessment perceptions, conceptions and beliefs to establish a conceptual framework to guide deeper understanding and broader investigation. ***Reported in this thesis***	*Phase 2* Disciplinary and other focus groups to attempt to **understand** findings of the first phase.	*Phase 3* Case studies, observations, research with students, examination of documentation, grades etc to **investigate** hypotheses generated in previous phases

As described earlier, I am invested in the community of practice that is the Irish HE sector at both disciplinary and pedagogical levels. Through attendance at international conferences and PD events, and especially through my work with PHELC, I have developed a sense of the wider HE community outside Ireland specifically in relation to pedagogical practices in the HE sector. I have a professional, personal and emotional involvement in these communities and brought that to the research study; it permeated every aspect of this phase of study from its inception to completion. Each element was

conceived to produce findings that could be replicated and used elsewhere. Once again, while the pedagogical lenses above are presented discretely, for me, they were interwoven, overlapping and complementary. They have also allowed me to consider this research journey in the long-term from the outset as well as for the specific purposes of completing this dissertation and the EdD programme within a realistic timeframe.

Further, given the criticism of teacher belief research as outlined in Chapter Two, I felt it was important to extrapolate implications for this study. Hoffman and Seidel (2015) recommend consideration of degree of domain specificity, suitability of instrument to context, the malleable nature of beliefs, the nested influences on those beliefs, the nuanced influence of culture, cautious interpretation of data, variable types of measurement and the relationship between beliefs and learning outcomes. These implications are complex and too many to address in a doctoral thesis alone, hence, a long term, multi-phased research plan was developed to "seek carefully conceptualised, integrated, and validated understandings, by focusing on teachers' context-specific beliefs and their interconnections to other beliefs and behaviour" (Ashton, 2015, p.35), thereby contextualising the self-reported beliefs in the questionnaire with deeper investigation and examination in future phases of the study.

3.3 Study Design

This section provides a detailed description of the design of this phase of the study i.e. the exploration of assessment perceptions, conceptions and beliefs of those teaching in HE. The nature of and rationale for methodological decisions are outlined, generally in the sequence of each step of the study.

3.3.1 Reviewing the Literature to Set the Context (Narrative Review)

The narrative review was designed to contextualise the study by critically examining relevant literature leading logically to the questions which guide this research (Machi & McEvoy, 2022). Literature relating to the key concepts underpinning the study was accessed using relevant keywords. Generally, searches were time-limited from 2010 to 2023, although some sources fell outside of this timeline. Additionally, the work of some key authors in the field of assessment was targeted because of their focus on the generality of assessment in higher education (e.g. David Boud) or specifically on assessment beliefs (e.g. Gavin Brown). The narrative review was initially structured to establish

current understanding of key concepts such as teacher beliefs and nuances of assessment in the HE context, particularly in relation to the other pedagogical pillars of teaching, learning and curriculum.

3.3.2 Data Collection and Analysis

Two separate approaches were taken to address the research questions. Firstly, a scoping review of international literature on the assessment beliefs of those teaching in HE was conducted with the intention of illuminating underlying patterns. Secondly, a survey of those teaching in the HE context in Ireland was carried out to examine their conceptions of the purpose of assessment. This section describes and explains the decisions made relating to data collection and analysis of both.

3.3.2.1 Scoping Review: Design

The scoping review was conducted to address the first research question: *What patterns can be found in international literature on assessment beliefs of those teaching in HE?* When approaching the review, Fink's (2014) definition was used as a point of reference: 'a systematic, explicit, and reproducible method for identifying, evaluating, and synthesizing the existing body of completed and recorded work produced by researchers, scholars, and practitioners' (p.3). This section provides the rationale for choosing the scoping review approach and a discussion on some of the inherent tensions.

Traditional reviews can be seen as discursive, omitting a rationale for the selection of sources (Gough, Oliver & Thomas, 2017). I was drawn to the systematic literature review process to ensure that my own study design and focus were well informed by identifying patterns i.e. gaps, consistencies and weaknesses in the evidence of the literature (Booth, Papaioannou & Sutton, 2012) and to balance the impact of my own views and beliefs arising from personal experience.

Grant and Booth (2009) outline fourteen types of reviews with varying degrees of systematised approaches across a continuum, although it can be argued that attempting to describe a typology of review can conceal more than it reveals (Gough & Thomas, 2017). I experienced that tension when considering the advantages and disadvantages of each in relation to this study. As outlined in Table 3.1, the purpose of this study was to explore the assessment beliefs of those teaching in HE with a view to establishing a conceptual framework which, in turn, will guide further research in this area. As I examined each type of review, I was struck by the dissonance between how each was described generally and its application in practice which seemed to illustrate even more layers to the continuum

of systematisation. I kept returning to the main goal / reason for engaging in a systematised search of the literature i.e. to enable exploration of assessment perceptions, conceptions and beliefs.

A systematic literature review in its purest form did not seem appropriate because it is most suited to the focused investigation of a phenomenon rather than exploration and generally tends to adhere to guidelines on the conduct of such a review (Grant & Booth, 2009). Moreover, it did not seem helpful to divide literature reviews into two groups, systematic and non-systematic, rather, it was preferable to consider them on a continuum of more or less systematic (Okoli, 2015) especially, as the paradigm of experimentation upon which systematic reviews are perceived by some to be based ignores the value of professional wisdom and experience (Clegg, 2005). Additionally, the focus on the importance of the methodology when deciding to include or exclude studies does not take into consideration the varying social contexts within which interventions take place which, coupled with a narrow definition of 'evidence' (Cornish, 2015), has implications when reviewing the literature in the context of education. A systematic-type review could be considered 'the transitive search for knowledge of an intransitive world' (Clegg, 2005, p.420) which was how I eventually came to value the process. For me, the complexity of the social context of higher education and assessment in particular, implied the necessity for a systematised approach to a literature search which took into consideration varying contextual characteristics underpinning each study and the professional insights of those teaching in HE in those contexts (Clegg, 2005) so that I could explore and interpret what these teachers know, believe and how their practice evolves arising from their experiences. Therefore, it was apparent that the review needed to configure findings from primary studies rather than aggregate findings by adding up the results of mainly homogeneous studies, providing me with the opportunity to set a broad question to guide the literature review at the beginning which could then be narrowed as the findings were configured (Gough & Thomas, 2017). Through this interpretive approach, each study added insight to contribute to the overall picture (Booth et al., 2012). While practice was not privileged over data and 'evidence' as espoused by Cornish (2015), these constructs were equalised in the construction of the systematised search approach and taken into consideration in the inclusion and exclusion criteria. Taking all of the above into account, I opted to engage with the scoping method of systematically reviewing literature as developed by Arksey and O'Malley (2005) because of the complex, multidisciplinary nature of the field requiring less reliance on the more realist approaches of systematic reviews in favour of the ontological perspective of relativism (Kastner et al., 2012). Table 3.2 maps the characteristics of scoping reviews (Grant & Booth, 2009) onto the specific context of this study.

Table 3.2: *Scoping review characteristics (adapted from Grant & Booth, 2009, p.95)*

Description	Methods used (SALSA)			
	Search	**Appraisal**	**Synthesis**	**Analysis**
Preliminary assessment of potential size and scope of available research literature. Aims to identify nature and extent of research evidence (usually including ongoing research).	Completeness of searching determined by time/scope constraints. May include research in progress.	No formal quality assessment.	Typically tabular, with some narrative commentary.	Characterises quantity and quality of literature, perhaps by study design and other key features. Attempts to specify a viable review.
Application of Scoping Review approach to this study				
Preliminary exploration of the scope of literature relating to assessment perceptions, conceptions and beliefs of those teaching in HE with the aim of identifying patterns arising from a range of contexts to inform future research.	Limited to journal articles published within a ten-year period, taking into consideration the timeframe for the EdD thesis and the fact that the ScR is just one element of this study.	Studies were not included or excluded based on evaluation of their methodological approaches (no quality appraisal applied).	All data arising from analysis was tabulated. Narrative commentary accompanies each table.	Identification of characteristic patterns across all studies regardless of context. Attempts to specify a conceptual framework for further research.

Tricco et al., (2016) carried out a scoping review of scoping reviews, identifying four key reasons researchers chose this approach - (a) to explore the breadth and extent of evidence (38%), (b) to map or summarise evidence (36%), (c) to inform future research (21%) and (d) to identify knowledge gaps. It was my main intention to explore or scope relevant literature to clarify some of the complexity inherent in assessment belief with a view to informing further research (Levac, Colquhoun & O'Brien, 2010), which while aligning with the third reason identified by Tricco et al. (2016), does encompass some of the others also. Higher education assessment literature is quite fragmented, usually focusing on a particular aspect or specific context (Boud, 2018). I felt that within this myriad of fragments, there might be patterns to how those teaching in HE think about assessment and the scoping review approach allowed me to explore the "lay of the land" (Colquhoun et al., 2014, p.1292), to identify key characteristics or factors related to the concepts explored and perhaps some insight into how research is conducted in the field (Munn et al., 2018).

Search Strategy

Firstly, seven databases considered most relevant to the field of education were searched (Appendix B). To ensure the scope of the review was maximised as much as possible, eleven journals were also hand searched, eight of which yielded relevant articles (Appendix C). Searches were carried out between 10 and 20 August 2021. Table 3.3 outlines the inclusion and exclusion criteria applied some of which were developed iteratively as suggested by Arksey and O'Malley (2005). For example, as the search was developed, it became obvious that the number of articles arising would likely be enough to identify patterns and therefore, chapter and whole books were excluded as sources taking the time limits of this study into account as well as the fact that I was working alone.

Table 3.3: *Inclusion and exclusion criteria applied to the scoping review*

Inclusion Criteria	Exclusion Criteria
Articles only, published in English language between 2010 - 2021	Conceptions and beliefs of teachers outside of HE
Conceptions and beliefs regarding assessment.	Conceptions and beliefs of those teaching in HE relating to other aspects of pedagogy e.g. teaching, learning, curriculum.
Those teaching / assessing in higher education e.g. academics, researchers, academic developers	Assessment conceptions of students.
Quantitative studies	Newspaper, magazine articles.
Qualitative studies	Chapters or whole books.
Reflective / literature review	

Once the inclusion and exclusion criteria were set, the search strings were drafted, piloted, refined and finalised (Table 3.4). In particular, the terms in the first search string were included arising from the piloting because they appeared to be used interchangeably in the literature. The strings were amended depending on the database being searched (Appendix B), again, acknowledging the iterative nature of a scoping review in comparison to a pure systematic review.

Table 3.4: *Search terms used for scoping review*

Search terms
belief* OR perception* OR view* OR attitude* OR conception* OR perspective* AND (academic* OR teacher* OR educat* OR instruct* OR professor* OR pedagog* OR lecturer* OR facult*) NOT student* AND Assessment* AND "higher education" OR college OR universit* OR "post secondary" OR postsecondary

In total, 481 articles were imported into Zotero. Duplicates were removed leaving 347 individual articles for initial screening. Covidence was used to screen titles and abstracts resulting in 235 articles immediately excluded leaving 112 articles for full text screening. At the end of this process, 39 articles were included for full data extraction and analysis. Appendix D provides the PRISMA flow chart outlining the details of this process.

3.3.2.2 Scoping Review: Analysis of Data

Despite the importance of the literature review facet of the research process there is significantly less attention paid to the collection and analysis of literature included in research projects compared with other phases of the process such as the collection and analysis of raw data (Onwuegbuzie & Weinbaum, 2016). Arksey and O'Malley (2005) identify the fact that scoping studies tend to be descriptive in nature and do not address synthesis of evidence arising as a limitation. While I acknowledged that the findings of this scoping review would inherently exhibit this limitation, I was anxious to ensure the analysis would have some level of rigour. Deep consideration was afforded to the analytic approach undertaken in terms of extracting and interpreting data arising from the scoping

review with both thematic analysis (Braun & Clarke, 2022) and content analysis (Krippendorff, 2018) appearing appropriate for slightly differing reasons. As the contexts for the articles differed quite significantly, I felt that I needed to explore the interpretations of events (Cohen, Manion & Morrison, 2018) as presented by each author(s) in-depth to maximise reliability in the extraction and analysis process and therefore, increase certainty in the validity of the analysis and conclusions drawn. In the end, I chose to use Thomas and Harden's (2008) thematic synthesis model to explore the results, discussion and conclusion sections of each article, line-by-line. I was drawn to this analytic approach because it was developed specifically for synthesis of qualitative literature within the overall systematic literature review context, specifically allowing for the identification and translation of key concepts across studies. It allowed the development of a line of argument, 'pulling corroborating concepts together and, crucially, going beyond the content of the original studies … a critical component of synthesis, and is what distinguishes it from the types of summaries of findings that typify traditional literature reviews (Thomas & Harden, 2008, p.3). The authors conflate the terms thematic analysis and thematic synthesis, using the latter mostly throughout. Certainly, from reading their paper and putting the model into practice in this study, thematic synthesis seems to be the more appropriate term in that the model enabled '... a process of bringing together data from a set of included studies with the aim of drawing conclusions about a body of evidence' (McKensie, Brennan, Ryan, Thompson, & Johnston, 2019, p.229). Therefore, the reporting of results takes quite a blended qualitative and quantitative format albeit based on qualitative data in the main, aligning more with a content analysis approach and the core thrust of a scoping review.

The data arising from the articles were analysed using the software tool NVivo because of its capacity for linking data in a multitude of ways and its in-built alignment of analysis and interpretive processes (Richards, 1999). I availed of in-depth training on the use of NVivo prior to using it for analysis of the articles identified. In addition, a pilot analysis was completed to ensure that this part of the study had been designed correctly and to avoid problems appearing at a later date (Petre & Rugg, 2010). Six articles were used to (a) test the appropriateness of the tool itself, (b) practice my own skills, and (c) consider the creation of codes cases, attributes and values to minimise the potential for error and unnecessary changes when engaging in the analysis proper. This proved to be particularly important in the consideration of the attributes attached to each case (article), to ensure consistency from the outset and comprehensive consideration of the range of possible attributes applicable across the data set.

The following are the analytic steps taken to enable synthesis of data in the scoping review. The full codebook has not been included in the appendices due to its size (27 pages). However, one sample

NVivo map has been included in Appendix E, which provides insight into each of the phases listed below.

1. Phase One - open coding. Initially, I analysed all aspects of each article; however, only proceeded with the material sourced from the findings, discussion and conclusion sections for phase two, with the exception of the two reflective articles from which I coded almost all aspects (Boud, 2020; Cookson, 2018). Coding was inductive although the subcodes within the overall 'purpose' code were somewhat deductive. Having read each article at least twice, I developed 64 codes on NVivo arising from the findings, discussion, conclusions sections as explained previously. One code (purposes) had 19 subcodes. I also used a google doc to maintain a summary of each article in terms of focus, general positionality arising from the literature review, methodology and key findings.
2. Phase Two - secondary coding. As this was a scoping review, the 27 'bigger' codes were brought forward to the second phase of analysis i.e. those codes which were derived from 13 or more of the 39 articles scoped (at least one third). Each code was analysed again, with relevant subcodes created. The codes and their corresponding sources were tabulated and summarised.
3. Phase Three - tertiary coding generating high level codes. High-level codes were generated from the phase two coding which were regrouped as per each of five analytical themes (Thomas & Harden, 2008) i.e. the descriptive synthesis was interrogated in the context of the research question.
4. Phase Four - Cross referencing subcodes across main themes. Phase two analysis of the initial 27 codes resulted in the subsequent creation of lots of subcodes, many of which were applicable across a range of themes. Each of the subcodes were reread and examined and copied to relevant codes within each of the themes already generated in the previous phase to ensure that no relevant data had been missed. I determined that indeed, no key aspects of data had been overlooked and so, the final reporting on the findings arising from the scoping review was based on the third phase of coding as described above.

Arksey and O'Malley (2005) warn that scoping reviews generate large quantities of data requiring difficult decisions about breadth and depth of findings to be presented. I experienced this tension throughout this process but particularly when reporting findings. Ultimately, I simplified the tabular data for the purposes of reporting findings in text, providing examples of the more detailed tabulation in Appendix F. Additionally, descriptives of small codes were omitted when reporting the findings. While Arksey and O'Malley (2005) have no expectation of synthesis in a scoping review, the use of the Thomas and Harden (2008) analytic approach was really important in 'translating … concepts

from one study and recognising the same concepts in another study, though they may not be expressed using identical words' (p.3), especially as the included studies represented a myriad of contexts, foci and participants. Arksey and O'Malley (2005) also recommend supplementing the outcomes of the scoping review with consultation with relevant people or experts in the field. I did not do this in this study phase, however, the longer-term research plan has been considered for exactly that purpose. Moreover, it is also the reason I carried out a more traditional literature review first i.e. to critically review the expertise in the field of assessment and teacher belief to frame the outcomes of this scoping review.

3.3.2.3 Survey: Design

The findings of the scoping review (outlined in detail in Chapter Four) led to the creation of five key themes. While it would have been preferable to explore all themes arising from the scoping review in more detail in relation to academics' assessment conceptions in the Irish HE context, it was evident from the scoping review that data relating to the purpose of assessment produced quite a fragmented overall picture which lacked the coherence and clarity of the other themes. Therefore, the focus in the Irish context was on the purpose of assessment for which a survey approach was used guided by the question *What are the beliefs of those teaching in Irish HE contexts in relation to the purpose of assessment?* An open question was incorporated at the end of the survey to capture respondents' views of the other four themes arising from the scoping review as well as those relating to assessment purpose.

The content of the questionnaire was based on Brown's (2006) TCoA IIIA survey instrument which has been used at primary and post-primary levels mainly (Appendix A). This survey was chosen because it is an existing, tested measure focusing specifically on teachers' conceptions of assessment purpose albeit used primarily in the compulsory education sector. While the survey is widely available to use, I felt it would be polite to contact Professor Brown to request permission anyway, which he readily granted (Appendix G). I decided to distribute the survey online for ease of dissemination. Qualtrics was used as the platform for developing the questionnaire because of its features such as skip and display logic and the attractiveness of the layout.

Piloting

The first drafts of the questionnaire were developed to allow me to assess the structure, presentation and layout. I completed it a few times myself - editing various elements and creating new versions as I

viewed the questionnaire from the responder's perspective. Then, I asked two colleagues to complete a draft in my presence, without thought for the content but merely focusing on the accessibility, layout and so on. Following that first pilot, I copied the questionnaire to a new version, made some more edits and then circulated it to nine people for review, six of whom responded. I endeavoured to incorporate diversity of perspective in terms of institution and discipline. In addition, I tried to ensure someone piloted the survey using screen-reading technology to establish if it was accessible to those who are blind or vision-impaired; however, this was not possible. Therefore, I reviewed the Qualtrics guidance on accessibility, taking their advice regarding layout and design wherever possible.

The link to the draft survey was emailed to pilot respondents, accompanied by guiding questions (Appendix H). Overall, the feedback from the pilot respondents was positive in terms of accessibility, layout, clarity and ease of response. However, they all had suggestions, recommendations and queries, some of which were common with at least one other respondent while others were distinct to an individual. I incorporated most of the suggestions. Those I did not agree with related mainly to layout and design. For example, two respondents recommended incorporation of colour to make the questionnaire more attractive. However, the simpler white background with black font seemed to be the recommended design for those using screen readers, so I maintained the simple design. The following key changes were made based on the other recommendations:

1. The pilot draft contained two open questions, essentially seeking the same information but phrased differently:
   What aspects of assessment in higher education do you think warrant further exploration?
   What questions do you think I should ask in the follow-up focus groups?
   Everyone commented on the two questions, with an even split between favouring one over the other. Three respondents commented favourably on the explicit link between the survey and focus group phases, one of whom made a very good suggestion of including reference to the follow-up focus groups while simultaneously asking for insights regarding assessment without actually asking for suggestions of questions to include in the interview schedule. In the end, I rewrote the open question as - *This survey will be followed by focus group interviews. Based on your own experience and/or on the questions posed in this survey, what do you think are the specific areas relevant to assessment that need to be explored and examined further?*
2. Two respondents suggested respectively that questions be altered to take into account contexts such as exam / assignment / placement and formative / summative as they felt these were different types of assessment. However, it would not have been appropriate to add in more questions to address these contexts as the original instrument did not even though those same

contexts exist in primary and post-primary schools. I did acknowledge the concerns by amending the guidance and rationale in the lead-in paragraph to the 31 statements (Appendix I). Terms such as 'programme' and 'module' were clarified. The terms 'teaching' and 'teaching practice' were clarified for those in the discipline of education to highlight that they referred to the respondents' teaching practice and not that of their student teachers, as a result of one pilot respondent's stated confusion. Additionally, I acknowledged the limitations of a quantitative data collection tool, flagged the open question and the rationale for its inclusion.

3. Some minor changes were made in relation to the 'respondent detail' section in response to feedback e.g. an additional choice was added to Question RD4 (assessment experience) to allow academic developers to respond more appropriately. In addition, having considered the potential usefulness of the data and the complexity of the question, the question seeking information regarding professional development experience was removed from the survey.
4. The most difficult change was identifying appropriate choices for responses to the question *Which of the following best describes the discipline with which you identify?* When developing the pilot draft, I had considered Biglan's (1973) taxonomy and reviewed structures in some of the Irish universities. In the end, I decided to keep it simple and included the options education, health, business, humanities, science and 'other' (with an option to type the response). However, one respondent perceived that his discipline (computer science) would not fit easily within the 'science' option and he therefore opted for 'other'. As disciplinarity seems to play quite an important role in assessment beliefs, I wanted to ensure that I posed this question correctly to allow for fair analysis afterwards. I revisited (a) Biglan's taxonomy, (b) increased the range of university structures reviewed and (c) reviewed the *ISCED Fields of Education and Training 2013* (UNESCO, 2013). Upon reflection, I settled on the Biglan taxonomy, accompanied with suggestions under each category e.g. Pure Hard (e.g. biology, physiology, maths, physics, chemistry, geology etc). It is not clear that Biglan's categorisation has any real impact on the HE system in terms of institutional faculty and school structures; however, I felt it was important for me to have a clear conceptualisation of the disciplinary fields before circulating the survey.
5. While 'education' is one of many disciplines in the 'soft-applied' category, I provided it as a choice in its own right because it is my discipline and, looking ahead to post-doctoral life, I anticipated the potential of publishing in that field specifically. Moreover, I anticipated the likelihood of more respondents from this field particularly.

Before circulating the final draft generally, I asked two colleagues to complete it to ensure the new version was accessible and accurate. Following feedback from one of these respondents, I reinstated the question regarding PD, altering the original version slightly to include attendance at conferences

and leadership of PD events. I created the final version incorporating this amendment, which was then circulated.

The intended approach to analysis of data was also piloted, using the responses of the six people who had agreed to pilot the survey. I felt it was important to pilot the intended approach to analysis for two reasons:

1. While I had some knowledge and understanding of both Qualtrics and SPSS, I did not feel it was of a level to have absolute confidence that I would use each correctly.
2. I felt that some of the hard work in terms of making decisions about cleaning the data, naming variables in an understandable manner and so on could be done in the initial phase which would speed up the process when dealing with the data arising from the survey proper.

Final Survey Design

The first section contained a summary of the information sheet with a link to the more detailed information sheet (Appendix J) which opened in a separate window and could be downloaded. The second section required respondents to agree or disagree with a series of statements indicating their consent to engage with the survey (Appendix K). Proceeding to the main survey required responding 'yes' to each statement; a 'no' response to any statement was set to bring the respondent to the end of the survey. The third section comprised seven tick-box questions relating to the profile of the respondents i.e. type of HEI, nature of discipline, role, assessment experience, professional development undertaken, class size and number of years working in the HE sector (Appendix L). Each of these questions had an 'other' category in case respondents felt the existing categories / responses did not align with their own situations.

The fourth section comprised the main body of the survey. An introduction was included to remind participants of the number of questions (31) and to focus on their own assessment beliefs rather than their practices or those of their institutions (Appendix I). The fifth section comprised one open question which invited participants to identify aspects of assessment in higher education which they felt would warrant further exploration. I included this question for two reasons. Firstly, I acknowledged the highly quantitative nature of the survey instrument and the fact that it may not allow all respondents to accurately express their exact viewpoints, something I find very frustrating myself as a responder to quantitative surveys. Secondly, I hoped the open question would provide me

with additional insight into the assessment conceptions of teachers in Irish HEIs above and beyond the responses to the closed questions in the survey to inform the next phases of the long-term research plan. The sixth and final section comprised a thank-you message.

The survey was set to be completed anonymously. The 'force response' mode was applied to the statements of consent and to the respondent profile statements. However, I set the survey questions in 'request response' mode whereby if a question was deliberately or accidentally missed, a pop-up box alerted the respondent and encouraged them to go back and complete the relevant questions. I decided not to force a response in sections four and five because I did not want to discourage some respondents from proceeding even if they felt they could not answer all questions.

The statements were presented out of order and without the factors identified (Appendix M). As explained earlier, some of the statements in Brown's (2006) survey had to be altered to fit the HE context. For example, existing statements which included the word 'school', appropriate for the compulsory education sectors, were rewritten to include the words 'module' and 'programme' instead. Initially, I had considered the words school, department and faculty but their meanings vary across institutions and indeed, having considered the questions themselves, it would be impossible for a respondent to consider the impact of assessment in terms of structures like faculties; it seemed to me that conceptualising assessment happened closer to the pedagogical contexts of programmes and/or modules. In addition, massification and the resultant huge variations in class size, is a particular aspect of HE that is not necessarily present in compulsory education so I included an additional question to incorporate that particular phenomenon. These changes meant that the survey comprised 31 statements as compared to Brown's (2006) version which comprised 28 statements.

Dissemination of survey

A range of approaches to circulation were utilised. I proceeded cautiously, monitoring the number of respondents after each approach before moving on to the next. Motivating people to respond to surveys can be difficult (Cohen, Mannion & Morrison, 2018) so I felt that a range of approaches would be warranted as outlined in Table 3.5.

Table 3.5: *Approaches to circulation of the survey*

Phase / Steps	Nature of Approach
1 12 September 2022	Emails to every school in my own university Emails to key people in other HEIs e.g. academic developers, heads of T&L units.
2 14 – 23 September 2022	Use of Twitter - general circulation plus direct contact (@) with some known key people in HEIs Engagement over a period of time on the Twitter platform 74 retweets 11 quote tweets 70 likes
3 27 September – 15 October 2022	Personal reach-outs to people known to me across HEI sector to complete survey and/or share with others known to them who might be interested.
4 19 October 2022	Survey closed with 270 responses Initial 'cleaning' of data completed

3.3.2.4 Survey: Analysis of Quantitative Data

The data gathered on Qualtrics was downloaded as CSV, Excel and SPSS files to ensure all data was captured. The SPSS file was then duplicated, and I used the copy as my master document for analysis of all elements of the survey with the exception of the open question. As outlined above, the use of SPSS as an analytic tool was piloted using the responses of the pilot volunteers. As a result, decisions which had been made during the pilot phase were replicated when cleaning the data. For example, I had decided that the following would be deleted immediately i.e. start and end dates; status; progress; recorded date; consents. In addition, a quick scan of the responses showed that 29 people had opened the survey to view it presumably but chose not to complete it so these respondents were removed from the data set leaving 241 respondents remaining. Subsequently, it became evident that a further 20 respondents had completed the 'respondent details' section but had then failed to respond to any of the

statements and the open question and so they were also removed leaving 221 respondents ultimately included in the analysis.

The Qualtrics-generated identifiers for each respondent were changed to numeric form i.e. 001-221. Seventeen variables were identified in the pilot analysis as compared to 22 in the actual data set due to changes to the survey following the pilot phase. With the aid of a colleague, each variable was checked against those in the pilot phase. Where they matched, the naming system used in the pilot was copied to the new dataset and new labels were devised for new variables. At this point, I deemed the quantitative data prepared for analysis.

The data were analysed initially at a descriptive level, with trends in responses to each statement examined. Internal consistency of each subscale was checked. Those subscales evidencing good internal consistency were then examined in relation to how they correlated with each other. Subsequently, they were then checked for significant differences. Full details of analysis and findings are available in Chapter Five. The cleaned SPSS file was imported into NVivo to enable analysis of the open question.

3.3.2.5 Survey: Analysis of Qualitative Data

Initially, the responses to the open question were coded inductively across three phases of coding, leading to two key themes identified in the third phase. However, when reviewed, it seemed the themes were very broad and contained a lot of information. Having completed the analysis of the scoping review, the open question data in the survey were revisited. The synthesis of the scoping review data had led to the identification of five themes. The first round of coding already completed was retained. These codes were then recoded as per the framework identified through the scoping review and reported using that framework. Appendix N provides the NVivo codebook outlining the levels of coding.

3.3.3 Strengths and Limitations of the Study

The strengths and limitations of the study are discussed below in terms of ethics, reliability, validity and trustworthiness of the study design.

3.3.3.1 Ethics

The rigorous ethical application process demanded by the University of Sheffield was followed with attention to every detail. Approval was granted without requirement for revised submission.

While the review process forced me to think through the ethical considerations at the outset of the study, it was something I continued to consider throughout the research process. In practice, this meant that I was quite rigorous in relation to every decision made so that I could proceed with confidence. In particular, I was anxious that the survey was piloted meticulously, not just to anticipate potential structural errors but also to ensure its reliability and validity as a data collection instrument. It is also the reason I decided not to 'force' responses; I felt it was important to allow respondents the choice of response for every question, taking into account the time available to them and their sense of expertise and knowledge. Ethical difficulties in research may arise more as a consequence of carelessness, thoughtlessness and lack of attention to detail (Cohen et al., 2018) rather than deliberate attempts to deceive. Therefore, attention to ethical detail extended to analysis of data arising from the scoping review. Of course, there were no 'live' participants in this part of the study. However, I wanted to do justice to the views of the participants in and the authors of each article, hence the lengthy consideration of systematic review approach and synthesis. Moreover, I wanted to be as rigorous as possible to balance the potential biases arising from my own ontological and epistemological positionality (Savolainen et al., 2023).

3.3.3.2 Validity and reliability

Methodological limitations have been somewhat reduced by clear description of the research design and transparency with regard to data collection and analysis (Olafson, Salinas-Grandy & Owens, 2015) including explication of the theoretical framework that biases the research (Fives et al., 2015). Micro level unit of analysis is important to enable a clear understanding of how beliefs operate to shape identity and practice (Zembylas & Chubbuck, 2015), hence the fine-grained analysis of the articles included in the scoping review. Context needed to be accounted for from the outset as asking the same question in different contexts may not, in themselves, be comparable (Levin, 2015), hence careful development of the personal details section of the questionnaire and the planning of future phases of the study to investigate and examine the analysis of the self-reported beliefs in a deeper, integrated manner (Ashton, 2015). The research design also needed to consider who the teacher participants are, the consequences of congruence between beliefs and practices and the internal factors

influencing beliefs (Buehl & Beck, 2015), which was accounted for in both the scoping review and the questionnaire design and analysis.

While I was required to conduct and report on a study for the purposes of this thesis to achieve the award of a Doctorate in Education, I also approached this task with a much broader, more long-term goal taking into consideration my own role as a university academic which requires me to engage in research on an ongoing basis. As outlined in chapter one, the research element of my academic role usually takes a back seat to that of the teaching facet of my job. Moreover, most theses require the author to consider potential for further research. Rather than articulate that potential hypothetically at the end of this thesis, I conceptualised the path for extending the research from the outset, with some detailed planning for phase two already completed, although not included herein.

The theoretical framework took a long time to develop, constantly evolving with my own evolution in thinking and understanding of the topic in hand as well as the research process generally. However, of course, I have to acknowledge that ultimately, I had to come to conclusions and make decisions which dictated the direction of both the long-term research study and that of its first phase as outlined in this thesis. The tools used to collect data also embodied strengths and limitations.

3.3.3.3 Data collection and analysis

There were, by necessity, limitations to the range of articles included in the scoping review due to time constraints and the requirement to apply exclusion criteria such as date parameters, articles written in the English language and so on. Having said that, those limitations were somewhat ameliorated by the rigour of the analysis of the data in those articles. There is a danger that line-by-line analysis of individual studies' findings decontextualises the detail and therefore the meaning can be lost (Thomas & Harden, 2008). I was not only aware of this danger, I experienced it throughout the scoping review process. To offset this challenge, I included a fourth level of coding in NVivo, cross-referencing codes which seemed to be linked or overlap with others. This added robustness to the findings and therefore the conclusions arising. By its very nature, a scoping review is not concerned with the quality or nature of methodology underpinning each article. Therefore, it has to be acknowledged that there was a range in the quality of the articles included. However, that is why the approach to analysis was quite forensic and actually the line-by-line nature of that analysis allowed for the identification of patterns across all 39 articles which may have countered the quality of an individual article. Again, due to time constraints primarily, the range of databases searched had to be

limited although I was careful to focus on those clearly aligned with education generally. I also hand searched individual journals to maximise identification of appropriate articles. The detailed nature of the analysis of each article in the first level coding process resulted in the generation of many codes, some of which were not carried forward and therefore, are not considered in the presentation of findings and do not contribute to the discussion chapter. However, it is intended to revisit those codes at a later stage.

The survey deviated from the original instrument devised by Brown (2006) in relation to terminology and number of questions therefore, making it difficult to compare the findings with those of studies exploring the perceptions of teachers in primary and post-primary schools using the original survey instrument. Further, due to time constraints and usefulness in terms of this study, a factor analysis of the data was not carried out. Responses to statements can only provide a certain insight; they do not provide an explanation for those insights and even with guidance, statements are open to interpretation. To balance that limitation, the open question was added, to allow respondents an opportunity to provide some insights into their thinking if they wished. I deliberately included just one question as I did not want to deter respondents from engaging. The use of Qualtrics allowed for easy, quick and wide distribution. However, I suspect it was also easy to delete, ignore or forget.

3.4 Concluding Summary

The study reported herein is intended to be the first phase of a longer-term research project focusing on the assessment beliefs and practices of those teaching in HE in the Irish HE context. The Nind et al. (2016) theoretical framework which conceptualises pedagogy through the lenses of craft, art and science informed the overall design of this research. This phase of the study explores the assessment element of pedagogical practice through the lens of pedagogy as craft, focusing on assessment beliefs specifically and is intended to scope the "lay of the land" (Colquhoun et al., 2014, p.1292) for the later phases. A two-pronged approach was planned using scoping review of international literature and a survey exploring the assessment conceptions of academics in Irish HEIs. Every attempt was made to ensure rigour in terms of collection and analysis of data, and endeavouring to be reflexive throughout. While maintaining a relative ontological stance, the epistemological approach to the study design could be considered a blend of qualitative and quantitative influences. Ultimately though, the study was constructivist in nature, recognising that people "actively and agentically seek out, select and construct their own views" (Cohen et al., 2018) which was acknowledged in relation to the participants in the included studies in the scoping review, the participants in the survey and indeed to

myself as researcher as I reflexively considered the processes leading to the construction of knowledge (Hammersley, 2013) arising from this study.

