Challenges, Barriers and Enablers to the Implementation of and Engagement in Formative Assessment: An Analysis and Exploration within Higher Education

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Abstract

Formative assessment is a strategy that can be used by lecturers and students to provide information that they can use as feedback to adapt their teaching and learning strategies. Despite this, its implementation within higher education has reportedly been inconsistent for various reasons. The purpose of this study was to explore the challenges to implementing formative assessment in higher education institutions and the barriers and enablers to student engagement with it. The study used a design-based action research approach. Data collection methods consisted of informal observations, a literature review, focus group interviews, individual semi-structured interviews and questionnaire surveys. Data were analysed thematically. Seven themes were identified in the literature review findings and four themes from the fieldwork data. The discussion considers a number of factors that impact on engagement and implementation of formative assessment. These are, the complex relationship between formative and summative assessment, the burden of formative assessment, issues relating to assessment literacy, problems of peer review and integration of formative assessment into programme structures.

This thesis provides an original contribution to the research around formative assessment through its combined use of two theoretical lenses, Self-Determination Theory and the Theory of Practice Architectures. The study facilitates an exploration of how the broader, more pervasive structural elements of an institution create controlling environments which impact on teaching and learning settings and then in turn on student motivation and engagement. The use of a design-based action research approach together with these two theoretical frameworks produces some empirically and theoretically informed design propositions with which to design and construct a programme-wide formative assessment strategy. A further original contribution is the way in which key concepts from both Self-Determination Theory and the Theory of Practice Architectures have informed these propositions.

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Authors Declaration

I declare that this thesis is my own work and has not been submitted in any form for the award of a higher degree elsewhere.

Signature: 

Chapter 1: Introduction and Background

1.1 Chapter introduction

This chapter starts by introducing the context of formative assessment along with its proposed benefits. It goes on to discuss the personal context for the research and the purpose of the thesis is then outlined. This is followed by a critical discussion of the definitions, conception, purposes and functions of formative assessment. A rationale for the research is then presented along with the research questions. It concludes with an outline of the remaining chapters in this thesis.

1.2 Introduction to formative assessment

Formative assessment is a learning strategy that has been under development within the education sector over the past four decades. Whilst inconsistencies attached to its meaning and purpose have resulted in it becoming a somewhat nebulous and ill-defined concept which continues to develop and expand (Taras and Davies, 2017), the basic premise is that it is an educational strategy that is designed to facilitate the development of student learning and to provide feedback and support for such learning (Black and Wiliam, 1998). Evidence indicates that formative assessment can have a positive impact on student learning, and universities on a global scale are therefore increasingly being encouraged to adopt it as a strategy to improve students' experiences (Thanh Pham and Renshaw, 2015). Despite a range of theoretical justifications for formative assessment, its practical implementation in terms of the scope and range of possibilities associated with it is considered to be limited within higher education institutions, and it is therefore failing to fulfil its potential (Boud *et al.*, 2018; Khajeloo *et al.*, 2021; López-Pastor and Sicilia-Camacho, 2017; Wu and Jessop, 2018; McLean, 2018). As Torrance (2012) simply states, research studies and reviews have established that formative assessment *can* improve learning and achievement, not that it *will*.

The proposed benefits of formative assessment are, for example, increased autonomy (Willis, 2007); opportunities to learn from feedback (Sadler, 1989); guidance for students about how to understand assessment requirements and marking standards

(Nicol and Macfarlane-Dick, 2006); opportunities for students to reflect and collaborate (Nicol and Macfarlane-Dick, 2006); enhancement of motivation to learn (Vonderwell and Boboc, 2013; Willis, 2007); assists students to conceptualise their own learning (Panadero et al., 2018); contributes to critical thinking and self-evaluation (López-Pastor and Sicilia-Camacho, 2017); development of learning strategies for use across the life-span (Clark, 2012; Asghar, 2012); serves as an example for future professional practice (López-Pastor and Sicilia-Camacho, 2017); motivates regular study (McCallum and Milner, 2021). From a staff perspective formative assessment enables educators to gain valuable insight into student progress; to identify problem topics and adapt teaching practice accordingly (Hattie, 2009); and to identify students who are having difficulties (McCallum and Milner, 2021). From an institutional perspective formative assessment can support students from a wider diversity of backgrounds and aid retention (Yorke, 2001).

1.3 Personal context

My role is a senior lecturer in occupational therapy. I teach on pre-registration courses for BSc (Hons) and MSc degrees in occupational therapy. Occupational therapy is a science based, health and social care profession that is regulated by the Health and Care Professions Council. Since it is not a profession that is well known to everyone, I will provide a brief definition. Occupational therapy is a profession that helps people with a wide variety of conditions or disabilities to overcome challenges in completing everyday tasks or activities. In professional terminology, occupational therapists refer to these tasks or activities as ‘occupations’. Occupations in this sense are not just about a person’s job as in the more general meaning of the term but also refer to: self-care such as washing, eating or sleeping; productivity such as work, study, caring for others; and leisure such as sport, hobbies or socialising (Royal College of Occupational Therapists, 2024). I previously worked as a practising occupational therapist and have since been working as a senior lecturer in this discipline for nineteen years in two different universities. I will now go on to explain the context for the research which forms this thesis.

Programme validation procedures within my practice setting require specific formative assessment tasks to be stipulated on its module descriptor forms. Over the past few

years the issue of formative assessment within the programmes that I teach (pre-registration BSc (Hons) and MSc Occupational Therapy) has become an issue of great consternation amongst students and staff alike. Assessment practices in general continue to be a significant source of dissatisfaction amongst university students as evidenced by data from the National Student Survey (Deeley *et al.*, 2019; Forsythe and Johnson, 2016; Jessop and Tomas, 2017; Tomas and Jessop, 2019). Despite evidence to suggest that formative assessment can help to motivate students, support their learning, reduce failure rates and improve achievement (Crisan, 2017; Barnard and Mostert, 2015; Brazeal, Brown and Couch, 2016; Weurlander *et al.*, 2012), formal module evaluations and informal personal communications suggest that students often have not perceived formative assessment activities to have been of benefit to them. Additionally, it is frequently perceived as a contributor to the burden of assessment and a subsequent source of stress.

Informal discussions with lecturers on the other hand suggest that, whilst they recognise the potential value of formative assessment, its practical design and implementation usually lacks a theoretical basis or explicit evidence base. Furthermore, the tendency for module leaders to design 'a' formative assessment task for their modules (in order to adhere to the module descriptor forms) suggests that lecturers' understanding of formative assessment is not consistent with empirical exemplifications from existing research which advocate that formative assessment should be frequent and continuous (Elshami and Abdalla, 2017; Barnard and Mostert, 2015). This observation also suggests that formative assessment is viewed by lecturers as an 'instrument' rather than a 'process' which oversimplifies the concept and therefore limits its potential uses (López-Pastor and Sicilia-Camacho, 2017). Additionally, Black and Wiliam (2009) warn how the mere 'listing' of activities which constitute formative assessment without any coherent theoretical rationale, can lead to superficial adoption.

A further issue is that a number of the formative assessment tasks that are currently used within the occupational therapy programmes require students to engage in peer and self-assessment. Such tasks have frequently been met with resistance by students who tend to be less trusting of the views of their peers and look to the lecturer as 'expert'. Providing individualised formative feedback to students is resource intensive and poses a challenge for staff amidst policies of widening participation and

the consequent increase in student numbers. This view of the lecturers as 'expert' is also exemplified as students strive for feedback which confirms what is 'right or wrong' and tend to struggle with the provisional nature of knowledge.

The potential problem from my own context therefore is twofold. First, the lack of implementation of a research informed formative assessment strategy across the programme team may be limiting the potential benefits that the literature suggests it can yield. Second, it appears that there is a lack of recognition amongst students of the functions and value of formative assessment which may consequently impact on their motivation to engage with the process. If students view formative assessment as unhelpful, they may choose to engage with it in superficial ways, thus undermining their learning (Brazeal, Brown and Couch, 2016). The former of these problems is highly likely to reinforce the latter. As a result, use of formative assessment activities may therefore be counterproductive or even detrimental to student learning and motivation.

1.4 Purpose of this thesis

Through the first phase of an educational design research approach, this thesis aims to analyse and explore challenges to implementation and barriers/enablers to student engagement in relation to formative assessment within an undergraduate programme in the United Kingdom. The analysis and exploration phase of educational design research comprises problem identification and diagnosis. The main activities of this phase are an initial orientation, a broad literature review, and a field-based investigation. The broad literature review is conducted towards the start of the analysis phase to gain theoretical insights to shape understanding of the problem, context and relevant concepts. Insights from this literature review can inform data collection during the field-based investigation and can create a framework for data analysis (McKenney and Reeves, 2019). The literature review in this thesis therefore forms part of the findings as opposed to setting the context for the research. Analysis and exploration of the problem will then facilitate the next steps towards a workable resolution through the development of some intervention goals, initial design proposals and consideration of the requirements that will influence the choice of design.

1.5 Defining and conceiving formative assessment

One of the major problems of formative assessment is that it has numerous definitions with diverse meanings (Taras, 2007). Much of the literature uses Sadler's (1989) theory of formative assessment to explain its defining features (Taras and Davies, 2017). Sadler's theory proposes two main characteristics of formative assessment: the importance of using feedback to improve work; and the use of self-assessment by students in order to understand the parameters of assessment so that they are able to make use of feedback.

Black and Wiliam (1998) are often credited for their seminal work in relation to formative assessment. Whilst themselves acknowledging the problem that formative assessment has neither a tightly defined nor widely accepted meaning, their original definition referred to;

> *all those activities undertaken by teachers, and/or by their students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged.* (pp.7-8)

For them, it is the emphasis on the *modification* of teaching and learning activities that sets formative assessment apart from assessment in a more general sense.

Eleven years later, Black and Wiliam (2009) expanded their definition to explain that practice is formative when;

> *…evidence about student achievement is elicited, interpreted and used by teachers, learners or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded than the decisions they would have taken in the absence of the evidence that was elicited.* (p.9)

This latter definition tends to emphasise the active processes of *eliciting, interpreting* and *decision making.* It also includes the role of *peers* which highlights the place of peer evaluation and peer feedback as legitimate formative assessment activities. Within their 'theory' of formative assessment, Black and Wiliam also make reference to 'moments of contingency' as a way of distinguishing it from more general teaching and learning activities. Examples of moments of contingency are: real-time adjustments during teaching sessions; teacher's feedback during grading; changes to

subsequent teaching sessions in response to student feedback or from reflections on previous sessions or previous years (Black and Wiliam, 2009). In an attempt to capture the essence of the numerous definitions (Torrance, 2012) very succinctly articulates;

> *Definitions of formative assessment essentially revolve around the purpose of assessment being to improve learning* (p.324)

1.5.1 Formative assessment as distinct from summative assessment

Formative assessment has been defined in terms of its distinction from summative assessment. Black and WIliam (2003) attribute the earliest distinction between formative and summative to Scriven's work in 1967. Scriven however was referring to programme evaluation rather than student assessment. The distinction between formative and summative in relation to student assessment was then used by Bloom et al. in 1971. They referred to summative tests as those given at the end of teaching in order to grade students and judge what they had achieved, whereas 'formative evaluation' was used to provide feedback and corrections during the teaching and learning process (Bennett, 2011; Black and Wiliam, 2003). Sadler (1989) emphasises that feedback must be *used* by the learner in order for the assessment to be formative. If feedback is not used, the assessment comprises judgement alone and is therefore summative. Bennett (2011) and Wiliam (2011) consider the comparison of formative and summative assessment to be unhelpful in terms of defining them. They each go on to explain that summative assessment can indeed provide formative information to support students' learning by providing evidence to educators about how to improve their teaching. Similarly, they also argue that formative assessment can serve a summative function by indicating to educators what students know and can do.

On the other hand, Taras and Davies consider that understanding how summative and formative assessment relate to each other is essential in terms of a coherent theoretical framework that can be used to support and develop teaching and learning practice. They argue that a lack of understanding of such a relationship leads to *"fragmented discourses that are mutually contradictory and exclusive"* (p.52). They also claim that there is insufficient discourse about the explicit relationship which causes problems for the academic community (Taras and Davies, 2013).

1.5.2 Formative and summative assessment: functions or process?

Concerning the relationship between formative and summative assessment, Taras explains how problems surrounding understandings and conceptions of the two, arise from defining them in terms of their functions as opposed to processes. She argues that in order for formative assessment practice to be coherent, it must be regarded as a process which explicitly integrates summative assessment. This would provide a new paradigm which explicitly articulates the steps within formative, summative and self-assessment processes which can help to ensure clarity for educators and students (Taras, 2009). Taras supports the use of Scriven's (1967) explanation in which he described formative assessment as an additional step which follows summative assessment and provides feedback about the gap to address the required criteria, which can be used in future work. Summative assessment can therefore serve a formative function by eliciting evidence of a gap between actual and desired levels of performance and suggesting actions that can be performed to close the gap (Wiliam and Black, 1996). Taras criticises the tendency in the literature to separate formative and summative assessment into two mutually exclusive entities based on functions. She argues that separating the two has led to inconsistencies and calls for summative assessment to be made explicit within the formative assessment process (Taras, 2009). By severing the two from each other, feedback is only associated with formative assessment and much of the learning potential of summative assessment is therefore lost (Davies and Taras, 2018).

1.5.3 Formative assessment: instrument or process?

A further debate in the literature concerning formative assessment relates to whether it is 'an instrument' or 'a process'. Bennett (2011) discusses how some have come to see it as an 'interim assessment' or some sort of 'diagnostic test' that will produce a score and will take place during marking cycles rather than during regular teaching sessions. On the other side of the debate are those who see formative assessment as a process. Popham (2011) accuses educators who use the term 'formative assessment' of being 'sloppy with their language' as it suggests that implementing formative assessment as 'a kind of test' can improve learning. He attributes the blame

for the ‘corruption’ of the term to ‘profit motivated testing firms’ in the United States, who relabelled many of their tests as formative in order to appeal to educators who were desperately under pressure to improve their students’ scores (Popham, 2006). Similarly, in the UK, Mansell *et al.* (2009) discuss how policy makers have misused the term formative assessment to justify frequent testing of levels to identify deficiencies that would facilitate achievement of the next level, rather than focusing on the goals of learning. Although these examples are based on school education, they are useful in illuminating how the term formative assessment has become so confused. Instead of formative assessment, Popham (2011) argues for the promotion of the term ‘formative-assessment process’ which provides a qualitative insight into students’ learning and emphasises the collection and use of evidence to make adjustments. The understanding of formative assessment as a process also takes into account that this collection and use of evidence will be ongoing and continuous. Bennett (2011) however, considers that both positions are at risk of oversimplifying matters since both instruments and processes can in themselves be flawed and therefore potentially ineffective. He argues for careful consideration as to how instruments and processes can work together to ensure that feedback is useful.

1.5.4 Formative assessment or assessment ‘for’ learning

Bennett (2011) goes on to explain that a number of those who favour the more process orientated view, have abandoned the term ‘formative assessment’ in favour of ‘assessment for learning’. The term ‘assessment *of* learning’ has consequently been adopted to describe that which is more akin to summative assessment. Bennett criticises these alternative definitions for being too exclusive in suggesting that each is not able to fulfil the purposes of the other. Broadfoot *et al*. (1999) consider that the term ‘formative’ is open to different interpretations whilst also claiming that its meaning is too restricted. They favour the term ‘assessment for learning’ suggesting that it helps to identify steps needed to build on strengths as well as development needs. Gardner also attempts to make a distinction by proposing that formative assessment describes a process of frequent activities that are carried out over time and collated to provide a final or summative assessment and therefore does not necessarily contribute to learning. Whatever the perceived differences between formative assessment and

assessment for learning, there is agreement that the interchangeable use of the terms contributes to confusion (Gardner, 2012). Ultimately Gardner confesses that there is little to sufficiently discriminate between the two terms. He submits to using the terms synonymously but expresses a preference for assessment for learning as it is *"more accessible than the more technical term 'formative assessment"* (p.11). It seems therefore that the choice of terminology is often a matter of personal preference combined with superficial attempts to distinguish between the two rather than on the basis of any firm and widely accepted differentiation.

1.5.5 Learning-oriented assessment

To add further to the debate, Carless (2007) contends that assessment has come to engender too many meanings and demands. For example, it refers to: both grading and learning; evaluating student achievements as well as how to teach them better; and it is about standards and comparisons between individuals. Carless goes on to express how the explicit and hidden messages around assessment lead to tensions and compromises. In an attempt to emphasise assessment's role in enhancing student learning, Carless coined the term 'learning-oriented assessment' (LOA) which originated in response to differing conceptions about formative assessment amongst colleagues within an institution, as well as more practical challenges. LOA includes three main components: assessment tasks that promote the kind of learning needed for the twenty-first century workplace; processes which promote active involvement of students to prepare them for lifelong learning (particularly peer assessment and self-assessment) which develops evaluative capacity; and viewing 'feedback as feedforward' so that comments have clear implications for future work rather than simply justifying the grade that has been awarded (Carless, 2006). The proposed strengths of LOA are that it can be applied to both formative and summative tasks, as well as having utility for application at module level, which has been a particular difficulty in relation to formative assessment practices in higher education (Carless, 2007). LOA has been reported to promote better learning and helping students to develop autonomy (Ali, 2013), motivate students to learn (Hernandez, 2012) and facilitate creativity and problem solving (Gómez-Ruiz, Rodríguez-Gómez and Ibarra-Sáiz, 2013).

1.5.6 The problem of definition

Debate around the functions, processes, meanings and purposes of formative assessment has been the source of some confusion amongst the academic community. The issue is particularly difficult in higher education because different understandings have not been systematically addressed (Davies and Taras, 2018). 'Fragmented discourses' (p.52) lead to disjointed understandings amongst practitioners. A concept that is so difficult for the academic community to engage with restricts the development of assessment literate stakeholders (students, educators, managers) and results in the lack of a coherent theoretical framework with which to support and develop practice. At the same time, the lack of a theoretical framework inhibits the development of understanding amongst practitioners, which impacts on their ability to use assessment to promote learning in students (Asghar, 2012; Davies and Taras, 2018; Taras and Davies, 2013). Bennett (2011) explains that the lack of a clear consensus around the term formative assessment is problematic for several reasons. If it cannot be clearly defined, then its effectiveness as an educational strategy cannot be comprehensively evaluated and reported, since there is no way of knowing whether research studies are actually implementing what is considered to be formative assessment. Second, the findings from multiple studies cannot be accurately combined to summarise a meaningful evidence base since it is not possible to know what should be included or excluded. Finally, it cannot be transferred from one context to another if the characteristics are not sufficiently determined. In addition, the accumulation of different terms which change over time and vary within and across different sectors further complicates matters (Taras and Davies, 2013). For students, the consequences of such problems are that they are exposed to incongruent practices which can reduce their confidence in assessment processes (Davies and Taras, 2018).

Since a number of authors, as described above, have identified that many of the problems associated with formative assessment are tied up in defining it, a purposeful decision was taken not to provide an operational definition of the concept prior to data collection. Informal observations and discussions before and during the initial orientation phase (explained in greater detail in chapter 3), suggested that defining formative assessment was likely to be a factor that impacted on the perceived barriers and challenges of its implementation and engagement. Since the research was

concerned with exploring barriers and challenges relating to formative assessment, I was keen not to influence my participants responses, for example, by suggesting that that their understandings of the terms were inaccurate or incorrect. I wanted to ensure that participants' own definitions and conceptualisations of the term were fully explored in relation to the research questions to ensure that the analysis followed an inductive approach. Furthermore, as discussed previously in this chapter, there is some confusion in the literature about the distinction between the terms 'formative assessment' and 'assessment for learning'. Since the institution and practice context explored in this study uses 'formative assessment', this term was used exclusively in the data collection methods to prevent any unnecessary confusion for the participants.