The next two chapters comprise the findings of and discussion on the scoping review and the survey respectively, followed by the final chapter which draws conclusions and implications.

Chapter Four: Findings - Scoping Review

4.1 Introduction

The findings of the scoping review are outlined below. This is the first of two findings' chapters; the next chapter will provide the findings arising from the survey of those teaching in Irish HE contexts. As explained previously, the scoping review approach was used to address the question - *What patterns can be found in international literature on assessment beliefs of those teaching in HE?*

First, the classification of each case (article) is presented. This is followed by presentation of the data arising from the scoping review synthesis which culminated in the development of a five-pillar framework. This framework is presented visually in Section 4.3. Then, the findings relating to each pillar are presented, in tabular and textual formats, in detail in the following five sections. Each section ends with a summary of the overall findings therein. This chapter ends with a discussion of the patterns emerging from the review in terms of the assessment beliefs of those teaching in HE.

4.2 Overview of studies included in scoping review

The selection process for the review is outlined in detail in Chapter Three. As this was a scoping review, the quality of the included studies was not measured as would be the case in a systematic review (Arksey & O'Malley, 2005; Grant & Booth, 2009). However, Table 4.1 provides a summary overview of the key information relating to research approach and design across the 39 articles. Two articles were based on a literature review and therefore, had no participants; the remaining 37 articles were based on studies which exhibited a range of methodologies and methods.

Table 4.1: *Summary classification of articles included in the scoping review*

Research Approach	Data Collection	Participants
Qualitative - 17	Survey - 15	One discipline - 14
Quantitative - 11	Interviews - 11	Two disciplines - 3
Mixed Methods - 9	Mixed - 11	3+ disciplines - 20
Reflection/synthesis - 2	Literature Review - 2	N/A (lit rev) - 2

The detailed characteristics of the final set of articles selected is outlined below in Table 4.2. and provides information on (a) the element of assessment upon which the beliefs and conceptions of those teaching in HE were examined; (b) some characteristics of study participants; and (c) methods and methodologies used. The number of participants ranged from three (Offerdahl & Tomanek, 2011) to 1184 (Skidmore et al., 2018). Most articles emanate from either UK, US or Australian contexts, unsurprisingly, as one of the search limiters was articles written in the English language.

A few patterns relating to the articles are important to point out. Five of the articles relate to those teaching EFL which is a particular focus and may have skewed the data, while two others relate to general education modules in the US which tend to draw on lots of disciplinary input and in both articles, there was a strong sense of HE teachers feeling very isolated from and within the assessment process. Two articles are literature reviews, reflecting on assessment perspectives generally and, while very informative and useful, perhaps did not need to be included in the scoping review as they were not based on primary research. The reliance on questionnaires to examine teacher belief (Hoffman & Seidel, 2015; Levin, 2015) was very evident; 23 of the 37 primary research studies used this approach either exclusively or as one of a range of approaches. The most important and relevant pattern to note is that overall, the range of articles included mirror the fact that generally, research in the area of belief and assessment is based on small scale studies, individual HEIs and/or within one discipline (Levin, 2015). Conception and belief relating to assessment is at the heart of all of them but explored from a range of starting points and to differing levels of depth and breadth. Therefore, the decision to use Thomas and Harden's (2008) synthesis approach was critical to enable the underlying patterns of the craft understanding and knowledge of those teaching in HE to be extrapolated and synthesised in a meaningful manner regardless of the specifics of context. The synthesis is based on the data extracted from the results, discussion and conclusion sections of each article and therefore, include the perspectives of the authors as they attempted to draw conclusions from the data in their own studies.

Table 4.2: *Characteristics of articles included in the scoping review*

No	Author & Date	Focus	Methodology & Methods	Participants - Number, Discipline & Location
1	Adachi, C., Tai, J., & Dawson, P. (2018)	Self and peer assessment	Qualitative - Interviews	N - 13 Range of disciplines One Australian university
2	Barton, G.M., Baguley, M., Kerby, M., & Macdonald, A. (2020)	Initial teacher education - assessment practices	Qualitative - Document analysis, questionnaire and interviews	N - 17 Teacher education One Australian university
3	Bearman M., Dawson, P., Bennett, S., Hall, M., Molloy, E., Boud, D., & Joughin, G. (2017)	How assessments are designed	Qualitative - Interviews	N - 33 Range of disciplines Four Australian universities
4	Boud, D. (2020)	Reforming HE assessment	Reflection / literature review	N - N/A Discipline - N/A Australian context
5	Broughton, S.J., Robinson, C.L., & Hernandez-Martinez, P. (2013)	Use of technological tools for assessment	Qualitative - Questionnaire and interviews	N - 9 (9 survey respondents, 6 of whom were interviewed) Discipline - Mathematics One UK university
6	Cookson, C.J. (2018)	Assessment terminology	Reflection / literature review	N - N/A Discipline - N/A Context – N/A
7	Davies, M.S., & Taras, M. (2016)	Assessment terminology and beliefs	Quantitative mainly (some open questions) - Questionnaire	N - 100 (50 from each discipline) Discipline - Health/Life Science, Education One UK university
8	Day, I.N.Z., van Blankenstein, F.M., Westenberg, P.M., & Admiraal, W.F. (2019)	Intermediate (continuous) assessment	Qualitative - Interviews	N - 13 Discipline - Psychology, Law, Criminology One Dutch university

9	Deignan, T., & Brown, S. (2016)	Alternative assessment methods	Qualitative mainly - Interviews, Activity Theory Framework, Q methodology	N - 45 HE teachers from 6 countries engaging in UK masters programme Range of disciplines One UK university
10	Elshawa, N.R.M., Abdullah, A.N., & Rashid, S.M. (2017)	Formative assessment	Quantitative - questionnaire	N - 83 Discipline - ESL Six Malaysian universities
11	Fan, X., Johnson, R., & Liu, X. (2017)	Ethics in assessment practices	Questionnaire	N - 555 Range of disciplines 143 Chinese universities & colleges
12	Fuller, M., Henderson, S., & Bustamante, R. (2015)	Assessment leadership and culture	Qualitative - questionnaire, Delphi method	N - 10 Range of disciplines One American university
13	Gilles, J.L., Detox, P., & Blais, J.G. (2011)	Assessment of learning	Quantitative – questionnaire (administered in different locations at different times)	N - 643 (Montreal, 1995), 194 (Liege, 2008), 57 (Mons, 2008) Range of disciplines Two Canadian universities and two French universities
14	Goos, M., Gannaway, D., & Hughes, C. (2011)	Equity and feedback	Mixed - questionnaire and interviews	N - 308 course coordinators (questionnaire) and six Associate Deans (interviews) Range of disciplines One Australian university
15	Halinen, K., Ruohoniemi, M., Katajavuori, N., & Virtanen, V. (2014)	Reflections on assessment practice	Qualitative - interviews	N - 15 Discipline - Life Science (Microbiology) One Finnish university
16	Ippolito, K., & Pazio, M. (2019)	Impact on assessment beliefs of engagement in a professional development master's programme for university teachers	Qualitative - interviews	N - 9 Discipline - STEM One UK university
17	Knight, S.K., Greenberger, S.W., & McNaughton, M.E. (2021)	Written feedback	Mixed - questionnaire with quantitative and qualitative elements	N - 271 (219 part-time; 200+ teaching online)

				Discipline - business, education, humanities & social science. One US university
18	Koh, L.C. (2010)	Formative assessment - nurse education	Qualitative - interviews	N - 20 Discipline - nursing One UK university
19	Lilley, M., Puper, A., & Wernick, P. (2011)	Using a technological tool for summative assessment purpose	Quantitative - questionnaire	N - 69 (46 computer science; 23 other) Range of disciplines One UK university
20	MacDonald, S.K., Williams, L.M., Lazowski, R.A., Horst, S.J. & Barron, K.E. (2014)	General education assessment and motivation of staff	Qualitative - interviews	N - 6 (general education coordinators) Range of disciplines One US university
21	Mimirinis, M. (2019)	E-assessment	Qualitative - interviews	N - 21 Range of disciplines One UK university
22	Munoz, A.P., Palacio, M., & Escobar, L. (2012)	Beliefs about assessment in an EFL context	Qualitative - questionnaire and interviews	N - 62 (questionnaire), 5 (interviews Discipline - EFL One Columbian university
23	Norton, L., Norton, B., & Sadler, I. (2012)	Marking and feedback	Mixed - questionnaire with qualitative and quantitative data arising	N - 45 Range of disciplines One UK university
24	Norton, L., Norton, B., & Shannon, L. (2013)	Assessment design	Quantitative - questionnaire only	N - 586 HE teachers enrolled on T&L course past and present Range of disciplines Range of UK universities
25	Norton, L., Floyd, S., & Norton, B. (2019)	Assessment design	Quantitative - questionnaire	N - 356 Range of disciplines Two UK universities

26	Offerdahl, E.G., & Tomanek, D. (2011)	Experimentation with new strategies	Qualitative - interviews, participant reflective journals, intervention	N - 3 Discipline - science One American university
27	Onalan, O., & Karagul, A.E. (2018)	Beliefs relating to the purpose of assessment	Quantitative - questionnaire	N - 70 Discipline - EFL One Turkish university
28	Postareff, L., Virtanen, V., Katajavuori, N., Lindblom-Ylanne, S. (2012)	Conceptions and practices	Qualitative - interviews	N - 28 Discipline - pharmacy One Finnish university
29	Quesada-Serra, V., Rodríguez-Gómez, R., & Ibarra-Sáiz, M.S. (2016)	Assessment practices	Quantitative - questionnaire	N - 427 Range of disciplines 18 Spanish universities
30	Reimann, N., & Sadler, I. (2017)	Personal understanding of assessment and assessment practice	Qualitative - interviews	N - 9 Range of disciplines Two UK universities
31	Rodríguez-Gómez, G., Quesada-Serra, V., & Ibarra-Sáiz, M.S. (2016)	E-assessment and professional development	Mixed - questionnaires, intervention, interviews	N - 148 (148 questionnaire, 6 interviews, 37 intervention plus 32 control group) Range of disciplines Seven Spanish universities
32	Rohrbacher, C. (2017)	General education modules and conceptions of assessment	Qualitative - interviews, document analysis	N - 7 Discipline - history Two US universities
33	Sadler, I., & Reimann, N. (2018)	Assessment understanding and practice	Qualitative - interviews, participant concept maps	N - 8 Range of disciplines Two UK universities
34	Skidmore, s.T., Hsu, H.Y., & Fuller, M. (2018)	Culture of assessment	Quantitative - questionnaire	N - 1184 Range of disciplines Range of US universities
35	Tang, J., & Harrison, C. (2011)	Feedback beliefs and EFL	Mixed - interviews, questionnaire, intervention	N - 52 (questionnaire), 54 (25 intervention, 29 in control group), 8 (interviews)

				Discipline - EFL UK and Chinese university programme??
36	Taras, M., & Davies, M.S. (2012)	Functions and process of assessment	Quantitative - questionnaire	N - 50 Discipline - health and life sciences One UK university
37	Taras, M., & Davies, M.S. (2017)	Assessment beliefs of academic developers	Mixed - questionnaire, interviews	N - 13 (questionnaire), 7 (interviews) Discipline - HE teacher education/development UK universities, number unclear
38	Wang, X., & Hurley, S. (2012)	Willingness of HE teachers to engage with assessment as a scholarly activity	Quantitative - questionnaire	N - 71 Range of disciplines One US college
39	Wang, L., Lee, I., & Park, M. (2020)	Assessing writing - EFL	Mixed - questionnaire, interviews, document analysis	N - 136 Discipline - EFL Eight Chinese universities

4.3 Interpreting and Presenting the Data

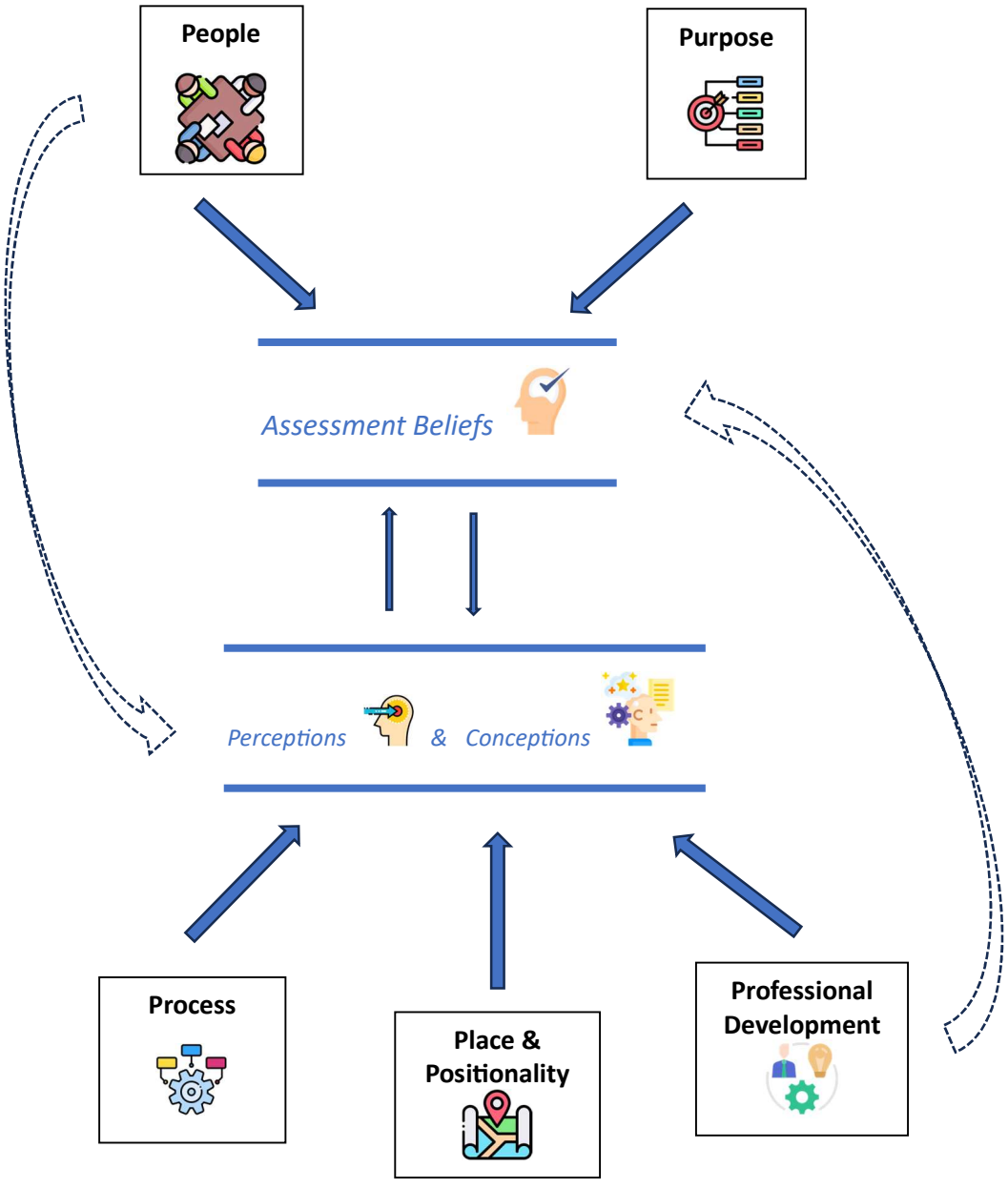
As outlined in Chapter Three, one of the reasons for using the scoping review approach was to identify patterns to the key characteristics (Munn et al., 2018) of how teachers think about assessment which would allow me to explore the "lay of the land" (Colquhoun et al., 2014). Slowly, as codes were combined during the analytic process, overall trends were identified, leading to the development of themes which combined to create the *5Ps framework* – perceptions, conceptions and beliefs relating to ***P**eople, **P**urpose, **P**lace & **P**ositionality, **P**rocess, **P**rofessional Development* – which is used to present the findings of the scoping review below. *Place and Positionality* are combined as they both refer to contextual factors influencing the conception of assessment. The results of the review are presented in summarised tabular format, accompanied by textual descriptions as described by Grant and Booth (2009). The textual descriptions focus on the main patterns identified; smaller themes have not been included. The tables presented hereafter include key codes. Appendix F provides examples of more detailed tabular coding for two of the codes below.

The first two elements of the framework - *People* and *Purpose* - attracted the highest number of codes and subcodes during the synthesis process. Overall, the data within these two elements relate mainly to beliefs held by those who teach in HE while the data relating to the other three elements – *Place & Positionality, Process and Professional Development* – concern mainly the influences *on* assessment beliefs.

Terminology i.e. *belief*, *conception* and *perception*, is used interchangeably across the articles included in the scoping review without examination or definition which might delineate subtle differences. The synthesis of the data in this scoping review provides some insight into the nuanced differences of each, moving along a continuum from perception, to conception, leading to more firmly held beliefs. Perceptions and conceptions tend to be fluid, as those who teach in HE are influenced by what they experience (perception), leading to reflection on (conception) and possible change in or reinforcement of beliefs in relation to teacher/student roles and the purpose of assessment. Having said that, there was also evidence that those teaching in HE hold beliefs about assessment *Processes*, *Professional Development* and *Place & Positionality*. Likewise, while the data regarding *People* and *Purpose* relates mainly to beliefs about those teaching in HE, students and the reasons for using assessment, there was evidence of more fluid perceptions and conceptions of these elements as well. However, overall, the data seemed to suggest that those teaching in the HE context tended to hold beliefs mainly about people and purposes of assessment and that context, assessment processes and PD tend to influence those beliefs depending on how they are perceived and conceived. Figure 4.1

provides a visual representation of the overall outcome of the synthesis which is examined in detail in the rest of this chapter.

Figure 4.1 *Visual representation of the overall findings of the scoping review – the 5Ps framework.*



The synthesis approach used (Thomas & Harden, 2008) resulted in some codes attributed to more than one theme. However, for the purposes of reporting herein, only the key elements for each of the five themes in the framework is included to avoid duplication and repetition.

4.4 Perceptions, Conceptions and Beliefs about People

The theme relating to beliefs about people generated from most codes and sub-codes which have been divided into two categories: (a) the teachers themselves and their peers and (b) beliefs about students. This section reports on the former and the next section reports on the latter.

4.4.1 Beliefs about self and peers

Table 4.3: *Perceptions, conceptions and beliefs of those teaching in HE in relation to themselves/peers*

Code	Studies
Teacher assessment literacy	1, 3, 4, 6, 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 32, 35, 36, 37, 39
Responsibility	4, 6, 8, 10, 11, 12, 14, 15, 18, 20, 21, 22, 23, 24, 29, 31, 32, 35, 37, 39
Resistance to change	1, 3, 4, 5, 9, 12, 14, 16, 20, 24, 25, 31, 32, 34, 37, 39

4.4.1.1 Teacher assessment literacy

Contradictory conceptions and confusion

There was evidence that participants in some studies had confused, unclear conceptions of assessment, which manifested differently depending on the context of the study. Confusion revealed itself generally with some study participants unable to articulate the purpose of assessment (Fuller et al., 2016; Postareff et al., 2012). In other studies, participants revealed difficulties with assessment literacy in relation to specific contexts, for example, Davies and Taras (2016) found participants had

confused conceptions of the role of summative and formative assessment; Koh (2010) found participants did not understand formative assessment; and Goos et al. (2011) found that conceptualisation of the purpose of assessment and indeed, assessment generally, differed between teachers and management.

Some studies revealed confusion regarding the association between assessment and learning. Teachers held firm beliefs about student learning (Bearman et al., 2017) but exhibited limited means to uncover student understanding (Offerdahl & Tomanek, 2011) and lack of confidence to enhance learning (Quesada-Serra, 2016) while simultaneously believing that incorrectly implementing assessment processes is damaging to student learning (Rohrbacher, 2017). The non-alignment of learning and assessment persists in the online environment (Mimirinis, 2019).

Confused terminology results in a lack of shared understanding of assessment so those teaching in HE focus on their own understanding of assessment rather than on the underpinning theory (Taras & Davies, 2013) resulting in variation in perceptions and attitudes (Taras & Davies, 2017). When comparing assessment literacy and understanding between science and education teachers, Davies and Taras (2016) found that both groups (science teachers in particular) saw formative and summative assessment processes as similar which the authors highlight as problematic. Those who are more expert in higher education assessment practices do not place emphasis on terminology itself but rather on how it might be mapped onto the disciplinary context (Fuller et al., 2015).

While teachers appreciate that a knowledge of theory is important to assess effectively (Gilles et al., 2011), they do not understand it or use it effectively (Davies & Taras, 2016). Indeed, even if assessment theory is understood, teachers experience difficulty in enacting it in practice (Reimann & Sadler, 2017).

Relationship between teacher assessment literacy and student assessment literacy

The expectation that students are literate when it comes to the assessment processes and practices they participate in implies that those teaching in HE have a responsibility or requirement to teach students about those processes and practices (Davies & Taras, 2016; Koh, 2010; Mimirinis, 2019; Rodríguez-Gómez et al., 2016; Taras & Davies, 2013; Taras & Davies, 2017). However, given teachers' own levels of assessment literacy and their own ability to conceptualise assessment, it is difficult to see how they are in a position to enable this understanding in their own students (Koh, 2010). Even when

teachers realise that students do not understand the assessment process, they can sometimes plough ahead without addressing that lack of understanding (Davies & Taras, 2016) probably because they do not quite know how to enable understanding and student assessment literacy. In one study, academic developers evidenced confusion (Taras & Davies, 2013); in many instances, teachers present their own individual beliefs to students without understanding the inherent complexity (Taras & Davies, 2017). The ability of those teaching in HE to include students in the assessment process as partners was also impeded by their own conceptions and literacy, even if student partnership was valued or espoused (Norton et al., 2013; Norton et al., 2019; Quesada-Serra et al., 2016; Taras & Davies, 2013).

Some aspects of assessment require particular skill on the part of the teacher (Adachi et al., 2018; Boud, 2020; Davies & Taras, 2016; Fan et al., 2017; Fuller et al., 2016; Goos et al., 2011; Knight et al., 2011; Koh, 2010; Quesada-Serra, 2016; Taras & Davies, 2013; Taras & Davies, 2017) such as enabling peer or self assessment procedures, providing feedback, and understanding the connection between summative and formative assessment. Where particular strategies and assessment methods were utilised, teachers struggled to justify their decisions (Postareff et al., 2012; Quesada-Serra et al., 2016). This is discussed further in Section 4.2.2.

4.4.1.2 Teacher responsibility

Teachers' responsibility as viewed by teachers

Students are positioned most passively in terms of summative assessment (Boud, 2020), which was often seen as the responsibility of the teacher. For example, participants in two studies (Elshawa et al., 2017; Quesada-Serra et al., 2016) disagreed that students should be involved in developing marking criteria and those in Fan et al's (2017) study perceived grading to be the responsibility of the teacher. Munoz et al. (2012) found their participants perceived themselves to be responsible for providing accurate assessments with the vast majority of participants in Norton et al's. (2013) study disagreeing that students should be allowed the freedom to choose how their assessments are shaped. Even when using self-assessment approaches formatively, teachers may be reluctant to use them for summative purposes which may be associated with the traditional views of teacher responsibility for grading or issues of power (Taras & Davies, 2017). Despite teachers acknowledging the importance of student agency in assessment, they still took a dominant role in assessment (Wang et al., 2020).

How teachers view their relationship with students tends to align with their views on responsibility for assessment, ranging from a hierarchical perception of the relationship to that of a collective assessment process based on collaboration (Halinen et al., 2013). Koh (2010) found that teachers had a key role and responsibility in enabling and crafting formative assessment approaches and that the process needed to be teacher-led. Sometimes, teachers found the responsibility for assessment processes removed from them due to institutional policies (Rohrbacher, 2017).

Teacher skills and perceptions to address assessment responsibility

Teachers' perceptions of their own role and that of students seemed aligned with their ability to enable students to take responsibility within the assessment process e.g. perceptions of responsibility for grading (Fan et al., 2017); perceptions of assessment roles generally (Mimirinis, 2019); and perceptions that they themselves lacked the skills to effectively include students in the process (Quesada-Serra et al., 2016). Halinen et al. (2013) found that those who viewed their own role in assessment as non-hierarchical were open to learning and valued students' views on the assessment process. Students need to be viewed as partners in the assessment process if they are to maximise their responsibility for their own learning (Koh, 2010) which requires a fundamental shift in roles which, if not supported in the educational context, often means teachers act contrary to their beliefs (Wang et al., 2020).

4.4.1.3 Resistance to change

Personal and professional factors

It can be difficult to encourage colleagues to endorse particular assessment initiatives and approaches such as peer and self-assessment (Adachi et al., 2018). Perception of role and of learning may need to change first in order to embrace assessment change (Deignan & Brown, 2016; Taras & Davies, 2017). Personal and professional knowledge and experience may result in inertia rather than the disciplinary context (Goos et al., 2011). Lack of professional incentive to engage with assessment may also contribute to resistance (Norton et al., 2013; Rohrbacher, 2017). Perceptions of student views on assessment is also a constraining factor e.g. students are only interested in grades (Norton et al., 2013) or they can pass without actually learning anything (Norton et al., 2019). Teachers may also be resistant to change if they believe their current practice is appropriate (Rodríguez-Gómez et al., 2016) or, as in the case of general education modules, they do not feel a sense of ownership over the assessment process (Rohrbacher, 2017). More experienced teachers may experience greater incongruence between assessment beliefs and practice than newer teachers (Wang et al., 2020)

Pragmatic resistance

Resourcing factors such as time, money, technology, timetables etc can present challenges which may manifest as resistance to assessment change (Bearman et al., 2017; Ippolito & Pazio, 2019; MacDonald et al., 2014; Norton et al., 2013; Wang et al., 2020). Broughton et al. (2017) found that some of their participants were reluctant to move to new technology because they had already invested so much time and effort in creating question banks using the older technology.

While most of the factors causing resistance relate to individuals, there were some factors identified that are external to the individual. Boud (2020) outlines a range of external factors including cultural differences between countries; the lack of influence of the compulsory education sector on higher education; the propensity of those teaching in HE not to use evidence-based assessment practices; and, varied use of enforcement of standards-based, outcome-oriented approaches.

Institutional culture may also influence practice, whereby cultures of fear are often not focused on student learning at all but rather on external issues such as accreditation, accountability, public criticism, technology, compliance and so on (Fuller et al., 2015; MacDonald et al., 2014). School and programme culture may also create a closed loop thereby maintaining the status quo (Goos et al., 2011).

4.4.2 Beliefs about students

This section presents a compilation of the findings from the data extracted in relation to the perceptions, conceptions and beliefs those teaching in HE hold about their students vis-a-vis assessment.

Table 4.4: *Perceptions, conceptions and beliefs of those teaching in HE in relation to students*

Code	Studies
Student responsibility in the assessment process	1, 4, 5, 6, 14, 17, 18, 21, 25, 28, 31, 32
Students and self-assessment	1, 3, 4, 5, 6, 7, 10, 17, 22, 27, 28, 29, 30, 31, 36, 37, 39

Students and peer-assessment	1, 4, 10, 11, 16, 21, 22, 26, 28, 29, 30, 31, 33, 37, 39

4.4.2.1 Students and peer-assessment

Peer assessment may be perceived as enabling students to learn from each other, developing real world skills akin to those often included as graduate attributes or outcomes (Adachi et al., 2018). Teachers may also believe that peer feedback enhances learning and that students benefit from more timely feedback from peers (Mimirinis, 2019) and that reading other students' work illustrates the nature of the assignment (Sadler & Reiman, 2018) including how teachers assign grades (Taras & Davies, 2017).

As alluded to above, student assessment literacy may compromise the effectiveness of peer-assessment. Students may engage with peer assessment superficially if they do not have a sense of ownership over the task, an understanding of why they are doing it, and if they lack feedback literacy skills (Adachi et al., 2018). Students may also be quite competitive which is sometimes/often embedded in the context of higher education, militating against effective peer assessment (Ippolito & Pazio, 2019) and tensions can exist when students are expected to grade the work of others (Rodríguez-Gómez et al., 2016). Therefore, it is unsurprising that within the overall peer assessment approach, the more favoured use is for feedback rather than grading (Boud, 2020) with some preferring to use it for objective rather than subjective testing (Elshawa et al., 2017). Some professors believe that students benefit from clarity in knowing where they stand in terms of grades within the overall class cohort while others believe this is unethical and may cause stress (Fan et al., 2017). While most references to peer-assessment were in relation to the impact on learning, one identified the deliberate use of the approach to specifically enhance teacher educators' pedagogical practice by modelling its use for student teachers who themselves, will be expected to utilise it in their own classrooms (Reimann & Sadler, 2017).

However, overall, those teaching in HE may find the challenges of implementing peer-assessment outweigh the benefits as they find it difficult to teach students to better engage with standards and challenging to garner endorsement from colleagues (Adachi et al., 2018). Ethical issues surround the use of peer-assessment for grading and teachers need to use clear guidelines which take account of student privacy and clarity of process to reduce students' complaints regarding fairness (Fan et al., 2017). While teachers tend to avoid creating discomfort for their students, surfacing emotions may have positive outcomes for students and engagement in the process needs to be repeated so that skills

can be improved over time (Ippolito & Pazio, (2019). Peer and self-assessment approaches allow teachers to adjust their teaching to the individual needs of each class (Munoz et al., 2012). However, teachers may not be aware of peer assessment as an approach (Postreff et al., 2012) or may perceive themselves as not capable of implementing the process therefore, using it rarely, if at all (Quesada-Serra et al., 2016). Those who trial the use of peer assessment may have different experiences, with some finding it disruptive and creating tension while others find it promotes both their own and student learning (Rodríguez-Gómez et al., 2016), with teachers often reverting to a dominant role in spite of a belief that they should promote student autonomy and independence (Wang et al., 2020).

4.4.2.2 Students and self-assessment

While peer and self-assessment are often perceived as necessarily aligned or coupled, the main differences are the development of collaborative skills and independent learning skills respectively; skills which are often aligned with graduate attributes (Adachi et al., 2018). The ability to assess one's own work is the essence of evaluative judgement which is associated with disciplinary as well as scholarly and life-long learning (Bearman et al., 2017); requires students to improve the standard of their own work (Munoz et al., 2012; Rodríguez-Goméz et al., 2016); and assess if it is good enough (Boud, 2020).

Adachi et al. (2018) identify a range of issues related to student engagement with self-assessment including needing a sense of ownership over the task; superficial engagement; non-completion of feedback loops; and lack of feedback literacy. Students were perceived to be motivated to use practice tests to self-assess (Broughton et al., 2013). Teachers also perceive that students may not be ready to engage in self-assessment in the initial years of their degree because they do not have the requisite skills or experience (Rodríguez-Gómez et al., 2016) or perhaps lack the necessary knowledge and motivation (Wang et al., 2020).

Teachers hold mixed perceptions of self-assessment believing it to be related to formative purposes of assessment mainly, but also to summative purposes (Davies & Taras, 2016; Taras & Davies, 2013; Taras & Davies, 2017). Again, this is not surprising as the literature evidences confusion on the part of authors. For example, one study found that its participants favoured formative assessment followed by self-assessment, with summative assessment the least preferred (Onalan & Karagul, 2018), a questionable conclusion which appears to be comparing two different things in that self-assessment could be considered an approach to use for formative or summative purposes. Self-assessment may be aligned with AfL because AfL places a particular onus on students to self-assess and self-regulate

(Cookson, 2018) or because teachers identify characteristics of self-assessment which mirror those commonly associated with the spirit of AfL (Reimann & Sadler, 2017). Self-assessment may also be seen as a form of authentic assessment (Adachi et al., 2018).

4.4.2.3 Student responsibility in the assessment process

If the assessment process is to have a positive impact on learning, students need to be regarded as active participants (Boud, 2020; Offerdahl & Tomanek, 2011) or indeed partners in learning (Koh, 2010). Vesting responsibility in the assessment process develops criticality and independence (Adachi et al., 2018) and capacity to become lifelong learners (Boud, 2020). Specific approaches such as AfL (Cookson, 2018) and AaL (Rohrbacher, 2017) require students to take responsibility for their own learning arising from assessment and enable development of related skills.

The effective engagement of students with the assessment process is dependent on the perceptions of teachers (Mimirinis, 2019; Norton et al., 2019). Teachers may be reluctant to involve students in the design and development of assessment tasks and criteria (Elshawa et al., 2017). The term 'student' communicates a passive identity whereby students are expected to follow instructions whereas the term 'learner' implies a more active role (Boud, 2020). However, while teachers may be unwilling to hand over responsibility for design and development of assessment processes, they may be quite willing to vest total responsibility in students to engage with the teacher-designed assessment processes regardless of class profile and evident differences between groups (Postreff et al., 2012).

Students may not interpret feedback as intended, even when provided without a grade, with some perceiving suggestions as a damning indictment of their work while others may fail to realise the importance of the comments (Cookson, 2018). Teachers express frustration when students do not act upon feedback provided but this may not be related to their skillset but rather to the timing of feedback (Goos et al., 2011) or a lack of understanding on the teacher's part in terms of encouragement and support to react effectively to feedback (Knight et al., 2021).

4.4.3 Summary - People

The pattern of key characteristics arising in relation to teachers' assessment conceptions and beliefs about themselves and their students are as follows:

Teachers' ***assessment literacy*** is mired with confusion so that even when aware of ineffective practices, they may not be able to change course. Terminology is confused and often used with no theoretical basis or reference to the relevant field of literature. Development of assessment literacy is iterative and evolutionary resulting from experimentation with assessment tools; interaction with and/or observation of peers; and engagement with PD opportunities. Teachers believe that students should be assessment literate but this implies literacy on their own part so that students can be enabled to understand and engage with the assessment process. Often, teachers base their assessment support of students on their own experiences and beliefs without understanding the complexity of assessment. Enabling students as partners in the assessment process is even more complex if teachers do not have the necessary understanding of those processes themselves. Teachers' assessment literacy is influenced by contextual factors such as HEI systems which create confusion, focusing on grading rather than learning and prioritising structural information at an early date which militates against reflection on assessment practice. Teachers' enactment of conceptions takes place at a complex contextual nexus of their own knowledge, technology, demands of the HEI in which they find themselves as well as disciplinary demands.

The implication of the point above is that teachers will likely need to change how they view assessment and the roles of those within the process. However, ***resistance to change*** can be common and is related to a range of factors. Personal and professional factors may contribute to resistance such as perception of one's own role as assessor, knowledge of assessment processes, and perceptions of student views on assessment which may not be well-founded. Teachers may believe their current practice is good and does not need to change, with more experienced teachers sometimes experiencing greater incongruence between belief and practice than those who have come to the role recently. Pragmatic factors may also contribute to resistance to change such as perceptions of the time required, necessity of resources and the favouring of older, more familiar technologies over newer, unfamiliar technologies. National and institutional culture may contribute to resistance to change. Institutional culture may particularly influence resistance because teachers fear accreditation processes, accountability, public criticism, compliance and so on. Perceptions of school and programme cultures also exert influence on disposition to change assessment practices. However, some teachers find ways to overcome these potential barriers. Dialogue and reflection on practice seem to enable teachers to change views and beliefs, especially as resistance to change may be predicated on uncertainty rather than unwillingness. Teachers also need to believe that their institutions will support them in their assessment work, particularly in terms of incentivising change and innovation. At an individual level, teachers need to reconsider their roles and that of their students within the assessment process.

The perceptions of teachers regarding ***responsibility*** for assessment aligns with perception of teacher and student roles. Generally, students are placed in a much more passive role particularly in relation to summative assessment even if teachers agree that students need more agency in the assessment process. Involving students in the assessment process requires a shift in role perception and an understanding of terminology related to assessment which, as outlined above, is problematic. Moreover, there can be a disconnect between assessment and other aspects of pedagogical work, further complicating teachers' understanding and perception of the process and the implications for their role and that of students.

Teachers generally perceive that ***peer assessment*** enables learning, particularly in terms of illustrating the assignment and the grading process. However, they also tend to believe that it is compromised by the nature of an assignment and/or students' feedback literacy skills and therefore, use it mainly for formative feedback purposes rather than grading. Additionally, teachers believe that the challenges outweigh the benefits of its implementation, perceiving themselves as not capable of enacting peer assessment properly or, indeed, being completely unaware of it as a consideration in the assessment process.

While ***self-assessment*** approaches are considered effective for developing evaluative judgement and therefore, improving standards and achievement, teachers perceive barriers to its implementation also. They may believe it is difficult to teach the requisite skills and that self-assessment can only be used for some types of tasks. It also requires reconsideration of assessment roles, and teachers need to actively involve students in the identification of standards, which as outlined in the previous section, teachers find difficult to do.

4.5 Perceptions, conceptions and beliefs about Purpose

This was the second code/theme identified in the level three analysis of the scoping review data.

Table 4.5: *Perceptions, conceptions and beliefs of those teaching in HE in relation to the purpose of assessment*

Code	Studies
Support Learning	1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 14, 15, 17, 18, 19, 21, 22, 23, 25, 28, 29, 30, 31, 32, 33, 34, 35, 38, 39
Summative assessment versus formative assessment	1, 3, 4, 6, 7, 8, 9, 10, 19, 21, 22, 26, 27, 30, 32, 35, 36, 37
Provide feedback to students	1, 4, 5, 6, 7, 8, 9, 10, 11, 14, 16, 17, 18, 19, 21, 22, 23, 25, 26, 28, 29, 30, 31, 33, 35, 36, 37, 39
Meet intended learning outcomes	3, 4, 6, 12, 15, 19, 20, 21, 28, 32, 37, 39
Measure learning	4, 5, 8, 11, 13, 15, 19, 22, 24, 25, 26, 28, 30, 31, 32, 35, 39
Grading	4, 5, 7, 10, 11, 15, 19, 21, 22, 23, 24, 25, 26, 29, 30, 32, 35, 36, 37, 39
Formative Assessment	4, 6, 7, 9, 16, 17, 21, 22, 26, 27, 29, 30, 32, 33, 35, 37
Assessment for Learning	6, 15, 21, 22, 24, 26, 29, 30, 32, 33, 36, 39
Inform teaching	6, 8, 10, 15, 18, 20, 21, 22, 26, 27, 28, 30, 32, 37, 38, 39

4.5.1 Support Learning

The role of assessment in supporting learning was identified by participants across a large number of studies. Support for learning was viewed from a range of perspectives as outlined below.

Teacher role and understanding

While those teaching in HE often articulate motivation and willingness to use assessment to support learning, they may not know how to translate that motivation into practice (Day et al., 2019; Knight et al., 2021; Munoz et al., 2012; Quesada-Serra et al., 2016). Teachers' understanding of assessment and

their knowledge of assessment literacy, or lack thereof, may limit more transformational assessment practices which support learning (Davies & Taras, 2016; Koh, 2010). Mimirinis (2019) contends that teachers with less developed assessment skills view e-assessment platforms from the perspective of what they offer the teacher whereas those with more transformational views of assessment view them from the perspective of enhancement of student learning. While he was referring to one specific assessment tool, it is likely that his contention may be applied to a range of other assessment tools. For those teachers who understand how to design assessment to support learning, knowledge of content is a prerequisite expectation for student engagement rather than something which needs to be assessed in its own right (Halinen et al., 2013). Teachers' beliefs in the purpose of assessment impacts their ability to use assessment to support student learning also (Postareff et al., 2012); when teachers believe in the power of assessment to support learning, they can change their theoretical understanding and apply that to their daily assessment practices (Koh, 2010).

Reciprocal nature of learning and assessment

Learning appears to influence assessment as well as being influenced by assessment practices. Halinen et al. (2013) found that assessment at its best was designed to foster the application of student knowledge; a genuine learning situation associated with teaching wherein grades were assigned as part of the process but did not lead assessment design. Bearman et al. (2017) found that teachers saw learning as a significant influence on assessment design also, in terms of learning outcomes but also in relation to long term learning beyond the college experience.

Assessment frames learning (Boud, 2020; Postreff et al., 2012; Rohrbacher, 2017), influencing student priorities (Boud, 2020), providing teachers with information on progress which, if used, can enable learning (Quesada-Serra, 2016). While the terms formative assessment and summative assessment have often been presented as a binary, Cookson (2018) argues that assessment is not inert, has immense impact on students and needs to be directed towards positive learning outcomes. A multiplicity of assessment avenues may maximise opportunity for supporting learning (Reimann & Sadler, 2017). However, those teaching in HE may experience difficulty in managing the impact of assessment on learning in terms of tensions with standards (Munoz et al., 2012) or awareness of how to identify opportunities for supporting learning through assessment (Postreff et al., 2012). Learning oriented assessment practices create an environment whereby (a) students view mistakes as part of learning and (b) effective feedback is promoted (Elshawa et al., 2017; Wang et al., 2020).

Aspects of learning supported by assessment

Bearman et al. (2017) found that participants regarded assessment as successful if they noticed students had corrected misconceptions and moved to higher order thinking. The perceived use of assessment to improve learning was echoed in a range of studies (Elshawa et al., 2017; Munoz et al., 2012; Norton et al., 2012). Knight et al., (2021) examined the use of written comments on assignments, finding that comments in margins were usually used to identify errors across disciplines but comments at the end differed in use depending on the discipline, ranging from reinforcing and summarising to provision of specific suggestions for next steps to identification of strengths and areas for improvement. Explicit feedback on strengths to aid improvement is particularly important for students who are already performing quite well and was highlighted as crucial for language learners (Tang & Harrison, 2011); it is likely this aspect of supporting learning is transferable across learning contexts. Participants in Rohrbacher's (2017) study used formative assessment to help students improve and summative assessment to judge and classify.

Assessment can also allow for development of transferable skills such as communication, reflection and evaluative judgement (Adachi et al., 2018). The overall concept of evaluative judgement can appear quite abstract unless mapped onto a disciplinary context such as 'thinking like an archeologist' (Bearman et al., 2017). Assessment should enable students to identify work of high quality and relate it to their own work to, in turn, enable them to reach high standards (Boud, 2020) and encourage independence (Broughton et al., 2013), higher order cognitive skills (Day et al., 2019) and autonomy (Wang et al., 2020). There is a general consensus that reproducing knowledge is not enough for the competences expected in the workplace (Postreff et al., 2012); employers tend to criticise university graduates for their ability to apply knowledge rather than reproduce it (Boud, 2020).

4.5.2 Summative versus formative assessment

This section examines the tensions between summative and formative assessment.

Teacher focus, understanding, interpretation influences enactment of summative assessment and formative assessment

The notion of formativeness or summativeness is subjective; what is more important is how that assessment shifts and has impact / power over the end user (Cookson, 2018). Teachers often ignore or lack awareness of the role of formative assessment, focusing mainly on summative assessment

(Bearman et al., 2017). This likely reflects bigger, systemic assumptions where institutional policies focus mainly on summative assessment, with minimal focus on formative assessment and little to none on sustainable assessment (Boud, 2020). The participants in Munoz et al's. (2012) study indicated that they believed in the function of assessment for improvement; however, their practices tended to focus on summative assessment. Using assessment to gather information to assign grades may be seen as its primary purpose rather than to diagnose student understanding either before or during instruction (Offerdahl & Tomanek, 2011). Those with a more traditional view of assessment tend to use it to evaluate ability rather than as a learning opportunity (Tang & Harrison, 2011).

However, Elshawa et al. (2017) found the opposite with two thirds of their participants viewing formative assessment as preferable to summative, a viewpoint mirrored by participants in Onalan and Karagul's (2018) study. Lilley et al. (2011) found that their participants preferred to use objective testing of knowledge/facts as part of a formative approach to assessment or for low-level summative tasks. The online environment may also favour formative assessment approaches and almost creates a context where teaching and learning are inseparable from assessment (Mimirinis, 2019).

Study participants from science and education disciplines found it difficult to separate the functions of formative and summative assessment which seemed to conflict with the literature (Davies & Taras, 2016). In particular, those from the education discipline appeared less inclined to separate the two functions, although this was evident in both groups of teachers. The authors conclude that they may lack confidence in assessment terminology. They also seemed to be unclear on the difference between process and product which the authors see as unsurprising as the literature generally focuses on function which is hard to relate to the reality of classroom processes and assessments. In their later paper (Taras & Davies, 2013), they found that some science lecturers did not associate grading with summative assessment while others associated grading with formative assessment, leading them to conclude that the participants did not exhibit a clear understanding of the relationship between or the functions of formative and summative assessment. Many of the questionnaire respondents agreed that summative assessment and formative assessment were similar processes, yet half then proceeded to outline the differences between the two (Taras & Davies, 2019). In addition, they associated summative assessment with 'of' learning and formative assessment with 'for' learning but seemed to understand summative assessment more than formative (Taras & Davies, 2019).

The role of timing in the conceptualisation of summative and formative assessment

Timing can be considered intrinsic to the conceptualisation of the term 'summative evaluation' because of the use of phrases such as 'at the end' or 'after' (Bloom, Hastings & Madaus, 1971, cited in Cookson, 2018). Providing feedback and corrections at each stage of the teaching-learning process is historically associated with formative evaluation (Bloom, 1969, cited in Cookson, 2018). Teachers have difficulty distinguishing between process and product and the role they play in the assessment calendar (Davies & Taras, 2016). Day et al.'s (2019) study focused on intermediate assessment and they found that their participants focused more on supporting student learning rather than reproduction of knowledge, concluding that this may be because of the timing of that particular assessment. Most instructors in Elshawa et al's. (2017) study believed in the need to develop test specifications ahead of administering any type of assessment; however, two thirds believed that FA was a preferable means of assessment than summative.

4.5.3 Provide feedback to students

Teachers' perspectives and skills in providing feedback

How teachers perceive the provision of feedback impacts the process and practice therein. Perceptions of learning influence their perception of their own role in providing feedback (Deignan & Brown, 2016) and the suitability or nature of that feedback (Broughton et al., 2013). Perceptions of specific aspects of feedback also influenced decisions e.g. the usefulness of grading bands versus precision (percentage) scores (Elshawa et al., 2017); the importance or not, of focusing on strengths when providing feedback (Fan et al., 2017). The range of differences in perceptions of feedback was evident within groups of teachers (Reiman & Sadler, 2017), across disciplines (Taras & Davies, 2016; Norton et al., 2012) and between those who were providing the feedback and those in leadership roles (Goos et al., 2011). Two studies identified specific categories of those teaching in HE based on their perceptions and practices in relation to provision of feedback (Mimirinis, 2019; Tang & Harrison, 2011); categories which mirror those associated with assessment generally. There seems to be general agreement that formative assessment is explicitly associated with provision of feedback (Koh, 2010) but confusion around the association of the use of assessment for summative purposes and provision of feedback (Davies & Taras, 2016; Taras & Davies, 2013; 2017).

There is some evidence of the perceived need for PD to enhance feedback skills (Norton et al., 2019), although, Rodríguez-Gómez et al. (2016) noted that formal PD did not change some practices. Further, there is some evidence that engaging in a new idea or innovation, leads to reflection on

feedback practice which, in turn, leads to enhancement of skills and understanding of the feedback process (Offerdahl & Tomanek, 2011; Sadler & Reimann, 2018), although for some, practice changed but understanding remained stable (Sadler & Reimann, 2018). Throughout, the use of terminology in the literature varies, reflecting the range of perceptions and understanding in relation to feedback specifically and assessment generally. For example, terms such as feed-forward (Quesada-Serra et al., 2016) and feed-up (Wang et al., 2020) are used but it is difficult to see clarity in the distinction between these terms and the term 'feedback'. In addition, how terms such as formative assessment and summative assessment are used is nuanced across the literature.

Some studies identified reasons for resistance to the provision of feedback on the part of those teaching in HE, usually associated with perceived challenges. These challenges include the difficulty in scaling up feedback processes for large numbers (Ippolito & Pazio, 2019); lack of training (Norton et al., 2012; 2019); workload and time (Norton et al., 2012; Wang et al., 2020). Norton et al. (2012) particularly highlighted the impact of perceived challenges on teachers' ability to provide effective feedback within the hard disciplines. Wang et al. (2020) concluded that feedback practices did not always align with beliefs because they wavered in the face of the perceived impediment.

Student skills re feedback

Academics express frustration when feedback is not acted upon (Adachi et al., 2018), while others believe students use feedback but are not clear on the evidence of that use (Tang & Harrison, 2011). Teachers with a learning centred approach consider ways in which the students may lead the feedback process by suggesting aspects of their work on which they desire feedback and evidencing how they have acted upon the advice subsequently (Boud, 2020). Cookson (2018) posits that AfL places an onus on students to assume responsibility for their own learning and therefore, use feedback constructively to improve their work. However, expectations around feedback may differ between teachers and students (Goos et al., 2011). Teachers may differ in their perception of the level of support feedback provides with some considering detailed feedback as too specific, thereby not allowing students to see beyond the specific assignment on which it is based to others who believe that group or class feedback is of no value beyond what is already provided in a textbook and that students need individualised feedback in order to use it correctly (Broughton et al., 2013).

Feedback as a process

When feedback is conceptualised as part of a learning centred process, the process is more student directed, leading to the development of evaluative judgement (Boud, 2020). The confusion surrounding some terminology, such as feedback versus feedforward (Rodriquez-Gomez et al. (2016), may interrupt or disrupt the feedback process. Feedback provided following submission of an assessment task may lead to a disconnect between provision of feedback and use by the learner (Day et al., 2019). Feedback can potentially be a two-way process, enabling improvements in both learning and teaching (Munoz et al., 2012; Postareff et al., 2012). The perception that use of feedback is mainly dependent on the student may also hinder the completion of the feedback loop (Tang & Harrison, 2011).

Timeliness of feedback is generally viewed as important but challenging to achieve with students expressing dissatisfaction with slow turnaround times (Goos et al., 2011) and teachers opting to provide grades only rather than diagnostic feedback (Wang et al., 2020). Peer assessment may provide timely feedback (Adachi et al., 2018).

4.5.4 Meet intended learning outcomes

Boud (2020) examines the development of HE assessment practices and highlights a number of challenges in reforming the sector, including (a) the intractable nature of grading in the context of LOs, (b) the difficulty in writing meaningful LOs in terms of content and number, (c) the trap of emphasising knowledge rather than its application, (d) the unacknowledged and misunderstood importance of programme learning outcomes in terms of alignment of assessment through the programme and in terms of validation and certification and, (e) the existence of a dysfunctional system which undermines the principles on which assessment is based i.e. LO, standards-based assessment, particularly in the Australian context. The difficulty of aligning course LOs and teaching with assessment was also highlighted in Postreff et al.'s (2012) study. The potential for vague language of LOs to render them meaningless and the difficulty experienced by lecturers in quantifying certain aspects of learning (e.g. ethics) was also highlighted by Rohrbacher (2017).

The desire of establishing a 'common language' for assessment may be resisted and derail outcomes in HE (Fuller et al., 2015). Halinen et al. (2013) identified a spectrum of conceptions with those on one end focused on content-centred thinking about assessment, aligning their practices with that thinking. Mimirinis (2019) also identified a spectrum of conceptions in the e-learning context.

Teachers need to feel part of the assessment process from the establishment of LOs to the alignment of assessment approaches (MacDonald et al., 2014).

4.5.5 Measure learning

Measure understanding

Teachers' conceptions of student understanding varies from construction to repetition of knowledge (Postreff et al., 2012). While some disciplines require and value reproduction of knowledge, they also value creativity in say scientific research but often do not have assessment processes in place which assess these aspects of learning (Halinen et al., 2013). Lecturers use examinations to assess recall and coursework/projects to examine grasp of underlying concepts (Broughton et al., 2013). Experimentation with clickers allowed teachers to begin to see them as tools for diagnosing student understanding rather than relying on their overall knowledge developed over the years (Offerdahl & Tomanek, 2011). FA is used to help teachers and students improve and SA to judge and classify understanding (Offerdahl & Tomanek, 2011; Rohrbaher, 2017).

Apply knowledge

Students need to develop their metacognition to ensure they know what they know so that they can then apply that knowledge; they need an appreciation of good work and an ability to make judgements about the work of others so that they can then judge their own work and apply the knowledge they have appropriately (Boud, 2020). When teachers have assessment practices consistent with a focus on learning, grading occurs alongside but does not take a leading role ahead of application of knowledge and development of expertise (Halinen et al., 2013). A spectrum of understanding exists on the part of teachers in relation to assessment, with those who have transformational conceptions characterised by deep reflection on the purpose of assessment and a willingness to reflect on their own practices, conceptions and justifications for the descriptions/arguments; however, these are in the minority with most teachers conceptualising assessment reproductively (Postreff et al., 2012).

Reproduce knowledge

There is still an emphasis on knowledge acquisition over the application of such knowledge in the HE system generally (Boud, 2020). Electronic systems and tools tend to be viewed as useful for assessing acquisition of knowledge (Broughton et al., 2013). While Postreff et al. (2012) found that their participants held mainly reproductive conceptions of assessment, Day et al., (2019) found the

opposite, tentatively concluding that this may be attributed to the fact that they were examining the use of intermediate points of assessment practice. How teachers view their relationships with students in terms of assessment impacted what they did i.e. those who saw themselves as responsible for assessment favoured practices which focused on memorisation; indeed, teachers' stated purpose of learning impacted their level of reflection e.g. whether perceived success was based on the course, future academic expertise or as a tool for life-long learning (Halinen et al., 2013). Teachers may perceive it to be difficult to change practices because students want grades (Norton et al., 2013) and/or that students can satisfy assessment requirements without learning anything (Norton et al., 2019), regardless of the intent to measure learning.

4.5.6 Grading

Purpose of grading

Grading has been the most intractable element of assessment often encouraged by legacy university systems which were built on the grading system (Boud, 2020). Grading may be associated with summative purposes of assessment, although may be associated with formative assessment also (Davies & Taras, 2016; Taras & Davies, 2013), with some seeing the primary purpose of assessment as the gathering of information to establish a grade (Offerdahl & Tomanek, 2011), to measure learning (Reiman & Sadler, 2017) and to hold students accountable (Rohrbacher, 2017). Halinen et al. (2013) found that teachers held mixed views on grading, with some using it to differentiate students while others considered grading performance as a side product of assessment practices, paying much more attention to a focus on learning both with colleagues and students themselves.

Grading processes

There is a general perception that using peer assessment for grading purposes is not appropriate (Boud, 2020). Using a range of sources to report a final grade may be seen as preferable to reliance on one source only (Elshawa et al., 2017), with lower weightings given to objective testing for low stakes assessments (Lilley et al., 2011). Weightings may be used for elements of an assignment based on the perceived value of each element (Broughton et al., 2013) and teachers may perceive the use of a precision mark (percentage) preferable to the use of a letter grade as a performance indicator (Elshawa et al., 2017). Assessment practices are not always aligned with beliefs (Wang et al., 2020).

E-assessment is seen as a way of efficiently enabling the assessment process whereby the assessment team can easily see the processes of others; plagiarism detection is built in; and, formatively

monitoring students' work is beneficial (Mimrinis, 2019). However, assessment may be perceived to interfere with teaching, especially if there are a few assignments spread over a semester (Munoz et al., 2012). Norton et al. (2012) found that lecturers in their study generally agreed that marking was a subjective process while in a later study they found that half of their respondents thought there was a lack of agreement around marking schemes (Norton et al, 2019). While some of those teaching in HE believe that formal training is important and even that it should be mandatory (Norton et al., 2019) others are resistant to training or indeed collaboration and moderation with colleagues (Tang & Harrison, 2011).

Teachers' perceptions of student role in grading

Teachers may believe that constructing pedagogically sound assessments is difficult because students focus on grades only (Wang et al., 2020) and that they can achieve an acceptable grade without actually learning anything (Norton et al., 2013) although those teaching in HE hold mixed views on student focus on grades (Tang & Harrison, 2011). On the other hand, summative grades may be used to hold students accountable (Rohrbacher, 2017). Including students in the grading process is important for ethics and fairness (Fan et al., 2017) but teachers may not agree or feel competent to enable student involvement in the grading process (Quesada-Serra et al., 2016).

4.5.7 Assessment for learning

Nature and purpose of AfL

Cookson (2018) traces the evolution of thinking around AfL in the literature from its emergence in the 1990s as the shift in assessment focus moved from measurement to supporting learning. She also tackles the perceived overlap between AfL and formative assessment, with many authors using the terms interchangeably; however, differences have been identified such as (a) AfL is an ongoing process rather than a chain of individual formative assessment events, an iterative process as learners need to build up expertise which cannot be done with one-off formative assessment events (b) places responsibility on students to self-assess, (c) AfL is part of everyday student and teacher practice enabling reflection on information from dialogue, demonstration and observation to enhance learning. Rohrbacher (2017) found that participants in his study saw AfL as knowing who students were, knowing strengths and weaknesses and being able to enable learning based on that knowledge both in terms of content and skills. AfL practices improve student autonomy in learning (Wang et al., 2020).

Relationship between AfL and other elements of assessment

The terms AfL and formative assessment have been continuously confused and used interchangeably (e.g. Munoz et al., 2012) even though there are significant differences e.g. formative assessment is about frequent, AfL is about continuous; formative assessment is about providing teachers with evidence, AfL is about informing students about themselves (Cookson, 2018). The confusion in the literature is mirrored in practice, with different conceptions evident depending on the individual (Reiman & Sadler, 2017), with some identifying practices which might be associated with an aspect of assessment other than AfL e.g. summative assessment (Taras & Davies, 2017), although this may be due to the conceptions of the authors themselves.

Developing AfL competencies

The development of AfL practices needs an institutional culture that fosters it (Halinen et al., 2013; Mimirinis, 2019; Munoz et al., 2012; Sadler & Reiman, 2018). PD opportunities enable AfL practices (Norton et al., 2013; Wang et al., 2020) with long term courses viewed as being more impactful than short courses (Halinen et al., 2013). Existing and changing practices vary between individuals depending on their differing conceptions of assessment and learners (Mimirinis, 2019), pace and nature of adoption of new ideas and techniques (Sadler & Reiman, 2018) and the apparent gap between the development of understanding compared to practices (Sadler & Reiman, 2018; Wang et al., 2020).

4.5.8 Inform teaching

Thinking around the purposes of assessment changed during the 1990s to a focus on using assessment for improving teaching and learning, moving from a final, uni-directional end-product to an iterative, reflective practice (Cookson, 2018). Evidence from a number of the studies included in this scoping review referred to participants believing that assessment should be used to inform teaching (Day et al., 2019; Elshawa et al., 2017; MacDonald et al, 2014; Mimirinis, 2019; Munoz et al., 2012; Offerdahl & Tomanek, 2011; Onalan & Karagul, 2018; Postreff et al., 2012; Reiman & Sadler, 2017; Rohrbacher, 2017; Wang & Hurley, 2012) in one way or another.

While the references above considered the general impact on teaching enhancement, there were some which referred to the improvement of teaching to enhance student learning (Elshawa et al., 2017; Halinen et al, 2013; Koh, 2010; Rohrbacher, 2017; Taras & Davies, 2017; Wang et al., 2020).

4.5.9 Summary – Purpose

The pattern of key characteristics arising in relation to teachers' assessment conceptions and beliefs about the purpose of assessment are as follows:

The main purpose of assessment identified in the scoping review is to ***support learning***. While teachers may believe that assessment can support learning, they may not be able to conceive of practices to enact this aim. Some teachers may view assessment tools in terms of what they offer them whereas more effective teachers will view them in terms of the support they offer learners. Effective assessors assume content knowledge as a prerequisite for task engagement and focus on the application of that knowledge in assessment design, which also explicitly incorporates a focus on student learning in the short and long term. Practices which explicitly focus on learning create an environment wherein making mistakes is accepted as part of learning and aligns with effective feedback. Beliefs regarding feedback range from providing scores to supporting learning by providing opportunities. Teachers perceive particular aspects of learning as supported by assessment such as self-correcting misconceptions, using higher order thinking, and the development of transferable skills such as communication, reflection and evaluative judgement. Local cultural expectations may enable or hinder learning. If teachers perceive cultures of power, accountability and external demands as central they may choose assessment practices not consistent with supporting learning.

Assessment may also be used for ***formative and summative*** purposes. Teachers may ignore or be unaware of using assessment for formative purposes, using it to evaluate ability rather than as a learning opportunity. Institutional and cultural practices may force their attention on the development and use of assessment for summative purposes, particularly in terms of provision of grades. However, the five articles written from the context of EFL and online learning tend to highlight teachers who believe assessment should be used primarily for formative purposes to continuously improve and support learning. In some cases, study participants from certain disciplines find it difficult to distinguish between the two functions, particularly education.

Provision of ***feedback*** is also seen as a key purpose of the assessment process, although there is evidence of disagreement depending on teachers' role, beliefs and understanding. Generally, it is seen as a vehicle for learning improvement, with more impact on those who are struggling than high achievers generally. Feedback seems to be more useful when viewed as a process with timing and

distribution identified as important. Teachers' beliefs about students and learning influences their conceptions of their own role in terms of feedback, with both sets of stakeholders having different expectations of the feedback process. Further, teachers' understanding of specific elements of the feedback process influence practice such as terminology, the association of feedback with formative assessment rather than summative assessment, and perceptions of inhibitors such as time, training and workload, leading to a disconnect between general positive beliefs about feedback but lack of ability to enact those beliefs effectively.

Using assessment for the purpose of ***measuring intended learning outcomes*** is also identified arising from the scoping review data. Crafting learning outcomes is a complex process. Learning outcomes may be in tension with grading processes and there can be a disconnect between programme and module learning outcomes with the former receiving a dearth of attention in terms of assessment design and implementation.

Associated with the point above, the purpose of assessment to ***measure learning*** also arises from the scoping review data. Formative assessment approaches are seen as important for identification of (mis)understanding. If focusing on learning, those teaching in HE tend not to be led by grading demands. Generally, the focus on assessment in HE is on reproduction of knowledge. However, even when valuing reproduction, some of those teaching in HE may also value other aspects of learning such as creativity but find it hard to enact that value in terms of designing assessment to measure both elements of learning. Perceptions of student values may also influence assessment decisions of those teaching in HE such as the difficulty with changing practices because students want grades; and that students can satisfy assessment requirements without learning anything even when assessment design is focused on measuring learning.

Sometimes, ***grading*** can be viewed as the main purpose of the assessment process. Certainly, it is an enduring part of the process, usually associated with summative assessment. How those teaching in HE view students influences their beliefs around grading, for example, they generally believe that peer assessment should not be used for grading purposes. Overall, the beliefs relating to grading from across the articles scoped, tend to be negatively framed and indicate a perspective that grading is problematic.

The use of ***assessment for learning*** specifically is also identified in the scoping review. Again, confusion between the terms AfL and formative assessment is highlighted, indicating, once again, a wider issue with problematic use of terminology and its impact on understanding and practice. Generally, AfL is separated from other forms of assessment in that it is viewed as part of ongoing, everyday practice to identify students' understanding. Experimental use of AfL techniques enables evolving development of understanding and skill. Even if AfL is valued, those teaching in HE may find it difficult to enact and needs to be supported and fostered at an institutional level.

The role of assessment in ***informing teaching*** is evidenced as a purpose arising from the scoping review as an end goal in itself and/or with a view to enhancing teaching to improve student learning.

4.6 Perceptions, conceptions and beliefs about Place and Positionality

This was the third code/theme identified in the level three analysis of the scoping review data.

Table 4.6: *Perceptions, conceptions and beliefs of those teaching in HE in relation to the context of place and positionality*

Code	Studies
Institutional culture	3, 4, 9, 12, 13, 14, 15, 16, 20, 22, 23, 24, 29, 32, 33, 34, 38
Disciplinary culture	2, 3, 4, 5, 7, 10, 12, 13, 14, 15, 16, 17, 20, 21, 23, 24, 25, 27, 28, 29, 32, 33, 34, 35, 36

4.6.1 Institutional culture

Enabling aspects of institutional culture

Assessment can be a focus for institutional development (Boud, 2020). Assessment leaders have potential to transform colleagues' beliefs and practices at disciplinary levels but need to be supported by fostering collegial networks and meaningful professional development opportunities (Ippolito & Pazio, 2019). Assessment leadership requires understanding student learning at campus level, across disciplines and benefits from consistent and clearly articulated communication regarding the overall

meaning and value of assessment in tandem with maximising opportunity for teachers to express their own understanding within disciplinary contexts (Fuller et al., 2015). Enabling faculty development in small, incremental steps in assessment at a disciplinary level makes the process more relevant for teachers (MacDonald, et al., 2014).

Institutional policies can be a catalyst for change in assessment practice (Munoz et al., 2012). Institutional policy initiatives such as management of time available, engagement with external examiners, moving to online marking, enabled changes to assessment practice although impact on understanding was not evident (Sadler & Reimann, 2018). Changing assessment practice at all institutional levels is underpinned by changing teachers' assessment frame of reference (Ippolito & Pazio, 2019). Institutional commitment to assessment change is necessary for sustainable development and meeting the needs of future students (Boud, 2020).

Negative impact of institutional culture

Fixed traditional assessment practices, often not based in any scholarship, persist because of habit or inertia (Boud, 2020). Identifying an ineffective or negative culture of assessment may in fact be the first step towards refining it and making appropriate changes (Fuller et al., 2015).

Fear of compliance with institutional or broader systems may result in removing the focus of assessment design away from student learning (Fuller et al., 2015) but, on the other hand, faculty may demonstrate a total lack of awareness of compliance regulations and procedures which might be helpful to their assessment practice such as the use of criteria when assessing students' work (Norton et al., 2012). Institutional processes such as the publication of module descriptors and making decisions in relation to weightings and nature of assessments for individual programmes / modules often need to be finalised for incoming students even as existing students are experiencing assessment processes and teachers are observing potential difficulties, which limits teachers' ability to modify processes they know to be erroneous (Quesada-Serra et al., 2016). Changes to institutional assessment practices need to be navigated in a complex, layered context in relation to disciplinary customs, standards of practice and accountability (Norton et al., 2013). However, Wang and Hurley (2012) found that their participants indicated that institutional culture did not have a significant relationship with their willingness to engage in assessment practices.

Institutional culture is layered

The notion of institutional culture is layered in terms of the institution itself, elements of assessment, range of institutions and so on. It can be difficult to distinguish between formal organisational requirements and informal norms, mores and myths, with assessment impacted at every level (institution, faculty, department), both positively and negatively, with leadership in smaller departments seeming to have the greatest influence (Bearman et al., 2017). Within the higher education system, teachers in younger universities perceive fewer constraints to assessment practices compared to those in older, more traditional institutions (Norton et al., 2013). University assessment policies tend to focus primarily on the summative layer of assessment, with little attention paid to formative assessment and none to sustainable assessment practices (Boud. 2020). There are many institutional cultures (fear, student centred etc.) but no one culture is appropriate for every institution in every circumstance (Skidmore et al., 2018).

Institutional support is required to develop assessment

Change in assessment requires institutional commitment and the realisation that sustainability involves attracting and meeting the changing needs of students (Boud, 2020). Innovating assessment needs the support (Deignan & Brown, 2016; Halinen et al., 2013) and active encouragement of the institution (Macdonald et al., 2014; Rohrbacher, 2017) as many teachers value the principles of the institution (Munoz et al., 2012). The privileging of research targets over those for teaching and learning, may hinder incentive to innovate at an institutional level (Norton et al., 2013).

4.6.2 Disciplinary culture

Characteristics of disciplinary conceptualisation of assessment

While those teaching in HE may be exposed to a wide variety and breadth of assessment designs through their discipline, which is positive, it may also be the case that they are unable to see beyond that disciplinary experience (Bearman et al., 2017). Those whose discipline is not education may recognise the importance of the theory underpinning assessment but this does not translate into practice because they see that theory as the preserve of educationalists (Davies & Taras, 2016). The disciplinary context of assessment practice may perpetuate the status quo because of the reliance on tacit knowledge therein, thereby restricting possibilities for innovation in assessment practices (Goos et al., 2011). Moreover, the status quo may be deepened if assessment design and practice is viewed as the preserve of the individual teacher, limiting collaboration and interaction between teachers in the

same discipline (Halinen et al., 2013). There is some suggestion that those teachers in the 'hard' disciplines are more likely to resist 'desirable' assessment practices than their colleagues in the 'soft' disciplines (Norton et al., 2012). The disconnect between disciplinary context and assessment beliefs and practices is illustrated in the context of general education modules which draw upon a range of disciplines whereby those teaching in HE do not feel a sense of ownership over the assessment process partly because the students are not majoring in their discipline (Rohrbacher, 2017). The concept of doxa, "that which is so accepted it is not noticed (Bourdieu, 1977)" (Bearman et al., 2017, p.61) is relevant to assessment practice and likely influences conceptualisation of assessment.