1.6 Rationale for this research

Understanding the complex relationship between the implementation of formative assessment and students' engagement in it, is considered to remain an important area of investigation. Research has focused mainly on the effects of formative assessment on students' academic results and on how to optimise the effectiveness of formative feedback (Nicol and Macfarlane-Dick, 2006; Sadler, 1989). There have been few studies addressing subjective experiences and social processes of formative assessment (Brazeal, Brown and Couch, 2016; López-Pastor and Sicilia-Camacho, 2017). It is important to understand these subjective experiences and social processes in order to determine how student motivation and engagement with formative assessment can be optimised. Research has also revealed that tutors' reported beliefs and principles around formative assessment are often not reflected in their practice (Taras and Davies, 2017). Moreover, educators' views in relation to formative assessment are often overlooked within research studies (McCallum and Milner, 2021). There is a need therefore to investigate underlying reasons for inconsistencies between evidence, beliefs and practice. Suggested reasons for the lack of uptake in formative assessment practice in higher education include: resistance of teaching staff; disciplinary cultures; lack of understanding of what constitutes good practice; push back as resistance to authoritative policies or simple inertia (Boud *et al.*, 2018). Most research around formative assessment in relation to student learning has been carried out at sub-university level (Asghar, 2012). There is a considerable

lack of research exploring the topic within higher education (Morris, Perry and Wardle, 2021) which has very different contextual factors. More research is needed to help to understand the complexities around formative assessment at university level in order to support educators, institutions and policymakers to improve practice (Morris, Perry and Wardle, 2021).

1.7 Core contribution of this thesis

This thesis provides an original contribution to the research around formative assessment through its combined use of two theoretical lenses, Self-Determination Theory (Ryan and Deci, 2017) and the Theory of Practice Architectures (Kemmis and Grootenboer, 2008). The study facilitates an exploration of how the broader, more pervasive structural elements of an institution create controlling environments which impact on teaching and learning settings and then in turn on student motivation and engagement. Furthermore, the study considers how neoliberalism, marketisation and consumerism within higher education impact on the practice of formative assessment. The use of a design-based action research approach together with these two theoretical frameworks produces some empirically and theoretically informed design propositions with which to design and construct a programme-wide formative assessment strategy. A further original contribution is the way in which key concepts from both Self-Determination Theory and the Theory of Practice Architectures have informed these propositions.

1.8 Research questions

The purpose of this research study is to explore and analyse the challenges, barriers and enablers associated with the implementation of, and engagement with formative assessment practices within a university degree programme.

The research questions are:

1. What are the challenges for academic staff in implementing formative assessment within the context of a university degree programme?

2. In what ways do students undertaking a university degree programme experience barriers to engaging in formative assessment?

3. What factors enable and motivate students undertaking a university degree programme to engage in formative assessment?

1.9 Chapter Outline

This first chapter has introduced formative assessment as a learning and teaching strategy within higher education, along with a discussion of my own role, personal context, and the purpose of this thesis. This was followed by a critical exploration of the varying definitions and conceptions of formative assessment. The rationale for the study was then discussed followed by the core contribution of this thesis. Finally the research questions were presented.

Chapter 2 begins with a brief introduction to the theoretical frameworks that I have used to support the analysis of the study's findings, namely Self-Determination Theory (Ryan and Deci, 2017) and the Theory of Practice Architectures (Kemmis and Grootenboer, 2008). I go on to explain how my theoretical position started at the beginning of the research and how this changed and evolved over the course of the study. This is followed by a more detailed explanation of the two theories focusing on the relevant concepts that I have used to make sense of my findings. The chapter concludes with an overview of how the two theories can work together to offer a meaningful theoretical framework.

Chapter 3 explores the philosophical stance and the methodological approach underpinning the study. I explain my ontological position of critical realism and offer a rationale as to why it is an appropriate philosophy to underpin the research. I then go on to critically discuss the methodological approaches of educational design research, design-based research and design-based action research, as well as how these approaches fit with critical realism. This is followed by a detailed account of the study's methodological procedure. This includes an overview of the 'analysis and exploration' phase which involves three stages of data collection: initial orientation; literature review and fieldwork investigation. The procedure for each of these stages is described followed by the data collection methods used. Ethical considerations are

then addressed. Next is an outline of how the data were analysed. The chapter ends with an explanation of the four main outputs of the analysis and exploration phase and how these were developed.

Chapter 4 presents the findings from the initial orientation which is the first data collection task of this research. It presents a draft problem statement which is based on informal feedback and personal observations from key stakeholders involved in the study. Causes of the problem and contextual factors relating to it are presented using a fishbone diagram and a SWOT analysis.

Chapter 5 presents the findings from the literature review which forms the next data collection task for the study. The findings are presented thematically under seven headings: 'Differing conceptions of formative assessment' explores how the lack of consensus about what formative assessment is has caused challenges for its implementation; 'Modularisation' which has occurred as a result of mass education systems in higher education leaves little time for formative assessment due to the increased volume and frequency of summative assessment; 'Lack of institutional support' discusses how institutional policies prioritise grading over strategies which focus on learning and therefore restrict opportunities for formative assessment; 'Resources' refers to increasing staff workloads and time constraints which impact on lecturers ability to implement formative assessment; 'Lecturers' assessment literacy' explores how a lack of theoretical understanding of the function and purpose of formative assessment impacts on how it is implemented; 'Lack of value for formative assessment in students' explains that pressure to perform well in high stakes assessment means that students prioritise summative tasks and do not appreciate the benefits of formative assessment in terms of wider learning; 'Students lack of assessment literacy' and more specifically lack of feedback literacy means that they are not able to take full advantage of what formative assessment can offer.

Chapter 6 discusses the findings from the fieldwork investigation which was conducted concurrently with the literature review data collection. The findings are presented thematically under four headings. 'Formative assessment as preparation for the 'big event'' explores participants' perceptions of the direct relationship between formative and summative assessment and their subsequent expectations that engagement in formative activities should lead to an improvement in summative grades; 'It's just extra

work' describes staff participants views that the implementation of the formative assessment policy has created an additional workload burden; 'Who am I, or my peers to judge' reports the difficulties surrounding students' experiences of peer review as a formative assessment task; 'Formative assessment as a 'thing' to be feared or just a part of the learning process' discusses how the practice of implementing formative assessment and the terminology around it can provoke stress and anxiety in students as opposed to when it is integrated into general module teaching.

Chapter 7 integrates findings from the field study with relevant issues arising from the literature review findings. The discussion draws on Self-Determination Theory to explore how students' and lecturers' behaviour in relation to formative assessment practice is regulated, and the subsequent impact that this might have on motivation. It then uses the Theory of Practice Architectures to gain an understanding of the arrangements that constrain and enable the practice of formative assessment in higher education and specifically within the institution that was studied. Discourses around neoliberalism, marketisation and consumerism within higher education are considered to illuminate how the practice arrangements influence practice.

Chapter 8 presents the four main outputs of the analysis and exploration phase which are a revised problem statement, long range goals, partial design requirements and initial design propositions. The purpose of these outputs is to inform the design and construction phase which will follow on from this study.

Chapter 9 begins with an overview of how the study has answered the research questions. It then goes on to explain the study's main contributions to knowledge in this field. The limitations of the study are then addressed. Finally, recommendations for the next phase of the research are discussed.

Chapter 2: Theoretical Framework

2.1 Chapter introduction

This chapter begins with a brief introduction to the theoretical frameworks that are used to aid the understanding of the findings of this research. These are Self-Determination Theory (Ryan and Deci, 2017) and the Theory of Practice Architectures (Kemmis and Grootenboer, 2008). It then goes on to offer a personal reflection and rationale for how the underpinning theoretical frameworks changed and developed as the study progressed. A more detailed explanation of the theoretical frameworks is then provided.

Two theoretical frameworks are used in the analysis of this research to offer an understanding the issues that influence the implementation of, and student engagement in formative assessment. The first of these is Self-Determination Theory (SDT) (Ryan and Deci, 2017). SDT is described as, a broad theory of motivation, personality development and wellness. It originated as a narrow theory of intrinsic motivation and has expanded towards a broader framework for the study of human behaviour within social contexts (Ryan and Deci, 2019). Ryan and Deci (2019) claim that SDT has been used extensively within educational research and that the literature highlight the importance of autonomous motivation in promoting quality learning and engagement in students. Furthermore, the theory goes on to assert that environmental and social factors influence autonomous motivation. Whilst Ryan and Deci (2019) acknowledge that educators are impacted by controlling regulations and bureaucratic leadership, they are critical that educational practices have failed to implement the supportive techniques advocated in the literature relating to SDT.

Whilst SDT, as stated above, recognises that there are challenges faced by educators in terms of the organisational constraints that are imposed on them, the theory does not offer scope to fully interrogate the features that can shape a learning environment. A theoretical perspective which does consider the complex range of factors that influence an educational setting is that of practice theory (Boud *et al.*, 2018). More specifically, the Theory of Practice Architectures (Kemmis and Grootenboer, 2008) is a theory that explains how practices are constrained, and indeed enabled, by a variety of conditions including language, discourse, physical environments, material

resources and social and political relationships. This study therefore draws on a combination of both Self Determination Theory and the Theory of Practice Architectures with which to explain the findings.

2.2 Personal reflection on change of direction

My original intention for this research was to draw on social constructivist and self-regulated learning frameworks in order to emphasise the interactive process of engagement between lecturers and students, and to explore aspects such as student volition, learning habits and effort investment. I initially felt that a focus on a "top down" versus "bottom up" model (Boekaerts and Corno, 2005), which considers how a focus on well-being as opposed to growth can result in individual behaviours such as withdrawing effort, avoidance and passivity, could help to understand student resistance to engagement in formative assessment. As I continued to explore theories relating to self-regulation and motivation however, I came across Self-Determination Theory (SDT) (Ryan and Deci, 2017) which emphasises the important impact that environmental and social contexts have on the emotional and interpersonal factors involved in motivation for learning, which then influences engagement (Deci and Ryan, 2015). I felt that this this emphasis on social and contextual factors resonated more with some of the themes that were starting to emerge from my findings, as these went beyond factors relating to individual students. Of particular relevance is the focus that SDT places on supportive versus controlling environments and how this can influence autonomous learning behaviours in students. As my data analysis proceeded further however, it became apparent that there were broader, more pervasive structural issues that were influencing both lecturers' implementation of, and students' engagement with formative assessment processes. Whilst SDT acknowledges that the environment has a considerable impact on students' learning performance, a detailed interrogation of the wider political and organisational issues that constrain or enable the environment is beyond its scope. It became apparent the SDT alone was not sufficient to explain my findings.

As I continued to engage with literature around formative assessment, I came across a paper by Boud *et al.,* (2018) in which the authors advocate the use of practice theory as a perspective offering the capacity to recognise the complexity involved in

assessment practices. Whilst previous theoretical approaches, for example, behaviourist, cognitive and social constructivist theories (Rust, O'Donovan and Price, 2005; Shepard, Penuel and Pellegrino, 2018; Pryor and Crossouard, 2008) have uses in relation to aiding understanding of how assessment influences achievement of learning in individuals, and how learners experience assessment within a social context, they tend to fall short in terms of their attention to the complex range of factors that are involved (Boud *et al.*, 2018). Boud *et al.* go on to explain how assessment within higher education is affected by complexities such as: the interface between practice and institutional policies and regulations; competing demands of various factions; the interactions between key stakeholders; and differing conceptions around the purpose of assessment. In relation to assessment, practice theory is a perspective that offers the capacity to recognise such complexity. It provides an authentic view of assessment in the real world as opposed to a 'textbook' portrayal. It also prioritises what *actually* occurs rather than offering a normative perspective of what 'should' occur. Practice theory can therefore help to explore how existing assessment practices are held in place and why assessment is so difficult to change (Boud *et al.*, 2018). As explained in the introduction chapter, the issues surrounding formative assessment practice within the institution arise from complexities analogous with those outlined above. I therefore felt that practice theory could offer a useful framework with which to illuminate understanding of this. Furthermore, in practice theory, the unit of analysis is on the practice itself, removing the individual from centre stage and instead focusing on actions and relationships both between people and between people and material objects (Boud and Brew, 2013). I felt that this could help to explain how and why some of the conceptions of formative assessment in my research have evolved and continued, as well as a focus on what actually happens in reality, during the enactment of formative assessment activities.

As my interest in finding out more about this group of theories grew, my supervisor pointed me in the direction of some key theorists, one of which was Theodore Schatzki. As I explored Schatzki's work I came across references to the work of Stephen Kemmis on the 'Theory of Practice Architectures' (Kemmis and Grootenboer, 2008). Kemmis acknowledges that this theory has been strongly shaped by the ideas of Schatzki but with different emphases on certain concepts. For example, in addition to material objects, the Theory of Practice Architectures adds emphasis to the 'semantic

things' (for example, language and specialist discourses) and to the 'social things' (social groups and relationships) that enable and constrain action (Kemmis and Smith, 2008). As I read more about the Theory of Practice Architectures, I considered that it had much to offer in terms of providing a framework with which to explain my findings. My research is interested in how the collective actions of a department have influenced shared meanings in relation to formative assessment and how these meanings that are ascribed can inhibit successful implementation and engagement of students. Despite this change of direction, I still considered SDT's focus on how the learning environment influences individual behaviour to be relevant and felt that the Theory of Practice Architectures offers some useful scope for explaining how supportive or controlling environments are created by external structures that impact on a practice. I considered that the two theories could therefore work well together in analysing my findings. The next section goes on to explain Self-Determination Theory, followed by an overview of the Theory of Practice Architectures.

2.3 Self-Determination Theory

SDT emphasises a developmental tendency towards psychological growth, mastery, new experiences and integration. In relation to education, it is an empirically based theory that is interested in promoting students' interest in learning, development of competencies and their wellbeing. Within SDT, individuals are viewed as having natural propensities to advance their knowledge and develop new skills (Ryan and Weinstein, 2009). At the same time however, the theory acknowledges that such developments are not automatic but are dependent on the individual's supporting environment, including biological, social and cultural conditions. In order for development to occur, individuals require support for basic psychological needs, namely those of autonomy, competence and relatedness (Ryan and Deci, 2020). As well as supporting these fundamental needs however, it is claimed that social contexts, such as the classroom environment and teaching strategies, can also hinder these needs and consequently impede psychological development (Guay, 2022). This consideration of the influence of the environment on autonomy, competence and relatedness demonstrates the resonance of practice architectures and how the two

theories (SDT and the Theory of Practice Architectures) can work together as complementary theoretical frameworks.

2.3.1 Autonomy, competence and relatedness

Autonomy refers to a sense of initiative and ownership and the need to self-regulate one's experiences and actions. It is supported by experiences of authentic interest and value which stem from an autonomy supportive environment and undermined by autonomy controlling environments which externally control individuals in the form of rewards or punishments. SDT based research has consistently found that more autonomous forms of motivation, that is, students engaging in a task that they find meaningful and enjoyable, lead to more positive outcomes including higher academic achievement, creativity, persistence and increased wellness (Ryan and Weinstein, 2009). If an individual's behaviour is regulated by internal or external pressures, true self-regulation is overridden, and autonomy is diminished. If students experience pressure due to forces of rewards or feelings of shame, for example, they experience high levels of controlled motivation which is associated with poorer outcomes such as procrastination or burnout (Ryan and Deci, 2017; Vansteenkiste, Lens and Deci, 2006).

Competence relates to feelings of mastery, effectiveness, and a sense of being able to succeed and develop. It is supported by well-structured environments that provide optimal challenges, positive feedback and opportunities for growth. Competence can be impaired by challenges that are too difficult, persistent negative feedback and interpersonal factors such as person-focused criticism or social comparison (Ryan and Deci, 2017).

Relatedness refers to connectedness, a sense of belonging and feeling significant among others or integral to an organisation. It is supported by an environment in which people feel respected and cared for, and also where they can make a meaningful contribution to others (Ryan and Deci, 2017).

According to SDT, these three basic needs are equally important and the hindrance of any one of them can damage motivation, reduce wellness and in more extreme cases lead to psychopathology. (Ryan and Deci, 2017; 2020).

2.3.2 Intrinsic and extrinsic motivation

In terms of motivation, SDT distinguishes between different motivational orientations that explain an individual's drive to engage in learning tasks (Baas *et al.*, 2020). These range on a continuum from amotivation and extrinsic motivation to intrinsic motivation (Ryan and Deci, 2017). In relation to education, students described to be amotivational completely lack any motivation. At the other end of the continuum, those who are intrinsically motivated find learning interesting and enjoyable, and engage in educational activities for their own sake. Such students would be considered to be autonomously motivated (Fröberg and Jonsson, 2021). University students who are autonomously motivated have been found to have higher achievement success (Müller *et al.*, 2021; Niemiec and Ryan, 2009). In the middle of the continuum, extrinsic motivation is separated into four distinct types (external, introjected, identified and integrated) which are distinguished by the extent to which they have been internalised. The process of internalisation describes how imposed values are changed into personally adopted values. For a student, this may involve the realisation that success in their educational pursuits may require the enactment of formerly externally imposed values (Baas *et al.*, 2020). External and introjected forms of regulation are considered to be associated with 'controlled' motivation. For example, a student who engages in a learning activity because they are obligated to do so, to obtain good grades or to avoid criticism is considered to be externally regulated. Externally regulated actions have not been internalised to any extent. A student who engages out of feelings of guilt, to receive the approval of others, or to enhance feelings of self-worth thereby pressuring themselves to do well, is motivated by introjected regulation. In this case there has been some partial internalisation, but the individual has not accepted the demands or rules. Identified and integrated regulation on the other hand, are associated more with autonomous motivation which has been internalised to a greater degree. For example, a student who values the benefits of a learning activity and endorses it because it will be useful in achieving an end goal would be described to have identified regulation. Students who engage in an activity because they find it interesting have an integrated regulation style (Haerens *et al.*, 2019; Baas *et al.*, 2020).

Ryan and Deci (2020) propose some core hypotheses of SDT in relation to education and claim that these are well supported by research. Autonomous motivation is

enhanced when students: experience a greater sense of freedom and self-endorsement and feel more in charge of their own learning (autonomy satisfaction); feel more effective (competence satisfaction); and experience mutual trust and care between themselves, lecturers and peers (relatedness satisfaction). Conversely, controlled motivation or amotivation is experienced when students: experience lack of choice or pressure to perform well (autonomy frustration); feel incapable (competence frustration); or feel rejected or disrespected by lecturers and/or peers (relatedness frustration) (Haerens *et al.*, 2015).

2.3.3 Intrinsic versus extrinsic goal framing

More recently, researchers interested in SDT have started to pay attention to the impact that intrinsic versus extrinsic goal framing has on educational outcomes (Vansteenkiste, Lens and Deci, 2006). This work has arisen from more general findings in relation to people's goal pursuits. Intrinsic goals are defined as those that are satisfying in their own rights, for example, contributing to the community, improving health, personal growth or affiliation. Extrinsic goals on the other hand have an outward orientation often based on interpersonal comparisons, acquiring external approval and signs of self-worth from others. Examples of extrinsic goals are often related to fame, financial success and physical appearance. People with intrinsic goals generally have better outcomes in relation to psychological wellbeing, social relationships and functioning than those with extrinsic goal pursuits. When applied to education, a similar pattern has been found. Framing goals as intrinsic rather than extrinsic leads to deeper level processing, enhanced performance and free choice persistence as opposed to rote or surface learning (Vansteenkiste, Lens and Deci, 2006). These findings suggest that when providing a rationale for a learning activity, educators should focus on intrinsic versus extrinsic goals. This will help students to see the long term relevance in terms of personal growth and lifelong learning and therefore is more likely to lead to engagement in learning activities.

2.3.4 Supportive versus controlling environments

In relation to SDT, a number of researchers have explored how social contexts can be adapted in order to promote more autonomous behaviour (Vansteenkiste, Lens and Deci, 2006). Within an educational context, it is important to consider how the social and cultural conditions of the university could either support or undermine the three basic needs of autonomy, competence and relatedness. Whilst a facilitative educational environment would provide opportunities for learners to participate fully and to flourish, a restrictive environment is likely to lead to reduced enjoyment, boredom, disengagement, reduced academic performance and conceptual learning, fear of failure, reduced persistence and high rates of attrition (Guay, 2022; Haerens *et al.*, 2015; Vansteenkiste, Lens and Deci, 2006). More autonomous forms of motivation will lead to increased student engagement. Linked to this is the proposition that in order to facilitate such autonomous motivation, students require basic psychological need support from educators (Ryan and Deci, 2020). Educators can therefore influence students' experiences by either promoting or inhibiting positive motivational experiences through the way in which they structure their learning environments. Autonomy-supportive teaching styles are characterised by: empathising with students' perspectives; allowing opportunities for self-initiation; encouraging problem-solving and experimentation; providing meaningful rationales for learning activities; and providing timely and positive feedback (Vansteenkiste, Lens and Deci, 2006). The educator should aim for choice driven as opposed to controlling teaching styles (King and Bunce, 2020). In contrast, more controlling styles are characterised by: pressurising students to think or act in particular ways; reward contingencies; deadlines and overtly controlling language. Not only can these externally controlling behaviours be damaging in themselves, but they can trigger internal controlling processes that individuals then use to regulate their own behaviour, consequently resulting in forms of introjected regulation (Vansteenkiste, Lens and Deci, 2006).