Assessment tools chosen may reflect unique disciplinary literacies (Barton et al., 2020; Elshawa et al., 2017) or a reliance on disciplinary traditions whereby those teaching in HE cannot envisage using anything other than what has always been accepted (Berman et al., 2017). Differences may be seen between disciplines in terms of types of tools chosen (Gilles et al., 2011) with some disciplines which do not value a quantitative approach to assessment being more exposed to a wide range of assessment methods and tools (MacDonald et al., 2014). The relationship between the assessed and the assessor is influenced by the wider range of relationships in the online context also (Miminrinis, 2019). The juxtaposition of learning outcomes and assessment tools is particularly evident in the context of general education modules wherein broad outcomes focusing on critical thinking or creativity must be addressed via assessment tools designed by teachers across a range of disciplines, many of whom find it extremely difficult because of perceived vagueness of such learning outcomes (Rohrbacher, 2017). Beliefs about learning are often drawn from a disciplinary viewpoint and are associated with beliefs about and modalities of assessment (Bearman et al., 2017), for example, in the sciences it is common to require exact and factual knowledge, leading to reliance of examination type assessment (Postareff et al., 2012).

Teachers are concerned with what students think, learn and experience which is associated with their own professional, disciplinary identities (Bearman et al., 2017). For example, corrective feedback was perceived as important to EFL students because of the EFL context (Tang & Harrison, 2011). Boud (2020) highlights the perceived importance of transition pedagogy in introducing students to a discipline and the processes therein. The disciplinary influence on assessment conceptualisation may also be reinforced by the external examiner who may view some assessment practices with disapproval if they do not fit with their own assessment beliefs (Ippolito & Pazio, 2019). Moreover, inheritance of established assessment practices may inhibit innovation (Broughton et al., 2013).

Necessity of developing assessment conceptualisation in the disciplinary context

There is evidence that dialogue around assessment needs to be contextualised within a disciplinary context for it to be meaningful, understandable and relatable for those teaching in HE (Fuller et al., 2015; MacDonald et al., 2014; Norton et al., 2013; Norton et al., 2019; Skidmore et al., 2018). The concept of 'evaluative judgement' can be elusive until associated with the discipline, for example, thinking like a historian (Bearman et al., 2017). Assessment conceptions and practices are influenced by the disciplinary culture (Postareff et al., 2012), a culture which needs to be explored particularly when supporting dialogue around expectations of student learning Fuller et al., 2015). In the general education context, Rohrbacher (2017) found that assessment practices were robust in one university where general education was designed and run along the lines of a disciplinary department.

However, there was some evidence that assessment conceptualisations did not necessarily depend upon disciplinary context (Onalan & Karagul, 2018). Goos et al. (2011) suggest that the tacit knowledge and local influence of programme and school cultures may actually impact assessment conceptualisation more than that of the discipline itself. Halinen et al. (2013) found that more complex assessment conceptions and practices were not influenced by the disciplinary context of their participants but rather, emerged when teachers focused on student learning.

4.6.3 Summary - Place and Positionality

Within this theme, two key subthemes were identified relating to the institutional and disciplinary contexts respectively.

The ***institutional culture*** of a HEI impacts on and is impacted by assessment. Institutional policies act as a catalyst for assessment innovation and change, influencing individual and group practice. The role of those leading assessment within the institution is particularly important in enabling assessment development, which is most effective at a disciplinary level. However, HEIs are generally most concerned with summative assessment, grading and assessment procedures which do not enable comprehensive assessment practice and innovation. Traditional practices persist including fear of non-compliance and submission of assessment information at a time which does not allow for reflection and revision. Identifying in-built negativity and institutional barriers is a first step in developing assessment practices. The institution needs to view assessment as central to its pedagogical mission.

The impact of ***disciplinary culture*** on assessment practices emerged as a strong subtheme also. While those teaching in HE may be exposed to a range of assessment practices, the disciplinary context may limit assessment perspectives, maintain a status quo and deepen the disconnect between assessment practices and theory. The perspectives of individual teachers may be further limited depending on how the culture views their role in terms of assessment and other elements of pedagogy, militating against collaborative practice with colleagues and therefore limited exposure to potential change, innovation and so on. How students are viewed within a disciplinary context also impacts assessment practices and design. However, because of the reality of the day-to-day disciplinary engagement of teaching staff, it seems the development of assessment practice, change and innovation will work best if embedded at a disciplinary level to ensure it is relatable. The more confined programmatic context may provide assessment opportunities which supersede the disciplinary cultural context wherein programme culture and perceptions of students may influence the practices of individuals differently notwithstanding the wider cultural context. Systemic changes in the HE context, particularly the links with life-long learning and the workplace have changed some disciplinary cultural norms.

4.7 Perceptions, conceptions and beliefs about Process

This was the fourth code/theme identified at the third level stage of coding.

Table 4.7: *Perceptions, conceptions and beliefs of those teaching in HE in relation to the process of assessment*

Code	Studies
Assessment practices related to teaching	3, 4, 5, 15, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 36, 39
Assessment practices related to conceptions	3, 5, 6, 7, 8, 10, 11, 12, 15, 16, 19, 21, 22, 23, 26, 27, 28, 29, 30, 32, 33, 39
Rationale for assessment practices	3, 5, 8, 10, 15, 17, 19, 23, 25, 28, 30, 31, 32, 35
Range of assessment practices	2, 3, 5, 7, 8, 10, 13, 19, 21, 22, 23, 26, 28, 29, 30, 35
Assessment informs teaching	6, 8, 10, 15, 18, 20, 21, 22, 26, 27, 28, 30, 32, 37, 38, 39

Improvements associated with the assessment process	4, 6, 10, 12, 13, 15, 17, 24, 26, 31, 32, 35, 37, 38
Criteria and standards	1, 2, 3, 4, 9, 10, 11, 15, 16, 17, 19, 22, 23, 25, 28, 30, 31, 32, 33, 35, 37, 39
Designing assessment	2, 3, 8, 9, 11, 15, 19, 21, 22, 24, 25, 29, 31

4.7.1 Assessment practices related to teaching

Disconnect between assessment and teaching

Boud (2020) highlights two ways in which assessment is formally separated from teaching. Firstly, he outlines an initiative in Brunel University, London, where teaching is associated with FA only and all SA is managed by 'assessment units'. He also sees the programmatic approach to assessment as disaggregating assessment from teaching as summative assessment is associated with programme outcomes rather than individual module/unit outcomes.

When teachers have to make compromises with assessments, they experience contradiction between pedagogical ideals and the practice they were able to enact (Broughton et al., 2013). The association between assessment and teaching may be viewed across a spectrum from none to integral association (Mimirinis, 2019), with some teachers believing that assessment interferes with teaching (Munoz et al., 2012). Norton et al. (2013) asked their participants if they thought there was a separation between their teaching philosophy and their assessment practices. While 31% agreed with this statement, a further 57% were unsure. Even when assessment thinking and perceptions change, there may be no changes to teaching practice without experiencing dissonance (Offerdahl & Tomanek, 2011). Postreff et al. (2012) concur albeit in terms of changes in teaching not affecting assessment practice and suggest CPD programmes must explicitly address assessment as well as teaching and learning. One issue may be that assessment is more complex than teaching because of its 'double duty' and the higher levels of regulation applied (Reimann & Sadler, 2017). Wang et al. (2020) found that the less autonomous teachers felt, the less likely they were to engage with AfL practice as part of their teaching even when they believed those practices were important.

Alignment of assessment practices in relation to teaching

Sometimes, alignment of assessment and teaching practices manifests itself in the management of schedules to optimise feedback, workload and student learning (Bearman et al., 2017). While faculty may experience difficulty in conceptualising broader, programme level assessment, they are more comfortable and confident with assessment at modular/unit level because it is perceived as more related to what happens in the classroom (MacDonald et al., 2014). Some participants in Mimirinis et al.'s (2019) study saw the online environment as a natural facilitator of the alignment of assessment with teaching and learning, with active choices made by teachers in the design of assessment tasks; however, the authors conclude that overall, the separation of assessment from teaching and learning in online environments persists.

Assessment practices heavily aligned with teaching and learning appear to be quite complex (Reimann & Sadler, 2017). There is evidence that teachers believe their assessment practices influence their teaching in terms of reflection on practice, interacting with students and curriculum development (Rohrbacher, 2017). Conceptions regarding teaching and learning also seem to influence assessment practice (Tang & Harrison, 2011).

Research in the field of assessment tends to focus on specific facets but developing a holistic view of assessment is needed to clarify how teaching and learning can be improved (Taras & Davies, 2013).

4.7.2 Assessment practices related to conceptions

Categories of teachers as per beliefs

Two articles identified categories of teachers in relation to assessment beliefs. Day et al. (2019) roughly categorised teachers into two groups; those who did not demonstrate difference between their stated conceptions and practice and those who did demonstrate a misalignment between conception and practice, with those conceptions falling along the lines of reproductive and transformational. Halinen et al. (2013) identified three categories of teachers' assessment discourses: (a) those who spoke about assessment in terms of maintaining the status quo and advocate content-centred thinking, (b) those who evidenced awareness of using assessment to direct student learning and, (c) those whose discourse evidenced a learning-centred conceptualisation of assessment, characterised by a shared responsibility in the assessment process.

The alignment of assessment beliefs with assessment practices

The literature evidenced some mixed findings regarding the alignment of assessment conceptions and practices. There can be a disconnect between conceptions and practices (Fuller et al., 2015; Halinen et al., 2013; Norton et al., 2012; Postreff et al., 2012) which could be sometimes attributed to teacher understanding and competence, with some authors arguing that teachers' conceptions cannot be verified without actually viewing how they enact those practices (Day et al., 2019; Onalan & Karagul, 2018; Reimann & Sadler, 2017). Understanding and defining key terminology is necessary in order to conceptualise assessment (Cookson, 2018), with some confusion evident around specific terms such as formative and summative (Davies & Taras, 2016; Munoz et al., 2012) with formative aspirations manifesting ultimately as summative practices (Munoz et al., 2012). The perceived importance of some assessment procedures and the competency to enact them differed between teachers depending on experience (Quesada-Serra et al., 2016). Change can be small scale, particularly in relation to understanding, varying between teachers (Sadler & Reimann, 2018). Wang et al. (2020) found that teachers maintained a dominant role in the assessment process despite professing belief around the importance of developing learner autonomy and in feedback practices.

Conceptions and practices may not align due to external constraints (Day et al., 2019) leading to a low level of adoption of desired practice rather than resistance arising from principle (Lilley et al., 2011). These may be perceived constraints of an assessment tool (Broughton et al., 2013); departmental or institutional policies relating to percentage of students passing a course (Fan et al., 2017); lack of time and scalability (Ippolito & Pazio, 2019), leading to teachers reverting to practices which align better with contextual expectations (Wang et al., 2020). In addition, the common objective use and application of assessment outcomes which arise from a subjective process can make assessment problematic (Rohrbacher, 2017).

The references coded to 'characteristics of aligned assessment' focus mainly on the alignment of higher order thinking with high level application in the development of assessment, rather than an evaluation of alignment *per se*. Once convinced of the value of an assessment approach, teachers challenged their own beliefs and habits and found ways to overcome previously perceived barriers to enable themselves to enact their beliefs (Ippolito & Pazio, 2019). Increased understanding of the nature of knowledge and understanding enabled teachers to make informed decisions about the type of assessment they wished to use (Lilley et al., 2011). Sometimes, it can be difficult to separate conceptions and practices (Reimann & Sadler, 2017).

While most of the literature considers the impact (or not) of conceptions on practice, that impact may be viewed in reverse also. Teachers' beliefs about assessment may shape practice but by the same token, engaging in assessment practices and design may also shape practitioners' conceptions of assessment (Bearman et al., 2017). Experimentation with specific practices may provide an opportunity to reflect on existing beliefs (Offerdahl & Tomanek, 2011; Reimann & Sadler, 2017; Sadler & Reimann, 2018).

4.7.3 Rationale for assessment practices

Student learning underpins rationale for assessment practice

Teachers used the e-system for aspects of learning but had embraced other assessment approaches to address the assessment of conceptual understanding (Broughton et al., 2013). Rohrbaher (2017) found that teachers used formative assessment to support learning and summative assessment to judge and classify student learning.

Teachers who view the responsibility of assessment as solely theirs tend to favour assessment which reproduces information, sometimes even withholding information relating to rubrics (Halinen et al., 2013). How teachers view students also impacts their beliefs in relation to feedback (Tang & Harrison, 2011). Further, assessment practices may be dictated by a desire to avoid cheating and plagiarism (Norton et al., 2012) or a fear of developing assessment approaches which would allow students to pass without actually learning much (Norton et al., 2019).

Practices are often underpinned by teachers' desire to support and/or improve student learning (Knight et al., 2021), with teachers evidencing more transformational conceptions in relation to an ideal assignment rather than the one they are currently using (Day et al., 2019). Elshawa et al.'s (2017) study indicates that most participants used a variety of assessment methods and tasks to report grades with the majority negatively viewing reliance on one type of assessment only. Teachers who apply alternative, and perhaps more innovative, assessment practices want to guide students rather than test their knowledge; however, aligning course objectives and teaching with assessment seemed to challenge most teachers (Postreff et al., 2012).

Rationale for assessment practice is contextual

Change in assessment practice often comes about as a result of an environmental influence (Bearman et al., 2017) reward structures for innovation (Rohrbacher, 2017). However, inertia may exist for the same reason with teachers maintaining practices that they inherited (Broughton et al., 2013) or because they view the curriculum and therefore, student learning as unchanging thereby requiring no changes to practice (Halinen et al., 2013). The demands of a profession may also lead to assessment practices which are believed to align (Postreff et al., 2012).

Rationale for assessment practice is based on teacher characteristics

Sometimes, the low adoption of an assessment approach may be due to practical implementation issues such as know-how, time and so on (Lilley et al., 2011). Teacher beliefs relating to student learning also impact on rationale for assessment practices (Norton et al., 2012; Postreff et al., 2012). Reimann and Sadler (2017) found that an individual may hold more than one conception of assessment, making it difficult to categorise teachers as per specific conception types and highlighting the complexity of assessment thinking and practice. An individual's pace of engagement with assessment change is often iterative, trying something new, reflecting and evaluating and then moving it forward in the next iteration of the assignment (Rodríguez-Gómez et al., 2016).

4.7.4 Range of assessment practices

Assessment design decisions

Educators designed form and content of tasks, taking actions viewed as essential for design and implementation of a task such as marking/feedback processes e.g. rubrics, timing, moderation, range of feedback options including peers, and ensuring assessment aligned with teaching (Bearman et al., 2017). Teachers may design assessments to ensure all aspects of learning are addressed (Broughton et al., 2013) but may rely somewhat on traditional tasks (Elshawa et al., 2017; Norton et al., 2012). Davies and Taras (2016) noted that teachers can explicitly consider formative assessment in their design decisions. Decisions around assessment tasks may also be dependent on their perceived impact on grades (Lilley et al., 2011). Postreff et al., (2012) found that 8/28 of their participants used 'alternative' assessments and most of these could justify their choices which centred around their focus on assessing students' understanding of the 'big picture'. Teachers may not assess for learning at the beginning of a period of instruction to establish what students already know (Quesada-Serra et al., 2016). Teachers also make decisions about the level of detail possible in terms of feedback arising from assessment tasks (Tang & Harrison, 2011).

Teachers' conceptions of assessment choice and design

Teachers may be reliant on their own experiences as students and/or from courses they contribute to (Day et al., 2019). Teachers may also believe that a range of assessment tasks must be used to ensure all skills are assessed (Elshawa et al., 2017). Even when teachers change from more traditional to more alternative assessment tasks, they are more confident in naming the traditional tasks compared to the newer ones (Munoz et al., 2012) and indeed, may be unaware of the possible range of assessment tasks which could be utilised (Norton et al., 2012). Even when using a range of assessment approaches, teachers may continue to articulate reproductive conceptions of assessment (Postreff et al., 2012). Teachers also reported limited skills in monitoring progress in-class in terms of AfL (Offerdahl & Tomanek, 2011). Conceptions of assessment may be related to the different practices used as much as the other way around (Reimann & Sadler, 2017).

4.7.5 Assessment informs teaching

Thinking around the purposes of assessment changed during the 1990s to focus on using assessment for improving teaching and learning, moving from a final, uni-directional end-product to an iterative, reflective practice; an extension of FA known as AfL (Cookson, 2018). Evidence from a number of the studies included in this scoping review referred to participants believing that assessment should be used to inform teaching (Day et al., 2019; Elshawa et al., 2017; MacDonald et al, 2014; Mimirinis, 2019; Munoz et al., 2012; Offerdahl & Tomanek, 2011; Onalan & Karagul, 2018; Postreff et al., 2012; Reiman & Sadler, 2017; Rohrbacher, 2017; Wang & Hurley, 2012) in one way or another.

While the references above considered the general impact on teaching enhancement, there were some which referred to the improvement of teaching to enhance student learning (Elshawa et al., 2017; Halinen et al, 2013; Koh, 2010; Rohrbacher, 2017; Taras & Davies, 2017; Wang et al., 2020).

4.7.6 Improvements associated with the assessment process

Why focus on improving assessment practice?

Assessment hugely impacts the nature and quality of student learning (Boud, 2020) and innovation and improvement in the process are considered important (Rodríguez-Gómez et al., 2016). The perceived benefit to teaching and learning motivates lecturers to engage in assessment development

(Wang & Hurley, 2012). Assessment can be seen as a tool for developing students' expertise (Halinen et al., 2013).

How are assessment practices improved?

Improvement in assessment practice is a process which involves changing negative culture (Fuller et al., 2015). Creation of a learning community where evidence-based practice can be shared facilitates improvement in assessment (Gilles et al., 2011). A professional development programme also impacts teacher belief and competence, thereby encouraging and developing improvement in assessment practices (Norton et al., 2013; Rodríguez-Gómez et al., 2016). Teachers need to engage with analysis of and reflection on data arising from assessment tasks with a view to improving practice (Rohrbaher, 2017), with faculty desiring to improve their own practice more than complying with institutional culture (Wang & Hurley, 2012).

4.7.7 Criteria and standards

Teacher engagement with standards and criteria

It can be difficult for some teachers to write criteria because it highlights the underlying differences in assumptions, perceptions and expectations (Brown & Deignan, 2016). However, others indicate positivity in the development and use of rubrics (Elshawa et al., 2017). Engagement with criteria and rubrics may differ within teaching teams with some believing they should move beyond the guide to ensure in class participation and attendance is acknowledged while others believe that assessing students without a clear rubric and criteria is not objective (Fan et al., 2017). Even when criteria exist, teachers may still assess based on how they 'feel' about an assignment and often cannot describe assessment criteria Postreff et al., 2012), while others dismiss the use of rubrics and moderation because they believe they already know what they need to engage in the assessment process effectively (Tang & Harrison, 2011).

While some teachers believe that students should be exposed to multiple types of assessments to ensure they reach a certain standard (Fan et al., 2017), others fear moving away from traditional types of assessment because it may endanger equality (Halinen et al., 2013). Objective, knowledge-based testing is sometimes favoured for formative assessment purposes or low-stakes summative assessments (Lilley et al., 2011).

Teachers are enabled to try new assessment approaches, including use of criteria and marking schemes when explicitly modelled (Ippolito & Pazio, 2019; Rodríguez-Goméz et al., 2016). Participants in Reimann and Sadler's (2017) study were able to explain and justify their use of criteria in the context of their assessment intentions and learner engagement; the evolutionary nature of practice evident in terms of development of and engagement with criteria and rubrics evident as teachers trialled their use (Sadler & Reimann, 2017).

Student engagement with standards and criteria

Students need to be able to make judgements about their own work and that of others so that they can reach the highest standards (Boud, 2020). Teachers have indicated that clarifying criteria and expectations at the beginning saves a lot of time later on in a module/programme (Bearman et al., 2017) and allows students to self-assess to gauge if they are meeting those expectations (Knight et al., 2021). Participants in Adachi et al's., (2018) suggested that they found it difficult to teach students how to better understand and engage with criteria and that self and peer assessment were good ways to develop that understanding. Introducing peer and self-assessment can be difficult for teachers initially, with some finding it disruptive and not helpful (Rodríguez-Goméz et al., 2016). However, while some teachers may be willing to clearly communicate standards and criteria to students, they are less willing to allow their involvement in the development of criteria and rubrics (Elshawa et al., 2017).

However, teachers (mainly in the 'hard' sciences) may also believe that students are more likely to challenge grades if they have too much insight into the marking system (Norton et al., 2012). Students may also manage to reach assessment expectations without actually learning anything (Norton et al., 2019).

4.7.8 Designing assessment

Enablers of assessment design

Assessment design is complex, particularly at programme level, and those in leadership positions need to meet with individual staff to ascertain and refine assessment processes (Barton et al., 2020). Some participants in Deignan and Brown's (2016) study believed that poorly considered approaches to design on the part of colleagues should not inhibit others from being innovative in approach.

Some make design changes based on previous experience and observation of students' engagement in and response to the same or similar type assessments; from their own experiences as undergraduate students themselves; focusing on disciplinary examples of evaluative judgement; and, trying to reconcile the inevitable tensions inherent in any assessment design (Bearman et al., 2017). Belief about student learning may also lead to decisions such as providing multiple means of assessment to reveal and support student learning (Fan et al., 2017; Halinen et al., 2013; Norton et al., 2019). The online environment is believed to enable the use of assessment for formative purposes especially (Mimirinis, 2019).

Assessment design and change appear to be iterative, adapting over time to constraints, conflict between personal and contextual beliefs revealing strategies such as keeping the head of department informed, explicitly mapping the assessment with the programme framework and ensuring the right teaching team was available (Bearman et al., 2017). Professional development appears to enable assessment design (Norton et al., 2013).

Challenges of assessment design

While exposure to a range of disciplinary assessment types and approaches may positively impact an individual's assessment design, it may also limit their ability to see beyond that experience (Bearman et al., 2017). Fan et al. (2017) found that while some of their participants were eager to use multiple means of assessment, others expressed concerns relating to fairness and subjectivity. Perception of students being able to pass an assessment without actually learning anything may also be an inhibiting factor (Norton et al., 2019).

Practical constraints such as time, cost and workload may also inhibit willingness to engage in assessment design and innovation (Norton et al., 2019). Competence and skills may also be an inhibiting factor, particularly in terms of actively involving students in assessment design and development (Quesada-Serra et al., 2016).

4.7.9 Summary – Process

The pattern of key characteristics arising in relation to teachers' assessment conceptions and beliefs and the assessment process are as follows:

How ***assessment practices relate to teaching practices*** may be considered in terms of both disconnect and alignment, and viewed across a spectrum. Assessment practices may be separated from teaching formally by vesting responsibility for each in the hands of different individuals or units. Indeed, even when assessment is viewed at a programmatic level, it may be separated from the teaching process because the focus is generally on the use of summative assessment to assess intended programme learning outcomes rather than those at a modular level. Even when teachers' assessment thinking changes, it may be difficult to translate that into changes in teaching practice. One reason for this may be that the assessment process is complex because of its double duty in terms of supporting learning as well as certifying understanding. Moreover, the assessment process tends to attract more regulatory oversight institutionally. However, alignment of assessment and teaching practices may be enabled if explicitly considered in the management of module or programme schedules. In particular, the alignment of assessment and teaching practices may be evident at modular level because teaching is perceived more in the context of an individual's module rather than the programme overall. In addition, it may be the case that assessment practices influence teaching practices because they lead to reflection, interaction with students and consideration of curriculum development.

Teachers can be categorised in relation to assessment beliefs, in terms of those whose ***assessment practices and conceptions*** align, do not align or may be categorised along a more nuanced continuum from content to student centred thinking. Beliefs about assessment generally may also align with choice of modality. The disconnect between beliefs and practices may relate to competence on the part of the teacher; perhaps cannot be well understood without observation and deeper interrogation of practice; and may vary with experience and level of importance attributed to enacting them in the first place. Understanding key terminology and its implications in practice is also necessary for assessment conceptions to be enacted in practice. External constraints may negatively impact enactment of conceptions in practice. Once convinced of the value of an assessment approach, teachers challenge their own beliefs and find ways to change practice. Engaging with assessment practices may shape assessment conceptions and belief, with experimentation with an assessment practice enabling reflection and change in assessment conception.

The ***rationale for assessment practices*** may be associated with how teachers view students in terms of assessment responsibility or lack thereof. Assessment practices underpinned by a desire to support student learning tend to be more innovative and transformational. Changes in assessment practice may be contextual such as a change in curriculum or personnel. Adoption of assessment practices may be due to individual teacher characteristics in terms of competence, multiple conceptions some of which compete with others, and iterative changes in thinking and behaviour.

Design decisions may be taken in terms of each step in the process; in consideration of impact on learning; perceived impact on grades; amount of feedback possible. Design conceptions may develop from prior experiences and overall, rely on more traditional assessment methods and be unaware of alternatives. The ***range of assessment practices*** used may shape conceptions as much as vice versa.

The perceived impact of assessment on student learning can be the impetus for ***improving practice***. Assessment practice can be improved by addressing institutional culture, PD, and engagement with data arising from the assessment process.

Engagement with the development of ***criteria and standards*** as part of the assessment process varies with some finding it very difficult because it reveals underlying assumptions and beliefs while others are positive about the development of criteria and rubrics. Even when criteria exist, subjective judgements may be utilised based on how the teacher 'feels' about the assignment or they may be completely rejected because teachers believe they know what they need to engage with this part of the assessment process. Evaluating achievement of criteria may lead some to expose students to a multiplicity of assignments.

4.8 Perceptions, conceptions and beliefs about Professional Development

This was the fifth code/theme identified at the third level stage of coding.

Table 4.8: *Perceptions, conceptions and beliefs of those teaching in HE in relation to professional development in assessment*

Code	Studies
Nature of professional development	2, 3, 4, 11, 12, 13, 15, 16, 20, 22, 23, 24, 25, 26, 28, 29, 31, 32, 33, 34, 35, 36, 37, 39
Changing practices and conceptions	1, 3, 4, 5, 9, 13, 14, 15, 16, 20, 22, 24, 25, 26, 28, 29, 30, 32, 33, 35, 36, 38, 39
Scholarship of assessment	3, 4, 6, 9, 12, 13, 16, 20, 24, 25, 29, 32, 33, 36, 37, 38

4.8.1 Nature of professional development

Professional development builds an assessment identity

Ippolito and Pazio (2019) suggest that their participants saw themselves differently and were perceived differently by others in their disciplinary community as a result of their engagement with PD, as educational experts and change agents as well as disciplinary experts. Investment in PD in assessment by the institution, can enable teachers to internalise assessment as their own responsibility (Munoz et al., 2012) and create an institutional assessment identity (Fuller et al., 2015). Those teaching in HE usually identify as scholars, so institutional support of the scholarship of assessment may also enhance the assessment identity of academics (MacDonald, 2014).

Professional development enhances assessment competence

Some authors highlighted the positive impact of PD on assessment practice competence generally (Gilles et al., 2011; Quesada-Serra et al., 2016) and on teachers' perceptions specifically (Rodgríguez-Goméz, 2016). Most of the references to the enhancement of assessment competence related to specific skills and facets of assessment, for example, constructive alignment (Barton et al., 2020); ethics in assessment (Fan et al., 2017); AfL (Halinen et al., 2013; Wang et al., 2020); marking practices (Norton et al., 2019); design, student participation and assessment literacy (Rodriguez-Gómez et al., 2016). However, Rodriguez-Gómez (2016) also found that not all assessment skills were enhanced following PD opportunities i.e. monitoring of student progress remained unchanged in their study. Teacher education is the main catalyst for pedagogical change including assessment practices (Munoz et al., 2012), with formal PD seemingly impacting assessment practice to the highest degree (Halinen et al., 2013; Norton et al., 2013).

Types of and approaches to professional development

Some studies outlined the role of peers in PD. Those who had already engaged with PD opportunities were referenced as particular sources of and influences on learning (Bearman et al., 2017) with the possibility of cascading knowledge to colleagues (Ippolito & Pazio, 2019). Conversations with colleagues, either informally (Bearman et al., 2017; Norton et al., 2012; Rohrbacher, 2017) or formally as part of a formal PD course (Munoz et al., 2012) or a community of practice (Wang et al., 2020), were also seen as valid and important types of PD.

Reflection on practice was also identified as impacting assessment practice. Allowing those teaching in HE to work out challenges rather than providing answers enables leaders to create a culture of assessment (Fuller et al., 2015). Formal PD opportunities which build in reflection on assessment practices enable participants to consider ideas not immediately perceived as relevant to their context (Ippolito & Pazio, 2019) and become aware of their own assessment beliefs (Munoz et al., 2012). A new innovation such as the introduction of a new assessment tool can create the opportunity for reflection on practice which enhances development of assessment thinking and skills (Offerdahl & Tomanek, 2011), although, on occasion, disappointment in an assessment innovation may have the opposite effect by creating self-doubt and therefore limiting such development (Wang et al., 2020).

Experiencing the assessment process as a student on a formal PD programme enabled those teaching the programme to model desired assessment practices while those participating in the programme were enabled to reflect on their own learning (Ippolito & Pazio, 2019), with most impact on practice evident on completion rather than during the course (Norton et al., 2013). Changes in understanding of assessment tends to be stable following PD while changes to practice are more common (Sadler & Reimann, 2018).

Barriers to professional development

While HEIs often establish dedicated units to support PD for staff, those working in these units face multiple contexts, precluding a single solution (Gilles et al., 2011); if this complexity is not acknowledged by academic developers, the effectiveness of their support may be compromised (Taras & Davies, 2017). This difficulty may be increased because of a fundamental confusion about assessment experienced across the HE sector, including by those leading PD and innovation in the field (Taras & Davies, 2013). Moreover, while opportunities for PD in assessment may be provided, lack of time and workload (Norton et al., 2012) as well as lack of institutional recognition for effort invested in the PD process (Rohrbacher, 2017) compromise engagement. This may be compounded by resistance on the part of some staff who do like being told how to execute certain elements of assessment such as marking and grading (Tang & Harrison, 2011). When HE teachers feel removed from student learning and the development of the assessment process they are also less inclined to engage in reflection on the assessment process (MacDonald, 2014). The outcomes of PD opportunities are not consistent across participants, with considerable variation in nature and scale of changes to practice (Sadler & Reimann, 2018).

4.8.2 Changing conceptions and practices

Local level changes are impetus for change

As changed practices become normalised, the context changes which, in turn, influences changes in attitudes and beliefs (Adachi et al., 2018). A local impetus for change may include inter alia a new programme chair, programme review, adoption of an entirely new subject which is then impacted by environmental influences (the context of the change) and professional influences (the skills and beliefs of the people involved) (Bearman et al., 2017). Local requirements to change provide opportunities for dialogue leading to reform (Rohrbacher, 2017); feedback from colleagues can also precipitate change (Munoz et al., 2012). The social nature of learning applies at the local level in terms of those teaching in HE responding to or initiating change in assessment beliefs and practices (Bearman et al., 2017). However, the local context may also stifle assessment innovation if over-reliant on tacit, accepted knowledge maintaining a status quo (Goos et al., 2011; Norton et al., 2019). If teachers see value in assessment in terms of student learning, they will balance this with the cost of time and energy invested in changing practice (Macdonald et al., 2014).

Wider context is impetus for change

In the Australian context, the systemic acceptance that assessment frames student learning and achievement, precipitated a national focus on principle-based rather than rule-based assessment policies, although the application of these policies differs across universities (Boud, 2020). Institutional change may also be precipitated by reaccreditation processes (Rohrbacher, 2017) and institutional policy (Munoz et al., 2012). Norton et al. (2013) found, to their surprise, that participants in their study did not feel that external benchmarks negatively impacted or inhibited their assessment practices. However, even when some changes are made, some practices may remain fixed due to institutional inertia and habit (Boud, 2020) or acceptance of disciplinary accepted and widely practiced systems (Norton et al., 2019). Provision of institutional support was perceived to enable assessment innovation (Deignan & Brown, 2016; Fuller et al., 2013; Halinen et al., 2013), with Rohrbacher et al. (2017) recommending that institutions establish structures whereby faculty should be formally supported, recognised and rewarded for their work in this field.

Individual knowledge, awareness, competence, understanding influences assessment change

Regardless of the impetus for change, individual teachers change assessment thinking and practice at different pace and to different levels (Sadler & Reimann, 2018). Some see change in assessment as a challenge while others see it as something to be negotiated and are prepared to learn from colleagues

and take a risk in embracing new ideas (Bearman et al., 2017). Changing assessment methods is complex, particularly as terminology changes over time and carries different meanings for individuals (Deignan & Brown, 2016). Teachers may be fearful, doubt themselves and experience disappointment (Wang et al., 2020) so it is important that new ideas and innovations work so that teachers experience success to allay those fears (Quesada-Serra et al., 2016). Skills need time to develop also (Broughton et al., 2013).

The impetus for changes in individuals' beliefs and practices may vary. Sometimes, when teachers experiment with new tools or ideas they begin to reflect on their assessment practices more deeply, leading to reconceptualisation of assessment practices (Offerdahl & Tomanek, 2011). Feedback and learning from colleagues may also influence assessment conceptions and practices (Bearman et al., 2017; Munoz et al., 2012). Perceived limits of processes or tools already in use may be the foundation for change (Broughton et al., 2013). Explicit PD in assessment practices may also change conceptions. Participants in the Gilles et al. (2011) study unanimously agreed that effective assessment requires a basic level of preparation and competency, while 55% of participants in Norton et al's. (2019) study changed their views on assessment following engagement with formal PD. However, personal professional knowledge and experience directly impact assessment practice (Goos et al., 2011) and the construction of understanding is different for different individuals (Reimann & Sadler, 2017). Therefore, pre-existing conceptions of assessment need to be taken into account when providing support or PD (Halinen et al., 2013; Munoz et al., 2012). Ippolito and Pazio (2019) found that modelling the assessment practices in the delivery of a PD course allowed participants to engage with the interplay of theory, principles and practice of assessment, thereby changing their frames of reference. Understanding is not just about knowledge and beliefs but also about enactment of practice (Reimann & Sadler, 2017). Teachers need to see the relevance of assessment practices if time and energy is to be invested; the particular context of general education modules whereby teachers felt quite removed from the overall assessment process (MacDonald et al., 2014) illustrates the impact of disconnect on beliefs and engagement.