Additionally, the social and cultural conditions can also affect the motivation of educators in relation to their teaching. More supportive organisations and administrators can lead to more intrinsic motivation and self-determination in relation to their work (Nie *et al.*, 2015). In turn, autonomously motivated teachers influence students to become more engaged in their learning (Roth *et al.*, 2006).

Contemporary teaching practices with a focus on testing and achievement, have been criticised for largely ignoring such findings in relation to creating supportive learning environments. Teacher centred approaches and more traditional methods are considered to be authoritarian environments characterised by externally controlled reward contingencies, deadlines and regulations. Such environments place pressure on students to learn which can then lead to internal forms of control as students place pressure on themselves in order to meet social expectations. Both external and internal forms of control have a negative impact on student motivation (Walters, Silva and Nikolai, 2017).

It is important to acknowledge however, that educators' teaching styles can be largely affected by social and institutional pressures, a factor that King and Bunce (2020) claim has been largely overlooked in empirical studies. One of the key pressures is the marketisation of higher education in which students have come to be defined by governments, universities and indeed by themselves, as consumers. Students who identify as consumers have been found to be motivated by the extrinsic goal of gaining a degree in order to facilitate future job prospects, rather than an intrinsic interest in learning for its own sake (Bunce and Bennett, 2021; Wong and Chiu, 2019). This raises concerns for educators as evidence suggests that students who are extrinsically motivated are less likely to engage and demonstrate lower achievement and satisfaction. Students who identify as consumers often express a preference for didactic, teacher centred (controlling) styles, as they perceive themselves as gaining better value for money than more learner centred approaches which can sometimes be perceived as 'do-it-yourself' approaches.

2.4 Practice Theory

Practice theory describes a broad spectrum of perspectives which share common attributes, for example, the idea that human activities are socially and historically constituted and that people develop routines, habits, artefacts and conventions that over time lead to stabilising and reproductive functions (Hermansen and Nerland, 2014). There are also some differences, for example, in terms of how they address aspects of practice. Whilst some practice theorists are concerned with how practices are reproduced and kept stable over time (for example, drawing on the work of

Bourdieu), others are more interested in how collective patterns and actions are achieved and developed, thus highlighting the role of collective meaning making (Hermansen and Nerland, 2014). A practice perspective of knowledge and learning, as opposed to viewing them as features within individuals, helps to understand why practices persist despite individuals changing.

With specific reference to change within higher education, Trowler (2020) discusses how social practices are bundled and nested within a larger system of practices and that the decisions that are made at higher levels have consequences for those on the ground. He argues how values and attitudes are often deep-rooted through socialisation and reinforced by daily recurrent behaviours. Academic staff are not 'passive role players' (p.153) and pre-existing values and attitudes therefore need to be understood and addressed when implementing change (Trowler, 1998). Trowler (2020, p.117) refers to a 'practice sensibility' which enables individuals to see beyond the immediate context and become aware of how social practices operate. A practice sensibility, he claims, helps to explain the processes at work within teaching and learning regimes and gives perspective on forces beyond individual viewpoints. For practice theorists, successful learning achievement is not judged by how much the individuals involved learn, but by how successfully the new practice is implemented. They are concerned not only with solving immediate problems but with addressing wider issues.

2.5 The Theory of Practice Architectures

Kemmis and Grootenboer (2008) draw on Schatzki's concept of 'site ontology' in which the specific context is central to analysing and explaining social phenomena (Schatzski, 2012). According to Schatzki, the social site is made up of orders and practices. Orders are entities such as people, artifacts, things, whilst practices are organised activities. Schatzki (2002) uses his idea of a 'constantly evolving nexus of arranged things and organised activities' (p.xi) to explain how human action and co-existence is both enabled and constrained. Such 'things' may comprise material objects as well as semantic things such as language and discourses which influence how people interpret the world around them (Schatzki, 2002). Schatzki conceptualises practices in terms of the relationships between people and things that are organised

in time and space. He defines a social practice as ‘an open, organized array of doings and sayings’ (p.51) (Schatzki, 2010). Kemmis and his colleagues (Kemmis and Grootenboer, 2008; Kemmis *et al.*, 2014) expand on Schatzki’s ideas by emphasising that the ‘relatings’ component of social practices needs to be made explicit in order to foreground the social and political dimension of practice and draw attention to the media of power and solidarity which can be instrumental in holding a practice in place.

Kemmis and colleagues provide an account of what ‘practices’ are made up of, and how practices shape and are shaped by the external (to the individual) influences with which they are enmeshed (Mahon *et al.*, 2017). The theory is particularly suited to providing a framework with which to analyse this research because it accentuates the complexity of sites of practice, with particular emphasis on how practices are constrained or enabled. The theory deliberately uses the words ‘constrain’ and ‘enable’ to illuminate the consequences of practice and the role of agentic beings in creating and sustaining these. Since this research very much focuses on challenges and barriers in relation to formative assessment practice, an interrogation of constraining factors is highly relevant. Furthermore, an exploration of enabling factors will help to highlight how these challenges can be addressed. The theory is underpinned by a transformative agenda and is promoted as a theoretical resource for finding ways to improve education where current practices are unrealistic, unproductive or unsustainable. It can be used as a framework for making practical judgements about what ought to be done to address problems (Mahon *et al.*, 2017). Kemmis, one of the original authors of the theory explains that its development was linked to a;

> *moral and political imperative to understand and address the ill effects of neoliberalism and managerialism including increasing pressures on educational institutions and practitioners.* (Kemmis and Mahon, 2016) p. 221.

In this study, the managerial demand on teaching staff to include formative assessment within the institution has arisen in response to the rise in consumerism and consequent focus on improving student satisfaction with assessment processes, without any real consideration of how it should be implemented. A theory which aims to understand

the realities faced by practitioners and examine what shapes, sustains and transforms these through responding to constraining conditions has much to offer.

Mahon *et al.* (2017) explain that since practice theories have been informed by a number of evolving traditions, there is no one, unified theory of practice. They go on to explain that the Theory of Practice Architectures, whilst positioning itself within the broader group of practice theories, offers a *"distinctive ontological view"* (p.2). It shares the basic assumptions that: practices are 'situated', 'embodied', 'social', 'relational' and 'indeterminate'; they comprise patterns of activity and understandings that shape human life; they recognise the importance of the material world and of communication, text and symbols in how practices are constituted; they reject dualisms such as mind/body, structure/agency, cognitions/action. Its unique contribution, however, is in relation to which aspects of practice are foregrounded. Such foregrounded aspects are that: it politicises practice by emphasising power relationships, moral dimensions and the consequences of practice; it humanises practice by focusing on the 'sayings', 'doings' and 'relatings'; it theorises relationships between practices through the 'theory of ecologies of practices'; it is ontologically oriented, meaning that theorists attend to the particular conduct and content of practice, how it is organised in time and space, and the arrangements that make it possible and sustain it (as opposed to an epistemological orientation which focuses more on knowledge and the learning process; and finally, it offers insights relevant to education (Mahon *et al.*, 2017). These foregrounded aspects are each relevant to the findings of this study and give further weight to the rationale for the use of this theory.

According to the Theory of Practice Architectures, practice is defined as;

> *a socially established cooperative human activity involving utterances and forms of understanding (sayings), modes of action (doings) and ways in which people relate to one another and the world (relatings) that 'hang together' in characteristic ways in a distinctive 'project'* (Mahon *et al.,* 2017, pp7-8).

The 'project' of a practice consists of: its intention or aim; the actions in terms interconnected sayings (language), doings (activity or work) and relatings (relationships of inclusion/exclusion or power relationships, for example); and the end achievement. The sayings, doings and relatings are harnessed together in an

organised way in order to pursue the project. It is how these particular sayings, doings and relatings 'hang together' that give a practice its distinctiveness and a practice cannot be reduced to any one of these on its own. Practices are always situated with a single site or multiple sites and one practice can be the site of another practice. Whilst practices are shaped by experiences, intentions, dispositions, habitus and actions of individuals, they are also shaped and 'pre-figured' by extra-individual conditions or 'arrangements' that exist beyond the individual and either already exist in, or are brought to sites of practice. Without these arrangements a practice could not be realised and they form an integral part of the *"ontological ground that makes a practice possible"* (Mahon *et al.,* 2017, p.9).

Kemmis *et al.* (2014) describe three particular kinds of arrangements that co-exist within a practice site. These are cultural-discursive arrangements, material-economic arrangements and social-political arrangements. Cultural-discursive arrangements are resources that facilitate the sayings in a practice. For example, the language and discourse used in and about a practice. They can constrain and enable what is relevant or appropriate to say within or about a practice. Material-economic arrangements are resources that facilitate the doings of a practice which affects what, when, how and by whom something can be done. Examples of material-economic arrangements are the physical environment, material entities, financial resources, funding arrangements, timetables, or divisions of labour. Social-political arrangements are the resources that demonstrate how people in a practice relate to each other and to non-human objects. These can constrain or enable the relatings of a practice. These three arrangements create the conditions that either do or do not support the sayings, doings and relatings of a practice and can therefore make a practice sustainable or unsustainable. These conditions may be geographically or temporally distant from the site but they must in some way be present at the site for them to be considered part of the practice architectures that impact on the practice (Kemmis *et al.*, 2014)

These three arrangements together pre-figure a specific practice and are referred to as the practice architectures of that practice. Each particular practice has its own practice architectures which are site specific. It is these practice architectures which make the practice and hold it in place and are necessary but not sufficient for the enactment of the practice. In addition, according to the theory, there are three

dimensions of intersubjectivity which together make up the social world. These are semantic space, physical space and time and social space. Cultural-discursive arrangements are realised in semantic space through the medium of language; material-economic arrangements are realised in physical space and time through the media of work and activity; and social-political arrangements are realised in social space where people relate to each other through the media of power or solidarity (Mahon *et al.*, 2017).

It is also emphasised that the mediating role between practice and practice architectures is mutual. Whilst practices are *mediated by* practice architectures, practices also *mediate* practice architectures. They do this by leaving behind *"traces"* or *"residues"* in individuals' memories which then influence their ongoing practice (both individually and collectively). These human interventions can then form part of the practice architectures which are developed and maintained through traditions, habit, coercion and ideology, rules and sanctions or regulation and compliance mechanisms. This leads to a *"kind of collective memory of the practice"* reproducing sayings, doing and relatings over time to form established *"practice traditions"* (Mahon *et al.,* 2017, p.12). Practice traditions form part of the practice architecture in that they represent the history of the practice. They carry the imprints of previous sayings, doings and ways of relating.

Mahon *et al.* (2017) go on to stress the transformational potential of the theory by explaining how new practice architectures can be integrated into a practice site in order to prefigure the practice in new and innovative ways. Related to this is the theory's recognition of a moral component which emphasises that for a practice to have the most effective outcomes, it should be based on ethical judgement and creative problem solving rather than prescribed rules and procedures. By highlighting the capacity of human agency, the theory provides optimism for those who wish to improve a practice (Mahon *et al.*, 2017). Cultural-discursive arrangements can be changed by the enabling of a new shared language, for example through reforms to the curriculum, engagement with research or professional collaboration; material-economic arrangements can be changed through considering how time is allocated, how physical space is organised or how communication is facilitated for example; social-political arrangements can be changed, for example by how groups are shaped, how policy decisions are made or how power and responsibility are distributed through

leadership practices (Harju, 2022). This is another reason why the Theory of Practice Architectures is appropriate for this research as it can be used to facilitate change and will be used to inform the design principles.

2.5.1 The Theory of Ecologies of Practices

The Theory of Ecologies of Practices is an extension of the Theory of Practice Architectures. It explains how the effects and consequences of one practice can shape other practices so that they become interdependent as they adapt and evolve in relation to each other. They can also constrain and enable each other and thereby one practice can become a practice architecture for another practice (Kemmis *et al.*, 2012a)

Whilst practice theory and particularly the Theory of Practice Architectures offers an effective framework with which to explain the institutional and departmental influences on the implementation of and engagement in formative assessment, it does not permit scrutiny at a more individual level. Self-Determination Theory offers a framework with which to explore how a learning environment can influence an individual's development. Since this research involved one to one interviews with students to explore their perceptions of engaging in formative assessment it seems appropriate to also include some analysis at more of an individual perspective.

2.6 Self-Determination Theory and the Theory of Practice Architectures

As stated previously, educators' teaching styles are affected by social and institutional factors, suggesting that 'arrangements' that pre-figure a practice, can impact on the actions of lecturers in designing learning activities which in turn influences the motivational processes of students in completing these. This therefore highlights how Self-Determination Theory, and the Theory of Practice Architectures can work together to explain the findings of this study. Self-Determination Theory explains how controlling or supportive learning environments might influence a student's engagement in formative assessment activities but falls short in its capacity to explain the wider external conditions that determine the extent to which a lecturer is able to

create an environment that is supportive as opposed to controlling. The Theory of Practice Architectures on the other hand offers a framework with which to explain the factors which enable and constrain the practice of implementing formative assessment but does not explicitly consider how this impacts on the motivational orientations of lecturers and students. The two theories together therefore offer a useful framework with which to make sense of the findings of this research study.

Furthermore, through reading more around practice theories, I also came across Paul Trowler's work around implementing change within higher education institutions (Trowler, 1998; Trowler, 2020). Much of this resonated with the findings of this study, specifically those from the fieldwork data. Trowler's work offers an informative framework with which to examine the failings around the formative assessment policy implementation as well as consideration of how the change could have been more effectively instigated. This is explored in the discussion chapter.

2.7 Chapter summary

This chapter has outlined the theoretical frameworks used to support the data analysis in this research. It has provided a reflective overview of how my theoretical position changed as the research progressed. Finally, it has considered how Self Determination Theory and the Theory of Practice Architectures can work together to support meaningful explanations for the study's findings.

Chapter 3: Methodology

3.1 Chapter introduction

This chapter starts by introducing the philosophical stance of the research and then goes on to explain the underpinning ontological position of critical realism. The next section explains the methodological approaches of educational design research, design-based research and design-based action research. This is followed by a discussion of the compatibility of design-based research approaches with critical realism. Next is the rationale for the chosen methodological approach for this study, followed by a detailed explanation of the analysis and exploration phase of educational design research which forms the main basis of the data collection for this research. The methodological procedure then goes on the explain the three data collection activities of initial orientation, the literature review process and the field-based investigation procedure. The ethical considerations are discussed next. This is followed by a description of the data analysis methods for each of the three activities of this phase and explanation of how the findings from the three activities were synthesised. The chapter concludes with an overview of how the four outcomes of this phase (problem definition, long range goals, partial design requirements, initial design proposals) were produced.

3.2 Philosophical stance

This research study aims to explore and analyse the challenges of implementing formative assessment and the barriers and enablers to students' engagement in it. The previous chapter describing the theoretical frameworks used, illustrates that both lecturers' design of learning activities and student engagement are multifaceted constructs that are influenced by numerous factors both internal and external to the individuals. The study therefore seeks to answer complex questions relating to the implementation of, and engagement in formative assessment. Another way of framing 'internal' and 'external' influences is through the concepts of 'agency' and 'structure' respectively. Critical realism is a philosophical position that examines how human agency (for example, choices, meanings, understandings, intentions, reasonings,

motivations) interacts with the enabling and restricting aspects of social structures (for example, social rules, norms, enduring patterns) (Houston, 2010). For critical realists, the world is essentially real in the sense that there are real social structures; however knowledge of the world is incomplete, changeable and complex. Critical realism holds that knowledge about the real world is attainable and it allows for theory to emerge from research that investigates a phenomenon and its mechanisms at a deep level (Webster, 2016). Critical realism therefore offers an appropriate philosophy to underpin this research. Agency might refer to factors such as lecturers' and students' choices, the meanings that they attribute to formative assessment, their perceptions of its purpose, their motivations, or their attitudes towards learning in general. Examples of structural factors might be the university's regulations around formative assessment, social norms that are associated with it, the ways in which formative assessment is implemented within the course, or wider societal conceptions of learning and higher education. In order to gain a holistic understanding of what influences implementation and engagement, it is necessary to understand the interplay between these two key forces of agency and structure.

3.2.1 Critical realism

Critical realism distinguishes between three domains of reality which are: the 'empirical' domain which contains for example, experiences of events; the 'actual' domain refers to aspects of reality or events which may not be experienced; and the 'real' domain which contains causal structures and mechanisms which can be deduced through empirical inquiry and theory construction (Bhaskar, 2008). In terms of an epistemological framework, critical realism contends that we can conduct empirical investigation of those aspects of the world that are accessible (McEvoy and Richards, 2006). The underpinning ontological position of critical realism is that there is a social reality that exists that is independent of people's thoughts and observations. Objective knowledge about this social world is achievable, although may be subject to errors and consequently theories are likely to require revision (Webster, 2016). The social reality is complex and changeable and impossible to fully understand as our perceptions about it are shaped by resources and interests that mediate knowledge (Withell and Haigh, 2018). Critical realism sees the social world as being made up of

‘entities’ which are phenomena or structures that can be visible (for example, classrooms, curricula, universities) or, more commonly in the social world, invisible (for example, concepts, ideas, knowledge, attributes). The primary concern for research conducted within a critical realist paradigm, is to investigate the real domain through the development of deeper understanding of the properties of these entities which give them powers to affect other structures. These ‘causal mechanisms’ which can be physical, social or cognitive, account for actual events and experienced observations and include factors which can enable or constrain the activation of events (Haigh *et al.*, 2019; Withell and Haigh, 2018). This idea of factors which can enable or constrain action resonates with the three kinds of arrangements that prefigure practice as described in the Theory of Practice Architectures.

It is important to recognise that from a critical realist perspective, knowledge is transitive and as it is based on the researcher’s ability to perceive and construct ideas about entities. This knowledge may be fallible and open to challenge and change. Theories therefore may be adapted, further developed or abandoned (Haigh *et al.*, 2019). This is why Bhaskar (2008) refers to the pursuit of *tendencies* as opposed to *certainties* in terms of causal relationships. In terms of analysing these relationships, critical realists theorise about the underlying mechanisms that influence their observations of experiences and events in the entities under investigation. This process is known as ‘retroduction’ (McEvoy and Richards, 2006).

3.3 Methodology

3.3.1 Educational design research and design-based research

As the main purpose of this research is to address a very real problem of everyday practice, a methodological approach that takes into account the actual context in which it is experienced was considered necessary. Traditional, theory oriented educational research where innovations tend to be designed and tested out under ‘laboratory’ type conditions where key variables are strictly controlled, has frequently been criticised for its lack of relevance to authentic educational settings and consequent lack of practical results that can be applied (Akkerman, Bronkhorst and Zitter, 2011; Bikanga Ada, 2018; Collins, 1992; Reeves, 2015). Nijhawan (2017) condemns large-scale

educational research which uses standardised research tools to generate data for complex statistical analysis, at the expense of methods that enable educators to directly influence educational settings through the consolidation of theory and practice. Comparative research provides educators with little knowledge about how to adapt strategies that are effective for their own situation (Gravemeijer and van Eerde, 2009).

At the same time however, there are criticisms that educational research carried out in the practice setting, for example, action research or evaluation research, does not contribute towards the development of theory and therefore fails to deliver in terms of offering new knowledge to guide future developments (Dolmans and Tigelaar, 2012; Reeves, McKenney and Herrington, 2011). Sandoval and Bell (2004) refer to a tension within the discipline between an aspiration to develop knowledge that is relevant and of practical use in the local context and the responsibility to produce scientifically robust findings that can be generalised.

Educational design research (EDR) is an approach that proposes to overcome these limitations through the simultaneous advancement of both practice and theory (McKenney and Reeves, 2012; McKenney and Reeves, 2019). The main purpose of EDR is to focus on, and to address significant and complex educational problems in the real world (Chen and Reeves, 2020; Shrivastava and Shrivastava, 2021) and to produce a tangible solution that is theoretically informed, open to empirical testing and based on the insights and understandings of key stakeholders (McKenney and Reeves, 2019). EDR enhances student learning by identifying the pre-disposing factors that influence outcomes (Shrivastava and Shrivastava, 2021). The approach is defined as;

> *a genre of research in which the iterative development of solutions to practical problems also provides the context for empirical investigation, which yields theoretical understanding that can inform the work of others*
>
> (McKenney and Reeves, 2019, p.6).

The ultimate objective of EDR is to enhance learning rather than to justify the superiority of one pedagogical approach over another (Shrivastava and Shrivastava, 2021; Van der Merwe, 2019). Studies that seek to ascertain the superiority of one learning and teaching strategy over another, fail to discover the complexity of variables involved in the educational process (Reeves, 2015). This is particularly pertinent in

the context of this study, when considering Torrance's (2012, p.330) assertion that with regard to the theory and practice of formative assessment, we should not be looking to "plan and construct the perfect functioning system" but that we should accept "degrees of tolerance" which are inevitable and beneficial features of any "human system".

Furthermore, in order for its objective to be realised, EDR must be conducted within the real world context of the classroom in order for it to produce useable knowledge that takes into account contextual influences and variables (Steketee and Bate, 2013). EDR uses existing theory to frame the research and also to shape the design of a practical solution in the form of an intervention. The intervention is therefore theoretically informed and the testing of that intervention further contributes to theoretical understanding and development. The main theoretical outputs of EDR are defined as 'design principles', the purpose of which are to make recommendations for how to address issues within their contexts. The main practical outputs are the creation of hands-on solutions to real problems in the form of interventions (McKenney and Reeves, 2019).

EDR is just one 'variant' of a collection of approaches that come under what Wang and Hannafin (2005, p.5) describe as 'a design-based research paradigm'. This paradigm encompasses various terms including design experiments (Collins, 1992), development research (van den Akker, 1999), design research (Edelson, 2002), design-based research (The Design Based Research Collective, 2003) and developmental research (Richey and Klein, 2005). Table 3.1 illustrates these approaches along with the key features of each. Wang and Hannafin explain that whilst each has a slightly different focus, they share similar underlying goals and approaches, that is, 'to advance design, research and practice concurrently' (p.5). They also go on to define design-based research according to five basic characteristics: pragmatic; grounded; interactive, iterative and flexible; integrative; and contextual.

Design-based research (DBR) has seen a considerable rise in popularity within the field of educational research over the last three decades and is widely considered to have emerged from the work of Brown (1992) and Collins (1992) (McKenney and Reeves, 2019; Sandoval and Bell, 2004; Wang and Hannafin, 2005). McKenney and

Design-Based Research Approaches		
Author(s)	**Name**	**Key features**
Collins (1992)	Design experiments	• Conducted in real world environments • Compares multiple innovations • Participation of multiple stakeholders • Involves evaluation and revision of designs
Van den Akker (1999)	Development research	• Begins with expert consultation, literature review, analysis of case studies and current practice examples • Collaboration with participants to design interventions • Involves analysis and reflection on the research process and outcomes • Use of multiple data collection methods • Empirical testing of interventions • Outcomes expressed as statements in the form of design principles
Edelson (2002)	Design research	• Aims for the simultaneous development of practice and research • Four characteristics: research driven, systematic documentation, formative evaluation, generalisation • Aims to generate theory that goes beyond the specific study context
The Design Based Research Collective (2003)	Design-based research	• Iterative cycles of design, enactment, analysis and redesign • Usually conducted in a single setting • Involves collaboration between researchers and practitioners • Highly contextualised and authentic intervention designs
Richey and Klein (2005)	Developmental research	• Defines research problem and reviews relevant literature • Multiple methods of data collection e.g. field observation, document analysis, case studies, expert reviews, in depth interviews, surveys • Descriptive data analysis and synthesis (quantitative and qualitative)
McKenney and Reeves (2012, 2019)	Educational design research	• Simultaneous advancement of practice and theory • Addresses complex problems in the real world • Produces tangible solutions that are theoretically informed, open to empirical testing and based on insights of key stakeholders

Table 3.1 Design Based Research Approaches

Reeves (2019, p.10) refer to these works as ‘landmark papers’ which emphasised the need for research to have a reciprocal relationship between theory and the design of educational strategies. Both Brown and Collins condemned laboratory research for its limited ability to acknowledge the underlying variables that can have a profound influence on educational settings, and for its weakness in being able to offer explanations about how learning occurs in a real context. The ensuing call for research to be situated within the educational contexts where learning takes place, and for theory and design to inform each other, led to the emergence of ‘design experiments’.

In 2003, The Design Based Research Collective published a paper advocating the use of design-based research to help to understand the relationships between “*educational theory, designed artifact and practice”* in order to *“create useable knowledge, and advance theories of learning and teaching in complex settings.”* (p.5). They proposed that good design based research should include five characteristics: design of learning environments and theory development should be enmeshed; it should be based on continuous cycles of design, enactment, analysis and redesign; research should lead to shareable theories that can highlight relevant implications to practitioners; research should document successes and failures as well as interactions that develop understanding of how learning and teaching designs function in authentic settings; and methods should document and connect the intervention with the outcome of interest (The Design Based Research Collective, 2003). This understanding of design-based research corresponds well with a practice theory based approach.

The approaches that come under the paradigm of design-based research, tend to share a number of epistemological features including, the simultaneous aim to enhance practice and refine theory; an iterative process involving design, implementation, evaluation and development/revision; collaboration between researchers and practitioners within authentic educational settings; and the development of design principles that have contextual relevance and make a contribution to theory (Sandoval, 2014; Wang and Hannafin, 2005). Design-based research is described to be systematic whilst also allowing for some flexibility in its execution (Wang and Hannafin, 2005). Whilst it is evident that all approaches within the design-based paradigm follow a cyclical process of defined stages, some variants appear to place more or less emphasis on particular phases. For example, McKenney

and Reeves' (2019) EDR process accentuates analysis and exploration of the problem, as this forms the whole of the first of their three phases, as opposed to others which go straight into implementation and testing of a first version to see how it works (Collins, Joseph and Bielaczyc, 2004). McKenney and Reeves go on to condemn the notion of 'solutionism' which they explain to be the common tendency for people to jump to finding a solution before paying sufficient attention to understanding the causes and nature of the problem. They claim that solutionism has been a pervasive problem in attempts to enhance learning and teaching at all levels (McKenney and Reeves, 2021). By thinking of a solution before considering the problem that it could solve, researchers run the risk of only partially addressing the problem or even missing it altogether (Steketee and Bate, 2013). McKenney and Reeves are also keen to stress that the issue to be addressed in EDR must be defined as a problem, not as a solution. Furthermore, that the process ensures the design of proper solutions rather than the mere treatment of symptoms (McKenney and Reeves, 2019); considering the broader structural factors impacting on the implementation of formative assessment, rather than simply considering non-engagement as an individual student problem for example.

3.3.2 Challenges of design-based research approaches

There are differing opinions about the suitability of DBR for doctoral research projects. Goff and Getenet (2017) discuss an assumption within the educational research community that DBR is a long term and intensive approach to educational research which therefore deters doctoral students from attempting to use it. McKenney and Reeves (2019) suggest that the process usually involves multiple iterations of the three sub-cycles, as the intervention is drafted and revised. Due to this ongoing iterative nature, projects can often be long term, over a number of years. On the other hand, Jetnikoff (2015) claims that DBR is both pragmatic and supportive of small projects that can make a difference and evaluate change. Goff and Getenet, through their own research findings consider that a creative and flexible use of the EDR approach can deem it appropriate for doctoral research. Moreover, they discuss how Reeves' articulation of the different phases of EDR (Reeves, 2006) makes it easier for doctoral students to conceptualise how the approach might be used. In fact they go on to

explain how one of the doctoral researchers in their study focused on investigating and analysing the problem, and developing a set of draft principles which would be further refined, tested and developed in their postdoctoral work; thus only completing the first of the phases involved in the process.

Another issue pertinent to EDR/DBR however, is that much of the literature places an emphasis on a 'project team' (Pinilla *et al.*, 2021) and the requirement for intensive and long-term collaboration between researchers and educators and/or students, to work together to produce tools, approaches, theories or products (Bikanga Ada, 2018; Goff and Getenet, 2017; Jetnikoff, 2015; Van der Merwe, 2019). Furthermore, in EDR/DBR the researcher or research team are separate to the practitioners and external to the educational context which is being investigated (Nijhawan, 2017). This poses another challenge for its use in doctoral research since doctoral students are less likely to be working within research teams nor to have the necessary resources to be able to fund intensive collaborations.

3.3.3 Design-based action research

Some have suggested that there is a lack of a clear distinction between DBR and action research. Wang and Hannafin (2005) however, claim that there are two main differences. The first is that EDR generates theory whereas action research does not. The second is that in EDR, it is usually the researcher that initiates the research process, whereas in action research it is usually the practitioner. In relation to these differences, Nijhawan (2017) criticises DBR for its failure to adequately take account of practitioners' practical knowledge or 'mētis', since researchers act from outside. Action research on the other hand, occurs when the practitioner occupies the dual role of researcher and educator, therefore adopting an insider perspective to the research being undertaken. Action research however, is criticised for not being sufficiently scientific as it does not contribute to theory development. Owing to the deficiencies of each approach, Nijhawan proposes that action research and DBR be combined into "*a powerful approach….that aims for theory development and mitigates the mentioned deficits"* (p. 20). In this proposition, Nijhawan makes a case for 'design-based action research' which he argues "*gives teachers theoretical assistance in intervening with mētis into their real world environments"* (p. 20). The developed solutions, he claims,

can contribute to contextualised theories with *"a medium degree of generality"* (p. 21). It is unclear however, what is meant by the term *medium*.

3.3.4 Design-based research/educational design research and critical realism

Webster (2016) discusses how a critical realist perspective allows for theory to emerge from research that investigates a phenomenon and its mechanisms. Furthermore, this also involves revising, changing, or discarding theory over time. The goal of research for critical realists is not to identify generalisable laws, or to explore lived experience, but to develop deeper levels of understanding and explanations of reality (McEvoy and Richards, 2006). DBR/EDR therefore is consistent with the research paradigm of critical realism as the goal of DBR/EDR is to gain an in depth understanding of the problems faces in real life settings and to generate theoretical perspectives from empirical investigation. Another commonality between critical realism and DBR/EDR is that both take a pragmatic approach in relation to data collection and analysis methods. Whilst some criticise DBR for its lack of clear description and clarification of research methods (Sandoval, 2014), proponents of both DBR/EDR and critical realism advocate a mix of data types, recognising that that this may be necessary to address complex issues that are experienced in real practice settings, particularly when investigating causal explanations for how events are experienced (McKenney and Reeves, 2019; Withell and Haigh, 2018). Mixed methods and triangulation from different sources of information can help to explain why an intervention is, or indeed, is not successful under which circumstances and in which context (Dolmans and Tigelaar, 2012). Critical realists refer to the use of mixed research methods as 'critical methodological pluralism' (Danermark, 2002).

3.3.5 Rationale for methodological approach

Whilst the use of DBR/EDR approaches has increased rapidly in relation to educational technology innovations, it is also claimed to have much to offer in relation to assessment practices since it has the scope to explore university cultures of assessment and issues relating to institutional policy (Bikanga Ada, 2018).

Furthermore the use of such an approach enables the investigation of assumptions and beliefs of stakeholders about assessment practices which is important as a starting point in aiding understanding of existing problems (Li and De Luca, 2014). This is important since little is known about how assessment can promote deep learning in students and DBR/EDR has the potential to contribute towards a richer understanding of how assessment can enhance learning whilst at the same time, making a theoretical contribution that can be shared amongst researchers and practitioners (Dolmans and Tigelaar, 2012).

Furthermore, DBR/EDR approaches complement a social practice theory perspective. Trowler (2020) claims that within a social practice, priorities, pressures, resources and the 'effects of the backstory' (p.115) are all highly situated. He goes on to argue therefore that 'grounded' and 'light touch ethnographically derived understandings' (p.157) of the specific context using 'discursive repertoires' (p.126) are essential in the initiation and sustainment of successful change outcomes. In order to situate a sense of how change can be effected, it is necessary to understand the present situation and how it works. Trowler also emphasises the importance of 'trialability' (p.154) in introducing policy through small-scale experimentation and an incrementalist approach, arguing that this is more likely to create a sense of ownership at ground level (Trowler, 1998). Since DBR/EDR describes a methodological approach that takes into account the actual context, incorporates qualitative ethnographic methods such as observations and interviews, and has an experimental focus, it appears that to fit well within a social practice orientation.

This research study is based on a very real problem that has been identified within a particular educational context. EDR would therefore seem to be an appropriate approach to take in guiding the study design. The identified problem however, is one which has occurred in the author's own workplace and has therefore very much taken an insider or first person perspective. Furthermore, the lack of an extensive research team and the adoption of a dual role of practitioner/researcher is less consistent with some of the features of an EDR approach and more commonly associated with an action research orientation. The research approach adopted for this study therefore could be described as design-based action research as proposed by Nijhawan (2017) above. Additionally, as this study comprises a doctoral research project, the timeframe is not sufficient to permit the full cycle of EDR to be completed. This thesis therefore

focuses on the first phase of ‘analysis and exploration’ as described by McKenney and Reeves (2019), with a view to conducting the second phase ‘design and construction’ and third phase ‘evaluation and reflection’ in post-doctoral work. The ‘design and construction’ phase is where first, potential solutions to the problem are generated, explored and articulated according to their theoretical frameworks. The solutions are then manufactured using a prototype approach and finally the intervention is assembled along with justification for the decisions underpinning it. The ‘evaluation and reflection’ stage involves testing the feasibility, viability and effectiveness of the intervention followed by careful consideration of the conclusions arising from the research and development. The aim of this is to produce a broader theoretical understanding of the intervention (McKenney and Reeves, 2019). Table 3.2 illustrates the three phases of the EDR cycle along with their corresponding purposes, activities and outputs.

3.3.6 Analysis and exploration phase

The main purpose of this phase of the EDR cycle is to identify and diagnose the problem in order to gain a more in depth understanding of its causes, the contextual factors surrounding it, and the views and needs of key stakeholders (practitioners and learners). It begins with the assumption that existing practices are inadequate and that alternatives need to be considered. Initial perceptions of the problem should be refined and causes should be explained in terms of potential workable resolutions. This phase also involves learning how others have viewed and responded to similar problems. Recommended tasks for this phase are:

1. initial orientation (in the form of a draft problem statement);
2. a literature review to help to develop a better understanding of the problem (by exploring how others have experience similar issues), and to assist in identifying a framework for analysis;
3. a field-based investigation using the same qualitative or quantitative methods as other research approaches.

The literature review and the field-based investigation can be conducted sequentially or concurrently. The EDR process emphasises both a reductionist and holistic

Educational Design Research Process			
Phase	Phase 1 Analysis & Exploration	Phase 2 Design & Construction	Phase 3 Evaluation &Reflection
Purpose	Problem identification and diagnosis	Development of a tentative solution to the problem	Empirical testing of the solution and refining theoretical understanding about if, how and why intervention features work
Activities	• Collaborating with practitioners • Literature review • Field-based investigation of the context using multiple data collection methods	• Generating ideas for potential solutions • Mapping solutions from a skeleton design to detailed specifications • Creating initial prototypes • Revising prototypes	• Empirical investigation of design ideas and prototype solutions • Organic and structured reflection
Outputs	• Clear problem definition • Identification of long-range goals • Partial design requirements • Initial design propositions	• Skeleton design and design specifications • Prototypes of the desired intervention • Manifestations of design propositions • Case examples of interventions	• Better understanding of the intervention, the appropriateness of its intentions, the results of its implementation and the consequences arising from it • Explanations for the results • New or refined ideas concerning designs or prototype solutions

Table 3.2 Educational Design Research Process

approach. The former requires that the problem is broken down into constituent parts and modes of interaction are examined, whilst the latter requires an understanding of how components interact within complex educational systems. It is important to acknowledge what can and cannot be changed (McKenney and Reeves, 2019). Analysing the problem using the Theory of Practice Architectures is particularly useful in enabling such an understanding.

The analysis and exploration phase should also include identification of one or more theoretical frameworks to provide a lens for examining and explaining complex educational phenomena. This can alert attention to important aspects of the problem and can influence decisions relating to the potential solutions. The identification of

theoretical frameworks often occurs during review of the literature on similar problems (Chen and Reeves, 2020; Kennedy-Clark, 2013). As explained in the previous chapter, Self-Determination Theory and the Theory of Practice Architectures were both identified in related literature as being relevant theoretical frameworks with which to interpret the findings of this study.

There are four main outputs from this analysis and exploration phase which are: a revised problem definition which should be both descriptive and explanatory; long range goals which specify the overall aim of the intervention; partial design requirements (factors, often constraints, which should frame design choices); and initial design proposals. It is emphasised that design requirement and proposals at this stage are tentative and partial (McKenney and Reeves, 2019).

3.4 Methodological procedure

The first task in the study was the initial orientation. The literature review and field-based data collection were then conducted concurrently in order that each could help to shape the other. Searches for relevant literature did continue after the field-based data collection had been concluded in order that the most up to date research could be retrieved.

Figure 3.1 below is a timeline to illustrate key stages in the research process

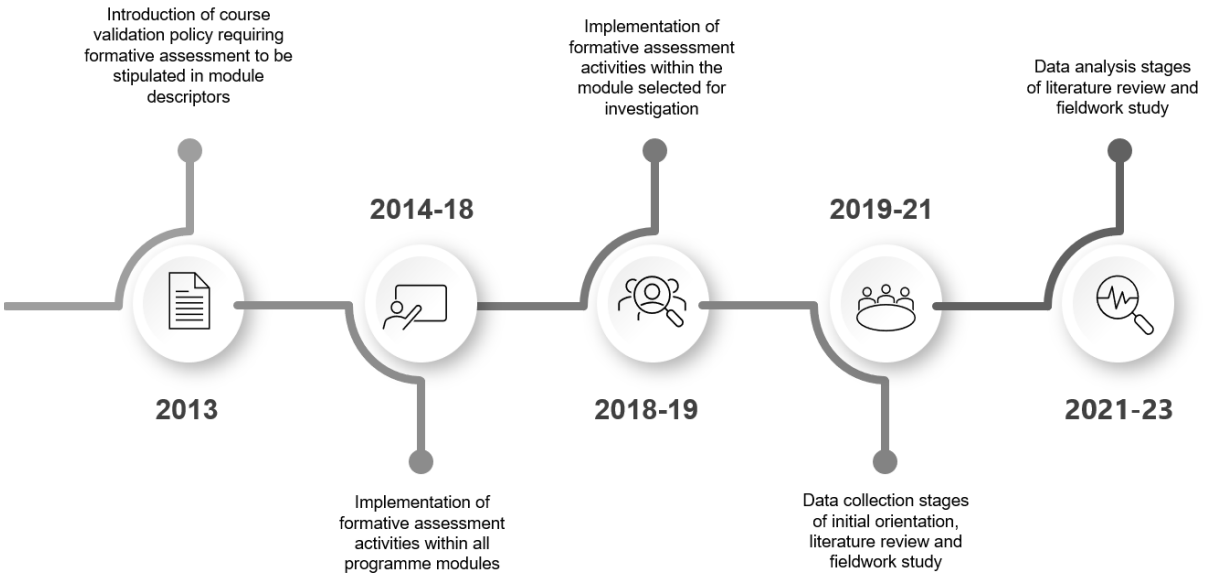

Figure 3.1 Timeline of stages in the research process

3.4.1 Procedure for the initial orientation

The first task of this stage is to write a draft problem statement, which is usually descriptive and incomplete in nature, and often informed by narrative and informal feedback from stakeholders who experience the problem first-hand. The draft problem statement is then considered along with other factors that are important to understand in order to address the problem such as, “what do we know about the problem?” which involves identifying the current situation, the desired situation and the known or suspected causes of the discrepancy; “what do we know about the context?”; and “what do we know about the needs and wishes of key stakeholders?” (McKenney and Reeves, 2019). Feedback to inform the initial orientation in this research was in the form of casual conversations with lecturing staff about their observations and experiences, personal reflections, informal comments and module evaluation summaries from students, and examination of programme documentation (module descriptor forms and module guides).