The difference in changes in assessment thinking and practice does not just differ between individuals; within individual teachers, there may be some dissonance also, whereby changes in practice may be more evident than changes in understanding which remains stable (Sadler & Reimann, 2018) or changes in assessment practices which do not impact change or improvement in teaching (Ippolito & Pazio, 2019). The focus on particular aspects or characteristics of assessment causes compartmentalisation in thinking and disjointed practices, whereas a comprehensive overview of assessment is necessary to identify the path to improvement of teaching and learning (Taras &

Davis, 2013). Furthermore, consideration needs to be given to scaling up changes in conceptions and practices from the individual to the organisation (Bearman et al., 2017) which may be enabled if systems are in place for cascading assessment conceptions and practices to colleagues (Ippolito & Pazio, 2019).

Assessment change is evolutionary

Changes in assessment practice are often iterative, developing over time and building on a sequence of activities such as adapting to environmental constraints, strategising change approaches and influencing colleagues (Bearman et al., 2017). However, some assessment practices are more difficult to implement than others so iteratively moving towards desired practice allows for smaller success which encourages and motivates further changes (Quesada-Serra et al., 2016).

Assessment thinking can move from the focus on teacher activities to consideration of how students learn (Offerdahl & Tomanek, 2011). However, assessment practices can change slowly (Postreff et al., 2012) particularly in relation to understanding more than practice (Sadler & Reimann, 2018). Wang et al. (2020) found that more experienced teachers were slower to change thinking and practice, possibly because of emotional exhaustion and therefore, less likely to embrace large-scale change which may precipitate feelings of self-doubt.

4.8.3 Scholarship of Assessment

Theory versus practice divide

While some of those teaching in HE may be aware of or may agree that scholarship on assessment is important, most do not refer the literature at all (Bearman et al., 2017; Taras & Davies, 2013; 2017) with many assessment practices not supported by scholarship (Boud, 2020; Deignan & Brown, 2016; Fuller et al., 2015). This can result in teachers using problematic frames of reference for their work although exposure to evidence in education during engagement in PD can increase understanding (Ippolito & Pazio, 2019). Norton et al. (2013; 2019) state that participants' reported practices that generally seemed to align with the principles of assessment found in the literature. There is little collection of data regarding assessment in HE (Gilles et al., 2011). The HE sector does not generally seem to draw on the learning from the compulsory sector (Boud, 2020).

Nature of assessment literature

Cookson's (2018) article essentially traces the literature on assessment across decades with the main finding being that difficulties relating to terminology and nomenclature are ongoing and discord and confusion persists, probably because the field is so broad that even those to the fore in assessment scholarship are lost in a sea of research noise. This difficulty may be compounded by the lack of clear, actual examples of particular approaches in institutional, programmatic and domain levels (Quesada-Serra et al., 2016) and inherent contradictions within the literature (Ippolito & Pazio, 2019). Even in the literature included in this scoping review, there was evidence of author confusion in terms of terminology and meaning. For example, the participants in Davies and Taras' (2016) study found it difficult to distinguish between formative and summative assessment processes which the authors thought might have contributed to their discrepancies in understanding. However, this may have been as a result of the authors viewing that conflated understanding through a lens which does not adequately acknowledge the overlapping elements of both purposes of assessment.

Research may need to move beyond the reproductive versus transformational and teacher versus student centred to investigating the complexity of assessment thinking, practice and development over time (Sadler & Reiman, 2018). There is also a perception that assessment expertise is within the realm of a few experts and journals whereas in fact, every HE teacher is involved in assessment (Taras & Davies, 2013). Part of the academic's identity is that of scholar so considering the role of assessment in scholarship may increase engagement and attainment (MacDonald et al., 2014; Wang & Hurley, 2012). Scholarship in the field of assessment should be encouraged, supported and rewarded (Rohrbaher, 2017).

4.8.4 Summary - Professional Development

The pattern of key characteristics arising from the scoping review in relation to PD are summarised below:

A range of underlying features of the ***nature of professional development*** were extrapolated from the review. PD builds assessment identity, confidence and competence whereby HE teachers who have engaged with PD are perceived differently by their peers. However, PD outcomes may not be the same for all. Moreover, participants may be exposed to some elements of assessment but not all. PD needs to be related to the disciplinary field of participants so that they perceive the relevance to them. Assessment PD events need to unpack the beliefs of the participants to inform the teaching of those

running the programme. PD opportunities need to be in-depth to be effective and should include opportunities to reflect on practice and to experiment with new tools and ideas. While PD changes practice, changes to assessment understanding may be less developed. Specific units in HEIs which are charged with the job of providing PD face a range of challenges including resistance from staff to engage; provision of PD across multiple contexts; and enabling individual development to make an impact at institutional level.

Enabling ***changes to assessment conceptions and practice*** comprises a number of considerations. Local level changes are often the impetus for changes in assessment practice which, in turn, change the context and therefore, beliefs of those in that context. However, changes at local level may also stifle innovation, retaining instead the status quo. Systemic changes can impact assessment conceptions and practices also including changes nationally, reaccreditation or new institutional policies. The HEI can enable change but assessment needs to be recognised as a focus for change first. Individual assessment change happens at different rates regardless of wider, systemic influences, ranging from those who challenge, negotiate or embrace change. Confused terminology and fear of failure hinder willingness to engage with assessment change. However, experimentation with new ideas, reflection on existing or new practices, exposure to expertise and views of colleagues and engagement with PD all positively influence assessment conceptions and therefore, practices. Understanding is slower to develop, requiring knowledge, belief and the ability to enact both. Potentially fragmented foci in elements with influence conception may lead to the maintenance or development of a compartmentalised view of assessment without understanding the bigger picture.

Most HE teachers do not refer to the ***scholarship of assessment*** to inform their practice, even if they believe that it is important to do so. Further, assessment does not seem to provide a strong focus for scholarship in the HE pedagogical sphere. Research literature arising from compulsory education does not seem to be used to inform practice in the HE sector.

4.9 Discussion

The overall aim of this study was to explore pedagogy as craft (Nind et al., 2016) specifically in relation to assessment beliefs of those teaching in HE. The question guiding this scoping review was *What patterns can be found in international literature on assessment beliefs of those teaching in HE?* Scoping reviews are descriptive by nature (Arksey & O'Malley, 2005) and that characteristic is somewhat evidenced in the preceding sections of this chapter albeit that the creation of the 5Ps

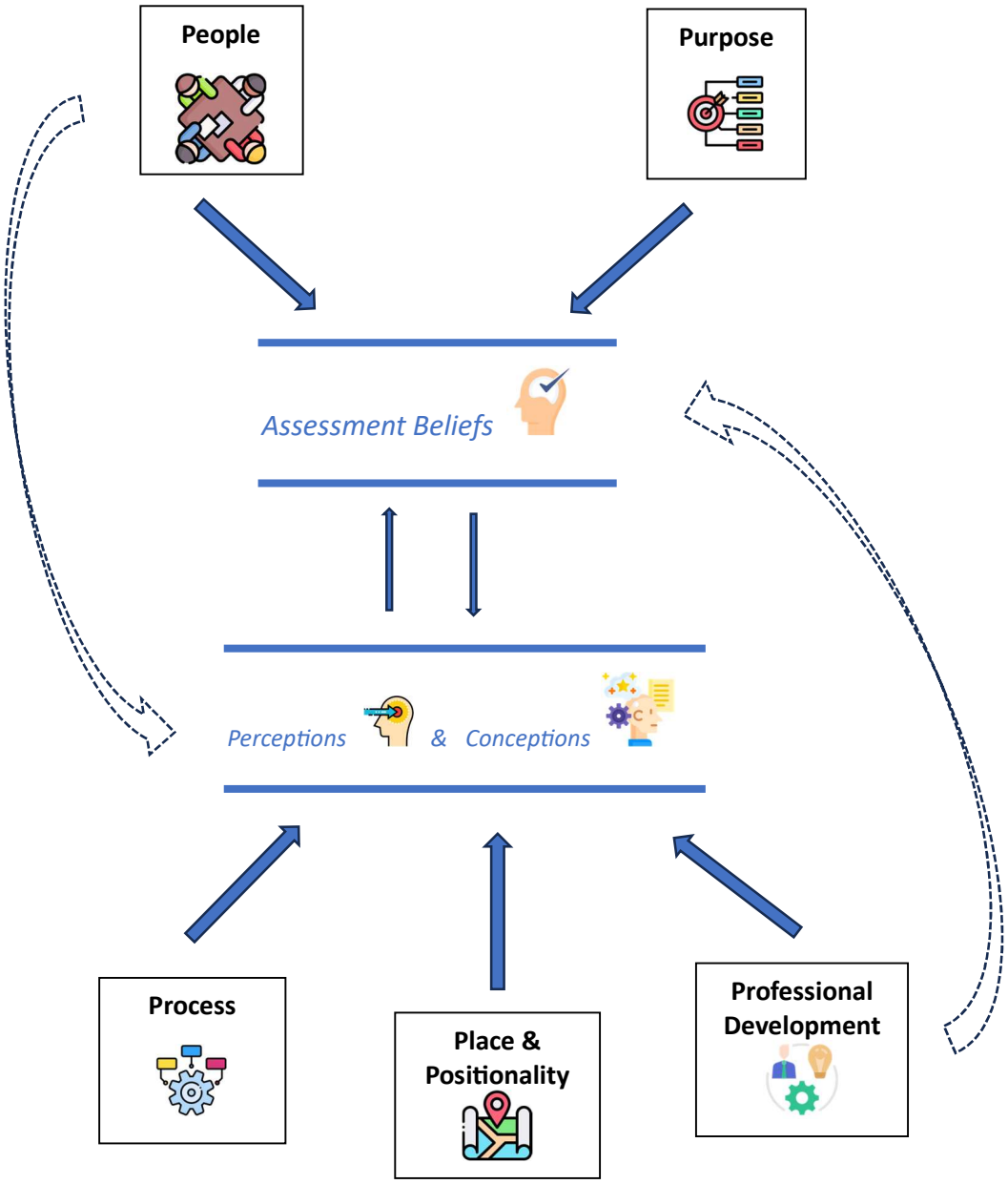
framework was an attempt to move from synthesis to analysis. Certainly, the review went beyond the original content to allow translation of concepts across the included studies (Thomas & Harden, 2008).

The scoping review generated very large quantities of data, some of which has been reported upon herein. The *5Ps framework* is not linear and does not develop an iterative argument but rather outlines the "lay of the land" (Colquhoun et al., 2014, p.1292) regarding assessment beliefs of those teaching in HE. However, while the data is voluminous and broad, there are some overarching key points which can be forefronted.

4.9.1 Patterns arising from higher education assessment belief research

The most evident patterns of beliefs arising from the studies included in the review resulted in the *5Ps framework*. The data analysed were the results, discussion and conclusion sections of the studies, therefore, the beliefs of study participants had already been examined by the authors who already extrapolated implications in the specific contexts of their study and so, my thematic synthesis (Thomas & Harden, 2008) was intended to draw those insights together regardless of the individual contexts upon which the studies were based. The *5Ps framework* reveals the layered elements of the assessment process of which teaching academics possess beliefs which are informed by and, in turn, inform practice. Two elements of the framework relate to beliefs of those teaching in HE - (a) to the people centrally involved in the assessment process i.e. staff and students and (b) to the purpose of assessment. The other three elements of the framework relate more to factors which may influence beliefs i.e. (c) assessment processes, (d) context in terms of place and positionality and (e) professional development. Of course, methodological decisions taken to include and/or exclude data have impacted this framework and it is likely that if the data are revisited, the existing patterns may be extended, or the range of patterns increased. However, the existing framework provides a basis upon which to conduct further research in an informed manner comprising breadth as well as depth.

Figure 4.1 *Visual representation of the overall findings of the scoping review – the 5Ps framework (figure provided again for reference)*



4.9.2 Inhibitors and enablers of effective assessment practice

The most fragmented patterns emerging from coding the data related to beliefs about the purpose of assessment which mirrors the literature wherein different academics in the field view purpose of assessment from a range of perspectives (Biggs & Tang, 2011; Carless, 2015; McConologue, 2020; Sambell et al., 2017). Therefore, it is hardly surprising that the assessment process revealed some level of fragmentation also in the pattern emerging as assessment practices are likely chosen depending on the purpose the HE teacher perceives to be central in terms of gauging understanding.

Another challenge to effective assessment is the lack of recognition of and regard for evidence-based practice systemically. There is a significant amount of evidence to show that those teaching in HE hold beliefs which align with the recommendations within assessment literature but do not feel confident or competent to enact them. That disconnect between belief and practice is a key finding because it provides a clear focus of further research to determine how that disconnect might be meaningfully addressed. Having said that, assessment literature itself can be broad and focus on 'small' contexts in terms of location, learning context and numbers of participants for example. The scoping review itself epitomises the spectrum of foci albeit all included articles related to assessment belief. However, it was also evident that the act of engaging with new ideas and innovations provided an opportunity for those teaching in HE to reflect on their assessment generally; the experience opened a door to new thinking and revealed an aspect of pedagogical practice which perhaps had not been attended to previously. Reflection and dialogue seem to be two processes which positively impact assessment belief and practice. Moreover, peers who are viewed as assessment leaders or experts garner the attention of those teaching in HE and influence them to reflect on and develop their own assessment practices.

Leading on from that, the inclusion of students as partners in the assessment process might be enabled although, that may take some teachers time to reach a level of competence to do that well. The teacher is the lynchpin in enacting the alignment of assessment with other aspects of the pedagogical endeavour, so they need to be supported to enhance necessary skills.

The institutional context can inhibit effective assessment practice. Even when individuals or groups enact innovative practices, their impact is limited if the institutional context is not encouraging and

supportive of such work. Further, institutional policies and procedures may be in tension with effective assessment practices in terms of procedures for developing programme or module curricula and retention of grading and administrative systems which hark back to an institutional emphasis on comparison of student learning rather than support of learning. However, the institution can also be a very effective enabler of high-level assessment practice if it explicitly considers the layered realities of the assessment process rather than just those which relate more to administration. This probably goes to the heart of the systemic disconnect between the Carless (2015) contention that assessment is at the heart of the HE pedagogical experience for both teacher and students and its invisibility in course documentation; lack of systemic use of assessment literature; and SoTL which tends to focus on narrow, disparate range of contexts with little attention to 'big' assessment.

4.9.3 Terminology regarding perceptions, conceptions and beliefs

Some authors in the field of assessment research have accepted that the term conception is most suitable for use when exploring teachers' related views and understandings (Barnes et al., 2015). As outlined in Chapter Three, following piloting of the search strategy for the scoping review, it became evident that other terms besides conception were also used. Therefore, when refining the search strings, a range of nouns were utilised which seemed to relate to or overlap with each other. The presentation of findings in this chapter uses terms such as perception, conception and belief interchangeably as they were used in the literature included in the scoping review. The use of the Thomas and Harden (2008) thematic synthesis approach to analysis of the data arising allowed for the identification and translation of key concepts across studies and the illumination of practices underpinning the beliefs espoused across the 39 included articles. As the key concepts, or themes, were developed and reported upon, the interchangeability of terminology seemed less clear with nuanced patterns of use surfacing. This led me back to the literature, with the particular purpose of delineating the nuanced characteristics of the terms perceptions, conceptions and beliefs. It was outside the scope of this study to go back to the data to reinterpret it in the context of each of these terms. However, going back to relevant literature to examine these terms has somewhat clarified my own understanding and will inform the next phases of the study. Hereafter is a short explication of the terms arising from that additional review of the literature. A more detailed synopsis of this work is included in Appendix O.

Perception can be understood as becoming aware of something directly through the senses (Audi, 2011) which may be viewed as portals to reality which can enhance or mislead development of knowledge (Nilsson, 2014) as the individual attaches meaning to information received (Slavin, 2018).

Perception can be viewed across a continuum from simple perception *of* … to perception of an object to *be* … to perception *that* an object has certain characteristics (Audi, 2011) with the latter two functions edging closer to conception. Following perception, it is possible that a process occurs whereby what is perceived is grasped and acknowledged (or not) by the individual leading to a conclusion or belief (Echevervi, 2013) indicating conscious awareness and an active thinking process (Millar, 2006) enabling the construction of a mental model. While perception may be the ultimate source of belief there also may be a disposition to believe and therefore a bias in conceptualising that which is perceived in the first instance (Audi, 2020). And the process is likely cyclical in that beliefs, in turn, influence perception if that perceived rings true in relation to already held beliefs (Nilsson, 2014).

Appendix O provides a more detailed consideration of this terminology leading to tentative definitions to be used in later phases of this research. At a broader level, deep exploration of these terms is warranted given their use across education not just in relation to assessment but all aspects of the educational field which may go some way towards addressing some of the issues raised in relation to the use of terminology in belief research referred to in Chapter Two (Fives & Beuhl, 2012; Fives et al., 2015; Levin, 2015; Skott, 2015). The untangling of these terms is potentially very important for PD in assessment in terms of conceptualising how PD opportunities should be designed.

4.9.4 Aspects not included in the reporting of the data analysis

As outlined in Chapter Three, codes which emanated from twelve journal articles or less were not brought forward to the next round of analysis due to time and workload constraints. However, sometimes focusing on what is not addressed can reveal interesting insights as much as that which is highlighted. Of particular interest to me was the lack of explicit focus on class size as a characteristic of teacher perspective on assessment; I expected that issue to be a core characteristic influencing beliefs about the possibilities and limitations of assessment in the HE space. Other codes which were not brought forward comprised explicit reference to the use of assessment data to inform HEI practices and policies; authentic assessment; assessment workload implications; the use of technology for assessment purposes; programmatic assessment; and the use of assessment for accreditation purposes. All of these were explicitly referred to in some studies, interpreted and coded by me as listed and all surprised me in the lack of attention and focus they received across the breadth of studies included in the review.

4.10 Summary

The aim of the scoping review was to synthesise the findings, discussions and conclusions of included articles relating to assessment beliefs across a range of disparate contexts in HE to excavate what lay beneath in an attempt to determine some overall patterns. The outcome of the review was the development of the *5Ps framework* which is constructed of the themes identified using the thematic synthesis approach of Thomas and Harden (2008). The framework addresses aspects of the assessment beliefs of those teaching in HE. It also addresses assessment practices as the authors' interpretations of their data provided insights into this aspect. The theme relating to *Purpose* was quite fragmented, with lots of purposes of assessment evidenced in the included data as well as the data which was not included in the reporting of the findings above. As this fragmentation became evident as the synthesis progressed, the use of the Brown (2006) TCoA-IIIA scale seemed an appropriate tool to use to establish a baseline in relation to the assessment beliefs of those teaching in HE in the Irish context, the results of which are presented and discussed in the following chapter.

Chapter Five: Findings – Survey

5.1 Introduction

Brown's (2006) TCoA-IIIA scale was used to address the question: *What are the beliefs of those teaching in Irish HE contexts in relation to the purpose of assessment?* The purpose of using this scale was to set a baseline of conceptions in the HE context as a foundation for later research and to complement the findings of the scoping review. The scale had to be adapted to suit the Irish HE context, so terminology was replaced to mirror the reality of this context; some original statements had to be split into two statements; and an additional question was added in relation to class size which is much more variable and diverse in HE than in the compulsory school sector. Further, one open question was added. The quantitative data was analysed using SPSS while the responses to the open question were analysed on NVivo using the *5P framework* as described in the previous chapter. Full details of the approach to analysis of the data arising from the survey is described in Chapter Three.

This chapter outlines the following:

1. Demographic profile of respondents.
2. Overview of responses to scale statements.
3. Descriptive and inferential analysis of each factor on Brown's (2006) TCoA IIIA scale.
4. Analysis of responses to the open question.
5. Discussion of findings.

5.2 Demographic profile of respondents

Initially, it appeared that 270 people engaged at some level with the survey. To get an overall sense of the data before drilling down into the detail, I looked for overall trends. On reviewing the duration recorded for completion of the survey, the average time spent was 30 minutes. While it cannot be concluded that all this time was spent on the survey itself (respondents may have been distracted during the process), it does give some indication of serious engagement with the content. Responses were then reviewed, and it was evident that 40 people had engaged with the survey by accessing the link but did not progress to respond to any questions; these respondents were deleted from the data set. A further nine participants responded to the sections requiring consent to participate and profiling details (discipline, years in HE etc.) but did not progress to respond to the statements or the open

question, so they too were eliminated from the data set, leaving 221 respondents. Of those 221 respondents, some chose not to respond to each of the statements and/or to the open question but they were retained as part of the data set because their partial responses were deemed valid and worthy of inclusion in the analysis.

The remaining data set was then reviewed to further 'clean' the data in preparation for descriptive and inferential analysis. First, each of the questions regarding respondent details had an '*other*' option and provision for text entry response explaining the reason for this choice. For most of the respondent details, those choosing 'other' numbered between zero and nine except for the question asking respondents to identify the nature of their role which attracted 21 'other' responses. In most cases, I was able to reclassify according to the original categories provided based on my interpretation of the text responses; in the very small number of cases where this was not possible, the data was categorised as 'missing'. Second, the percentages outlined in the tables throughout this chapter refer to the valid percentage of responses to each question and not a percentage of the overall total number of respondents to the survey. Finally, one question relating to PD required respondents to 'tick all that apply'. Rather than leaving the unticked options blank or classifying them as 'missing' it seemed logical to interpret those ticked as meaning *'yes, I have engaged with this type of CPD'* and therefore, interpret those options not ticked as meaning *'no, I have not engaged with this type of CPD'* and so, zero was inserted throughout to indicate the latter interpretation.

5.3 Respondent characteristics

This section provides an overview of the survey respondents in terms of discipline, type of HEI, role, types of programmes, class size, years of experience, and PD undertaken.

5.3.1 Discipline

As explained in Chapter Three, Biglan's (1973) typology was used to categorise the disciplines with which respondents identified. Table 5.1 outlines the range of disciplines represented in the survey responses.

Table 5.1: *Disciplines with which survey respondents identified*

Category of Discipline	N	%
Hard Pure e.g. biology, biochemistry, genetics, physiology, maths, physics, chemistry, geology, etc	12	5.5
Hard Applied e.g. agriculture, psychiatry, medicine, pharmacy, dentistry, all engineering, computer science etc.	38	17.3
Soft Pure e.g. psychology, sociology, linguistics, literature, communications, economics, philosophy, history, geography etc	39	17.7
Soft Applied 2 e.g. arts, nursing, conservation, recreation, business, journalism, law, architecture, library etc	43	19.5
Soft Applied 1 - Education only	88	40.0
Other – unspecified	1	0.5
Total	***221***	***100.0***

Education was separated out within the soft applied category for two reasons. Firstly, it is my identified discipline and as such, I felt it would likely be important to establish a sense of how people working in this field conceptualise assessment, not just for the purposes of this thesis but also for future work on this topic. Secondly, because I am known within the discipline of education in the Irish context, I anticipated that there might be more respondents from this discipline than from others which are categorised as soft applied, thereby potentially skewing the data therein. As it transpired, I was correct as can be seen from the table above.

5.3.2 Higher Education Institution

The HEI typology was finalised following piloting of the survey (see Chapter 3) and is based on the system in the Irish context. Table 5.2 outlines the range of HEIs in which respondents work.

Table 5.2: *Higher education institution in which respondents work*

Type of HEI	N	%
Technological University	52	23.6
University	151	68.6
Institute of Technology	3	1.4
College or provider under auspices of HEA	12	5.5
College or provider under auspices of HECA	2	0.9
Other - unspecified	1	0.5
Total	***221***	***100.0***

As evidenced in the table above, most respondents indicated that they were working in the university sector with most of those working in one of the older universities while 23.6% indicated that they were working in one of the new technological universities which were established between January 2019 and June 2021 arising from an amalgamation of pre-existing IoTs.

5.3.3 Respondents' role

Respondents were asked to indicate the description which best aligned with their current role. As mentioned above, this question attracted the most 'other' responses all of which were subsequently categorised within the existing framework. Table 5.3 outlines this aspect of the respondent profile.

Table 5.3: *Respondents' current role*

Role	N	%
Academic - teaching some research or equal balance	158	71.5
Academic - research mainly with some teaching	27	12.2
Academic - mainly managerial role with some teaching	17	7.7
Academic Support e.g. academic developer, learning technologist etc	17	7.7
Researcher with some teaching	2	0.9
Total	***221***	***100.0***

Most respondents were academics of one type or another, with a small but significant group in an academic support role.

5.3.4 Types of programmes

Respondents were asked to indicate the statement which best described the types of programmes in which they have been involved with assessment of student work over the last five years. Table 5.4 outlines their responses.

Table 5.4: *Types of programmes on which respondents have assessed participants' work in the last five years*

Type of programme	N	%
Undergraduate only	45	20.4
Postgraduate only	22	10.0
Undergraduate and postgraduate	146	66.1
None, but I have supported staff in designing assessments (including initial design and/or grading and/or feedback processes etc)	3	1.4

None in the last five years but I have done so more than five years ago	1	0.5
I have assessed some programme participants' work but I mostly support staff in designing assessments (including initial design and/or grading and/or feedback etc)	4	1.8
Total	***221***	***100.0***

As might be expected, most respondents were engaged with assessment of undergraduate and postgraduate work (96.5%). The remaining categories were provided to take into account those academics whose workload was primarily based on managerial tasks and those supporting academics developing assessment but not necessarily required to mark students' work.

5.5.5 Class size

Respondents were asked to indicate the largest class cohort they had assessed in the last five years. Table 5.5 provides an overview of their responses.

Table 5.5: *Largest class cohort respondents assessed in the previous five years*

Largest class cohort	N	%
0-20 students	11	5.0
21-50 students	40	18.1
51-100 students	57	25.8
101-200 students	53	24.0
201-300 students	17	7.7
> 300 students	39	17.6
Not applicable	4	1.8
Total	***221***	***100.0***

Overall, the respondents split down the middle in terms of those whose largest assessment cohort was 100 or less students and those who had responsibility for assessment of cohorts of 100+ students, with 17.6% of the total cohort assessment class cohorts of 300 or more students.

5.5.6 Number of years in HE sector

Respondents were invited to indicate how long they had been working in the HE sector. Table 5.6 provides an overview of their responses.

Table 5.6: *Number of years working in the higher education sector*

Number of years working in HE sector	N	%
1-5 years	29	13.1
6-10 years	47	21.3
11-15 years	39	17.6
16-20 years	39	17.6
> 20 years	67	30.3
Total	***221***	***100.0***

As Table 5.6 shows, about one third of the respondents indicated that they worked in the HE sector between one and ten years, with two thirds indicating more than ten years' service in the sector. Overall, the respondent cohort could be considered quite experienced. This may perhaps reflect the shape of the Irish HE sector or perhaps might be attributed to the nature of the survey and the possibility it attracted responses from those who had more years of experience assessing students' work.

5.5.7 Professional Development

Participants were asked to indicate the nature of PD they had engaged with in relation to assessment specifically. Table 5.7 provides an overview of their responses. As respondents were allowed to tick

all that applied in this section of the survey, the results below are presented in a slightly different format to those above.

Table 5.7: *Type of professional development relating to assessment with which respondents engaged*

Type of PD	Yes		No		*Total*	
	N	%	N	%	*N*	*%*
One-off PD session on assessment in HE	157	71.0	64	29.0	***221***	***100.0***
PD course on assessment in HE accredited with certificate or badge	63	28.5	158	71.5	***221***	***100.0***
Attendance at conference focusing on assessment in HE	74	33.5	147	66.5	***221***	***100.0***
Level 9 certificate, diploma, masters in HE which included some focus on assessment	70	31.7	151	68.3	***221***	***100.0***
Level 9 certificate, diploma or master's which specifically focused on assessment in HE	11	5.0	210	95.0	***221***	***100.0***
Doctorate focused on assessment in HE	11	5.0	210	95.0	***221***	***100.0***
I have led / organised / taught CPD events for others which focused specifically on assessment in HE	38	17.2	183	82.8	***221***	***100.0***

It is clear from the table that the most accessed PD type is one-off sessions focusing on assessment - this is the only type of PD attracting a 'yes' response from more than half of the respondents (71%). While it is encouraging to see that about one third of the respondents have engaged with formal, HE

accredited programmes relating somewhat or totally to assessment, it is perhaps worrying that two thirds have not given the volume of assessment undertaken in the sector. Eleven respondents indicated that they have completed a doctorate on assessment in HE, which seems quite a large number out of the total cohort of respondents. However, it could be that the nature of this survey attracted these respondents due to their backgrounds but that cannot be ascertained for sure. It may also be the case that some of the eleven respondents misunderstood or misread the statement and perhaps have completed a doctorate on assessment generally but again, that cannot be ascertained definitively.

5.4 Analysis of responses to survey statements

This section provides a descriptive overview of the range of Likert-style responses to the 31 statements based on Brown's (2006) survey. The results of the six-item response scale are outlined in Appendix P. These were subsequently collapsed into a three-item scale as follows as outlined on Table 5.11:

1. Strongly Disagree + Mostly Disagree = Disagree
2. Slightly Agree + Moderately Agree = Somewhat Agree
3. Mostly Agree + Strongly Agree = Agree

5.4.1 Consistency within and correlation between scales

Respondents' composite scores on each of Brown's four scales were calculated. Descriptive statistics and reliability indices for these scales are provided in (Table 5.9). Three of the four scales showed good internal consistency: *Assessment makes programmes / modules accountable*, α=.88; *Assessment improves education*, α=.87; *Assessment is irrelevant*, α=.75. In contrast, participants' patterns of responses on items relating to the *Assessment makes students more accountable scale* was less consistent, with a relatively low reliability; α=.38. As a result, subsequent inferential analyses focus on those subscales that had good internal consistency (where α> .7) in line with Kline's (1999) recommendations.

Table 5.9: *Descriptive statistics and reliability indices for Brown's four scales*

Scale No.	Scale	No. Items	*M*	*SD*	*a*
1	Assessment makes programmes / modules accountable	6	20.2	5.6	.88
2	Assessment makes students accountable	3	12.4	2.5	.38
3	Assessment improves education	12	49.5	8.6	.87
4	Assessment is irrelevant	9	26.4	6.2	.75

A Spearman's rank correlation was used to assess the relationship between the three scales which evidenced good internal consistency.

Table 5.10: *Correlation between scales with high levels of internal consistency*

Scale No	Scales	*r*	*p*
1 & 3	Assessment makes programmes / modules accountable ***and*** Assessment improves education	.536	<.001
1 & 4	Assessment makes programmes / modules accountable ***and*** Assessment is irrelevant	-.153	.030
3 & 4	Assessment improves education ***and*** Assessment is irrelevant	-.425	<.001

When correlated, the relationship between *Assessment makes programmes / modules accountable* and *Assessment improves education* was moderately positive (r=.536) which might be expected. The relationship between *Assessment makes programmes / modules accountable* and *Assessment is irrelevant* was weak and negative (r=-.153), confirming that those who believed that assessment is a good tool for gauging accountability in terms of programmes also tended not to believe that assessment is irrelevant, which again, might be expected. However, the correlation might also be

expected to be stronger. The relationship between *Assessment improves education* and *Assessment is irrelevant* was also negative (r=-.425) but moderately strong.

Overall, the correlation between the three main factors were as expected, although the strength of correlation raises questions particularly in relation to beliefs about the irrelevance of assessment.

5.4.2 Descriptive and inferential analysis of each scale

This section explores the responses to each of Brown's (2006) four scales (factors). Descriptive and inferential analyses are presented in relation to each. Further, the analysis of the statement regarding class size which was introduced to the survey is also presented at the end of this section. Table 5.11 provides responses to each statement. As explained in Chapter Three, the statements were presented to survey participants out of order and without the factors. For the presentation of analysis, they have been reorganised within each of the four scales. Further, the original six-item response scale has been refined to a three-point scale for the purposes of presentation of findings. However, the responses as per the six-point scale may be viewed in Appendix P.

Table 5.11: *Collapsed responses to 31 statements adapted from Brown (2006) - three item response scale*

Statement	N	Disagree	Somewhat Agree	Agree
		%	%	%
Assessment makes programmes / modules accountable				
Assessment provides information on how well programmes are doing	220	15.4	54.5	30.0
Assessment provides information on how well modules are doing	220	13.6	51.3	35.0
Assessment is an accurate indicator of a programme's quality	214	39.7	47.7	12.6
Assessment is an accurate indicator of a module's quality	214	33.6	45.8	20.6
Assessment is a good way to evaluate a programme	203	27.6	54.2	18.3
Assessment is a good way to evaluate a module	203	21.1	52.7	26.1
Assessment makes students accountable				
Assessment places students into categories	221	11.8	37.1	51.1
Assessment is assigning a grade or level to student work	214	25.7	42.5	31.8

Assessment determines if students meet qualifications standards	203	5.9	33.1	61.1
Assessment improves education				
Assessment describes abilities				
Assessment is a way to determine how much students have learned from teaching	221	7.3	42.1	50.7
Assessment establishes what students have learned	214	5.6	57.4	36.9
Assessment measures students' higher order thinking skills	203	11.9	55.2	33.0
Assessment improves learning				
Assessment provides feedback to students about their performance	221	7.7	30.3	62.0
Assessment feeds back to students their learning needs	213	10.3	48.9	40.9
Assessment helps students improve their learning	203	4.4	50.7	44.8
Assessment improves teaching				
Assessment is integrated with my teaching practice	221	4.1	17.2	78.8
Assessment information modifies ongoing teaching of students	210	7.6	42.3	50.0

Assessment allows different students to get different instruction	203	44.3	40.3	15.3
Assessment is valid				
Assessment results are trustworthy	221	5.4	51.1	43.4
Assessment results are consistent	212	18.4	54.7	26.9
Assessment results can be depended upon	203	10.4	59.1	30.6
Assessment is irrelevant				
Assessment is bad				
Assessment forces teachers in higher education to teach in a way against their beliefs	220	57.3	33.6	9.1
Assessment is unfair to students	212	74.5	23.6	8.0
Assessment interferes with teaching	203	59.6	34.5	5.9
Assessment is ignored				
Teachers in higher education conduct assessments but make little use of the results	221	38.0	37.6	24.4
Assessment results are filed and ignored	212	49.0	36.3	14.7

Assessment has little impact on teaching	203	75.9	18.7	5.4
Assessment is inaccurate				
Assessment results should be treated cautiously because of measurement error	220	25.4	59.6	15.0
Teachers in higher education should take into account the error and imprecision in all assessment	212	4.2	51.0	44.8
Assessment is an imprecise process	203	28.5	55.1	15.8
New question added to survey				
Assessment is impacted by class size	221	5.9	28.6	65.5

5.4.2.1 Assessment makes programmes / modules accountable

Just over half of the respondents indicated that they believed that assessment *provided information on how well programmes and modules are doing* with about one third fully agreeing with these statements. However, while those somewhat agreeing with the statements that *assessment is a good way to evaluate programmes and modules* remained just over one half, the number agreeing dropped to 18% and 26% respectively while those disagreeing rose to between a quarter and a fifth. The statements relating to assessment being an accurate indicator of a programme's or a module's quality resulted in the greatest diversity of opinion with one third or more indicating disagreement with this statement while only 12% and 20% fully agreed and less than half somewhat agreed. It is interesting to note that the statements regarding programme and module quality attracted the widest range of responses and the highest numbers of respondents disagreeing. It is not clear why this is so; it may be because they view programme and module quality as dependent on factors other than assessment such as quality of teaching. It could also be because they see assessment as slightly disconnected from the teaching and learning elements of a module and/or that assessment of quality is a separate process often involving external examination. It is not possible to come to a firm conclusion based on this data but this is an aspect of conceptions of those teaching in Irish HE which warrants further examination in future research.

The maximum score on this scale was 36. As demonstrated by the means in Table 5.12, respondents did largely agree with the idea that assessment is an accountability tool for programmes and modules when grouped together by discipline.

Table 5.12: *Mean responses to conceptions of assessment as an accountability tool for programmes and/or modules by discipline*

Discipline	N	*M*	*SD*
Hard Pure	12	19.8	3.1
Hard Applied	33	21.1	5.9
Soft Pure	33	21.9	5.4
Soft Applied 2	40	20.6	7.0
Soft Applied 1 (Education only)	83	20.4	5.1

Across the disciplines, values ranged from 19.8 (Hard Pure) to 21.9 (Soft Pure). A Kruskal Wallis test indicated that there was no statistically significant difference between the disciplines in their conceptions of assessment as an accountability tool for programmes / modules and therefore, no further analysis tests were carried out; $H(4)=2.156$, $p=.707$

Responses to this scale were then considered in terms of the number of years respondents had worked in the HE sector.

Table 5.13: *Mean responses to conceptions of assessment as an accountability tool for programmes and/or modules by HEI years*

HEI years	N	*M*	*SD*
1 - 5 years	28	20.0	5.5
6 - 10 years	43	21.3	5.5
11 - 15 years	33	20.2	5.0
16 - 20 years	38	20.6	6.2
More than 20 years	60	21.3	5.8

As demonstrated by the means in Table 5.13, respondents largely agreed with the idea that assessment is an accountability tool for programmes and modules. Across the HEI years, values ranged from 20.0 (1-5 yrs) to 21.3 (6-10 yrs, more than 20 yrs). A Kruskal Wallis test indicated that there was no statistically significant difference between the respondents in their conceptions of assessment as an accountability tool for programmes / modules when considered by number of years in HE and therefore, no further analysis tests were carried out; $H(4)=2.351$, $p=.671$.

The ‘class size’ characteristic was reorganised for the purposes of analysis. While ‘large’ class size is open to interpretation (Maringe & Sing, 2014), there is a somewhat general acceptance that ‘large’ can be attributed to classes of 100+ students (Exeter et al., 2010; Farrell, 2021). Therefore, the class size characteristics were combined to create two new groupings - those whose largest assessment cohorts comprised up to 100 students and those whose largest assessment cohorts comprised 100+ students.

A Mann-Whitney U test revealed that there was no significant difference between those teaching classes up to 100 students (*Md*=20.0, *n*=101) and those teaching classes larger than 100 students (*Md*=21.0, *n*=97) in terms of agreement that assessment holds programmes / modules accountable; *U*=4341.50, *z*=-1.38, *p*=0.166, *r*=0.10

5.4.2.2 Assessment makes students accountable

Respondents indicated quite high levels of overall agreement with the statements relating to the *categorisation of students* and the *determination of reaching appropriate standards* arising from the assessment process. However, the agreement pattern regarding the statement *assessment is assigning a grade or level to student work* attracted a slightly different spread of responses compared to the other two items in this category. While there was overall agreement with the statement, those somewhat agreeing increased to 42% as compared to 33% and 37% respectively for categorisation and certifying standards, while the number disagreeing rose from 12% and 6% respectively to 26% disagreeing that *assessment is assigning a grade*. So, while there is overall agreement with this statement, the strength of that agreement is not that for the other two statements. However, overall, those teaching in HE agree that assessment makes students accountable.

As described above, the internal consistency of the responses for this factor on the survey was not strong and therefore, there are no interpretive analyses. It is probable that the lack of internal consistency is related to the small number of subscale items.

5.4.2.3 Assessment improves education

This factor comprises the majority of statements in the scale, divided into sub-factors.

Assessment describes abilities

Just over half of the respondents fully agreed that assessment is a way to determine how much students have learned from teaching with an overall 93% agreement rate, suggesting teachers perceived a link between teaching and learning revealed through the assessment process. Respondents also evidenced overall agreement that assessment establishes what students have learned and

measures higher order thinking skills, although there was a slightly higher level of disagreement with the latter (12%). However, overall, it seems clear that Irish academics agree that assessment describes abilities as outlined in this scale, although the use of the term 'abilities' may not necessarily be the most appropriate.

Assessment improves learning

There was strong agreement with the statements within this subfactor overall, particularly that *assessment provides feedback to students about their performance*. While overall agreement with the notions that *assessment feeds back to students their learning needs* and that it *helps them to improve their learning* remained high, it was not with the same strength with more respondents indicating that they somewhat agreed.

Assessment improves teaching

The statements within this subfactor evidenced mixed responses. There was very strong agreement that *assessment is integrated with teaching practice*; in fact, this statement attracted the highest level of full agreement (79%) of all statements on the scale. This high level of agreement warrants further attention and deeper investigation in future research to ascertain why those teaching in Irish HE believe this and what they are thinking of in terms of assessment practice vis-a-vis teaching practice. Respondents also agreed that *assessment information modifies ongoing teaching*, with those agreeing split fairly evenly between somewhat and full agreement. However, 44% of respondents disagreed that *assessment allows different students to get different instruction*, with 40% somewhat agreeing with the statement. This statement attracted the highest level of disagreement by far across all statements in the first three factors, which present statements expressing positive claims in relation to assessment. Again, this level of response warrants further exploration. This scale item was included in the original TCoA-IIIA (Brown, 2006) for use in the compulsory education sector which differs from the HE sector in terms of class size, nature and amount of student-teacher ongoing contact, curriculum structure and so on, which may explain the level of disagreement above. However, more interestingly, 40% of respondents somewhat agreed that assessment did allow for different instruction for some students; it would be interesting to explore this a little further to see how this manifests itself in reality.

Assessment is valid

Again, there was overall agreement that *assessment results are trustworthy, consistent and can be depended upon*. However, the *consistency of results* attracted disagreement from about one fifth of respondents.

The maximum score on this scale was 72. Disciplinary differences were explored in terms of the conception that assessment improves education (Table 5.14).

Table 5.14: *Mean responses to conceptions of assessment as improving education*

Discipline	N	*M*	*SD*
Hard Pure	12	50.0	6.6
Hard Applied	34	50.1	8.9
Soft Pure	33	52.8	7.5
Soft Applied 2	39	49.1	10.6
Soft Applied 1 (Education only)	83	47.6	7.7

A Kruskal Wallis test indicated a statistically significant difference did exist between the disciplines in relation to their conceptions on this scale; $H(4)=10.997$, $p=0.027$. Post-hoc comparisons using Dunn's method with a Bonferroni correction for multiple tests indicated that the mean score on the conceptions of assessment as improving education scale for those in the Soft Pure discipline ($M=52.8$) was significantly higher than that of those in the Soft Applied (Education) discipline ($M=47.6$); $z=3.07$, $p=.021$, $r=0.27$.

As demonstrated by the means in Table 5.15, respondents largely agreed with the idea that assessment improves education when grouped in terms of the number of years they had worked in the HE sector.

Table 5.15: *Mean responses to conceptions of assessment as improving education*

HEI years	N	*M*	*SD*
1 - 5 years	28	45.5	10.5
6 - 10 years	42	50.3	6.0
11 - 15 years	33	50.4	9.1
16 - 20 years	38	48.7	8.2
More than 20 years	61	50.8	8.9

Examination of descriptive statistics indicated that those who had spent the least amount of time working in a HEI had the lowest levels of agreement with this scale. However, the range of mean responses on this scale according to the number of years working in a HEI did not vary significantly. A Kruskal Wallis test confirmed that there was no statistically significant difference between participants based on their experience in their conceptions of assessment improving education and therefore, no further analysis tests were carried out; $H(4)=6.937$, $p=.139$.

A Mann-Whitney U test revealed that there was no significant difference between those teaching classes up to 100 students ($Md=49.0$, $n=101$) and those teaching classes larger than 100 students ($Md=51.0$, $n=97$) in terms of agreement that assessment improves education; $U=4598.50$, $z=-0.745$, $p=0.456$, $r=0.05$.

5.4.2.4 Assessment is irrelevant

This factor comprised three subfactors, each containing three statements.

Assessment is bad

The statements in this subfactor attracted quite high levels of disagreement, particularly that *assessment is unfair to students*, with 75% disagreeing although 24% somewhat agreed. Almost 60% disagreed that assessment *forces teachers in HE to teach in a way that goes against their beliefs* and

also that *assessment interferes with teaching*, with approximately one third of respondents somewhat agreeing with these statements.

Assessment is ignored

This subfactor attracted a mixed set of responses. There was a strong level of disagreement with the statement *assessment has little impact on teaching* (76%). However, respondents were quite evenly split across the three item response scale in relation to the statement that *teachers in HE conduct assessment but make little use of the results*. And, while almost 50% disagreed that *assessment results are filed and ignored*, 36% somewhat agreed and 15% fully agreed, indicating some divided views here also. Again, this warrants further research, particularly to ascertain what, if any, use should be made of student results and how they might be used by teachers.

Assessment is inaccurate

The statement, *teachers in HE should take into account the error and imprecision in all assessment* attracted 96% agreement. The statements *assessment results should be treated cautiously because of measurement error* and *assessment is an imprecise process* attracted 60% and 55% partial agreement respectively with approximately one quarter of respondents disagreeing with these statements, and very low numbers fully agreeing.

Disciplinary differences were explored in relation to the conception that *assessment is irrelevant*. The maximum on this scale was 54.

Table 5.16: *Mean responses to conceptions that assessment is irrelevant by discipline*

Discipline	N	*M*	*SD*
Hard Pure	12	23.7	4.6
Hard Applied	34	26.4	6.3
Soft Pure	33	24.4	4.7
Soft Applied 2	39	25.3	6.7
Soft Applied 1 (Education only)	83	28.3	6.5

A Kruskal-Wallis test provided evidence of a difference between the mean ranks of at least one pair of groups; $H(4)=14.789$, $p=0.005$. Dunn's pairwise tests were carried out (where significance values were adjusted using the Bonferroni correction). Differences in conceptions on the relevance of assessment was uncovered between the Soft Applied (Education only) and Soft Pure disciplines; $z=-3.14$, $p=0.017$, $r=0.28$. The median score for the Soft Applied (Education only) was 28.3 compared to 24.4 in the Soft Pure disciplines. Those in the Soft Applied (Education only) appeared to have a stronger level of agreement with the idea that assessment could be considered irrelevant when compared to colleagues in the Soft Pure disciplines.

Table 5.17: *Mean responses to conceptions of assessment as irrelevant by HEI years*

HEI years	N	*M*	*SD*
1 - 5 years	28	28.8	8.1
6 - 10 years	43	25.4	5.8
11 - 15 years	33	25.7	4.0
16 - 20 years	37	25.6	6.6
More than 20 years	61	27.0	6.4

As demonstrated by the means in Table 5.17, respondents generally did not agree with the idea that assessment is irrelevant based on the mean scores. The range of mean responses on this scale according to the number of years working in a HEI did not vary significantly. However, those between 6 and 20 years evidenced very little variation in levels of agreement whereas those between 1-5 years and those with 20 years or more had slightly higher levels of agreement as indicated by mean scores. Nevertheless, a Kruskal Wallis test highlighted that there was no statistically significant difference between respondents based on length of service in their conceptions of assessment as an accountability tool for programmes / modules and therefore, no further analysis tests were carried out; $H(4)=5.259$, $p=.262$. The stability in conception over years might be considered unsurprising because it is likely that the respondents remained in the same discipline over this time.

A Mann-Whitney U test revealed that there was no significant difference between those teaching classes up to 100 students (*Md*=26.0, *n*=101) and those teaching classes larger than 100 students (*Md*=25.0, *n*=97) in terms of agreement that assessment is irrelevant; *U*=4459.0, *z*=-1.092, *p*=0.275, *r*=0.08

5.4.2.5 Class size

One question was added to the original scale in relation to the *impact of class size on assessment*. Two thirds of respondents fully agreed that assessment is impacted by class size with a further 29% somewhat agreeing. Again, this high level of agreement requires further illumination to clarify the nature of that impact in terms of what teachers believe and do in their assessment practices.

5.5 Analysis of open question

Respondents were asked one question at the end of the survey:

> *Based on your own experience and/or on the questions posed in this survey, what do you think are the specific aspects of assessment in higher education that need to be explored and examined?*

While the focus of the closed survey questions was on the purpose of assessment, the open question provided opportunity for respondents to consider whatever aspects of assessment they wished to prioritise. This allowed for some illumination of the results of the scoping review in the context of those teaching in the Irish HE context. Survey respondents (n=169) provided suggestions for aspects of assessment they felt should or could be further examined. Responses were coded as described in the methodology chapter. Findings are presented below using the *5Ps framework* developed from the scoping review; underlining is used to signpost the original phase one coding. In the initial phase one coding, some responses were attributed to more than one code so there is some overlap throughout. While many respondents provided clear suggestions as to aspects of assessment which should be followed up, many used the opportunity to provide comments and make statements rather than explicitly make recommendations *per se* for further examination. Where appropriate, respondent comments have been included to illustrate the findings and to provide voice to those who engaged with the survey.

5.5.1 Suggestions and comments relating to PROCESS

The largest number of first phase codes (16) were attributed to the process of assessment. Thirty-five respondents suggested further exploration of assessment design. Seventeen respondents explicitly referred to assessment design generally, with some expanding to suggest a particular focus such as UDL, automated assessment design and programmatic assessment design.

> *Specific thought should be given to universal design for learning principles where all students are given various ways to meaningfully engage with the assessment content, this makes education accessible and meaningful to all students (OQ93).*

Other respondents referred to specific design considerations such as diversity of the student population and fairness in group assignments.

Thirty-one respondents suggested that the effectiveness of feedback be examined further. Many of the responses just mentioned feedback without much elaboration. However, those which did elaborate identified points for discussion such as feedback in the large group context; timing of feedback; and, consideration of the feedback loop.

> *The lack of linkage between teaching learning and assessment. Assessment is often seen as a by-product of teaching and students do not see the value. We need to move to a model of assessment as/for learning (programmatic) where there is a clear link between what we teaching and use assessment as an extended learning tool. Assessment rarely generates clear feedback for student signposting to strengths and weaknesses. Until we get to that model students will not see a benefit from assessment and the disconnection will persist. (OQ108).*

Twenty-three respondents suggested the role of grading in assessment design should be considered for further exploration. Suggestions included consideration of weighting, fairness, ungrading, use of rubrics, workload and the link between grades and knowledge and/or understanding.

Sixteen respondents made suggestions in relation to the range of assessments used, with reference to balance, alternatives, and recognition of diversity.

> *Are learning outcomes well served by the type of assessments deployed; and are a range of assessment types used to cater for different learning styles/needs (OQ65).*

Eleven respondents suggested that academic integrity needed to be considered within assessment design in terms of assessment context, class size, reasonable accommodations, plagiarism and cheating.

> *The challenge in ensuring academic integrity to facilitate wider use of CA instead of exams (OQ26).*

> *[...] I am very concerned that we see traditional assessment continue with more and more students needed to be accommodated - is this good use of resources? Why not redesign assessment to include everyone in the first place? The language of accommodation is insulting to them too [...] (OQ77).*

Eleven respondents suggested that the alignment of assessment with learning outcomes should be a focus for further examination.

> *Are assessments i) a method of ascertaining if a student has attained / reached learning outcomes, or, ii) a method we can use to move students towards attaining learning outcomes? (OQ19).*

Nine respondents referred to overassessment as something which should be explored further. Most of these responses referred to workload of student and/or teaching staff. Other aspects of design referred to in some comments included assessment accuracy, timing, creativity, provision of choice, use of technology, and the balance between examinations and coursework.

5.5.2 Suggestions and comments relating to PEOPLE

As with the scoping review, beliefs about people related to those teaching in HE and students. Four codes were attributed to beliefs about ***teachers***. Twelve respondents suggested exploration of the impact of assessment on future teaching, particularly with a view to improving teaching.

> *I think more teaching staff need to know why we assess our students, and rethink how they treat assessment in their modules. There's little awareness of how assessment results can be used to improve teaching modules/programmes (OQ78).*

Nine respondents suggested teacher understanding of assessment practice should be examined further. Two respondents provided quite lengthy suggestions here from quite different perspectives, excerpts from which are provided below. The first was an academic:

> *As academics, many of us spend long years involved in teaching and assessment and we can convince ourselves we know more about assessment than we really do (and indeed we can*

pontificate even in situations of near perfect ignorance based on personal experience) (OQ94).

The second respondent was in an academic support role who responded to the open question at length; again, an excerpt from that response is provided below.

> *In my experience, they [academics] mostly conceive of assessment as summative only; they use traditional methods such as exams and essays; they don't use clear and useful marking criteria or share when with students in advance; they adhere to norm-referenced grading (refusing to give any student over 70 per cent despite what our institution's assessment policy says; and they don't supply useful feedback to students. My feeling is that most lecturers don't interrogate assessment and assessment practices. They simply continue to perpetuate the assessment culture that they were part of when they were students themselves, sticking to traditional approaches and reinforcing traditional positions of power between lecturer and student in assessment (OQ146).*

Three codes were identified relating to perceptions of ***students'*** interaction with the assessment process. Sixteen respondents suggested that the impact of assessment on student learning should be examined in the focus group phase. Some respondents named elements of assessment which should be considered in this context such as feedback, grading, formative assessment and so on. Overall, the general tone of the responses indicated a perception that assessment and student learning were often out of step. The following comments below illustrate this perception albeit from different vantage points:

> *How does variability in assessment quality within programmes affect student learning? Quality of assessment is very variable within and across programmes. I see no real quality assurance procedures, no auditing, little learning from mistakes and no proper oversight. However, a rigorous quality assurance system could stifle good teaching .... (OQ143).*

> *There is now more emphasis on formative assessment which often places too much of a burden on students [...] a tendency to dumb things down, to infantilize the third level learning academic programme [...] I have encountered well-meaning professors and instructors introducing games, scratch cards, selfies and other 'tasks' into the learning environment - not only is this patronising for young people, but it does little to underscore the seriousness of the intellectual endeavour ...(OQ148).*

Eleven respondents commented on the student experience of assessment, referring to the importance of considering diversity and equity within the assessment process. Other respondents suggested the importance of teaching students appropriate skills to engage with assessment effectively and the role of students as partners as aspects to be explored further.

5.5.3 Suggestions and comments relating to PURPOSE

Nine phase one codes related to the purpose of assessment. Ten respondents made comments or suggestions which queried the nature of what is being measured in the assessment process, with six of these respondents specifically referring to the importance of assessment designed to measure higher order thinking and skills. Excerpts from comments illustrate the key points:

> *The challenge in Irish institutions is that little attention is given to skills like problem solving, critical thinking, communication, self-management, adaptability/resilience etc. They are often overlooked in a programme assessment strategy (OQ109).*

Other comments included the importance of identifying individual student skills within the group context and the discrimination between students in the assessment process.

Eight respondents specifically suggested the formative purpose of assessment should be explored further in the focus groups. However, there was very little expansion on these suggestions beyond techniques for formative assessment and how it could be improved. Nine other respondents suggested that the balance between the formative and summative purposes of assessment be examined but again, there was little or no expansion on or explanation of that core suggestion across the nine responses.

5.5.4 Suggestions and comments relating to PLACE and POSITIONALITY

Three phase one codes were identified as aligning with the context of assessment. Twenty-six respondents referred to the impact of class size on assessment as something which could be considered in focus group discussions. Some of these respondents referred to large classes with little expansion. However, those who did expand on this suggestion tended to highlight the challenges posed by large class cohorts in relation to workload, creativity, formative assessment, feedback, time constraints and so on.

> *Large groups can mean that it's more difficult to be creative with assessment. It might not be realistic, for example, to do presentations or group work with 430 students even when broken up into tutorial groups. Getting more instruction on in-class assessment would be brilliant (OQ50).*

Fourteen respondents felt the impact of programme structure on assessment and vice versa should be further examined. Suggestions related to modularisation, semesterisation and programmatic assessment.

[...] the possibility of using assessment to build bridges between modules, semesters etc to ameliorate the fragmentation caused by modularisation and semesterisation (OQ3).

Nine respondents considered how assessment informs programme content for example, using assessment data to inform future programme planning and revisions generally and in terms of the links between assignments throughout a programme.

5.5.5 Suggestions and comments relating to PROFESSIONAL DEVELOPMENT

Only one first phase code was attributed to this higher level code - training or PD and only three respondents explicitly suggested that professional development should be a topic to be explored further in relation to assessment.

5.5.6 Summary and overall conclusions arising from the open question

The purpose of including the open question in the survey was to allow respondents to give voice to their engagement if they wished and to perhaps provide a little more insight into the views expressed throughout the survey. The analysis of this data seems to suggest that most respondents were concerned with the assessment *process* in terms of design, grading, integrity and alignment with learning outcomes. While the comments included within the process theme include some evidence of the respondents' beliefs, most relate to knowledge and skill. Perhaps the fact that the assessment process is the most considered aspect suggested by survey respondents for further examination reflects the fact that for most of those teaching in HE, it is the most prescient and demanding aspect. The assessment process requires tangible outputs such as task descriptors, rubrics, submission systems which must be produced regularly and within time constraints whereas, the other facets of the *5Ps framework* may be thought about, engaged with or alternatively, ignored and avoided.

It is particularly interesting that only three of the 169 people responding to the open question referred to PD at all in terms of further research and exploration and none suggested that disciplinarity warranted further investigation. In fact, in terms of assessment context, most suggestions for further exploration related to the impact of class size. This may have been influenced by the last statement in the survey but it contrasts with the scoping review where class size was excluded from the presentation of findings because it was referred to in so few articles.

5.6 Discussion

This discussion primarily focuses on the survey findings in relation to the purpose of assessment as explored by responses to the 31 statements. Where appropriate, the findings from the open question are aligned to provide further insight.

While respondents agreed overall that *assessment made modules and/or programmes accountable*, agreement lessened as statements became more definitive, moving from accountability in terms of how it was doing, to a tool for enabling evaluation to an indicator of quality. It is possible that this is because it may be seen as a separate part of the course design process (Boud et al., 2018) and therefore, the conceptualisation of assessment as a tool for the purpose of module or programme evaluation or measurement of quality is not present from the outset. Even if assessment is considered in the design of modules and programmes, the focus may be on institutional procedures and requirements (Dawson et al., 2013) rather than on the process and purpose of assessment itself. Distinct elements of assessment generally are not a feature of design at all such as feedback (Winstone & Boud, 2022) and so the insights the feedback process could provide on the quality of the module or programme overall are not considered from the start. Having said that, the use of Tight's (2012) framework by O'Sullivan et al. (2015) in the Irish context positioned all academic publications relating to assessment within the *course design* element, thereby indicating a certain degree of certainty that assessment design was naturally part of course design although, the focus of some of the articles was about assessment outcomes rather than design *per se*. The lack of detail in relation to assessment design in module descriptors (National Forum, 2017) mirrors some of the findings of other authors above; moreover, the study focused on module but not programmatic documentation relation to assessment design. The beliefs of the survey participants in this study in relation to the use of assessment as an indicator of quality in particular, may reflect the lack of consideration of assessment design vis-a-vis the overall design of the module.

Responses to the open question did not indicate a conceptualisation of assessment being used as an accountability tool at modular or programme level either. Thirty-five respondents did recommend further examination of assessment design in terms of future research, while eleven recommended the alignment of assessment with learning outcomes should be examined further. Nine respondents suggested that the use of assessment to inform programme content was an aspect of the process which should be considered for further research. However, while it could be extrapolated that these suggestions may relate to using assessment for modular or programmatic accountability purposes, none of the respondents were explicit on that point.

Again, as might be expected, respondents generally agreed that assessment serves the purpose of *making students accountable*. There was quite a strong level of agreement in terms of assessment's role in categorising students and determining achievement of standards which aligns with the notion that measurement of learners is quantifiable (Biggs & Tang, 2011). However, there was a much broader range of response to the role of assessment in assigning a grade with more respondents disagreeing with this statement than the other two statements relating to student accountability. While the role of grades may rarely be questioned (Hailikari et al., 2014), the responses of the Irish academics on this survey would seem to contradict that notion. Their responses to the open question also suggest that while some recommended further examination of the grading process, their reasons varied considerably, with many focusing on the process and fairness of grading rather than the manner in which it held students accountable. In fact, the respondent comments and suggestions relating explicitly to students did not indicate any sense of distrust of students (McArthur, 2018) but rather concern regarding their experience of the assessment process and the responsibility of those teaching in HE to ensure the process is well structured and implemented. Comments in the open question also seem to suggest a perception of the need to balance assessment approaches for summative and formative purposes, which reflects the fundamental double duty of assessment to support learning while simultaneously providing certification of attainment (Boud, 2020; Carless, 2015) and perhaps may indicate an appreciation of the role of formative assessment in enhancing academic integrity through the building of relationships between students and teachers within the assessment process (McArthur, 2018).

In the Irish context, the National Forum (2017) provided guidance to the HE sector in relation to the use of assessment for a variety of purposes within an overall framework which considered AoL, AfL and AaL. This conceptualisation of assessment across the sector may have influenced the beliefs and understandings of those teaching in HE of the breadth of assessment and possibly informed the wide range of suggestions for further exploration in the open question. However, the National Forum (2016) also found that at a curriculum/module design level, AfL and AaL were not generally considered indicating a systemic lack of attention to the creation of supports to enhance student accountability for their own work, which again may have contributed to responses to the open question.

There was overall agreement with the use of assessment for the purposes of *improving education*. This overall agreement was mirrored in each of the four subfactors. In particular, the high agreement with the subfactor that assessment can be used for the purpose of *improving and modifying teaching* seems

to indicate a conceptualisation of assessment which aligns with teaching. This is likely a finding that warrants further exploration to get a sense of how this manifests itself. Within this same subfactor, there was a fairly even split between those disagreeing and somewhat agreeing with the use of assessment to enable differentiation of instruction for different students which seems to indicate an understanding of the purpose of assessment to address equality and diversity within the student cohort (McConologue, 2020). Again, this warrants some further exploration, particularly in terms of those agreeing with this statement to clarify how this manifests itself. Further, this may perhaps be considered in relation to the conception that assessment improves learning. While there was overall agreement with this conception, it was stronger in relation to assessment providing feedback to students regarding their performance than it was in relation to providing more focused pointers to support improvement. In other words, respondents seem to be less convinced of the specificity of support and guidance the assessment process provides for the purpose of supporting and improving learning going forward compared to higher levels of certainty that retrospectively, the assessment process provides feedback on performance to date. This is perhaps related to the more systemic focus on AoL at the point of module/programme design (National Forum, 2016).

There was a significant difference found between the disciplines of soft applied (education only) and soft pure in terms of the belief that assessment can be used for the purpose of *improving education*. It is possible that those within the education discipline are more aware of the nuances of the assessment process because many will likely address assessment in the context of teaching student teachers and therefore, are more circumspect about the impact of assessment on improvement of T&L. While there was no significant difference between respondents' agreement with this factor based on their years of experience in the HE sector, those with the least experience tended to have the lowest levels of agreement. Some of the suggestions for further exploration in the open question can be attributed to the idea of using assessment for the purposes of improving the educational experience e.g. feedback, impact on student learning, impact on teaching and alignment with learning outcomes.

In general, there was overall disagreement that *assessment is irrelevant* across the three subfactors. The levels of disagreement with some of the statements mirror responses to statements within other factors. For example, respondents disagreed that *assessment has little impact on teaching* (76%) mirroring earlier responses within the *assessment improves teaching* subfactor. However, there were mixed responses to the use made of assessments results. The reservations indicated earlier in relation to the consistency of grading were somewhat mirrored in relation to the *assessment is inaccurate* subfactor with high levels of agreement with the statement that *teachers in HE should take into account the error and imprecision in all assessment*.

Once again, significant difference was found between the soft pure and soft applied (education only) disciplines in relation to the factor *assessment is irrelevant* with those in the latter once again indicating a greater level of caution in relation to the reliability of assessment. The number of years respondents spent in the HE sector did not influence their views with regard to this factor, indicating stability of conception over time (Fives et al., 2015; Skott, 2015). This may perhaps be unsurprising if it can be assumed that respondents remained within the same disciplinary area during this period. However, it does seem to belie the contention that beliefs change over time with experience (Beuhl & Beck, 2015; Entwistle & Karagiannopoulou, 2014). What is less clear though, is how the respondents saw themselves in terms of the assessor role and associated identity, which also may be viewed as changing over time (Xu & Brown, 2016). Having said that, those with least experience and those with most experience demonstrated less agreement with the relevancy of assessment which perhaps reflects somewhat the contention that beliefs change over time, although there were no significant differences found. And, once again, class size evidenced no impact on conceptions of the relevancy of assessment. In fact, class size had no impact on conceptions throughout the survey except when explicitly considered as a statement in its own right. Statistical testing was not carried out on this statement as it was an isolated statement and not part of an overall suite of statements combining to provide information on a broader factorial conception. However, there were overall high levels of agreement with the statement that class size did impact assessment even though the class size characteristic of respondents did not indicate that at all across the four factors.

The open question did not really attract explicit suggestions regarding the use of assessment nor the irrelevance of assessment. Having said that, some of those who indicated that the impact of class size on assessment should be explored further (26) tended to highlight the challenges and limitations of class size, implying that at least elements of the ideal assessment approach were rendered irrelevant or not achievable. Further, some respondents suggested that the impact of assessment on programme structure and content be examined further, indicating somewhat a belief that the outcome of assessment should be used to inform programmes indicating an awareness of the importance of the programmatic context of assessment (Boud, 2017; 2018; Jessop et al., 2014). Only three of the 169 respondents to the open question explicitly recommended that PD in assessment be explored further. This perhaps reflects the respondent characteristic in relation to type of PD undertaken, wherein the vast majority had engaged with one-off sessions and so, perhaps have not considered the impact of PD on assessment practices generally. However, it is concerning that PD does not seem to be something this group of people teaching in HE consider when reflecting on areas for further exploration given the complexity of the assessment process and the importance of developing competence in the field to

ensure appropriate assessment decisions are made (McConlogue, 2020). Other aspects of assessment which respondents did not refer to explicitly in their responses to the open question include rubrics and criteria (Prosser, 2014); the emotional aspect of assessment and being an assessor (Becker & Denicolo, 2013; Sadler, 2014), and assessment in relation to institutional accountability.

While the survey did provide a good, sound baseline for further research in the Irish HE context, the specificity of the underlying thinking and beliefs of the respondents is not clear, particularly in relation to the responses to statements in Brown's (2006) scale (Hoffman & Seidel, 2015; Levin, 2015; Skott, 2015). However, given the lack of attention to assessment beliefs generally as evidenced in the Fives and Gill (2015) publication, and specifically, in relation to the HE sector (Postareff et al., 2012), the findings of this survey go some way to addressing that gap. The intended future research arising from this first phase of the long-term study will go some way to exploring introspective, difficult to articulate beliefs (Skott, 2015) and deeper consideration of terminology in this aspect of HE practice (Fives & Beuhl, 2012). The responses to the open question in particular, indicate a broad spectrum of focus and understanding on the part of respondents, traversing the use of assessment for the purpose of supporting learning to the use of assessment for accountability purposes, mirroring the findings of the Barnes et al. (2015) systematic review albeit their review focused on teachers in the compulsory education sector.

5.7 Summary

The findings are perhaps as to be generally expected. Respondents overall agreed that assessment holds students and programmes/modules accountable and that it improves education, although the strength of this agreement weakens when some subscales and statements are examined. Likewise, there is overall disagreement that assessment is irrelevant but again, the strength of this disagreement waivers when subscales are examined. The responses to the additional item relating to large classes elicited overall strong agreement. However, this is somewhat at odds when responses to factors were analysed inferentially, indicating no significant difference between those assessing groups of less than 100 compared to those assessment groups greater than 100 students. This mirrors the scoping review which did not indicate that class size is a key factor in how those teaching in HE view assessment.

The open question garnered a range of responses, which when coded and then recoded using the *5Ps framework*, indicated a wide range of aspects of assessment respondents thought should be explored in more detail. Of most significance, was the absence of direct reference to the role or impact of PD

although it might be assumed that some respondents were thinking about PD when they made their suggestions.

This survey complemented the scoping review to provide a basis for informing the next phases of the long-term research study. The following chapter draws conclusions from this phase to be considered going forward.

Chapter Six: Conclusions and Implications

6.1 Introduction

This thesis reports on the first phase of an intended longer-term study which aims to explore, understand and investigate assessment practices in the Irish HE context. The specific aim of this phase was to establish a baseline by exploring teachers' beliefs and craft knowledge relating to assessment. This chapter draws conclusions from the findings of the study and identifies implications for assessment practice and for further research in the area. The study's contribution to knowledge is considered. Conclusions are also considered in relation to the research process including reflection on some aspects of the research journey, and limitations and strengths of the study.

6.2 Conclusions arising from the study

The use of the Nind et al. (2016) theoretical framework which conceptualises pedagogy from the perspectives of craft, art and science informed the approach for this study and from the outset contextualised in terms of a longer-term research project, of which this is the first phase. The aim of this phase was to consider the craft knowledge and practice of those teaching in HE by examining their beliefs. To ensure this phase was rooted in practice, a scoping review of relevant international literature relating to the field was carried out along with a survey of academics working in the Irish HE sector. One question guided each of the research avenues. The conclusions drawn in relation to each are discussed below.

6.2.1 What patterns can be found in international literature on assessment beliefs of those teaching in HE?

The use of the Thomas and Harden (2008) thematic synthesis approach resulted in a large amount of data and depth of analysis of the findings, discussion and conclusions of the 39 articles included in the scoping review. The purpose of using such a forensic approach was to offset the fragmentation caused by studies tending to be based in research contexts which focused on one small aspect of assessment belief and practice. Patterns became visible as the data were coded and combined to form themes, resulting in the development of the *5Ps framework*. The framework enabled each aspect of beliefs of those teaching in HE regarding assessment to be examined in detail and allowed some insights into assessment practice to be illuminated particularly through the conclusions of the study author. Below, some of the overarching patterns arising from the scoping review are presented.