In order to gain insight into the causes of the problem, a fishbone diagram (otherwise known as an Ishikawa or a cause and effect diagram) was used. A fishbone diagram, is used as a structured way to brainstorm possible causes of a problem and to assist in sorting these into categories. Use of different categories is helpful in encouraging the identification of alternative causes. The value of a fishbone diagram is that it facilitates a deeper analysis of the problem to better understand the systems and processes that are causing the problem. It helps to understand a system and to prioritise areas where the biggest impact could be made. It also helps to highlight that a problem is rarely due to a single cause (Centers for Medicare & Medicaid Services, n.d.).

In order to better understand details about the context, a SWOT analysis was also used during the initial orientation stage. A SWOT analysis can bring a useful lens with which to view a problem. It examines the strengths, weaknesses, opportunities and threats that are present within a particular context that contribute to the problem. The strengths are attributes of the immediate target setting that could mitigate the problem; weaknesses are attributes of the immediate target setting that might contribute to the problem; opportunities are external conditions that could mitigate the problem; threats are external conditions that might contribute to the problem (McKenney and Reeves,

2019). SWOT analyses have increasingly been used to address problems and facilitate planning strategies within the higher education sector (Benzaghta *et al.*, 2021).

3.4.2 Procedure for the literature review

The purpose of the literature review in the analysis and exploration phase is not to find the solution to the problem but to find out how others have experienced the problem or similar and how and why these were addressed (McKenney and Reeves, 2019). In this case the intention then was to explore relevant research pertaining to the challenges and problems relating to formative assessment practices in higher education institutions. To identify all potentially relevant studies the following electronic databases were searched: Academic Search Ultimate; British Educational Index; ERIC; Web of Science; APA PsycInfo; APA PsycArticles. In addition studies that were collated from OneSearch and from citation searches were also included. Combinations of search terms were: “formative assessment*” OR “assessment for learning” AND “higher education” OR “universit*” OR “undergraduate*” AND “challenge*” OR “barrier*” OR “difficult*” OR “issue*” OR “problem*” OR “limitation*” OR “obstacle*” OR “inhibitor*”. These terms were searched in titles, abstracts and keywords. Searches were limited to publications in English language and those published from the year 2000[1] onwards until April 2022. A total of 786 studies were retrieved in the initial search. After screening the titles and abstracts for relevance, 71 articles remained. Following removal of duplicates the total was 29. A further 16 articles were retrieved from OneSearch and citation searches.

3.4.3 Procedure for the fieldwork study

Data collection was carried out with participants from a BSc (Hons) Occupational Therapy course at a university in the United Kingdom. Purposive sampling was used to select participants who were most relevant to the research study and to ensure rich data collection that was pertinent to the research questions and would therefore lead

[1] British Educational Index only went as far back as 2009.

to more meaningful and focused findings (Braun and Clarke, 2013). The data collection procedure involved four key stages consisting of three different types of data collection: focus group interviews; questionnaire surveys; and individual interviews. Participants comprised lecturing staff and students. McKenney and Reeves (2019) consider that the EDR outcomes should be based on the insights and understandings of key stakeholders. These participants and data collection methods are therefore consistent with this. The methods used also permit analysis of the problem at different levels as put forward by Collins, Joseph and Bielaczyc (2004). These are: the cognitive level (what do learners understand and does that understanding change over time, are explanations clear); the interpersonal level (how well do educators and students interact, to what extent do students bond, respect and help each other); group level (participant structure, group identity, authority relationships, does everyone participate, does the group share goals and have a collective identity?); resource level (what resources are available and are they easy to access and use?); institutional level (institutional support, micro-political issues). Yorke (2003) advocates the strength of qualitative, and in particular, action research in developing theory and practice relating to formative assessment due to its capacity to facilitate deeper reflection than other methods. He also emphasises the importance of investigating perceptions from the perspectives of both students and the assessors to determine where there is convergence or differences in their beliefs of the purpose of formative assessment, or their experiences of being involved in the process (Yorke, 2003).

Stage 1

The first stage of the data collection process involved a focus group interview with practitioners (lecturers). Focus group interviews explicitly use group interaction to generate data as participants are encouraged to ask each other questions, exchange anecdotes and consider their own views in the context of those of other people. They are useful for allowing participants to explore issues of importance and to generate new or unexpected themes (Barbour, 2018; Patton, 2015). Invitations to participate in the study along with participant information sheets were emailed to all eleven programme lecturing staff. Seven lecturers participated in the focus group. The interview was preceded by a non-recorded settling down period which consisted of an explanation of the purpose and background to the research. The purpose of this was

to help the participants to gain an insight into the motives for the research and to provide assurance that their practice was not being judged or critically examined in any way. This was important in terms of enhancing the credibility of the data and to assist in establishing rapport and helping participants to feel at ease. This was followed by an explanation of the structure of the interview and an outline of ethical issues including participants' rights. The next part of the interview involved the data collection and was audio recorded to enable accurate and in depth analysis (Green and Thorogood, 2018). Questions were formulated in the initial orientation, and based on insights from the literature. Participants were asked firstly about their understanding of the purpose of formative assessment. They were then invited to discuss their experiences of using formative assessment in their teaching, including what influenced their practice of using it and their perceptions of its usefulness/effectiveness. Following this they were asked about any barriers or challenges that they had encountered in relation to implementing formative assessment. The focus group interview lasted for a duration of 1 hour and 18 minutes.

Stage 2

This stage involved evaluating five different types of formative assessment activities that were typically used within the course, from students' perspectives using questionnaire surveys. These formative assessment activities were implemented within one module during the second year of the course. Following the implementation of each of the formative assessments, an invitation email, and a participant information sheet, which included a link to the electronic questionnaire survey, was sent out to all 35 students who had undertaken the module in which the formative assessment activities had been implemented. The survey asked questions about what were their reasons for engaging with the formative assessment, how motivated they felt to engage in the activity and how useful they found the activity to be in relation to their learning. The Jisc online survey platform was used to distribute the electronic questionnaires.

Stage 3

This stage comprised a focus group interview with students. Invitations to participate along with information sheets were emailed to all thirty five students in the second year of the course. Five students participated in the focus group. The procedure for the interview followed the same structure as that described above. Again, it was felt to be important to emphasise that the purpose was not to judge students' engagement with formative assessment activities in any way in order to enhance credibility. It was important to emphasise the researcher's role as non-judgemental in order to minimise any problems caused by differences in status, knowledge or power. Again, as in stage one, questions were informed by the initial orientation and relevant literature. For the main part of the data collection, participants were asked firstly about their understanding of the purpose of formative assessment. They were then asked to discuss their experiences of undertaking formative assessment activities and to explore the benefits and limitations of the different types that they had engaged in. They were also asked to discuss what influenced their engagement with formative assessment activities and how they felt that they impacted their learning experiences. The focus group lasted for a duration of 52 minutes. The data collection part of this focus group interview was also audio recorded for trustworthiness.

Stage 4

This stage involved individual semi-structured interviews with students at the end of the module in which the five different types of formative assessments had been implemented. Semi-structured interviews allow for extensive exploration and can increase the credibility of research as they allow the participant freedom to elaborate and describe their experiences (Green and Thorogood, 2018). Again, invitations to participate, along with information sheets were emailed out to all students who had undertaken the module. Six students participated. As with the focus group interviews, each interview began with a settling down period. The purpose of the research to explore barriers and enablers relating to formative assessment was very much emphasised in order to encourage honest and open responses. Participants were then asked to comment on the usefulness of the formative assessment activities that they had participated in. They were then asked to discuss how motivated they had been to engage with the activities and what had influenced this, as well as any barriers

and enablers to their engagement and how the activities had impacted on their learning experiences. Participants were also asked for their views about timings, frequency and variety in relation to formative assessment activities. Finally they were invited to comment on how formative assessment strategies could be improved in the future. Interviews ranged from 24 minutes to 38 minutes in duration and were also audio-recorded for to optimise trustworthiness.

Each of the stages, along with the corresponding data collection method and numbers of participants/respondents are illustrated in Table 3.3 below.

Data collection stages, methods and numbers of participants/respondents

Stage	**Data collection method**	**Specific formative assessment activity for evaluation**	**Numbers of Participants/ Respondents**
Stage 1	Staff focus group	N/A	7 participants
Stage 2	Questionnaire surveys to evaluate five different formative assessment activities	Marking sample assignments with assessment rubric	21 respondents
		Group and tutor discussion workshop	14 respondents
		Peer review workshop	3 respondents
		Tutor review of 500 word draft of summative assignment (optional)	4 respondents
		One to one tutorial with module leader (optional)	5 respondents
Stage 3	Student focus group	N/A	5 participants
Stage 4	Semi-structured interviews with students	N/A	6 participants

Table 3.3 Illustration of data collection stages, methods and numbers of participants/respondents

N.B The final two formative assessment activities in stage 2 were optional and take up for these was very low.

3.4.4 Ethical considerations

Ethical permission to conduct the study was gained from Lancaster University. An invitation email along with a participant information sheet was sent out to all lecturers and participants in the sampling frame for each of the four stages described above. The participant information sheets outlined that participation was entirely voluntary with no pressure to take part, that non-participation would not incur any negative consequences and that confidentiality of participation and anonymity of information was assured. The participation information sheet for students also emphasised that non-participation would not affect their studies or the way in which they were assessed. The ethics application form stated that all those invited to take part were able to give consent and this was duly obtained and recorded via written consent forms for the individual and focus group interviews, and via a final question on the anonymous questionnaire survey forms. Subsequent reflection on the research process highlighted however that the concept of consent goes beyond the mere consideration of 'mental' capacity, particularly when taking into account relationships that involve power differentials between the researcher and participants, such as lecturers and students. This is discussed in more detail in chapter 9.

Further ethical issues that were addressed were first, an awareness that lecturers may potentially feel that their practice with regard to formative assessment was being judged. A non-judgemental focus was outlined at the beginning of the focus group interview as well as using humility to emphasise my own shortcomings with regard to design and implementation of formative assessment in the hope that this would provide reassurance. Second, was an acknowledgement that students may feel uncomfortable about being critical of formative assessment tasks that they had been required to engage in. It was emphasised at the beginning of the focus group interviews and individual interviews that the purpose of the research was to improve the experience for students and therefore their honesty was important and appreciated.

Data protection and storage followed the procedures as set out by Lancaster University. After the interviews have taken place, audio data were downloaded from a Dictaphone to a password-protected computer as an encrypted file. It was then

immediately deleted from the Dictaphone. Data were stored in encrypted files and on a password-protected computer which only I had access to.

3.4.5 Data analysis for the literature review

The papers included in the literature review were analysed using a thematic approach (Aveyard, 2023). The results/findings sections of the selected papers were read and their relevance considered in relation to the research questions. Initial themes were identified and noted down on separate documents. Once a list of initial themes was compiled, the results/findings sections of each paper were re-read and tabulated by identifying which papers each theme emerged from and to assist in the visualisation of patterns. Provisional labels were allocated to each theme before revisiting and comparing them to ensure that they were appropriately named. Data were moved as necessary between different themes to ensure the best fit and accuracy of the theme development. For example, 'management and institutional emphasis on formative assessment as a means to achieve targets', 'divergent views about the relationship between formative and summative assessment', 'inconsistencies about what activities constitute formative assessment' and 'disagreements about the roles of lecturers and students with regards to formative assessment' were each initial themes that were eventually merged to form a more developed theme of 'differing conceptions of formative assessment'.

3.4.6 Data analysis for the fieldwork investigation

All interviews were audio recorded in order to facilitate accurate analysis. Thematic analysis of the focus group interviews, questionnaire surveys and individual semi-structured interviews, followed the phases outlined by Braun & Clarke (Braun and Clarke, 2013). Braun and Clarke outline that in thematic analysis, themes are not necessarily dependent on quantifiable measures, but on their capacity to capture something important in relation to the overall research questions. Thematic analysis is therefore driven by the question. ATLAS.ti software was also used to support the data analysis.

The first stage was to transcribe the audio recordings of the focus group and individual semi-structured interviews. Summaries of each of the questionnaire surveys were also exported and downloaded as PDF files with all free text responses displayed. The interview transcripts and survey summaries were then uploaded into an ATLAS.ti project. The transcripts and summaries were read several times in order to facilitate familiarisation with the data, and to note initial ideas about relevant sections of data using the quotations function in ATLAS.ti. Following this, complete coding was used to code the entire dataset. Complete coding aims to identify everything that is of relevance, using brief phrases to illustrate why each part of that data might be useful in answering the research questions (Braun and Clarke, 2013). Each interview transcript and survey summary was systematically reviewed to look for chunks of data that would potentially address the research questions. Codes were assigned using the coding function in ATLAS.ti. Both data-derived and researcher-derived codes were used in this process. Data-derived codes are based on semantic meanings by reflecting participants' own language and ideas. Researcher-derived codes are latent in that they go beyond the literal content of the data to include an interpretive element (Braun and Clarke, 2013). Some codes are both data-derived and researcher-derived depending on how they are applied. 'Lack of value for peer feedback' is an example of a code that is both data-derived and researcher-derived. Staff participants referred explicitly to students not valuing the opinions of their peers (data-derived). Student participants did not explicitly say that they did not value their peers' views but made comments such as 'not seeing the point' in peer review, or 'not caring' about what their peers thought. The implicit meaning here is that they did not value peer feedback and so for some parts of the data this became a researcher-derived code. Data were coded widely and comprehensively, generating 64 codes in total. Using ATLAS.ti code manager, the data were then collated under each code heading. The memo function of ATLAS.ti was also used to make notes about how codes might be linked.

The next stage was to identify themes that capture the most salient patterns in the data. In thematic analysis, themes are central organising concepts that articulate topics and issues in the data that are meaningful in terms of answering the research questions (Braun and Clarke, 2013). Themes were created by examining the codes and the collated data relating to each code to identify similarities and potential patterns. Braun and Clarke (2013, p.225) discuss how some codes, if they are

sufficiently large, rich and complex, can themselves be 'promoted' to a theme. This was the case for a code that captured how improvement in summative grades is a motivator for student engagement in formative assessment. The amount of data collated within this code deemed it large and rich enough to become a theme. The other themes were identified on the basis of having multiple codes relating to them and for their relevance to the research questions. For example, there were a number of codes relating to: the impact of formative assessment on staff workloads; negative perceptions of students around peer review as a formative assessment; and stress and anxiety around the terminology of assessment. These clusterings of codes were considered to have distinct organising concepts and therefore became themes.

Next, the themes were given names that were considered to reflect their core meanings. They were then written up and verbatim quotes were selected to support their key concepts. Verbatim quotes were selected from the range of participants and according to their capacity to illuminate and represent the essence of the theme being presented. The analysis process then went on to interpret and theorise the significance of the themes in relation to Self-Determination Theory (particularly in relation to supportive and restrictive environments), and also in relation to the Theory of Practice Architectures (in particular the three kinds of arrangements that pre-figure the practice of formative assessment). These theoretical interpretations, broader meanings and implications are considered in the discussion of the findings.

3.4.7 Synthesis and theoretical analysis

Findings from the initial orientation, the literature review and the field-based investigation were synthesised and analysed in relation to Self-Determination Theory (Ryan and Deci, 2017) and the Theory of Practice Architectures (Kemmis *et al.*, 2013; Kemmis and Grootenboer, 2008) to provide a theoretical explanation for the findings. This theoretical explanation was then used to produce the four main products of the analysis and exploration phase which are: a revised problem definition; long range goals; partial design requirements; and initial design propositions. These four outputs are presented in Chapter 8.

Revised problem definition

The first output of the analysis and exploration phase is a revised problem statement which explains the discrepancy between the existing situation and the desired one. The problem statement is intended to be both descriptive and explanatory (McKenney and Reeves, 2019). The empirical findings from the literature review and the fieldwork data were used to revise the problem statement that was drafted in the initial orientation stage.

Long range goals

Three long range goals were developed in response to the exploration and analysis around the challenges relating to formative assessment. Long range goals are intended to specify the overall aim of intervention to support the design and construction phase. (McKenney and Reeves, 2019).

Partial design requirements

The third output involved first, exploring the freedoms, opportunities and constraints that have become apparent from the data and then using these to help to formulate the partial design requirements. The partial design requirements were developed by analysing the findings to explain what needs to be taken into consideration for the design and construction phase. These considerations relate to the problem, the setting and the key stakeholders. Partial design requirements form operational criteria that determine implementation of the intervention in the next phase to evaluate what a project can realistically achieve and what might be beyond its scope (McKenney and Reeves, 2019).

Initial design propositions

The final output was to devise the initial design propositions which refer to the central tenets that underpin, and are used as inputs for the intervention design in the next phase (McKenney and Reeves, 2019). These initial design propositions were developed through a revised understanding of the problem and context that emerged from the empirical data in this study.

These four products then go on to inform the next phase of design and construction, which as stated previously is beyond the scope of this thesis.

3.5 Chapter summary

This chapter began by explaining the philosophical stance and the methodological approach underpinning the study. This was followed by a detailed account of the study's methodological procedure including an overview of the 'analysis and exploration' phase which involves three stages of data collection: initial orientation; literature review and fieldwork investigation. The procedure for each of these stages was described followed by the data collection methods used. Ethical considerations were then addressed followed by an outline of how the data were analysed. The chapter concluded with an explanation of the four main outputs of the analysis and exploration phase and how these were developed.

Chapter 4: Findings – Initial Orientation

4.1 Chapter introduction

The initial orientation constitutes the first data collection task of this study. This chapter begins with the draft problem statement which has been informed by narrative and informal feedback from key stakeholders, namely the lecturers and students at the practice site, as well as personal observations arising from a design-based action research approach. A fishbone diagram illustrates insight into the perceived causes of the problem and a SWOT analysis conveys the relevant contextual enablers and restrictions.

4.2 Problem statement

“Students do not value and do not fully engage in the formative assessment tasks that are implemented by lecturers in their modules.”

About the problem

What is the current situation?

The current situation is that students do not fully engage in formative assessment tasks because they do not value them. Lecturers feel disillusioned about putting the time and effort into designing and implementing formative assessment tasks for every module since they are not valued by students. Furthermore, formative assessment activities do not seem to have any impact on students’ summative assessment grades.

What is the desired situation?

The desired situation is that students are motivated to engage in formative assessment tasks and that the tasks that are implemented are effective in enhancing students’ learning.

What is already known or suspected about causes for this discrepancy?

Insight into the root causes of the problem was guided using a fishbone (Ishikawa or cause and effect) diagram (Figure 4.1) as illustrated below. These are based on informal and narrative commentary from lecturers and students at the practice site as well as personal observations.