A key pattern emerging from the review indicated that those teaching in HE tended to hold beliefs about people (themselves, peers and students) and about the purpose of assessment which influence practice. While they also had some beliefs about their disciplinary contexts, PD and assessment processes, these were not as strong with the analysis of the data indicating that these aspects tended to influence beliefs about people and purpose. As experiences, information and knowledge is perceived and new conceptions are developed, beliefs may change and modify. Figure 4.1 provides a visual representation of this overall pattern.

Terminology is confused throughout, by the participants in the studies included and indeed, by the authors of some of the studies. Language carries meaning, so basic assessment constructs are difficult to establish because of this confusion. The term T&L seems to be particularly problematic because it is used as a 'catch-all' term which sometimes fails to catch aspects of pedagogical practice especially assessment and curricular development. However, confusion of terminology is embedded systemically, and that is unlikely to change any time soon. Therefore, it is important that those working in the field of assessment, particularly assessment leadership, navigate the language of assessment and come to some agreement on what they understand by terms, at disciplinary level as well as institutional levels at least. Most importantly, the use of the term T&L needs to be reviewed particularly when attributed to academic leadership roles.

While the scoping review revealed a wide range of *purposes of assessment*, the consistent pattern indicated that *supporting student learning* was viewed as the main purpose. This is encouraging but there appears to be a pattern of disconnect between beliefs, values, and enactment in that even when those teaching in HE espouse positive beliefs, they often have difficulty enacting those beliefs in practice. Having said that, a contrary relationship seems to exist between enactment of new ideas, exploration of new tools and/or engagement with some sort of new assessment practices and the impact that has on teacher beliefs. Teacher assessment beliefs and understanding seem to develop as a result of that engagement through reflection and sometimes, dialogue with others. At a systemic level, that disconnect seems to have its genesis at the point of inception – curriculum development of a programme. There are lots of reasons for this including lack of alignment between the pedagogical pillars of curriculum, teaching, learning and assessment and institutional priorities relating to limited administrative requirements regarding assessment information. However, it is also likely related to the fact that consideration of alignment of the pedagogical pillars above happens most often at a modular rather than a programmatic level, if it happens at all. There is strong evidence from the scoping review that those teaching in HE do not access assessment literature and are not using evidence-based practices and therefore, it is hardly surprising that there is an accompanying pattern of belief and

practice disconnect. This disconnect becomes central when teachers try to enact very specific assessment approaches such as peer- or self-assessment and authentic assessment which require very specific understanding of assessment processes and purposes.

Resistance to innovation and change may arise because of uncertainty on the part of the individual and/or perceived pragmatic constraints such as time or workload. The *disciplinary context* appears to have significant impact on beliefs and therefore, practices. Established ways of doing things, how students are viewed as learners and acquirers of expertise in a field influence how those teaching in HE collectively view the purpose of assessment and therefore, disciplinary doxa may also act as an inhibitor of change and innovation. However, the centrality of the disciplinary context cannot be ignored but rather, needs to be considered in terms of enhancing assessment practice and enabling those teaching in HE to reflect on and consider how they view assessment in terms of purpose and possibilities for processes to be utilised to meet those purposes. For assessment best practice to be meaningful, it needs to be mapped onto the disciplinary context so that collectively, those teaching in HE can see the possibilities.

Institutional behaviours inhibit or enable assessment innovation and practice depending on how they are experienced and perceived by those teaching in HE. Where institutions have considered assessment in depth, they act as enablers of assessment innovation and practice. Therefore, institutions should shift focus from procedures and administration of assessment to the development of comprehensive assessment processes. Towards the end of this study, the artificial intelligence (AI) debate and discussion flared, with lots of concerns articulated most of which are actually about how academics and HEIs view assessment. Time and scope of this study did not allow for examination of the AI issue in relation to assessment beliefs. However, based on the patterns emerging from the scoping review, it will be very difficult to effectively address the challenges of AI at an institutional level without first understanding the assessment beliefs of those teaching in that institution because assessment change and reconceptualisation will be required.

Following on from the point above, *explicit leadership in assessment* appears to be a core aspect of effective practice. Those perceived to have knowledge and expertise influence the beliefs and practices of others. Therefore, the leadership of assessment practices needs to be planned to take into account the ubiquitousness of the T&L term and the importance of the disciplinary context. Academic developers may perhaps support, offer education around and evaluate assessment practices across an institution, but each faculty (or relevant equivalent) likely requires someone within to map that

support onto the specifics of that unit and its disciplines, subdisciplines and programmes. Further, while the focus of this thesis is on assessment, it is also somewhat evident that curriculum planning and development also requires specific knowledge and skills, and therefore, leadership. The theoretical framework guiding the research approach to this thesis (Nind et al., 2016) provides a good foundation for reconceptualising the alignment of all four pedagogical pillars at every level of the HE system.

There are two key conclusions to be drawn in relation to PD. Firstly, it is evident that for *PD events to be truly effective, they need to require breadth and depth of engagement* over a substantial period of time. However, the likelihood of significant numbers of teaching academics being motivated or able to engage in this level of PD is not realistic, especially as the same most likely could be said for education and training in the other three pedagogical pillars. Secondly, *enabling those teaching in HE to experiment with new approaches and to reflect on their experiences* influences change in belief and enhances practice. So, perhaps there is a way forward emerging from these two patterns in the scoping review. If certain individuals were enabled at an institutional level to engage deeply with assessment scholarship and PD, they could, in turn, enable enhancement of practice at a disciplinary and/or faculty level. And this brings us back to some of the points above in relation to disciplinary context, leadership and how a HEI can enable rather than disable assessment practice. Therefore, while the *5Ps framework* includes one element specifically relating to PD, it could be concluded that the entire framework provides a lens for developing PD as well as in this field.

6.2.2 What are the beliefs of those teaching in Irish HE contexts in relation to the purpose of assessment?

The overall picture emerging from the scoping review analysis in relation to beliefs about the purpose of assessment was quite fragmented and therefore, not as clear as the analysis of the other four elements of the *5Ps framework*. Therefore, this element of the framework provided the basis for exploration with those teaching in Irish HE using a survey. The following conclusions may be drawn from the survey findings.

The lack of belief that assessment is an indicator of quality or can be used to evaluate a module may stem from the lack of consideration of this possibility at the point of programme/module development. Of course, the term *quality* needs to be defined to clarify this finding; however, it will likely be considered in relation to quality of teaching, standards of achievement particularly in relation to

programme outcomes and learning experiences. Once again, this implies explicit alignment of assessment with curriculum, teaching and learning.

While there was general agreement that assessment holds students accountable, the wide range of responses relating to using assessment for grading warrants further attention. The responses relating to assessment and students in the open question evidenced the enhancement of student learning as the perceived key purpose of assessment rather than holding students accountable. Indeed, the open question responses suggested a predisposed concern for the student experience rather than a distrust of student engagement with assessment principles.

The survey indicated very high agreement that assessment modifies teaching while simultaneously evidencing much lower agreement that assessment can be used to tailor learning to individual students. This may be related to the general focus on assessment at a modular rather than a programmatic level wherein even if assessment data is used by those teaching on a module to identify students who are struggling or indeed achieving to a very high level, they experience difficulty using that information to support and enhance that learning across module boundaries.

There is some evidence of disciplinary differences with those in the education discipline, specifically respondents are a little more circumspect than others that assessment improves education and is reliable. This may be due to the fact that those in the education discipline have a deeper understanding and knowledge of the possibilities and limitations of assessment and therefore, are more aware of the nuances of the assessment process.

Those teaching in Irish HE seem to engage with PD in assessment at a fairly superficial level if at all, based on the respondent profile. And when responding to the open question, only 3/169 made explicit reference to PD. Of course, the other responses likely indicate aspects of assessment they would like to learn more about but the specific references to PD in relation to assessment were almost non-existent.

When explicitly considering class size, Irish academics believe it to be a constraining factor but when viewed in relation to other conceptions about assessment, it does not seem to make any difference at all. So, it may be more likely that more fundamental factors are coming into play when explicitly

considering class size such as perception of workload vis-à-vis current assessment practices without awareness or consideration of alternative approaches. This is not clear and warrants further examination in later phases.

The opportunity to have the last word here might be given to one survey respondent who somewhat encapsulated the conclusions above quite succinctly:

> *As academics, many of us spend long years involved in teaching and assessment and we can convince ourselves we know more about assessment than we really do (and indeed we can pontificate even in situations of near perfect ignorance based on personal experience). I wonder if we can get any sense of the prevalence of real, critical awareness of the range of modalities of assessment, their various strengths and weaknesses, and the science of learning and skill development that should inform that awareness (OQ094).*

6.3 Implications for practice

Some key implications for practice are extrapolated from the findings presented in Chapters Four and Five and the conclusions above in relation to PD and HEI considerations primarily.

6.3.1 Professional Development

While PD clearly makes a significant contribution to enhancing assessment practice, this really only happens in the context of extended, deep engagement with the field which, realistically, may not be possible for the vast majority of academics who juggle competing demands regularly. The following are some of the important implications for the design and implementation of PD opportunities.

1. Assessment beliefs need to be unpacked as part of PD so that they can examined, reflected upon and acknowledged when engaging with new learning in the field.
2. The evolutionary nature of assessment development needs to be considered and opportunities for experimentation with new ideas and innovations provided to further allow those teaching in HE to reflect so that the layered nuances of assessment practice become more visible to them.
3. There is an evident tension between the willingness of those teaching in HE to acknowledge and implement effective assessment practices and their ability to enact that intention particularly in terms of evidence-based approaches and deep engagement with relevant literature. Concomitantly, those teaching in HE are positively influenced by peers they consider having expertise in assessment. Taking both of these factors into account, an effective way forward may be to invest significant PD resources to upskill of a key person(s)

in a discipline who might then liaise with institutional academic developers in mapping assessment education and training onto the specifics of the disciplinary field. These people would become sources of information, inspiration and expertise in lieu of individual deep commitment to engagement with relevant literature and research. However, this needs to be part of a wider structure taking into account the alignment of assessment practices with other pedagogical demands.

The 5Ps framework is a theoretical point of reference for enabling PD in assessment. Appendix Q attempts to translate that framework into a workable, usable toolkit to assist those facilitating assessment PD and review. It is a draft and will require piloting for refinement. The section relating to assessment purpose is based not just on the findings of the scoping review but also on the findings of the survey.

The toolkit provides stimulus questions aimed at illuminating existing perceptions, conceptions and beliefs across the five elements of the framework. As the notion of assessment identity is relatively new (Adie, 2013) and therefore, there is little research on the identities of teachers as assessors (Leonardsen et al., 2022), this element of the toolkit will provide some guidance for those facilitating reflection on and discussion of assessment beliefs and practices individually and collectively. Alongside the stimulus questions are suggested guidelines for action on the part of those facilitating that reflection and discussion arising from the responses to the stimulus questions.

6.3.2 Implications for institutions

While the implications in section 6.3.1 are likely relevant at an institutional level, this section draws some implications relating to other aspects of assessment which also need to be considered by HEIs. As evidenced in the scoping review particularly, the institution can act as an enabler rather than an inhibitor if the pedagogical mission of the organisation is supported appropriately.

1. The term T&L is embedded systemically. However, even if the term persists in one form or another, the foci it encompasses could be much more clearly delineated and clarified to ensure the alignment of all pedagogical aspects of the HE endeavour. The Nind et al. (2016) conceptualisation of pedagogical practice and research may be a good starting point. Clarity around institutional assessment beliefs and intentions will enable those providing PD to contextualise their work. It will also impact on curriculum development practices.

2. Leading on from the implication above, curriculum development practices also need to be supported in an informed manner, particularly in relation to programmatic pedagogical approaches in the first instance, before programme components such as modules are developed.
3. HEIs need to encourage scholarship in the pedagogical practices of their staff as much as in the disciplinary fields.

6.4 Reflections on the research process

As previously outlined, I embarked on this doctoral journey tentatively and nervously, not entirely sure of my competence to engage effectively. Over the course of the doctoral process, I have learned a lot about research in relation to methods, methodologies, analytic tools, study design and reporting. I have also learned a lot about myself. The following are some of my key reflections on the process.

The COVID-19 pandemic began half-way through the academic year in which I began the thesis part of the EdD programme. I had originally intended to examine HE teachers' beliefs and practices in relation to large class, face-to-face teaching, an aspect of my practice I have paid a lot of attention to over the last thirteen years. I had already designed a scoping review for that study when the pandemic hit and erased all face-to-face teaching across the planet and in 2020, I could not envisage when we might see their return, particularly very large groups. So, I felt I had to pivot and decided to focus on assessment instead, which led me down a road much less travelled, by me anyway! I lost a year during that time as I refocused and headed down the assessment road. While I had engaged with assessment literature previously, particularly in relation to my own practice, it is not an area I had a deep knowledge of and so, the journey was sometimes slow, frustrating and slightly overwhelming as I came to grips with key concepts and ideas. However, now that I am at this side of the process, I feel I have developed expertise which will stand to me in my career as a HE teacher. In fact, my own institution runs an EdD programme and very recently, it has become evident that we might be welcoming teachers from Irish HEIs, particularly those from the newly formed universities who need to engage in doctoral studies because of the context in which they now find themselves. So, having this depth of insight and expertise in the HE context is likely going to be very important. Having said that, even though I have been a proponent of the importance of those teaching in HE engaging in SoTL, I have found the length of time required to engage with the thesis, took me away from research within 'my discipline'. It may just be my perception, but I feel disconnected to SIE and TE research, and I wonder if others in the field see me as residing on the periphery also. So, going forward, I have plans to specifically engage in research in this field as well as continuing with my focus on

assessment. And a first step in that process may be to bring my three worlds (SIE, TE and HE) together by using some of this study as a springboard to specifically examine how assessment is used by those in the 'discipline' of education to evaluate the inclusivity of student teachers' pedagogical beliefs, competence and practices, particularly in ITE undergraduate programmes.

The scoping review element of the study was challenging. Having engaged with this systematic-type approach, I have come to one key conclusion – systematic-type reviews should not be presented as a 'type' of literature review nor presented in a continuum which includes the type of review of literature which sets the foundation for a study, leading logically to the establishment of research questions. Rather, systematic-type reviews may be used for the purpose of answering research questions arising from a more traditional narrative review. I did not fully understand that as I set out on the scoping review, and so underestimated the nature of the process in terms of time and volume of data. This challenge was augmented by my desire to balance the descriptive limitation of the scoping review (Arksey & O'Malley, 2005) with a forensic approach using thematic synthesis (Thomas & Harden, 2008) which was intricate, complex and required courage of conviction to complete.

The survey required me to enter the world of quantitative data collection and analysis. While I did so tentatively, I am very glad I did because the survey provided a good overview of assessment beliefs in the Irish context which supplemented the generality of the scoping review findings. I was also glad I had included an open question which, while very broad, did flag some assessment elements which were the focus of consideration, or not. It provided an opportunity for respondents to have a 'voice' in this element of the study. I had hoped to conduct some focus groups as part of this study also but time, workload and the scope of the EdD thesis did not allow; this will form part of the next step in the longer-term process. On that note, considering this study in the context of future research possibilities from the outset rather than retrospectively is a strength of the study because it forced me to think of a wider research design in a meaningful way and informed the decisions made in this study.

I embarked on this doctoral journey on Thursday 19 October 2017, four weeks after my 50th birthday. I had hesitated to take on a doctoral programme before this because I felt I did not have the requisite skills even though most of my peers had taken the plunge years earlier. Now, that I am at the other end of the process, while I do not consider myself an expert at all, I do feel I have learned so much theoretically and practically. Theoretically, I have a much better and deeper working understanding of epistemology, ontology, positionality, theoretical and conceptual frameworks; the foundations of the research process. Practically, I feel so much more confident and competent to engage with research

projects in terms of leading, designing and implementing each aspect of the design. And, I have upskilled in terms of a plethora of research tools which I used throughout the process before and after the forced pivot to a new focus for the thesis including Abstrakr, Covidence, Zotero, NVivo and SPSS. I am not an expert, but I am not afraid of them either! The doctoral process is essentially about making decisions. I am not a good decision-maker, so this was challenging throughout. However, I do think that my cautious, questioning approach to every aspect of this process was a strength in that there is attention to detail throughout which adds to the rigour and reliability of the study.

6.5 Contribution to knowledge

This thesis contributes to knowledge in that it has built on previous arguments and knowledge, pushed it forward and added to it and will potentially impact on the research planned in this study but also perhaps on the research of others (Wellington, 2013). This is evidenced by:

1. The development of the *5Ps framework* as a lens through which to view the focus of teachers' beliefs and therefore consider assessment practice. Additionally, it provides a framework for further research in the field which is of particular interest to me as I intend to follow on from this study to future iterative phases in the longer-term research plan.
2. When embarking on the doctoral process, the advice is usually to maintain a tight focus. However, the field of HE assessment research is quite fragmented precisely because the focus for most studies tends to be narrow methodologically, conceptually and/or contextually. Indeed, this is a limitation of the field of teacher belief research also. Moreover, this study was conceptualised as the first phase of a broader, more long-term research project to provide a basis for later, more focused examination of assessment practice in the Irish HE context. So, this study had a broad focus from the outset in terms of the scoping review particularly, with the aim of examining the bigger picture of HE teacher assessment beliefs generally. The breadth of the study was challenging but it needed to be done to provide a cohesive, comprehensive overview of assessment HE beliefs and implications arising. It is likely part of the reason that assessment does not feature much in curricular documentation; there is too much to consider.
3. Outside of the contribution to knowledge regarding assessment beliefs in HE, this study has highlighted the importance of defining and understanding terms used interchangeably such as belief, conception and perception. While at an embryonic stage, the brief explication of these terms provided in Appendix O provides the very early contribution towards knowledge albeit

requiring much deeper consideration going forward. This will inform belief research broadly, not just in the assessment context.

6.6 Limitations

Chapter Three outlines the key limitations of this study. In this section, some more overarching limitations are reflected upon.

As outlined in section 3.3.3, there are specific limitations inherent in aspects of the study design. While the responses to the survey statements provided a general overview of the beliefs of those teaching in Irish HE relating to the purpose of assessment, it did not disclose insights as to why they thought as they did, although the inclusion of an open question in the survey went some way to ameliorating that limitation. By its nature, the scoping review is descriptive; further, the included articles were not screened for methodological quality and rigour. Moreover, while considering assessment beliefs, the articles were based on a disparate range of assessment contexts. The decision to use the Thomas and Harden (2008) thematic synthesis approach balanced the generality of the scoping review structure, although due to time constraints, it was not possible to include all aspects of the review in this study.

One of the main limitations of the doctoral process is that the researcher is working alone rather than as part of a research team. While the guidance and support of the supervisor is invaluable it is not the same as working with others whereby the work is approached in a similar manner, particularly in relation to workload and making decisions, which must be made on multiple occasions at many points and layers of the process. Arising from this point, by default, I am a limitation of this study because of my own developing skillset in relation to working alone on an extended study, learning new research and technical skills, and my initial, rather scant engagement with assessment research and literature at a deep level as I embarked on this project.

Having said all of that, this study is the gateway to a range of possibilities in terms of further research generally and in relation to my own development, personally.

6.7 Further research

The possibilities for further research arising from this study was considered from the outset, framed by the Nind et al. (2016) theoretical framework. It is intended to use the findings and conclusions herein to develop the next phase which is intended to comprise focus groups based in disciplinary contexts given the pattern arising from the scoping review relating to the importance of embedding assessment theory and practice in the related disciplinary context. In addition, the fact that significant difference was found in terms of two of Brown's (2005) factors between disciplines strengthens the rationale for this decision. The *5Ps framework* will provide the structure for the development of interview schedules; indeed, the questions in the toolkit (Appendix Q) could be used to develop interview schedules. It is intended to follow that phase with an in-depth examination of practices using observation, analysis of assessment documentation at modular and programmatic levels and analysis of student work. However, the exact design of this phase will be based on findings from phase two. And depending on the outcomes of these phases, engagement with students and those in institutional leadership positions may form part of the long-term research plan also.

It may also be prudent to return to the scoping review codes which are not included in this study to determine what they reveal in terms of assessment belief and practice vis-à-vis those where were included. Further, given the quite recent developments in relation to AI, it is intended to review the relevant literature with a view to including some examination in later phases.

The insights into belief terminology and its interchangeable use in the field of HE assessment was something I saw at the outset of this study but accepted as normal and inevitable. Indeed, it is normal and inevitable but as I neared the end of the scoping review, I formed the opinion that it needed to be questioned, researched and examined, not just in terms of assessment but pedagogy generally. Therefore, this may be an avenue of research which I will follow also albeit an area that is outside my experience and expertise.

6.8 Closing remarks

Assessment in HE is complex, layered and imbued with lack of PD opportunities for those who are vested with its design, development and implementation to engage with the process in a confident and competent manner even though it is clear that those teaching in HE generally and in Ireland specifically value the importance of assessment in supporting student learning. This study explored the craft beliefs of those teaching in HE as they navigate the assessment process, from a literature

perspective firstly as well as from the perspective of those teaching in the Irish HE context. The concluding threads, plus the possibilities for further research will be pulled and woven when moving onto the next phase which will attempt to understand some of the belief findings leading ultimately to investigation of hypotheses arising.

This was a long and winding journey along a road less travelled. When I made the decision in August 2020 to pivot to the assessment focus for my EdD thesis, I completely underestimated the implications in terms of my existing knowledge, reviewing literature, beginning again with the development of a new research plan for the thesis. Now that I am at the other side of the process, I find I have added to the breadth of my knowledge and expertise as a HE teacher and this journey will likely open new possibilities in relation to my own pedagogical and research practice, and how I might move forward in my own institutional context. The EdD has effectively been an extended, hands-on experience in the layered intricacies of assessment from which I have learned so much about research, pedagogy, assessment, and myself.

Two roads diverged in a yellow wood,
… long I stood
And looked down one as far as I could
To where it bent in the undergrowth;
Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear
…
Two roads diverged in a wood, and I –
I took the one less travelled by,
And that has made all the difference.

Robert Frost, The Road Not Taken, 1915

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Appendices

Appendix A: Brown's (2006) teachers' conceptions of assessment inventory (abridged) – factors and corresponding statements.

Factors	Subfactors and Statements
Assessment makes schools accountable	Assessment provides information on how well schools are doing Assessment is an accurate indicator of a school's quality Assessment is a good way to evaluate a school
Assessment makes students accountable	Assessment places students into categories Assessment is assigning a grade or level to student work Assessment determines if students meet qualification standards
Assessment improves education	*Assessment describes abilities* Assessment is a way to determine how much students have learned from teaching Assessment establishes what students have learned Assessment measures students' higher order thinking skills *Assessment improves learning* Assessment provides feedback to students about their performance Assessment feeds back to students their learning needs Assessment helps students improve their learning *Assessment improves teaching* Assessment is integrated with teaching practice Assessment information modifies ongoing teaching of students Assessment allows different students to get different instruction *Assessment is valid* Assessment results are trustworthy Assessment results are consistent Assessment results can be depended upon
Assessment is irrelevant	*Assessment is bad* Assessment forces teachers to teach in a way against their beliefs Assessment is unfair to students Assessment interferes with teaching *Assessment is ignored* Teachers conduct assessments but make little use of the results Assessment results are filed and ignored Assessment has little impact on teaching *Assessment is inaccurate* Assessment results should be treated cautiously because of assessment error Teachers should take into account the error and imprecision in all assessment Assessment is an imprecise process

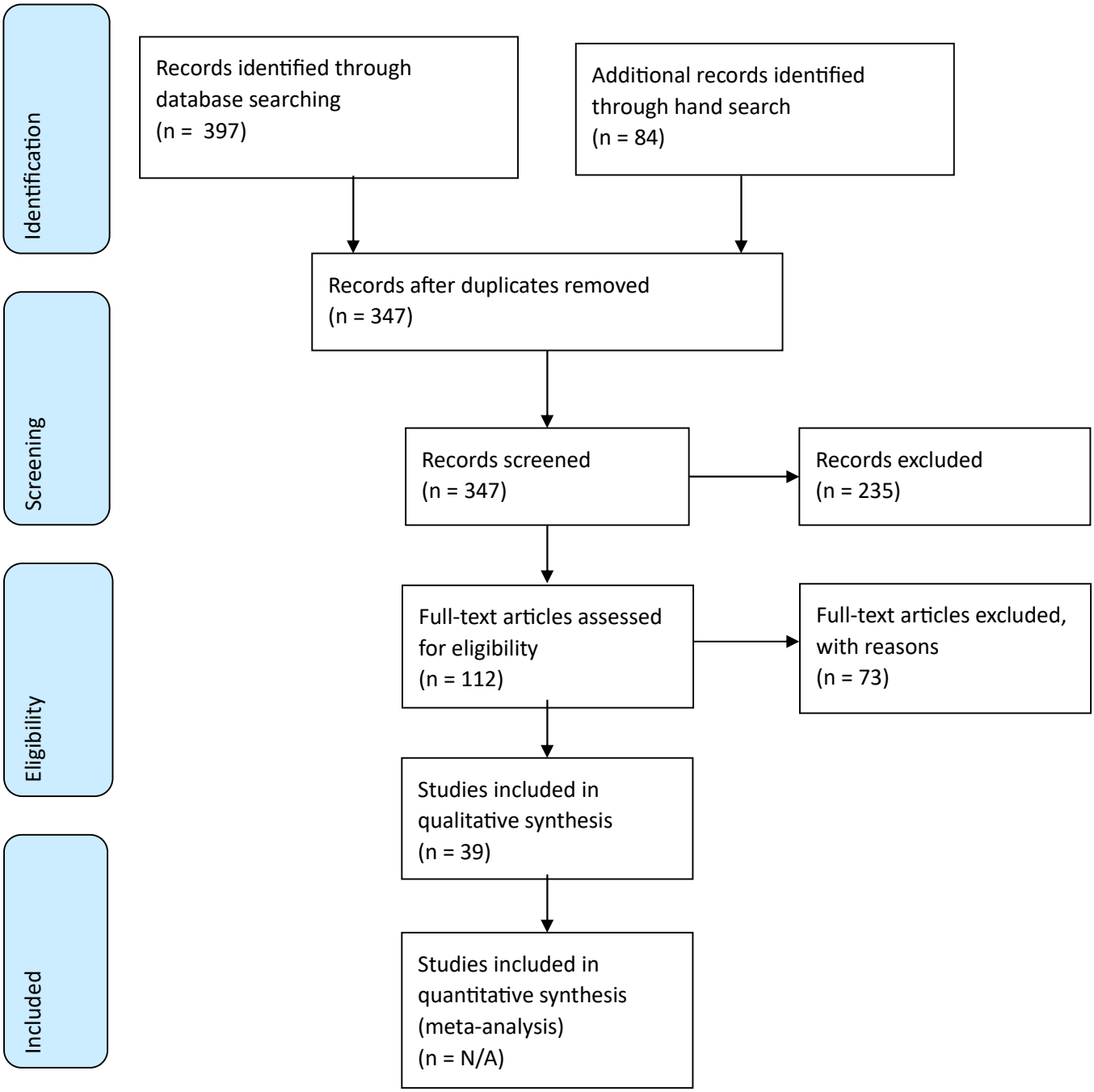
Appendix B: Database Search for 'Conceptions of Assessment in HE'

Database	Limiters & Expanders	Search Fields	Number of Articles Exported to Zotero
Academic Search Complete	Apply equivalent subjects Full Text Scholarly (Peer Reviewed) Journals Published Date: 2010/01/01-2021/12/31 Document Type: Article Language: English PDF Full Text	Strings 1-3 = in title String 4 = in abstract	32
Taylor Francis	1 Jan 2010 - 31 Dec 2021		27
Education Research Complete	Full Text; Scholarly (Peer Reviewed) Journals; Published Date: 20100101-20211231; Publication Type: Academic Journal; Document Type: Article; Language: English; PDF Full Text Apply equivalent subjects Search modes - Boolean/Phrase	Strings 1-3 - in title String 4 = in abstract	37
Web of Science	1/.1/2010 - 31/12/2021 English Articles	Strings 1-3 = in title String 4 = in topic (incl. title, abstract, keywords)	74
ERIC: Australian Education Index	1 Jan 2010 - 31 Dec 2021 Articles and international articles	Strings 1-3 = in title String 4 = in 'all text'	5 *(28 initially - had to screen titles at this point due to difficulties exporting to Zotero. Final number = 5)*
ERIC: US Education	Jan 2010 - 31 Dec 2021 Peer reviewed Scholarly Journals NOT speeches, reports, presentations English	Strings 1-3 = in title String 4 = used the term 'higher education' only in 'all text'	198
Scopus	2010-2021 English Journal Article Final publication stage	Strings 1-3 = in 'article' only String 4 not used	24 (600+ initial hits. Hand searched to identify HE articles = 24)

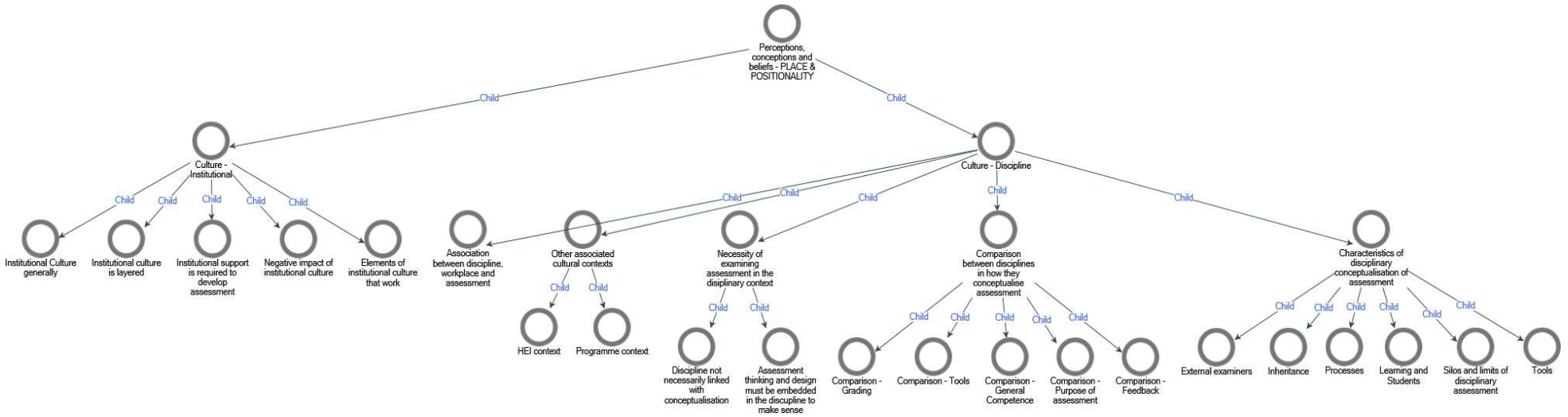
Appendix C: Journal Hand Search for 'Conceptions of Assessment in HE'

Journal	Dates	Notes	Number of Articles exported to Zotero
Assessment and Evaluation in Higher Education	From Issue 5 2021 back to 2010	Light touch screening of some abstracts to check relevance	51
Assessment in Education: Principles, Policies and Practice	From Issue 2 2021 back to 2010	Mainly primary and post-primary	3
Studies in Higher Education	From Issue 9 2021 back to 2010	Quick general search at first then hand search	15
Teaching in Higher Education	From Issue 6 2021 back to 2010	Mainly articles relating to T&L generally	2
Irish Education Studies	From Issue 2 2021 back to 2010	Mainly primary and post-primary	1
Active Learning in Higher Education	From Issue 2, 2021 back to 2010	Mainly articles relating to T&L generally	2
Higher Education	From Vol 82, Issue 1, July 2021 back to Vol 78, 2018 hand searched.	Abandoned hand search at 2018. Used search terms assessment beliefs and assessment conceptions to search full journal	4
Higher Education Research and Development	From Issue 5, 2021 back to 2019 inclusive hand searched.	Abandoned hand search at 2019. Used search terms assessment beliefs and assessment conceptions to search full journal	6
Note: The following journals were searched but very little of any relevance was found and therefore are not included above - (a) Research and Practice in Assessment, (b) Assessment Update, (c) Assessment. This was mainly due to the focus of the journal.			

Appendix D: PRISMA Flow Diagram



Appendix E: Sample NVivo codemap for one of the key themes (Place and Positionality)



Appendix F: Samples of detailed analytic tables for scoping review

Primary code - phase one	Studies
Teacher assessment literacy	1, 3, 4, 6, 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 32, 35, 36, 37, 39
Sub-themes	***Studies***
Contradictory conceptions and confusion	
• Understanding the process of assessment	7, 12, 14, 18, 28
• Understanding the association between assessment and learning	3, 21, 26, 29, 32
• Appreciation of theory versus engagement / enactment with theory	7, 30
• Language of assessment	7, 12, 36, 37
• Need knowledge of theory to assess effectively	13
• Understanding role	21
Development of assessment literacy and understanding	
• Evolutionary nature of understanding	6, 12, 26, 30, 31, 39
• Conceptions drawn from others	3, 12
• Impact of pre-existing beliefs on CPD	15, 16, 18, 25, 35
• Engagement in reflective practice	15, 30
• Did not draw on theory/literature	7, 12
Relationship between teacher assessment literacy and student assessment literacy	
• Requirement to teach students about assessment principles and processes	7, 18, 21, 31, 36, 37
• Ability to include students as partners in the process	24, 25, 29, 36
• Elements of assessment requiring skill on the part of the teacher	1, 4, 7, 11, 12, 14, 17, 18, 29, 36, 37
• Justification of approaches used	28, 29
Impact of context on assessment literacy	
• Requirements of HEI / system	4, 9, 12, 15, 21, 25, 29
• Sense of ownership / feeling cut-off	20, 22, 32
• Disciplinary language	3, 7, 9, 23, 25
• Contextual and individual understanding	30
• Technical proficiency	12, 19
Evidence of literacy confusion in scholarship / literature	6, 7, 16

Primary code - phase one	Studies
Provide Feedback to Students	1, 4, 5, 6, 7, 8, 9, 10, 11, 14, 16, 17, 18, 19, 21, 22, 23, 25, 26, 28, 29, 30, 31, 33, 35, 36, 37, 39
Sub-themes	**Studies**
Teachers' perspectives and skills in providing feedback	5, 7, 9, 10, 11, 14, 16, 18, 21, 23, 25, 26, 29, 30, 31, 33, 35, 36, 37, 39
Purpose of feedback	
• Improvement	8, 17, 18, 26, 35
• Monitor learning	8, 30, 35
• Identify strengths and needs	11, 17, 35
• No common understanding	14, 35, 37
Student skills re feedback	1, 4, 5, 6, 14, 35
Impact of feedback on learning	1, 5, 6, 14, 19, 21, 35
Impact of feedback on teaching	1, 21, 22, 28
Feedback as a process	4, 6, 31
• Timing of feedback	1, 5, 14, 21
• Feedback loop	8, 22, 28, 35, 39

Appendix G: Correspondence with Professor GTL Brown re TCoA III(A) – 19th May 2022

Email to Prof Brown:

Dear Professor Brown,

I am a student on the EdD Programme at the University of Sheffield, UK and I am an Assistant Professor in Dublin City University, Ireland. I am writing to request permission to use the Conceptions of Assessment III Abridged Inventory as part of my thesis research. The working title of my thesis is Conceptualising Assessment: The Assessment Beliefs of Irish Higher Education Teachers. My supervisor is Dr. Tim Herrick; his email address is t.herrick@sheffield.ac.uk should you wish to contact him for any reason.

The first phase will (subject to your permission) be based on the Teachers' Conceptions of Assessment Inventory (Abridged) which will examine assessment conceptions generally. The second phase will explore some of the findings from the first phase using focus groups comprising those involved in designing and implementing assessment. Your survey is a particularly relevant and helpful instrument for my research because it has been used extensively and validated in primary and post-primary contexts and I believe will enable me to establish a baseline of assessment beliefs in the Irish higher education sector.

If permissible, I would hope to make some amendments to the survey in order to make it applicable to the higher education context in Ireland. The statements loading to the Assessment makes schools accountable factor will likely have to be split into two separate statements, substituting the word 'school' with 'programme' and 'module'. I also hope to include an additional statement - Assessment is impacted by class size - which may be included within the Assessment is irrelevant factor. For the purposes of the thesis, analysis will be descriptive and inferential only. However, depending on the sample size, I may engage in some factor analysis in the future following completion of the EdD.

Thank you for your consideration, and I look forward to hearing from you. In the meantime, if you have any questions please do not hesitate to contact me and if you are interested in the findings of my research, I would be only too happy to share them with you.

Yours sincerely,

Ann Marie Farrell

Student, EdD, School of Education, University of Sheffield

Assistant Professor, Institute of Education, Dublin City University (profile)

Email from Professor Brown

Hi Ann Marie
Absolutely you can use the inventory.
It's available with CC-BY licence which means you can adapt it as you need.
Search https://doi.org/10.17608/k6.auckland.c.3690549.v1
Please do send results of your research when they are available for dissemination
Best wishes
Ngā mihi
Ahorangi / Prof. Gavin T L Brown, PhD
Manutaki / Director Quantitative Data Analysis and Research Unit
Te Kura Akoranga me Te Tauwhiro Tangata/ Faculty of Education & Social Work
Waipapa Taumata Rau / The University of Auckland

Appendix H: Covering email to those who agreed to pilot the survey

Dear X,

I am writing to ask a huge favour of you - would you mind piloting this survey for me? It is part of my doctoral research. It looks at the conceptions of assessment held by those working in Irish higher education. The following is the content of the survey:

Information sheet and follow up consent form with 10 consent statements (tick yes/no)

Respondent details - 7 items (tick relevant response)

Survey - 31 statements (likert scale - tick relevant response)

two open questions

Could you feedback on the following in particular:

Is the consent form clear to you, easy to respond to / layout etc?

The survey is an established one; I have changed almost nothing except the items which refer to programme and module as the original instrument used the term 'school' as it was aimed at primary / post-primary. In that context, were you able to understand the questions? Did you find it easy / difficult to come to a decision?

I am particularly interested in your feedback on the (a) respondent details from your perspective and (b) the terminology/language used in the survey

Were the instructions clear? Do I need to add a bit more info / direction for respondents?

For the purpose of the pilot, I have two open questions; I intend to only have one in the final version. I want to include a question so participants have a chance to 'speak' to me (I personally dislike closed questionnaires which do not allow me to say something). Responses will, hopefully, give respondents an opportunity to provide more insight into their assessment conceptions if they wish and will also inform the next phase of the study. What do you think of the questions I have included? Were they easy to answer? Would you have preferred a different question / focus?

The survey is set to be anonymous. If there is anything that you think identifies you, can you flag it to me please?

Approximately how long did it take to complete?

Anything else about engaging with the survey that strikes you? Any suggestions for improvement etc? All suggestions are welcome.

And, if you do not have time to do this, I completely understand - no problem at all.

Best wishes,

AM

Appendix I: Guidance provided to survey respondents regarding the 31 statements

Brown's (2006) **Teacher Conceptions of Assessment III Abridged Inventory** (TCoA IIIA) forms the basis of this survey. To date, the TCoA IIIA has been used mainly with teachers in primary and post-primary (secondary) educational settings. Most statements are taken verbatim from the original inventory but some had to be altered to suit the higher education context.

There are 31 statements in total. The survey asks about your beliefs and understandings about assessment. Please answer the questions based on ***your own overall beliefs*** of assessment, whatever the term 'assessment' means to you regardless of context such as assignment / exam / placement / formative / summative etc. Please focus on your ***beliefs*** and not your current practices or those of your institution. Indicate how much you actually agree or disagree with each statement using the following rating scale: Strongly Disagree, Mostly Disagree, Slightly Agree, Moderately Agree, Mostly Agree, Strongly Agree

Please note the definitions of the following terms used in the survey:

Programme - refers to an organised sequence of teaching, learning and assessment experiences / modules / courses leading to an award such as certificate, diploma, degree.

Module - usually a distinct, discrete, self-contained element of a programme.

For those of you in the education discipline, please note that the terms 'teaching' and 'teaching practice' in relevant statements refer to ***your*** teaching and teaching practice and **NOT** that of your student teachers.

I acknowledge the limitations of a closed, quantitative survey in terms of picking up nuance and depth of individual perspective. The purpose of the survey is to establish a baseline from which some of the findings of the survey will be explored in depth in focus groups. There is one open question at the end of the survey which invites you to identify aspects of assessment which you think would benefit from further exploration. I hope this provides you with the opportunity to express any thoughts and perspectives you could not express via the Likert-style statements.

Appendix J: Survey information sheet

Project Working Title: *Conceptualising Assessment: The assessment beliefs of those assessing learners' work in higher education in the Republic of Ireland*

Who is conducting this study?
This study is being carried out by Ann Marie Farrell. Ann Marie is currently a doctoral student (EdD) in the School of Education, University of Sheffield; this study is being carried out in part fulfilment of the doctoral programme. Ann Marie is also a teacher/academic in the Institute of Education, Dublin City University.

What is the project's purpose?
The aim of this project is to address the following research question - How do those teaching in Irish higher education institutions (HEIs) conceptualise assessment? This study is being conducted as part fulfilment for the University of Sheffield's EdD programme. The research comprises two phases: Questionnaire and focus groups.This information sheet is for the first phase only – questionnaire. Summary information is provided here; for full detail please access the information sheet link below.

Why have I been chosen?
If you are teaching in an Irish higher education context and involved in assessment of learners' work, then I invite you to complete this questionnaire. This includes academics, researchers and those supporting staff in development of teaching, learning and assessment strategies and skills.

What will happen to me if I take part? What do I have to do?
Based on the piloting of this questionnaire phase, it is estimated that responding to this questionnaire will take approximately 10-15 mins. If you choose to participate in this questionnaire, you will be asked to respond to the following types of statements / questions: Statements of consent to participate in the survey (tick)

Seven (7) respondent details e.g. your largest class size, discipline/subject, type of HEI, length of time teaching in higher education (tick)

Thirty-one (31) Likert-style statements relating to your assessment beliefs

One (1) open question (text entry)

When you reach the end of the survey, you will be invited to indicate your interest in partaking in the follow up focus group phase. If you choose not to take part in a focus group, please ignore.

What are the possible benefits of taking part?
Whilst there are no immediate benefits for those people participating in the questionnaire phase, it is hoped that your participation will inform (a) assessment practice in Irish higher education generally and (b) the follow-up phase of this study specifically.

Will my taking part in this project be kept confidential?
The questionnaire is anonymous.

What is the legal basis for processing my personal data?
According to data protection legislation, we are required to inform you that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of

a task carried out in the public interest' (Article 6(1)(e)). Further information can be found in the University's Privacy Notice https://www.sheffield.ac.uk/govern/data-protection/privacy/general However, as stated above, the questionnaire is anonymous and although some professional details are required in the first section of the questionnaire, it is very unlikely that you will be identifiable.

What will happen to the data collected, and the results of the research project?
No data gathered through the questionnaire will identify you. All questionnaire data will be retained for 5 years following completion of the viva voce to take subsequent academic publications into account.

Who is the Data Controller?
The University of Sheffield will act as the Data Controller for this study. This means that the University is responsible for looking after your information and using it properly.

Who has ethically reviewed the project?
This project has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by the School of Education.

What if something goes wrong and I wish to complain about the research?
If you are unhappy about any aspect of the project, please contact Ann Marie Farrell at AMFarrell1@sheffield.ac.uk (student email) OR at annmarie.farrell@dcu.ie (work email). The University of Sheffield has developed a policy for safeguarding to aim to prevent harm in research and innovation, available at: https://www.sheffield.ac.uk/rs/ethicsandintegrity/safeguarding

Designated Safeguarding Contact is: Dr Tim Herrick (my supervisor - t.herrick@sheffield.ac.uk). If the concern or incident relates to the Designated Safeguarding Contact, or if you feel a report you have made to this Contact has not been handled in a satisfactory way, please contact the Head of the School of Education: Professor Rebecca Lawthom, r.lawthom@sheffield.ac.uk and/or the University's Research Ethics & Integrity Manager (Lindsay Unwin; l.v.unwin@sheffield.ac.uk).

Contact for further information
Please contact me at AMFarrell1@sheffield.ac.uk OR annmarie.farrell@dcu.ie if you have any further questions about the project. Alternatively, you can contact my supervisor t.herrick@sheffield.ac.uk

If you wish, you may read or download a copy of this information sheet which expands on the summary information provided above (this will open in a separate window).

Thank you for reading. Please progress to the next section to indicate consent.

Appendix K: Consent Form

You need to indicate agreement to consent (or not) for each statement. Consent to participate in the survey requires 'yes' to all statements. If you select 'no' for any statement, you will be brought to the end of the survey once you have responded to all statements.

	YES	NO
I have read and understood the project information sheet dated 22/08/2022. (If you answer No to this question, please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)		
I have been given the opportunity to ask questions about the project.		
I agree to take part in the project. I understand that taking part in the project will include responding to an online questionnaire about assessment beliefs and practices in Irish higher education institutions from my own perspective		
I understand that my taking part is voluntary and that I can withdraw from the study now; I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.		
I understand my personal details such as name, phone number, address and email address are not required for this phase of the study and that the questionnaire is anonymous.		
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I cannot be named in these outputs because the questionnaire is anonymous.		
I understand and agree that the doctoral supervisor may have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.		
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.		
I agree to proceed to respond to the questions in this questionnaire		

Appendix L: Questions regarding respondent details on survey

This section comprises **seven** questions which seek to establish some details relating to you experience and context. A response is required for all questions.

RD1 Which of the following best describes the **discipline** with which you identfy? Tick one item only. Note: Categories below are based on Biglan's (1973) classification of disciplines. The examples provided in each should guide you in choosing the category most appropriate to your disciplinary area. If you are unsure, please choose 'other'.

Hard Pure e.g. biology, biochemistry, genetics, physiology, maths, physics, chemistry, geology etc.

Hard Applied e.g. agriculture, psychiatry, medicine, pharmacy, dentistry, all engineering, computer science etc.

Soft Pure e.g. psychology, sociology, linguistics, literature, communications, economics, philosophy, history, geography etc.

Soft Applied 1 - Education only

Soft Applied 2 e.g. arts, nursing, conservation, recreation, business, journalism, law, architecture, library etc.

Other. Please specify _____

RD2 Which of the following best describes the **higher education institution** in which you work?

Technological University

University

Institute of Technology

College or provider under auspices of HEA

College or provider under auspices/membership of HECA

Other. Please specify _____

RD3 Which of the following best describes your **main** role currently?

Academic - teaching mainly with some research

Academic - research mainly with some teaching

Academic - mainly managerial role with some teaching

Academic - mainly managerial role with no teaching

Academic Support e.g. Academic Developer/Learning Technologist etc

Researcher with some teaching

Teaching Assistant

Other. Please specify _____

RD4 On which of the following best describes the types of programmes have you **assessed** participants' work in the last 5 years?

Undergraduate only

Postgraduate only

Undergraduate and Postgraduate

None, but I have supported staff in designing assessments (including initial design and/or grading and/or feedback processes etc)

None in the last five years but I have done so more than five years ago

I have assessed some programme participants' work but I mostly support staff in designing assessments (including initial design and/or grading and/or feedback etc)

Other. Please specify _____

RD5 What is the **largest** class cohort you have assessed in the last 5 years?

0-20 students

21-50 students

51-100 students

101-200 students

201-300 students

More than 300 students

Not Applicable

Other. Please specify. _____

RD6 How many **years** have you been working in the higher education sector?

1-5 years

6-10 years

11-15 years

16-20 years

More than 20 years

Other. Please specify. _____

RD7 Have you participated in any of the following **professional development** opportunities? Please tick all that apply.

☐ One-off professional development sessions on assessment in higher education

☐ Professional development course on assessment in higher education accredited with certificate or badge

☐ Attendance at conference focusing on assessment in higher education

☐ Level 9 certificate, diploma or masters in higher education which included some focus on assessment

☐ Level 9 certificate, diploma or masters which specifically focused on assessment in higher education

☐ Doctorate focused on assessment in higher education

☐ I have led/organised/taught professional development events for others which focused specifically on assessment in higher education

☐ Other. Please specify _____

Appendix M: Order of statements as presented on the survey

Assessment provides information on how well programmes are doing.

Assessment provides information on how well modules are doing.

Assessment places students into categories,

Assessment is a way to determine how much students have learned from teaching.

Assessment provides feedback to students about their performance.

Assessment is integrated with teaching practice.

Assessment results are trustworthy.

Assessment forces teachers in higher education to teach in a way against their beliefs.

Teachers in higher education conduct assessments but make little use of the results.

Assessment results should be treated cautiously because of assessment error.

Assessment is an accurate indicator of a programme's quality.

Assessment is an accurate indicator of a module's quality.

Assessment is assigning a grade or level to student work.

Assessment establishes what students have learned.

Assessment feeds back to students their learning needs.

Assessment information modifies ongoing teaching of students.

Assessment results are consistent.

Assessment is unfair to students.

Assessment results are filed and ignored.

Teachers in higher education should take into account the error and imprecision in all assessment.

Assessment is a good way to evaluate a programme.

Assessment is a good way to evaluate a module.

Assessment determines if students meet qualification standards.

Assessment measures students' higher order thinking skills.

Assessment helps students improve their learning.

Assessment allows different students to get different instruction.

Assessment results can be depended upon.

Assessment interferes with teaching.

Assessment has little impact on teaching.

Assessment is an imprecise process.

Assessment is impacted by class size.

Appendix N : NVivo codebook for open question on survey

Name	Files	References
Comments relating to PROCESS	8	193
Academic Integrity is difficult to achieve	2	12
Alignment of LOs with assessment	1	11
Authentic assessment	1	5
Considerations for design of assessments	3	40
Creativity in assessment	1	3
Effectiveness of feedback	3	36
Examinations are not good	3	10
Examinations V coursework (balance)	1	2
Fairness and accuracy is challenging	1	6
Grading and marking challenges	4	26
Overassessment	1	9
Provision of choice in assessment	1	4
Range of assessments (some refs to diversity)	3	18
Rolling assignments (iterations)	1	3
Timing of assessment	1	5
Use of technology to enhance assessment	1	3
Comments relating to PEOPLE	7	76
Comments relating to STUDENTS	5	38
Assessment should be considered in light of impact on learning	2	18
Student experience of assessment (with refs to diversity)	2	12
Students as collaborators in assessment	3	8
Comments relating to TEACHERS	5	38

Name	Files	References
Impact of assessment on teaching	1	12
Respondent confusion re terminology	1	2
Ts understanding of assessment practice	5	13
Ts understanding of the purpose of assessment	3	11
Comments relating to PUROPSE	6	59
Assessment for learning	1	6
Attendance or engagement as part of assessment	1	4
Formative & summative alignment	1	9
Formative value of assessment	1	8
No formal assessment	1	1
Potential of assessment AS learning	2	7
Summative purpose of assessment	1	1
Ts understanding of the purpose of assessment	3	11
What is being assessed or measured	3	12
Comments relating to PLACE and POSITIONALITY	4	55
Assessment informing programme content	3	11
Impact of and on programme structure re assessment	4	18
Impact of Class Size on assessment	1	26
Comments relating to PROFESSIONAL DEVELOPMENT	3	5
Training or CPD	3	5
Other	1	21
Comment or Reflection on the Survey itself	1	11
Respondent confusion re terminology	1	2
Unclear comments	1	8

Appendix O: Additional literature review - The relationship between perceptions, conceptions and beliefs

Chapter Two highlights the diverse range of terminology used in the field of belief research (Fives & Buehl, 2012; Fives et al., 2015) and the associated implications (Levin, 2015; Skott, 2015). The terminology used to describe how humans interpret and make sense of the world can be problematic and ambiguous because it is used interchangeably and often without much thought to the underlying understanding of each individual term. In considering this assertion, I carried out a simple search on the *Academic Search Complete* database for articles which reported on the perceptions, conceptions and beliefs of subjects across a range of foci and disciplines using the search terms *perception* OR conception* OR belie** in the *title* of *articles* published between *2020-2023* inclusive. The first twenty relevant articles (two were discounted because the terminology was not relevant e.g. conception related to pregnancy) were scanned for definitions of the terms above. All 20 articles contained the terms *perception* and *belief* in the titles; none used the term conception. Three used specific tools to measure beliefs. Eighteen made no attempt to define either term while one explicitly stated the authors' definition of belief only without exploration or reference to literature and a second stated the authors' understanding of the purpose of belief but made no attempt to define belief or perception.

Taking the concerns expressed in the field of belief research into account, hereafter is an attempt to tease out the distinctions and commonalities between the terms perception, conception and belief for the purposes of this study. It is unlikely that the interchangeability of these terms will cease. However, I felt it was necessary to examine them for the purposes of this study, particularly to make sense of the data arising from the scoping review. As the data from the review was analysed, it seemed that while the terms were used interchangeably, there was nuance to the use of each on occasion.

Perception

At a simple level, perception may be understood as becoming aware of something directly through the senses (Audi, 2011). However, complications arise when different circumstances change the perception of the same thing and/or individuals perceive the same thing in different ways (Maund, 2003; Persson, Hillmeister & Persson, 2022). Our senses may be viewed as portals to reality which are very important in developing knowledge but which may also mislead (Nilsson, 2014). From a psychological perspective, perceptions can be understood as the meaning an individual attaches to information received through the senses which is influenced by mental state, past experience, knowledge and motivation (Slavin, 2018). Looking at or seeing a glass of water involves conscious

awareness and because of that, the perceiver will likely have thoughts about that glass of water based on how it looks, nature of glass, other evidence such as marks on the glass (Millar, 2016). Therefore, it would seem that perception likely exists on a continuum from passing awareness to more deliberate, constructive process.

Audi (2011) identifies four elements comprising the perception process - the object, prior sensory experience, the perceiver, and the relation between the object and the subject. He goes on to discriminate between types or modes of perception along a continuum from (a) simple perception of to (b) perception of an object to be, to (c) perceiving that which includes some property of what has been perceived. The complexity of understanding perception is heightened by deeper consideration of the object of perception. Heider (1958) outlines three key differences between the perception of objects and people (and, it could be argued, other living things to a degree):

1. Persons experience an interior life of thoughts and emotions, which is not the case with other objects of perception.
2. Persons may be seen as agents in and/or responsible for their own actions whereas objects are not.
3. Persons can manipulate and influence how they are perceived and observed whereas objects cannot.

Therefore, perception of human activity is a nuanced, contextualised process. People tend to see their own actions as constrained by the context or environment in which they find themselves whereas observers tend to become very focused on the behaviour of the person without possessing the same knowledge about that actor as the actor themselves, all of which may lead to a fundamental attribution error on the part of the perceiver, further compounded by the desire of the actor to manage what is perceived (Tedeschi, 2004). Moreover, the context the actor inhabits, while constraining might also contain affordances in terms of what it provides the actor, good or bad, which may encourage or influence their response to stimuli in the first instance (Maund, 2003). Expectation, based on prior experience, knowledge and/or familiarity with some stimuli more than others, may also bias perception especially when sensory input is weak or ambiguous (De Lange, Heilbron & Kok, 2018). The complexities outlined above suggest that there is an interplay between perception and cognition; a continuum from awareness of a stimulus to more active consideration of that perceived. This may be an important consideration for the design of PD. For example, the emotional aspect of the assessment process (Becker & Denicolo, 2013; McArthur, 2018) is not necessarily visible to others and that introspection may influence how a HE teacher views suggestions regarding assessment design or change. Furthermore, it highlights the importance of examining assessment practices in a comprehensive, layered manner, taking into account the beliefs of those teaching in HE but also

building in opportunities to critically examine those beliefs, observe practice and evaluate assessment artefacts, hence the longitudinal, long-term research plan, with the focus of this thesis as the first step on that journey.

Conception

The continuum of perception outlined by Audi (2011), especially perceiving to be and perceiving that, seem to edge closer to the idea of belief albeit grounded in perception, with belief appearing to depend more on our "conceptual resources in a way that perception does not" (p.19). How perceptions and experiences are conceived is complicated (Millar, 2016) and there are likely educational and cultural elements deposited in perceptions (Jiaming, 2008). At a philosophical level, the distinction between the existence between beliefs themselves and the processes that dispose humans to form those beliefs is not adequately understood (Audi, 2020). Certainly, there is a link between thought and language (Audi, 2011) and much of what we sense comes at us through language via multiple modalities such as television, papers, internet, social media and so on (Nilsson, 2014).

Following perception, it is possible that a process occurs involving the initial grasping or understanding of what is perceived, followed by an endorsement (or not) on the part of the perceiver, leading to a proposition or belief (Echevervi, 2013). Conscious awareness of that perceived implies an active, thinking process (Millar, 2016) which enables construction of a mental model or conception to make sense of or filter the information perceived. The perceptual context which provides affordances (Maund, 2003) or constraints (Tedeschi, 2004) requires the perceiver to make associations with existing understandings. Indeed, the anticipatory nature of humans means they construct predictive models of themselves and their environment which enables them to make sense of incoming information (de Lange et al., 2018) but also is likely to filter that information.

Based on the complexity and lack of agreement on the process of perception itself and its relationship to belief, it is plausible to conclude that conception is the bridge between both; that active processing of information perceived, leading to the formation of a proposition or belief.

Belief

We are not born with beliefs; they come from our senses (Nilsson, 2014) and perceptions (Audi, 2020) and exist on a continuum from those loosely held, to those that are reasonable to those which are well-founded (Millar, 2016). They are the primary determinants of attitude or disposition to "respond favourably or unfavourably to an object person, institution or event" (Ajzen, 2004, p.92). Not all perceptual experiences are doxastic in nature, but those which play a rational role may lead to the

assertive or committal proposition (Echeverri, 2013). While perception may be the source of belief, there too exists a disposition to believe and therefore a bias in making sense of (conceptualising) perceived stimuli and information (Audi, 2020). The mental construct of belief may develop as a consequence of or an explanation for other beliefs (Nilsson, 2014).

Beliefs are based on accepted assumptions, some of which may be not accurate because of a quirk of circumstance or context that is not immediately apparent, and which may act as motivators to believe (Millar, 2016). In other words, beliefs influence perceptions if they ring true in relation to already existing beliefs; may be equated to knowing, rightly or wrongly; experienced with conviction; and can change following new information (Nilsson, 2014). This may manifest itself in a disciplinary context in relation to assessment, where accepted ways of doing things are embedded and believed and therefore, new information perceived may be accepted when it aligns with those beliefs and rejected if it does not. Again, this has profound implications for changing assessment practices and for designing PD to enhance practice.

Critical reflection and discourse enables clarification of assumptions upon which beliefs and viewpoints are based (Hyde, 2021). The first step in critical thinking is to seek the opinion of experts and then to consider the consequences of an explanation for a belief (Nilsson, 2014).

Defining the terms

The *Allegory of the Cave* (Plato, translated by Jowett, 2015) tells the story of three people who were kept captive all their lives, chained so they could not move and therefore, could only see the cave wall in front of them. A fire lit behind them illuminated the movement of others, sometimes carrying objects; the captives saw both people and objects as shadows on the cave wall. Somehow, one captive became free and made his way out of the cave. Initially, he could not see properly because it took time for his eyes to adjust to the light. Then, his perceptions of light, shadow, objects, and people slowly began to change. He was excited to return to the cave and to share his new knowledge with his fellow prisoners. However, when he did return, the sudden move into the darkness disoriented him. When he explained what he had learned, the other two captives thought him mad and rejected his message.

The general thrust of the philosophical and psychological interpretation of the terms perception, conception and belief above seem to align somewhat with Fives and Buehl's (2012) articulation of the functions of beliefs - to filter information and experiences (perception); to frame problems and tasks (conception); and to guide action (beliefs). Plato's story also seems to describe a nuanced continuum from perception to conception and then belief. It illustrates the importance of context in relation to perception in terms of exposure to stimuli which in turn, change conceptions of reality and then beliefs. But it took time for the individual to become accustomed to the new things he was perceiving,

to make sense of the new information in relation to what was already familiar and to accept it. A second moral of the story is that once you have acquired new perceptions, developed new conceptions and created or changed beliefs, it is difficult to go back to the old context or way of doing things. And finally, attempts to change existing perceptions, conceptions and beliefs may be met with resistance usually arising from the perception of threat inducing fear.

So, for the purposes of the remaining phases of the longer-term research plan, the definition of each of the three terms are as follows:

1. Perception - filtering, interpreting and attributing meaning to information acquired.
2. Conception - development or construction of a model/frame of understanding based on the organisation of information perceived.
3. Belief - creation or change of an idea held as being correct which may or may not be based on evidence, situated on a continuum of conviction, which guides actions and influences perception and conception.

As explained in the body of this thesis, I returned to this aspect of the literature only after I had engaged with the scoping review process. It will also likely explicitly inform further phases of the longer-term research study in terms of focus group schedules, observation schedules of assessment practices for example.

Appendix P: Responses to 31 statements adapted from Brown (2006) - Six item response scale

Statement	N	Strongly Disagree	Mostly Disagree	Slightly Agree	Moderately Agree	Mostly Agree	Strongly Agree
		%	%	%	%	%	%
Assessment makes programmes / modules accountable							
Assessment provides information on how well programmes are doing	220	1.8	13.6	27.7	26.8	24.5	5.5
Assessment provides information on how well modules are doing	220	2.7	10.9	21.8	29.5	28.6	6.4
Assessment is an accurate indicator of a programme's quality	214	7.5	32.2	25.7	22.0	11.7	0.9
Assessment is an accurate indicator of a module's quality	214	6.5	27.1	24.3	21.5	19.2	1.4
Assessment is a good way to evaluate a programme	203	6.9	20.7	29.6	24.6	16.3	2.0
Assessment is a good way to evaluate a module	203	4.4	16.7	27.1	25.6	23.6	2.5
Assessment makes students accountable							

Assessment places students into categories	221	2.3	9.5	14.0	23.1	36.2	14.9
Assessment is assigning a grade or level to student work	214	7.0	18.7	22.4	20.1	24.3	7.5
Assessment determines if students meet qualifications standards	203	0.5	5.4	9.9	23.2	48.3	12.8
Assessment improves education							
Assessment describes abilities							
Assessment is a way to determine how much students have learned from teaching	221	0.5	6.8	14.0	28.1	37.1	13.6
Assessment establishes what students have learned	214	1.4	4.2	26.6	30.8	31.3	5.6
Assessment measures students' higher order thinking skills	203	2.5	9.4	26.6	28.6	27.6	5.4
Assessment improves learning							
Assessment provides feedback to students about their performance	221	1.4	6.3	7.2	23.1	35.3	26.7
Assessment feeds back to students their learning needs	213	1.4	8.9	28.2	20.7	28.2	12.7
Assessment helps students improve their learning	203	0.5	3.9	17.2	33.5	33.5	11.3

Assessment improves teaching							
Assessment is integrated with my teaching practice	221	0.9	3.2	4.1	13.1	29.9	48.9
Assessment information modifies ongoing teaching of students	210	1.4	6.2	15.2	27.1	34.3	15.7
Assessment allows different students to get different instruction	203	7.4	36.9	23.6	15.4	12.3	3.0
Assessment is valid							
Assessment results are trustworthy	221	0.9	4.5	14.9	36.2	39.8	3.6
Assessment results are consistent	212	2.8	15.6	21.2	33.5	25.0	1.9
Assessment results can be depended upon	203	2.5	7.9	30.5	28.6	27.6	3.0
Assessment is irrelevant							
Assessment is bad							
Assessment forces teachers in higher education to teach in a way against their beliefs	220	18.2	39.1	20.9	12.7	6.4	2.7
Assessment is unfair to students	212	29.7	44.8	17.5	6.1	1.9	0

Assessment interferes with teaching	203	17.7	41.9	18.2	16.3	3.9	2.0
Assessment is ignored							
Teachers in higher education conduct assessments but make little use of the results	221	9.0	29.0	19.0	18.6	19.0	5.4
Assessment results are filed and ignored	212	16.0	33.0	25.9	10.4	12.3	2.4
Assessment has little impact on teaching	203	22.2	53.7	15.3	3.4	4.4	1.0
Assessment is inaccurate							
Assessment results should be treated cautiously because of measurement error	220	1.8	23.6	29.1	30.5	8.6	6.4
Teachers in higher education should take into account the error and imprecision in all assessment	212	0.9	3.3	24.1	26.9	23.1	21.7
Assessment is an imprecise process	203	6.3	22.2	31.0	24.1	9.9	5.9
New question added to survey							
Assessment is impacted by class size	221	1.0	4.9	9.9	18.7	28.1	37.4

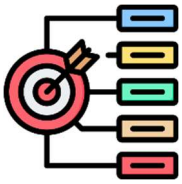
Appendix Q: Draft toolkit arising from 5Ps framework for use by those facilitating assessment review, reflection, discussion and professional development

People



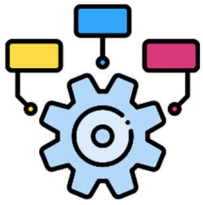
Unpack current beliefs of those teaching in HE	Moving forward Considerations for facilitators
Do you use any particular assessment terminology when discussing assessment / planning and designing / working with students? Do you use any points of reference when designing assessment such as literature from the field, case studies, anything else? What do you think is the role of the assessor? What are the inherent tasks demanded of an assessor? What skills are required to be an effective assessor? How do you see assessment in terms of curriculum e.g. programme / module descriptors … anything else? How does assessment align with student learning? How does assessment align with teaching? What is your responsibility in terms of assessment? What is the student role and responsibility in terms of the assessment process? What is your understanding of self- and peer-assessment? How can they be enabled?	Identify gaps / misconceptions Introduce terminology Signpost relevant sources of literature Unpick concepts of 'responsibility', 'skills', 'role of assessor', 'collaboration with student' / 'students as partners' Use specific models to enable dialogue and reflection Identify key people who may lead change from within Identify points of assessment ownership

Purpose



Unpack current beliefs of those teaching in HE	Moving forward Considerations for facilitators
What do you see as the purpose of assessment? How does assessment support learners? What are your views on the role of assessment to .. … hold students accountable? … those who teach accountable? … help evaluate the effectiveness of the programme / module? Are they any occasions in which you would consider assessment irrelevant or unhelpful?	Introduce assessment purposes which may not already be considered Tease out underlying beliefs re the purpose of assessment in terms of context – discipline, programme, history, unit/department/faculty. Relate back to terminology Relate back to curriculum – programme / module descriptors etc

Process



Unpack current beliefs of those teaching in HE	Moving forward Considerations for facilitators
What are the current assessment processes in place at design, implementation and evaluation levels? How are the assessment processes linked (or not) to curriculum, teaching and learning? How are the processes designed and by whom? What assessment processes have been in place for a lengthy period of time? Any assessment processes in place more recently? Do processes differ between programmes / modules? Do assessment processes align with your beliefs about assessment purpose?	Clarify rationale for using certain processes / approaches. Introduce assessment processes which may not have been considered. Identify existing processes which are still helpful or not Explicitly relate processes to purpose(s)

Place & Positionality



Unpack current beliefs of those teaching in HE	Moving forward Considerations for facilitators
How does the institution enable assessment processes? What is the institutional policy re assessment? What are the institutional priorities? How is assessment captured/shared at institutional level? What are the institutional requirements re. assessment? What are the institutional expectations re. assessment?	Clarify aspects of institutional policy which may not be clear. Develop policy framework for assessment at an institutional level
At a disciplinary level, what is the role of assessment? How does the discipline influence assessment decisions/practices? Does the disciplinary context inhibit assessment practices in any way? Are there disciplinary assessment traditions? How is assessment conceptualised at a programme level? Does that differ depending on the programme? If so, why?	Align disciplinary characteristics with purposes and processes Develop a menu of assessment possibilities for use in the discipline / unit. Provide strategies for enabling programmatic assessment design

Professional Development



Unpack current beliefs of those teaching in HE	Moving forward Considerations for facilitators
What enables your assessment knowledge? Assessor identity following PD What is the role of the institution? What are the PD requirements in the disciplinary context? How is PD defined – what is PD? What would enable engagement with PD? What may hinder engagement? What are the benefits of engagement with PD?	Ensure PD is explicitly linked to and rooted in discipline. Consider identifying specific individuals to be assessment leaders within the disciplinary context. Ensure current beliefs are unpacked (as per the sections above) PD may need to be developed at a range of levels, tailored to individuals. Consider how individual PD may influence institutional assessment practices Identify specific skills which may require developmental support. Build in opportunities for dialogue and reflection Consider use of 'innovative/experimental' practice to spark reflection on assessment Provide opportunities / framework to enable scholarship/publication via PD engagement Normalise review of assessment practices – provide mechanism for review Model assessment practices in PD context