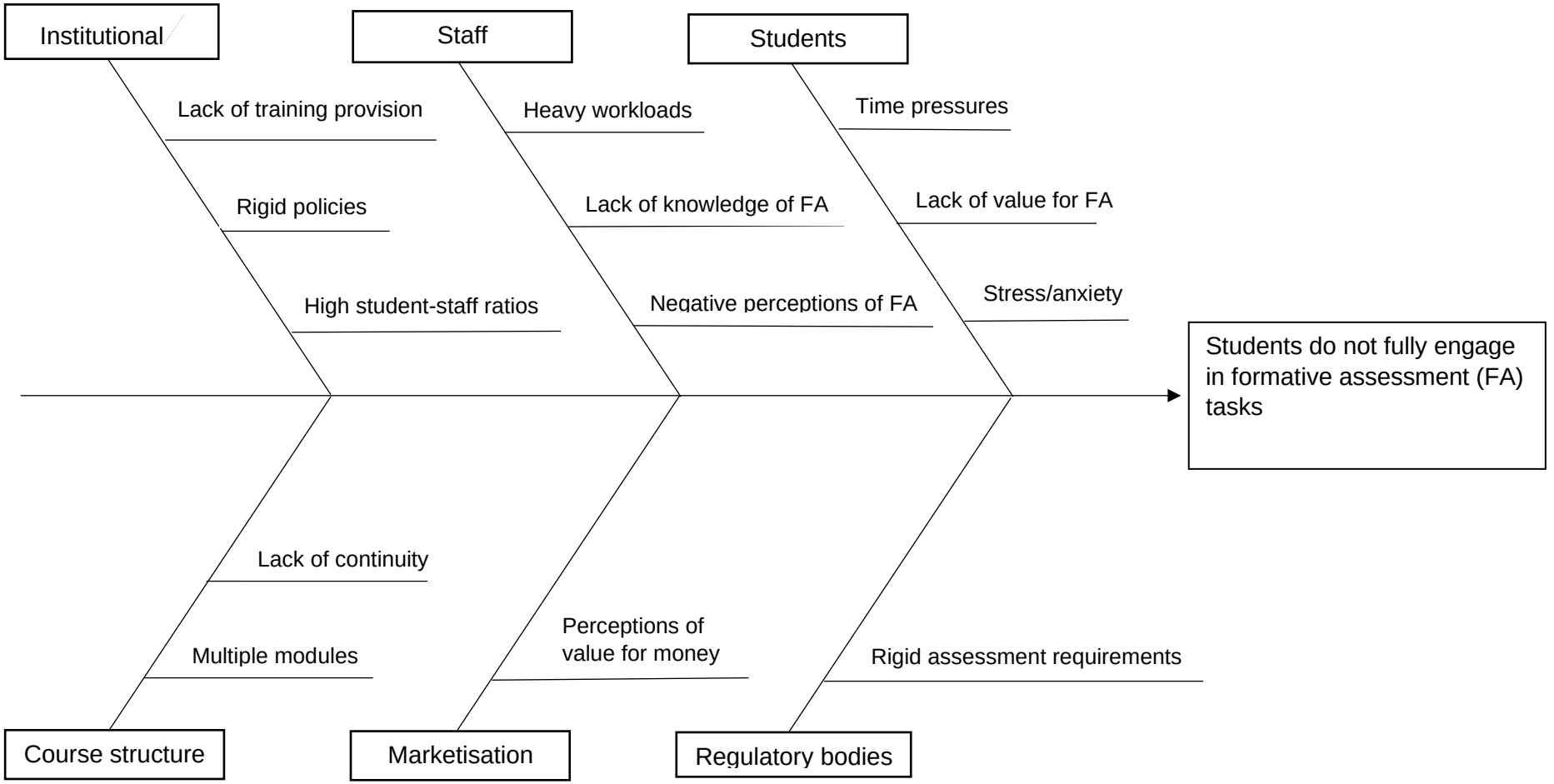

Figure 4.1 Fishbone diagram

4.3 About the context

The SWOT analysis (Figure 4.2) illustrates the Strengths, Weaknesses, Opportunities and Threats that might enable or restrict change in the setting. As with the fishbone diagram, these insights are also based on informal and narrative commentary from lecturers and students at the practice site as well as personal observations.

Strengths	Weaknesses
• Staff group experienced in learning and teaching • Enthusiastic and committed staff • Students' eagerness to succeed	• Lack of pedagogical understanding of formative assessment in staff • Staff disillusionment regarding formative assessment • Students' lack of value for many formative assessment activities • Students' perceived stress around assessment
Opportunities	**Threats**
• A centre for staff development within the university	• Lack of training provision around formative assessment • Rigid institutional formative assessment policy • High student-staff ratios • Heavy workloads of staff • Time pressures of students • Modularisation of course structure • Marketisation of higher education • Regulatory and professional body assessment requirements

Figure 4.2 SWOT analysis

4.4 About stakeholders

The initial orientation stage identified lecturers and students as being the key stakeholders whose needs and wishes should be explored to help shape understanding of the facilitators and barriers that must be taken into consideration.

4.5 Chapter summary

This chapter has outlined the draft problem statement devised from informal feedback and personal insights from key stakeholders. Causes of the problem and contextual factors relating to it have been illustrated using a fishbone diagram and a SWOT analysis.

Chapter 5: Findings – Literature Review

5.1 Chapter introduction

This literature review is structured according to the seven themes that were identified in the data. The first theme **'differing conceptions of formative assessment'** begins with a discussion of the widespread lack of consensus amongst policy makers, institutional management, and practitioners about what formative assessment *actually* is and its purpose. The second theme goes on to discuss issues relating to **'modularisation'** and how this has led to an increased frequency and volume of summative assessment which restricts time for formative assessment. The third theme is **'lack of institutional support'** which explains how institutional policies tend to prioritise grading over strategies such as formative assessment that focus on learning. The fourth theme **'resources'** discusses how increasing workloads and time constraints impact on the implementation of formative assessment activities. The fifth theme explores **'lecturers' assessment literacy'** and how a lack of theoretical understanding of formative assessment amongst academics impacts on how it is implemented. The sixth theme explains how **'lack of value for formative assessment in students'** arises from pressure to perform well in high stakes assessment at the expense of wider learning. Finally, the seventh theme discusses **'students' assessment literacy'** and more specifically how lack of feedback literacy prevents students from benefitting from formative assessment feedback.

The literature search focused on challenges to formative assessment in general. There are many research papers relating to the challenges of specific activities that can be used for formative assessment, however it was beyond the scope of this review to search for all the different activities that could be perceived as formative assessment. Furthermore, there is a wealth of literature relating to challenges of providing and receiving feedback. Whilst feedback is an integral part of formative assessment, specific research focusing on the challenges of feedback is again beyond the scope of this literature review.

5.2 Differing conceptions of formative assessment

The varying ways in which formative assessment is conceived at political, institutional and individual levels pose substantial challenges to its implementation in practice (Asghar, 2012; Carless, 2007; Ecclestone, 2006). In the United Kingdom, Ecclestone (2006) explains how many managers and educators view formative assessment as a means to quickly achieve targets. Formative assessment is used as a way of continuously 'coaching' students through summative criteria to meet the required objectives. Asghar (2012) supports this view that the demands created by institutional policy drivers, quality assurance and financial constraints disempower academics' autonomy to create a supportive learning environment. Carless (2007) describes a similar position in Hong Kong where at an institutional level, formative assessment is about performance goals rather than learning goals. In cultures where formative assessment is used for monitoring, auditing and compliance exercises, its rich potential to promote learning and to encourage skills for lifelong professional development is lost. Additionally, this leads to a host of diverse views about what formative assessment is and what it is not. The confusion that this causes amongst educators further impacts on its effective implementation in practice.

Ecclestone (2006) suggests that formative assessment takes on different guises depending on the dynamics of a learning culture. The issues described above are a consequence of an education culture that is based on the measurement of performance standards and attainment, and which prioritises grades over other educational outcomes. This is due to the need for institutions to communicate levels of achievement with professional regulatory bodies and potential employers who frequently emphasise the value of grades. Furthermore, quality assurance mechanisms require learning to be measured for certification and programme validation to ensure standardisation and comparability across degrees. Such an emphasis on grading and measurable outcomes ultimately requires summative assessment to be given precedence (Garvey, Hodgson and Tighe, 2022; Maclellan, 2001; Yorke, 2003; Jessop, McNab and Gubby, 2012). The prominence of summative assessment in higher education leads to considerable challenges in relation to the implementation of formative assessment (López-Pastor and Sicilia-Camacho, 2017; Carless, 2007; Garvey, Hodgson and Tighe, 2022). Despite its proposed benefits,

institutions rarely implement policies on the use of formative assessment (DeLuca and Volante, 2016; Lau, 2016). Carless (2007, p.62) talks of how formative strategies are *"drowned by the power of summative assessment."* This institutional culture of focusing on grading is cascaded down to students which further compounds the problem, as will be discussed later on.

Another challenge linked to the varying conceptions of formative assessment, concerns its relationship with summative assessment and how this is interpreted by academics. There are considerable differences of opinions regarding how formative and summative assessments link together (Asghar, 2012; DeLuca and Volante, 2016; Jessop, McNab and Gubby, 2012; Taras and Davies, 2017; Price *et al.*, 2010). There is a tendency for some lecturers to conflate formative and summative activities (Asghar, 2012; Price, Handley and Millar, 2011). A typical example of this is provided by one of Asghar's (2012) participants who considered the first of two summative assessments on one module to be formative, even though it contributed to the final grade, because the feedback could be used to improve the second summative assessment. Similarly, some of Jessop, McNab and Gubby's (2012) participants perceived that all assessments have a formative element and some considered formative assessment as a 'stage' in the summative assessment process. One of their participants viewed the whole of the first year as formative on the basis that it does not count towards the final degree classification. Another example of conflation is from Deluca and Volante (2016) who found that formative tasks are sometimes assigned grades, which they argue undermines the intention of formative assessment to support learning. Price *et al.* (2010) found that whilst comments on summative work are sometimes viewed as formative feedback, some lecturers increasingly consider the role of feedback as more about providing justification for the mark that has been awarded. Consequently this limits the extent to which it can serve a longitudinal and development function of feeding forward. Another difference in perceptions concerns varying attitudes towards the provision of feedback on drafts. Jessop, McNab and Gubby (2012) found that some lectures thought of this as good formative assessment practice, whilst others thought that it constituted 'pre-marking' and was therefore giving unfair advantage.

As well as conflicting views about the relationship between formative and summative assessment, there are also diverse opinions about the kinds of activities that constitute

formative assessment. Taras and Davies (2017) found disagreement on how activities could be used for formative assessment. Asghar (2012) found that some lecturers viewed it as comprising an extremely structured process of providing feedback to students, whilst others interpreted it more openly, citing less deliberate activities such as informal class conversations as examples. Another example of conflicting viewpoints is provided by one of Asghar's participants who reported having had numerous arguments with colleagues regarding whether peer assessment of presentations should be classed as formative assessment. Yorke (2003) takes a more eclectic stance, describing formative assessment to be a complex concept that can be formal (specified within the framework of the curriculum) or informal and even casual (not stipulated in the curriculum and takes place within the course of events, for example, instantaneous feedback). The blurred distinction between formative and summative assessment can result in educators missing opportunities to maximise impact of learning opportunities by not recognising that some of their activities encompass formative elements (Maclellan, 2001; Yorke, 2003).

Another factor that influences implementation of formative assessment activities, are the conflicting attitudes of staff and students with regard to each of their roles in the learning process. Price, Handley and Millar (2011) discuss how students reported feeling rejected when their questions were not answered, whereas staff rationalised this on the basis of encouraging self-evaluation and not wanting to do students' work for them. Again, Price, Handley and Millar argue that these differing perceptions are exacerbated by the conflation of formative and summative assessment. Furthermore student queries about their marks were often perceived by staff as a challenge as opposed to genuine requests for more guidance. Price, Handley and Millar question whether this is due to different views about students' intentions or whether students are too blunt in their manner and therefore perceived as confrontational.

5.3 Modularisation

The modularity of degree programmes is considered to be a factor which impedes the effectiveness of formative assessment (Harland *et al.*, 2015; Jessop, El Hakim and Gibbs, 2014; Jessop, McNab and Gubby, 2012; Price, Handley and Millar, 2011; Price *et al.*, 2010; Yorke, 2003; Hernandez, 2012). Mass education systems in the United

Kingdom, Europe, the United States, Australia and New Zealand, have led to most degree courses being structured by discrete units of study that are usually completed within twelve week-long semesters. One of the main outcomes of such modular systems is that summative assessment is emphasised at the expense of formative assessment. Modularisation leaves little time for formative assessment due to the higher volume of smaller modules which require grading at frequent intervals. Jessop, El Hakim and Gibbs (2014) in their audit of twenty three degree programmes at eight universities in the UK, found that most modules comprised two summative assessment points and that students were often faced with multiple concurrent deadlines in highly modular systems. Furthermore, because end of module assessments are designed as judgements of achievement for that specific unit of study, opportunities for feedback to feed forward are more restricted (Jessop, El Hakim and Gibbs, 2014; Jessop, McNab and Gubby, 2012; Harland *et al.*, 2015).

Besides the issue of time availability, modularisation also poses other challenges for formative assessment. First, it means that there is a fragmentation of programmes that hinders continuity of teaching staff, since lecturers tend to be assigned responsibilities for specific modules. Price, Handley and Millar (2011) discuss how this can affect the relational dimension between lecturers and students. Lecturers will not receive all students' subsequent work and therefore cannot accumulate evidence about progress based on feedback that has been provided. It therefore provides reduced opportunities for lecturers to monitor and support performance of students over a sustained period of time. Furthermore, this discontinuity of staff inhibits the development of trusting relationships which are important for creating safe conditions for dialogical feedback, as will be discussed later. Second, modularisation means that often, students do not see the utility of feedback from one module assessment to others (Jessop, El Hakim and Gibbs, 2014; Jessop, McNab and Gubby, 2012; Price, Handley and Millar, 2011; Winstone *et al.*, 2017). One of Price, Handley and Millar's lecturer participants illustrates this by referring to subjects as being taught 'in pigeon holes' and that consequently feedback was equally 'pigeonholed' (p.889). A further issue relating to compartmentalisation is that students perceive lecturers to have different preferences when it comes to assessment and therefore they do not perceive feedback from one lecturer to be relevant for work that is being marked by another (Price, Handley and

Millar, 2011). The issue of students' limited capacity to make connections across modules will be discussed in more detail later.

A study by Hartland *et al.* (2015) claims that the issue of modularisation is specifically more problematic in New Zealand than in the United Kingdom. The researchers discuss that modules at the university where they conducted their study, consist of a high volume of small and frequent assessment tasks that contribute to the overall module grade. In fact, the largest number of graded tasks for a single module was thirty one. As a consequence of this high volume of summative assessment, encouraging students to complete ungraded work was extremely challenging, if not futile. Only four out of forty six student participants reported that they would engage in work that was not graded. This behavioural position led to what Harland *et al.* refer to as 'a *type of grading arms race between academics and programmes'* (p.534), meaning that lecturers were almost compelled to grade work in order to coerce students to complete it. This illustrates a vicious cycle of burgeoning summative assessment load where students will only engage in assessed work and therefore lectures make all work subject to grading. Whilst academic staff recognised that such assessment practices impeded the learning potential of students, they felt helpless due to the modular structures that they were working in. The volume of assessments for each module was exacerbated by lecturers feeling that they each had to assess their own contributions to a specific module. Furthermore, students reported a preference for smaller, more frequent graded tasks as they perceived this to be 'less risky' (p.535). Students also indicated that they would not engage in independent learning if more time was created for this. Such viewpoints suggests that a pervasive culture has been established which would be very difficult to transform. Although this research was carried out in one university, the authors claim that the situation is typical of many others in New Zealand. This is however, based on their personal knowledge rather than research evidence.

5.4 Lack of institutional support

Structural and institutional frameworks and policies have been accused of being responsible for restricting opportunities for formative assessment implementation (Chen, Zhang and Li, 2021; Crook, Gross and Dymott, 2006; DeLuca and Volante,

2016; Maclellan, 2001; McLean, 2018; Jessop, McNab and Gubby, 2012; Price, Handley and Millar, 2011; Torrance, 2012; Jessop, El Hakim and Gibbs, 2014). A predominant grading culture and emphasis on summative assessment is often cited to be the main reason for this as accountability mandates and quality assurance procedures require measurement of student performance. Consequently, institutions rarely implement policies on formative assessment and it is therefore absent from programme documentation (Crook, Gross and Dymott, 2006; DeLuca and Volante, 2016; Jessop, McNab and Gubby, 2012; Torrance, 2012; Jessop, El Hakim and Gibbs, 2014). Programme documentation that focuses on grading at the expense of learning sends an implicit message to both lecturers and students that summative assessment is more important. Furthermore, this lack of institutional endorsement inhibits lecturers from making formative assessment a requirement and its voluntary status is therefore taken up by only a minority of students (Jessop, McNab and Gubby, 2012; Jessop, El Hakim and Gibbs, 2014). In their focus groups relating to general assessment practice, Jessop, El Hakim and Gibbs (2014) noted minimal reference to formative assessment from students, suggesting that either they did not value it, or even that they did not notice its presence on the programmes where it was implemented. When it was mentioned, students described it to be 'patchily implemented'. Their audit of twenty three degree programmes at eight universities also found a great variation in the amount of formative assessment with the number of formative opportunities ranging from 0 to 55 tasks per programme. Large variations within disciplines was also noted suggesting that differences are not accounted for on the basis of subject matter.

Price, Handley and Millar (2011) discuss how institutional policies around feedback have tried to address staff workload issues by introducing tick box sheets. They found that this 'mechanistic' feedback led to disengagement from students as restricted opportunities for dialogue was interpreted as lack of care from staff. They also discuss how such policies reinforce power relations between staff and students as feedback is reduced to a one way judgement of their performance. Students perceived themselves as 'receivers of a product' as opposed to partners in the learning process. Crook, Gross and Dymot (2006) argue that such a formalised and procedural approach to assessment and feedback diminishes its position as a social practice which therefore creates tension. Chen, Zhang and Li (2021) referred to a lack of support from leadership due to a lack of understanding around formative assessment.

McLean's (2018) research found research activity was valued more than learning and teaching which hindered motivation of staff to develop innovative assessment practices. This was based on the findings from one Australian metropolitan-based university however and may not be the case for all institutions.

5.5 Resources

The time constraints placed on academic staff are a commonly experienced challenge to the effective implementation of formative assessment activities. Universities are required to control costly staff increases whilst being expected to cater for rising numbers of students (Crook, Gross and Dymott, 2006). As well as high student-staff ratios, academic staff face increasing workloads due to demands to be research active, generate funding, engage in public service activities and take on additional administrative responsibilities (McLean, 2018; Yorke, 2003). The negative impact of overloading teaching staff, on the implementation of formative assessment is a problem that appears to be shared across higher education institutions in a number of nations including the United Kingdom (Asghar, 2012; Crook, Gross and Dymott, 2006; Deeley *et al.*, 2019; Jessop, McNab and Gubby, 2012; McCallum and Milner, 2021; Price, Handley and Millar, 2011; Yorke, 2003); Australia (Adachi, Tai and Dawson, 2018; Boud and Molloy, 2013; Goos, Gannaway and Hughes, 2011; McLean, 2018); the United States (DeLuca and Volante, 2016; Hunt and Pellegrino, 2002; Khajeloo *et al.*, 2021); Hong Kong (Carless, 2007; Liu and Carless, 2006); China (Chen, Zhang and Li, 2021; Xu and Harfitt, 2019); Saudi Arabia (Al-Wassia *et al.*, 2015); Canada (DeLuca and Volante, 2016); Bangladesh (Hanefar, Anny and Rahman, 2022); the Republic of Ireland (Hernandez, 2012) South Africa (van Schalkwyk, 2010) and India (Sharma *et al.*, 2015).

Whilst students frequently identify individualised feedback on drafts as the most beneficial strategy to their learning and confidence, lecturers acknowledge that this is impossible to sustain when dealing with such large cohorts, in terms of providing either written feedback or engaging in interactive dialogue with individuals (Asghar, 2012; Al-Wassia *et al.*, 2015; Chen, Zhang and Li, 2021; Deeley *et al.*, 2019; Goos, Gannaway and Hughes, 2011; Hernandez, 2012; Khajeloo *et al.*, 2021; McCallum and Milner, 2021; Price, Handley and Millar, 2011; Xu and Harfitt, 2019). Lecturers express

frustration at not having the time to provide good quality individualised feedback, explaining that formative feedback tends to be on the basis of what the majority of students struggle with, which can disadvantage some individuals (Khajeloo *et al.*, 2021). Not only do time pressures restrict opportunities to provide feedback, but they also prevent the lecturer's capacity to identify and analyse problems experienced by individual students and to monitor progress and make adjustments; factors that are central to the concept of formative assessment (Hunt and Pellegrino, 2002; Xu and Harfitt, 2019).

Price, Handley and Millar (2011) found that students were aware of resource constraints. Student participants perceived that lecturers did not have sufficient time to engage with them on an individual level. This impacted on their confidence in relationships with staff. Feeling that their lecturers were dismissive of them led to reluctance to interrupt them which ultimately resulted in student disengagement due to repeated unsatisfactory experiences.

Other consequences of high workloads, are that staff do not feel that they have the time to design and plan formative assessment tasks or to innovate and invest in new ways of doing things (Jessop, McNab and Gubby, 2012; Khajeloo *et al.*, 2021; McCallum and Milner, 2021; Chen, Zhang and Li, 2021). Yorke (2003) discusses how lecturers did not feel that they had time to implement formative assessment if they perceived it as something that was planned. Those who perceived it as more interactive however, merely considered it as good teaching practice. Self and peer assessment are formative assessment activities that lecturers feel discouraged from implementing as they perceive them to be impracticable, complex and time-consuming for large student cohorts. (Hernandez, 2012; Liu and Carless, 2006; Xu and Harfitt, 2019; Adachi, Tai and Dawson, 2018). Furthermore, peer assessment can also take up time that lecturers consider is needed for teaching, when there is pressure to cover a certain amount of content within specific modules (Liu and Carless, 2006).

5.6 Lecturers' assessment literacy

Academics' lack of knowledge, experience and understanding of formative assessment pose a considerable barrier which impacts on their ability to use it to

promote student learning. Again, this appears to be a commonly cited issue internationally. Whilst educators demonstrate mastery in disciplinary and content knowledge, pedagogical expertise is much less developed. Research in higher education has found a lack of theoretical understanding of formative assessment, an inability of lecturers to define it and explain its functions and processes, and inconsistencies in how principles are reflected in practice (Taras and Davies, 2013; Asghar, 2012; Chen, Zhang and Li, 2021; Sabah and Du, 2018; McLean, 2018; Al-Wassia *et al.*, 2015; Hanefar, Anny and Rahman, 2022; Taras and Davies, 2017). A lack of understanding around formative assessment can result in academic staff lacking commitment to its implementation, and even viewing it as meaningless as was the case in van Schalkwyk's (2010) research. In some cases, lecturers perceive assessment to be solely about grading students' performance and lack awareness of its role as a tool for learning (McGrath, Scott and Logue, 2020; Rawlusyk, 2018). In cases where formative assessment activities have been implemented, decisions around their planning and design have been found to be driven by personal choice and anecdotal beliefs around what works rather than being based on any evidence or theoretical grounding (Asghar, 2012). Other research has found that whilst lecturers may be able to implement appropriate formative assessment activities, it is the use of information arising from it that is not always acted upon (Al-Wassia *et al.*, 2015; Heritage *et al.*, 2009). Heritage *et al.* discuss how adapting teaching in response to evidence arising from students' assessed work is imperative to the objective of formative assessment, yet that this is the task that lecturers find the most difficult. Maclellan (2001) argues that feeding information back into the teaching and learning process is the most essential part of the formative assessment process. As Shepard maintains, labelling an activity as formative assessment does not necessarily make it so (Shepard, 2009). It is the use of the instrument, rather than the instrument itself that matters. This is exemplified in Marshall and Drummond's work where they refer to educators implementing formative assessment to the 'letter' rather than the 'spirit'. By this they mean that taking a rigid approach to the use of a technique loses its underlying spirit in which a flexible approach facilitates learner autonomy (Marshall and Drummond, 2006). Rawlusyk (2018) found that a large proportion of lecturers did not understand the value of formative feedback as 50 percent of participants did not consider that it was necessary to provide explanations of errors. Lecturers perceived feedback to be more about justifying grades than about promoting learning. This was

found to have an impact on students as they found the feedback to be negative, unmotivating and inaccessible. Hernandez (2012) suggests that feedback might not be sufficiently motivational to generate action. In addition, some of Jessop, El Hakim and Gibbs' (2014) student participants stated it was common for them to engage in formative tasks that did not elicit any feedback at all, and therefore had no impact on their learning.

Several studies note that a lack of training, practical workshops and opportunities for professional development are evident when exposing the limited assessment literacy of academic staff (DeLuca and Volante, 2016; Khajeloo *et al.*, 2021; Sharma *et al.*, 2015; Taras and Davies, 2017; Chen, Zhang and Li, 2021; van Schalkwyk, 2010). Davies and Taras (2018) express concern about inconsistency among staff developers' understandings of formative assessment since they are the ones responsible for shaping the comprehension of other staff in higher education institutions. This suggests that even when training opportunities are provided, it may not necessarily be helpful in developing lecturers' understanding of formative assessment, and may even lead to further confusion. Taras and Davies (2017 p.135) describe formative assessment as a 'nebulous concept' which is much more difficult to grasp than its summative counterpart. As discussed earlier in this review, a consequence of this is the differing interpretations and individual differences in understandings of formative assessment. Taras and Davies express concern at the lack of acknowledgement that there is no shared understanding of such a fundamental aspect of higher education. They question what hope there is for academic staff, if educational developers do not demonstrate consensus about what formative assessment is. Furthermore, such individual differences can lead to ingrained views which are passed firstly from educational developers to academic staff and in turn, from academic staff to students. Taras questions how formative assessment can be promoted and implemented efficiently if lecturers are not clear about its processes and theories (Taras, 2010).

5.7 Lack of value for formative assessment in students

A summative assessment culture fuelled by grade oriented priorities, as discussed previously, has created a lack of value for formative assessment activities in students.

Research consistently reveals that lecturers struggle to motivate students to engage in formative tasks and that such activities are regarded as less important by students because they does not contribute to module grades or degree classifications (Adachi, Tai and Dawson, 2018; Asghar, 2012; Chen, Zhang and Li, 2021; Deeley *et al.*, 2019; DeLuca and Volante, 2016; McGrath, Scott and Logue, 2020; Tomas and Jessop, 2019; Maclellan, 2001; Jessop, El Hakim and Gibbs, 2014; Taras and Davies, 2017). Students often feel pressure to perform well in high stakes summative assessment and perceive that formative tasks merely increase their workload burden, creating additional work for no extra marks (Carless, 2007; Xu and Harfitt, 2019; Jessop, El Hakim and Gibbs, 2014; Al-Wassia *et al.*, 2015). This can often lead to students giving minimal effort to formative assessment to satisfy threshold requirements (Tomas and Jessop, 2019). Jessop, El Hakim and Gibbs (2014), based on an audit and survey of twenty three degree programmes at eight universities in the United Kingdom, argue a case for the perceived lack of value for formative assessment through their finding of an inverse correlation between the number of formative assessments and students' overall satisfaction with their course. This is however, a moderate correlation and without more detailed information about the nature of the formative tasks for each course it is difficult to ascertain a more comprehensive understanding. Asghar (2012) and Jessop, El Hakim and Gibbs (2014) discuss how students are more likely to engage in formative work if they can see that it is related to the summative assessment, thereby giving it a utility value. Often, this requires formative tasks to bear the same terminology as the summative assessment. Furthermore it is reported that students frequently fail to see the relevance of feedback provided on one module to assessments on future modules relating to different topics, or indeed to see how it can relate to future learning in general or in the workplace (Harrison and Wass, 2016; Skinner, 2014; Tomas and Jessop, 2019; Winstone *et al.*, 2017). On the other hand Price, Handley and Millar's (2011) participants stated that feedback was too general to be of use whilst Hernandez (2012) considered that the timing of the feedback (for example, too late in the term) might be a problem.

Maclellan (2001) concluded from her research that students appeared not to have any real comprehension of the power of formative assessment, describing their conception of it as 'primitive' and 'underdeveloped' (p.317). She found that most students perceived assessment to be about judging their achievement rather than to promote

learning and consequently they did not find feedback to be helpful in any way. Maclellan argues that these findings are due to an incomplete conception of formative assessment that emphasises the role of the lecturer whilst ignoring the responsibility of the student. Feedback in itself is relatively futile if students are not involved in the process of reviewing and monitoring the quality of their own work.

A related issue is about students' ability to evaluate the work of their peers as in the case of peer review and feedback activities. A number of studies have reported challenges surrounding this (Adachi, Tai and Dawson, 2018; Liu and Carless, 2006; Rawlusyk, 2018). Adachi, Tai and Dawson (2018) discuss how academic staff find it difficult to motivate students to engage in peer assessment and report that when they do, participation is often on a superficial level rather than critical and evaluative. Rawlusyk (2018) findings attribute this to students' lack of ability to use assessment criteria and to judge quality, rather than due to issues with motivation. Staff participants explained however that training students how to do this was time consuming.

Another concern relates to how students receive and respond to feedback from their peers. Liu and Carless (2006) found that students often do not perceive that their classmates are sufficiently qualified to provide effective feedback and therefore do not value it. Rawlusyk's (2018) staff participants reported being unsure about whether students made use of peer feedback. Adachi, Tai and Dawson's (2018) staff participants expressed that their students did not engage with the feedback that they received from peers. They discuss the complexity of understanding the emotional aspects involved in receiving feedback and being able to accept the need for improvement. Furthermore, they suggested that their students were not culturally predisposed to receiving criticism and the modesty required for this. They also reported a lack of feedback literacy in relation to skills such as empathy and affect when providing feedback and consider that the nuanced interpersonal skills involved in this are not easy to teach.

5.8 Students' assessment literacy

The lack of value that students demonstrate for formative assessment may to some extent be attributed to weak assessment literacy and perhaps more specifically to

problems with feedback literacy. Feedback literacy is defined by Sutton as *"the ability to read, interpret and use written feedback"* (Sutton, 2012). Carless and Boud contend that low levels of student feedback literacy is one of the main barriers to effective feedback which in turn is one of the key components of formative assessment (Carless and Boud, 2018). Numerous studies suggest that students do not pay attention to, or act on the feedback that they have received and often reveal lecturers' frustrations with regard to this (Deeley *et al.*, 2019; Winstone *et al.*, 2017; Noble *et al.*, 2019; Price *et al.*, 2010; Price, Handley and Millar, 2011; Carless and Boud, 2018; O'Donovan, 2017; Hernandez, 2012; Skinner, 2014). In questioning the reason for students' apparent lack of engagement with feedback, various reasons have been put forward. It may be that despite an assumption that feedback is easily interpreted and translated into action, students in fact do not have the knowledge or skills to be able to understand and apply it (Maclellan, 2001). Maclellan's (2001) and Price, Handley and Millar's (2011) participants reported that dialogue with staff was the most effective way to support their understanding, but as stated previously, this was hindered by staff availability. Winstone (2017) found that some students perceived their academic skills as pre-determined and therefore did not believe that they could be improved. Perhaps on a more fundamental level, it may be that some feedback is simply not useful. Winstone (2017) explains how such a view places the blame on the sender for reasons such as not individualising feedback, making it too authoritative or using terminology that is too complex. Much of the research around formative feedback however, explores reasons why the receivers of feedback, that is the students, do not engage with it.

Before students can engage with feedback, they need to know what it is and when they are receiving it. Students in a study by Noble *et al.* (2019) reported having little direction regarding what actually constituted feedback and how it should be used. Similarly, Price, Handley and Millar (2011) found that students did not recognise feedback other than written comments on submitted assignments and they perceived this to be unidirectional, corrective feedback aimed at addressing errors. Similarly, O'Donovan (2017) explains how oral and dialogic feedback such as that provided in tutorials, is perceived by students to be teaching and not as feedback. Ecclestone (2006) and Winstone (2017) also found that students demonstrated quite narrow conceptions of the purpose of feedback, expecting straightforward advice that will help

them to gain good grades. Further research findings reveal that students can have difficulty in understanding academic terminology around learning outcomes and assessment criteria and feel that they lack the language for engaging in feedback processes (Noble *et al.*, 2019). Students often lack awareness of how to seek assistance in strategies for using feedback. There is a need therefore to develop improved mutual understanding and to provide students with greater direction in how to make use of support. (Deeley *et al.*, 2019; Skinner, 2014; Winstone *et al.*, 2017). Deeley *et al.* advocate the use of interaction and dialogue, signifying a shift away from the students' passive role in the feedback process. Hernandez (2012) found that a lack of dialogue was one of the most commonly expressed areas of dissatisfaction reported by students. Skinner's (2014) staff participants however, regularly reported that students did not attend scheduled office hours that had been assigned for individual feedback. Skinner suggests that this may be due to students' fear of receiving negative feedback. Al-Wassia *et al.*, (2015) and Maclellan (2001) discuss that such passivity from students can arise as a result of views that are consistent with a measurement model of assessment in which students do not recognise their own role in the process. They see staff as having the power to make a judgement about their performance and are not sufficiently empowered to take responsibility for their own learning.

A further barrier identified in the literature concerns students' emotional readiness to engage in discussion about their work. Asghar (2012), Boud and Molloy (2013) and Yorke (2003) consider the issues of power and trust, discussing that students may not feel confident to engage in dialogue with staff members who they perceive to have higher status in judging their work. Similarly, Winstone (2017) suggests that students' motivation to engage with feedback is dependent on their emotional responses and Asghar (2012) refers to the 'psychological safety' aspect which determines students' readiness to engage in dialogue. Price, Handley and Millar (2011) discuss how lecturers may unknowingly use language and tone which can undermine the message due to the students' past experiences. Students felt disengaged if their effort was not acknowledged or if they felt as though they were not being treated as individuals. Confidence and trust in the dialogue, recognition of feedback as a process strongly influenced by relationships and acknowledgement of the sociocultural context in which

it takes place are therefore crucial. Approachability, friendliness, and a positive attitude are considered important to students' confidence in developing relationships with staff.

Lecturers in Harrison and Wass's (2016) research discussed that they found the process of providing feedback to be complex and challenging due to not wanting to be perceived as unkind. They explained how they struggled to deal with conflicting aims of developing students' performance whilst also trying to build their confidence. Ecclestone (2006) describes an example where all staff in an institution were advised not to write on students' work or to ask challenging questions that could undermine self-esteem. O'Donovan (2017, p.629) supports this by emphasising that student discomfort, however short-lived, is 'risky' in the context where universities are judged via an increasing emphasis on student satisfaction and lecturer evaluations. Lecturers are therefore reluctant to challenge students and tend to use more didactic teaching strategies since teacher centred learning is often perceived as being less demanding of students and discursive forms of teaching are often disliked by them (O'Donovan, 2017). Similarly Al-Wassia *et al*.'s (2015) staff participants discussed using 'talk and chalk' methods as students often felt uncomfortable making contributions in large classes due to fear of public embarrassment. Consequently, this affected lecturers' abilities to monitor students' learning and to identify any areas of concern.

O'Donovan (2017) discusses how failure to interrogate students' understandings can thwart intellectual development and leads to an oversimplification of knowledge. She contends that some discomfort in the learning process is necessary but that this is not consistent with a consumerist notion of higher education. Taking these research findings into account, it becomes clear that the dual role of assessor of performance and supporter of learning poses a great challenge for academics in higher education (Yorke, 2003). Taras (2008, p.390) refers to the problem of *'relatively homogenous communities of practice'* in higher education where *'everything happens in-house.'* Garvey, Hodgson and Tighe (2022) go on to suggest that higher education faces the challenge of a different student-staff relationship when compared to experiences in high school. In high school, teachers are 'allies' helping students to achieve their goals which are determined externally by examination boards. At university, lecturers are the examiners which brings with it a different dynamic in relation to assessment practice.

Previous discussion highlighted that students struggle to make connections between different modules and fail to see the relevance of feedback on one module to other modules that concern different topic areas. Whilst some authors attribute this challenge to the modularisation of degree programmes in higher education, others suggest that it is about a lack of assessment literacy in students (Winstone *et al.*, 2017; Price *et al.*, 2010). Winstone *et al.* found that students were unable to see the broader messages in feedback and their relevance for more generic skills development. Frustration regarding the transferability of feedback to future work led to apathy, lack of volition to use learning strategies and ultimately to behavioural disengagement. Similarly, Price *et al.'s* findings reveal that students often considered feedback to be vague and ambiguous because they could not understand how it applied to another piece of work.

There is a tendency in the literature to place blame for a lack of usefulness of feedback on students' assessment literacy; however it may be the case that the feedback is too topic specific and not generic enough or that it actually is vague and ambiguous as reported by Price *et al.'s* (2010) participants. This is likely to be the case if it is being used to justify the grade rather than promote learning as was found to be the case in Rawsulyk's (2018) research discussed earlier. Feedback therefore may lack the important element of feedforward. Where there is a mismatch between the lecturer's intentions and the student's expectations, dissatisfaction will occur (Price *et al.*, 2010). This is a problem since student expectations are critical to engagement (Price, Handley and Millar, 2011). If students do not find feedback to be useful in feeding forward to future work, or if they perceive that it has not had the desired effect they are likely to feel disempowered and even experience learned helplessness (Winstone *et al.*, 2017).

A further issue relating to student literacy concerns students' ideas about the nature of knowledge. O'Donovan (2017, p.618) discusses how students arrive at university with very 'simplistic', dualistic' and 'absolute' beliefs about knowledge that answers are either correct or incorrect. They value teaching and assessment approaches that focus on memorisation of facts which can be assessed objectively and reliably with corrective feedback. They consider that there is 'one best way' to respond to an assessment task and struggle to contend with ambiguity or the idea that knowledge is contestable, constructed and complex with multiple perspectives.

5.9 Chapter summary

This chapter has presented seven themes that were identified in the data collected from the literature review. These themes explore the factors which create challenges relating to formative assessment. These are: differing conceptions of formative assessment; modularisation; lack of institutional support; resources; lecturers' assessment literacy; lack of value for formative assessment in students; students' assessment literacy.

Chapter 6: Findings – Fieldwork Investigation

6.1 Chapter introduction

This chapter discusses four themes that emerged from the fieldwork data. The first theme **'formative assessment as preparation for the 'big event''** explores participants' perceptions of the direct relationship between formative and summative assessment and their subsequent expectations that engagement in formative activities should lead to an improvement in summative grades. The second theme **'it's just extra work'** describes staff participants views that the implementation of the formative assessment policy has created an additional workload burden. The third theme **'who am I, or my peers to judge'** reports the difficulties surrounding students' experiences of peer review as a formative assessment task. The fourth and final theme **'formative assessment as a 'thing' to be feared or just a part of the learning process'** discusses how the practice of implementing formative assessment and the terminology around it can provoke stress and anxiety in students as opposed to when it is integrated into general module teaching.

Pseudonyms have been used for the presentation of verbatim quotes and have been selected to be consistent with gender and ethnicity.

6.2 Formative assessment as preparation for the 'big event'

A core finding of the fieldwork data was around participants' understandings of the purpose and function of formative assessment, particularly in relation to the emphasis that both staff and students placed on a direct relationship with summative assessment. The suggestion that engagement in formative assessment activities could, and indeed should directly, and almost immediately lead to improved outcomes in summative assessment tasks was clearly a basis on which formative assessment had been 'sold' to lecturers by the institution when being instructed to implement it as part of their standard module delivery. It became clear that in turn, this message had been passed on to the students as a way of promoting their engagement with formative assessment activities. This is at odds with the academic literature which defines

formative assessment in terms of a strategy to enhance learning and self-regulation in a broader sense. It is apparent from these findings that a number of the challenges identified by participants could be as a result of this perceived relationship, as they considered that the product of formative assessment, in terms of improvements in summative assessment grades, often does not live up to such a promise. Ultimately this led to negative perceptions of the value of formative assessment from both staff and students.

From the staff focus group it was apparent that most of the participants perceived that the main purpose of formative assessment was to improve students' performance in summative assessment through the provision of feedback and feedforward with specific reference to their summative work;

> *it's a related piece of work, which helps develop their understanding of what they need to do for the summative assessment.* (Moira, lecturer)

This understanding of the function of formative assessment had been created by the university's apparent claim that its implementation would improve the pass rate of summative assessment as suggested here by Jackie;

> *suddenly, they wanted us to do the formative as well because if you do formatives, nobody will ever fail a summative ever again.* (Jackie, lecturer)

Many of the participants in the staff group acknowledged that they also tended to use this line of reasoning in their attempts to encourage students to engage with the process of formative assessment;

> *I think we kind of really need to sell it, as being you know, it's useful for summative assessments, and I think we do that.* (Jackie, lecturer)

Furthermore, there was a perception amongst the staff that the formative task needed to be in the same format as the summative assessment in order for it to be considered valuable;

> *so the formatives do need to match what we're expecting them to do in the summative. So we're preparing them and giving them feedback on*

something very tangible that they are then going to do again. (Louise, lecturer)

So unless your formative is absolutely the same as the summative, you've misled them. (Christopher, lecturer)

It was very apparent from the data collected from student participants that this message regarding the proposed relationship between formative and summative assessment had been internalised by students, as indicated here in these definitions of formative assessment from the student focus group;

It's preparation for the big event (Sarah, student)

Like the walkthrough before a wedding (Dawn, student)

In addition, the student questionnaire surveys revealed that the most widely cited reasons by far, for their engagement in the formative assessment tasks were in relation to the summative assessment. Comments referred to perceptions that participation in the formative tasks would lead to the following outcomes: increase chances of passing the module; help to gain higher marks in the summative assessment; clarify that they were on the 'right track' with the summative assessment, see if anything needed to be added to or changed; and to give ideas about what needed to be included in the summative assignment. Again, such comments emphasise how the perceived relationship between formative and summative assessment was also assumed by students.

This viewpoint that the purpose of formative assessment was to improve summative assessment performance, had very clear implications for the types of formative tasks that students valued, and indeed, did not value. There was a very clear preference for the tasks that involved tutor feedback such as tutor reviews of draft assignments and one to one assessment tutorials;

Myself, I feel like no matter what I'm doing, I like to have that backing from the tutors to advise that I'm on the right track. (Sarah, student)

Tasks involving peer feedback on the other hand were generally not valued and to some extent were even resented by student participants as indicated by the quotes here;

> *this is gonna sound really mean, but I don't need them [other students] to think that it's good…I need tutors to think that it's good because it's them that's gonna mark it.* (Tom, student)

> *the feedback I got back off my peers, I was like, no offence to any of them but the only feedback I was really interested in was what I got from the tutors. I was like, no disrespect to any of you, but you're not lecturers so why on earth would I listen to your feedback when you don't know about occupational therapy.* (Angie, student)

Staff participants expressed awareness that students valued individualised tutor feedback, and that many students did not perceive peer review tasks to be useful to them;

> *Students undervalue feedback from peers. They look for the authoritative feedback from the staff.* (Pippa, lecturer)

Further evidence to suggest that students considered formative assessment to be explicitly linked to their summative performance was demonstrated through differences in the way that various tasks were perceived. One particular task that received unanimously positive reviews from student participants was the use of samples of previous students' work. This task involved presenting students with excerpts of sample assignments from across a range of grading bands including fails. Key benefits of exemplars were described by participants as: ideas regarding the structure and layout of assignments; guidance regarding the depth of knowledge required; types of references used; ideas for how to be more critical and less descriptive; help with terminology; knowing what to avoid doing; to gage the expectations for an assignment; and to understand what standard is required to achieve a higher grade. Being able to actually *see* concrete examples of what was expected rather than just being told by tutors was also highlighted as a particular benefit of the task. Despite the emphasis that most students placed on the summative performance, the quote below illustrates one respondent's capacity to generalise learning from one formative task to other module assessments;

> *I used this session to visualise what looks good and what fails to meet the criteria. If you do not have anything to compare to, how do you know you are on the right/wrong track? I would like to think this was useful to allow me to think about assignments in other modules.* (student survey respondent)

Whilst still assessment focused, it is promising that this student was able to consider how learning from a formative task can be generalised more broadly.

The formative task described above also encompassed a component activity in which students were asked to evaluate the sample assignments against the marking criteria as stipulated in the module assessment rubric. Use of the assessment rubric produced a mostly positive reaction amongst student participants. The expressed benefits of the rubric task were again mainly in relation to the perceived value of it in improving performance in the summative assessment. Comments related to: knowing what was needed to achieve a specific mark in the assignment; knowing how to get a *good* mark in the assignment; being able to understand how assignments would be marked; analysing the marking criteria; understanding how different components of the assignment were weighted; and seeing an example of grading criteria being applied through the use of the rubric in conjunction with the sample assignments. An interesting comment from a student survey respondent referred to the rubric helping them to *"have ownership of the process"* which again suggests a wider benefit relating to empowerment within the learning process.

Staff participants expressed that more training would have been useful in supporting their implementation of formative assessment. When it had first been introduced into the documentation, they had simply been instructed to start writing in formative assessments without being offered any sort of support. Neither had they had the opportunity to explore what formative assessment actually was or how they were going to implement it.

> *In our experience, we've not had the opportunity to fully explore what it is or how we're going to use it."* (Moira, lecturer)

They asserted that training on how to be more creative in designing and developing formative assessment tasks would have been useful.

6.3 It's just extra work!

The university's recent directive that a formative assessment method must be included in every module and formally specified and documented in each module's descriptor and handbook, had contributed to a perception amongst staff that it was an additional chore that was not accounted for in staff workloads. Immediately, the condition of it being an additional imposition required by the university, without any evidence-based rationale, generated negative connotations amongst the group of staff participants. In the staff focus group, participants expressed difficulties surrounding their ability to adequately manage the organisation's and students' expectations around formative assessment. When the university policy to include a formative assessment in every module had first been implemented, some lecturers had attempted to provide individualised written feedback but quickly found that the practice was not sustainable due to vast impact on their time;

> *For [name of module], we committed to giving written feedback, and it was just, it was awful wasn't it? It was too much.* (Louise, lecturer)

Jackie also commented on how the directive had doubled their marking workload;

> *Instead of doing one lot of marking per module, we were ending up doing two, one approximately halfway through. So, remember [name of colleague] saying, I don't understand how it's happened, but there's never a month goes by when I'm not marking and I think, yeah, I kind of got that feeling. We were constantly marking because of all these blimming formative assessments we'd suddenly been forced to do.* (Jackie, lecturer)

Furthermore, the fact that formative assessment had been imposed but not formally accounted for in the workload management tariffs generated some resentment amongst the lecturers;

> *it's not calculated as part of our workload, so therefore how do you fit it in and sometimes it's really difficult, like giving feedback for that module and we've got something like a week to turn it around* (Moira, lecturer)

Owing to the perceived relationship between formative and summative as discussed in the last theme, it is hardly surprising that staff participants tended to judge the effectiveness (or lack of it) of formative assessment through its impact on students' performance in their summative assessments. There was a general sense that many of the formative assessment tasks that they had implemented had been ineffective in improving summative work and this consequently led to a general view that it did not work in achieving what the staff perceived that it was designed to do. As a result the staff participants tended to share quite negative attitudes that formative assessment did not constitute a productive use of their time;

> *it has become extra work for all of us and it's not working effectively* (Moira, lecturer)

> *I'm not entirely convinced ever that doing the formative assessments has made any difference to the number of fails or the poor marks that we get with the summative assessment...they're not transferring what they've learnt from the formative to the summative* (Jackie, lecturer)

The lecturers recognised that having more time to engage in dialogic feedback with individual students, may be more successful. They referred to examples from practice placements in which all students have a halfway formative meeting with their practice educator. These were considered to be highly effective in terms of students' achievements, but the lecturers did not feel that this would be feasible in terms of academic modules;

> *A reason that I think that it [formative practice placement meeting] works, is that the educator sits with the student for an hour, one to one and talks through everything that they're doing and where they're going and what they need to do and blah, blah, blah. If we had the resources to do that with every student, then the halfway formative exercise would work very well.* (Moira, lecturer)

The lecturers acknowledged that they did not consciously reflect on and make adjustments to their teaching on the basis of the outcomes of formative assessment, but instead tended to give quite generic feedback. Neither did they have a sense of whether the feedback that they gave had any impact;

I use discussion boards on Blackboard. What points are they missing? What points does nobody kind of address? What are the things that crop up all the time? (Jackie, lecturer)

Whilst staff recognised that feedback from lecturers was favoured by students, the heavy workload involved had led them to make greater use of peer review activities for formative assessments despite their recognition that it was not necessarily useful;

Then you have the problem of, they want tutor input and you're struggling to meaningfully give input to all of them. I think to make it effective, you have to put the time in. If you try to do it quickly and say yeah, we'll do a peer thing, just bring your thing in, and they don't know how to do the feedback bit, some will do it well, some will do it badly and some will be too nice. (Christopher, lecturer)

Furthermore, the staff participants recalled having been told by their staff development team that peer review was a good strategy for formative assessment and that it should not take additional time. As discussed previously, peer review was notably problematic, and the implementation of formative assessment had increased staff workloads.

There was also a general sense amongst staff participants that students often perceived formative assessment as just an additional piece of work that they had to complete. Staff felt that a lack of understanding of the potential benefits of formative assessment and insufficient clarity in what it is actually measuring can reduce students' investment in the process;

If the student is viewing it as just a task to pass, to overcome, you know, they'll go oh, that's good, I've passed, and they're not necessarily seeing it as a developmental thing (Christopher, lecturer)

6.4 Who am I or my peers, to judge?

As stated above, peer review was used quite extensively for formative assessment activities to cut down on the workload for staff. As a formative assessment strategy, peer review evoked quite strong reactions amongst the student participants. The problems surrounding peer feedback as discussed by the student participants tended

to relate to three main issues. First, that students do not feel appropriately equipped or skilled to provide feedback to their peers which subsequently affects their confidence to express their views; second, that they do not perceive their peers to have sufficient knowledge, qualifications or status to adequately evaluate their work; and third, fear of the emotional impact that peer review can have on fellow students and the potential detriment to student friendships. With reference to the peer review workshop, Amy remarked;

> *everyone in my group sort of thought, well, I'm just going off what I think. I don't know how to really assess yours because if I'm wrong, I might send you down the wrong line. I think everyone just had the same opinion, like, why should I be marking their work when I'm not on a different level? I've not had mine marked. I don't know if I'm going down the right path, should I give feedback, who am I to kind of judge, but that's just all formatives* (Amy, student)

The final comment here suggests that Amy considered peer review to be almost synonymous with formative assessment which highlights how extensively it was used. It also signifies an acceptance of this as being the general routine in terms of formative assessment.

There was a tendency for student participants to perceive that reviewing work and feeding back was the sole domain of the lecturer and beyond the remit of students. They indicated that they could not see the purpose of peer review exercises and consequently, these were considered to be a waste of time and resources on the part of the lecturer. Some of the questionnaire survey responses indicated a sense of annoyance that they had had to sit and listen to other students talking about their projects when they could have spent the time working on their own assignments.

> *We spent an hour listening to other people's ideas when everyone just needs to think about their own* (student survey respondent)

As a result, students are reluctant to attend such formative activities involving peer review;

> *you give constructive feedback as a student and stuff but I'm like, how can I give you feedback when I don't know what it is I'm looking for, how can I*

give you constructive feedback, when I'm not a lecturer? A lot of peers that I talk to, they're just like, I don't see the point in doing this, formatively marking each other's work, it's wasting your time, as well as resources, in your planning, your lessons and things, and I just think then you've got students that go, I'm not turning up for that formative, there's no point (Angie, student)

Besides not seeing the point in providing feedback themselves, there was also a tendency for students to express a lack of value or distrust for the feedback that they received from their peers. This can to some extent be attributed to the emphasis that students placed on the relationship between formative and summative, as students expect feedback that is going to help them to gain better marks in the final module assessment. Some of the survey responses that student participants made in relation to the peer feedback that they received included: uncertainty about whether the feedback was 'correct'; it was contradictory with other peer feedback or with tutor feedback; feedback was too vague and did not make sense; feedback was questioning rather than providing advice; writing meaningless comments out of obligation to fulfil the task. Angie (student) reported that when she had asked a peer to clarify something that they had written on a peer review form, that they had been unable to explain it and admitted that they had only written it *"for the sake of saying something".* Furthermore, Angie expressed having been blatantly offended by some of the peer feedback that she had received;

I was like, who are you [other students] to tell me that I can't write properly? Who are you to say that 'you're great in class, but you're poor on paper'?…how dare you! You're not a professor, you're not a tutor, I couldn't believe that. (Angie, student)

Angie's experience as described above was not a commonly reported one. There was a greater tendency for the student participants to be apprehensive about upsetting their peers when providing feedback. Consequently this could inhibit them from being honest in their comments;

you don't know how everyone's coping, you don't know how everyone's working, you don't know everyone's life situations. So, if they've done

some work, which I don't think is amazing but is the best they could do, and they've got loads of external stuff going on, and struggling, I would find it really hard to say, it's really not very good, because you just don't want to then create a bigger issue. (Tom, student)

Similarly Dawn (student) expressed some wariness about upsetting fellow students but felt that she would still attempt to be constructive and that to some extent her assurance in doing so would depend on her knowledge of the recipient;

I think I'd probably be a little bit more wary of giving constructive feedback to somebody in case I upset them…but somebody gobby like me, or [name of peer] or somebody, I'd probably be okay with, you know, it's more again about how somebody would take it. I would be probably still a bit wary with somebody if I wasn't sure how they'd react, cause, you know, we've all got stuff going on and we don't know what state somebody is in. So something as simple as that could send someone off all weepy and crying. So I'd still be a little worried, but I probably would do it as long as it was proper constructive, and not like, major harsh or anything. (Dawn, student)

Gail (student) on the other hand admitted to saying that someone's work was 'really good' and had held back from expressing her true opinion for fear of upsetting a student that she was not very familiar with. Student hesitancy in giving feedback was also evident through some comments that the peer feedback that they had received was overly positive and not particularly constructive. Students were aware that their peers felt uneasy about offending them and that their comments therefore might not be particularly honest or genuine. Consequently therefore, this impacted on their perceived usefulness of the feedback.

Staff participants were also aware of the challenge of students not wanting to offend each other and recognised that this impacted on the nature of their feedback;

In the module I run, they do peer feedback and I just drift around each group. I'm not there all the time and I do hear some quite constructive feedback, but also sometimes you think ah, you're being a bit too kind. (Louise, lecturer)

Jackie (lecturer) pointed out that students were reluctant to be honest with each other due to them being friends. In the student focus group however, the participants had quite different perspectives on how the friendship aspect influenced their attitudes towards being constructive. Whilst some students expressed that they would feel more comfortable in being honest with people that they knew better, others were aware of the impact that this could have on their friendships and thought that it would be easier to give constructive feedback to people that they were less familiar with. There were mixed views regarding whether they would prefer to be randomly assigned or to choose their own peer review groups.

Staff participants similarly acknowledged an awareness that students were not adequately prepared for peer review and referred to shortcomings in their own approaches to using this as a formative assessment activity. Heavy workloads and time pressures had prevented them from being able to address this. They conceded that peer review is a difficult skill for students;

> *I think it's a skill to be able to give and receive that sort of feedback; and where we do it at the moment, randomly, some students have it and some don't. You know we just kind of hit on them really.* (Christopher, lecturer)

> *Do they have time to look at it and think about it? because you know, if you're doing a presentation and then you're expecting them to give instant feedback, that's really hard, whereas if they've got an opportunity to think about what they've seen, or think about what they've read...* (Carol, lecturer)

Similarly, the act of giving and receiving feedback was considered by staff to be a skill that had not been given sufficient consideration in relation to peer review tasks. Participants reflected on the need to provide students with assistance in this.

> *It's about knowing how to give feedback isn't it, which actually is skilful, and I suppose we haven't done that right. I've thought about doing it, talked about giving feedback but not actually got around to doing it. You know, to give some, not exactly training, but help. Maybe we need a more developmental approach to giving feedback.* (Louise, lecturer)

Additionally, students' perceptions that peer review is merely about critiquing each other's' work was considered to be a further barrier to their engagement in the activity. Staff discussed how students should be encouraged to see peer review as an opportunity to engage in open discussion about their work rather than as a means through which they simply critique the work of others. Student participants in the main tended to see peer review as unidirectional, in that the person receiving the feedback is the only beneficiary.

Furthermore, staff recognised that students had been thrown into tasks involving peer evaluation before being encouraged and supported to engage in self-assessment. They suggested that self-assessment would be a logical precursor to peer review activities in terms of building students' confidence in academic work;

> *I think that we need to give students the confidence in their own self-evaluation; and I think, depending where they are in that, they haven't actually got that confidence to be able to assess themselves; and then really, unless they can assess themselves properly, they're not really going to be able to assess other people. So I think if we're going to take formative feedback like that forwards then we would really need to start thinking about students' confidence levels and ability to self-assess themselves, and exactly what it is that we're looking at, and what we're looking for.* (Jackie, lecturer)

Despite the dominance of comments suggesting a lack of regard for peer review tasks from student participants, there were some positive observations. This quote illustrates how Sarah (student) actively benefitted from the feedback that she received from her peers;

> *So with the chance to have six other people picking out the same point that's maybe negative, that you haven't recognised…that helped me implement the change because you've got more people haven't you, and then they give their explanation of why and I think they were all quite similar, so that would then make me think I need to change that.* (Sarah, student)

Whilst this quote from Gail (student) suggests that her understanding of peer review goes beyond simply providing an opinion about others' work;

> *it was quite interesting the way in which that [peer review task] took place because rather than written feedback, it was done through open questions. 'Why did you put this down?', 'well I thought it was this', so it was all very positive you know. I certainly found it very useful and I hope other people did too.* (Gail, student)

For those students who demonstrated a more positive attitude to peer review however, there was less of concern about being 'right or wrong' and greater emphasis given to features such as constructive dialogue and questioning as opposed to merely providing judgements or making suggestions.

6.5 Formative assessment as a 'thing' to be feared or just a part of the learning process

A further issue impacting on lecturers' perceived effectiveness in their use of formative assessment was their own lack of understanding of how it should be implemented. In the focus group, the staff participants felt that there had been little guidance from the institution in relation to this. When asked about the purpose of formative assessment, Louise (lecturer) described it as *"a thing; something that has to be done."* As stated previously, this perception arose from the requirement to formally document a 'formative assessment' in each module descriptor. Some staff participants discussed how, in addition to the formative assessment task as documented on the module descriptor, they had integrated continuous formative tasks throughout their modules;

> *I say to them, we're doing formative work throughout the module. So, I've put a date in your module guide because I have to, however that's not how it's working.* (Moira, lecturer)

Responses from student participants indicated that they valued this way of integrating formative assessment tasks throughout a module;

> *I think it kept momentum going, whereas the majority of the time you're set an assignment, and then you're taught everything in between, and*

then the focus seems to leave the actual assignment and they're just separate areas that don't all seem to pull together. I think a lot of people, when we all discussed it, said, oh great. I think it just kept the focus on something that needs to be done, and that was a much better way of approaching it because people would turn in for them and wanted to do most of them. (Sarah, student)

Whilst still very focused on the summative assessment, this suggests that integrating continuous formative tasks increases student motivation to attend and participate.

Another benefit of integrating continuous formative assessment into a module is that it permits tasks to be varied in nature and therefore suited to meeting different learning styles. The benefits of having a variety of formative tasks were depicted by student participants to encourage engagement through stimulating interest, reducing boredom and monotony and promoting inclusivity in relation to different learning needs;

I think we get so caught up in repetitiveness... It's always the same thing. So actually, having different tasks, just makes your brain work in a different way. You know, you're looking at different angles all the time. Yeah, I think variety is very good. It stops you getting bored as well, definitely. (Dawn, student)

This approach of continuous integration of formative assessment tasks was discussed in contrast to other modules where the explicit reference to 'a formative assessment' was often considered to be 'extra work' and therefore burdensome. Students also likened this approach to having some kind of 'exam' which led to feelings of stress and tension. Students reported that building formative tasks into the general teaching activities of a module made it seem like a routine part of the learning process and therefore took the emphasis away from assessment and the associated stress.

It, for me, just felt really quite natural. So it just felt as if it was part and parcel of the whole timetable, it didn't feel as though it was forced in any way. (Gail, student)

It just felt like it was part of the part of the learning process, not just like an exam. (Dawn, student)

Related to the point above, another issue that was reported to increase feelings of stress and anxiety was in relation to the terminology used. The very act of naming formative assessment as 'assessment' was considered to be problematic by staff and student participants alike. Several of the staff participants maintained that they had an issue with the word 'assessment' due to the impact that it can have on students;

> *I'm a bit wary about the word assessment as well, because for some students they do get very tense, very anxious and a bit panicky. As soon as you don't use the word assessment, and you may do exactly the same thing, and call it, well 'we want you to do this and then we'll give you some feedback on it', and that's fine, but call it an assessment and suddenly it's such a big deal.* (Christopher, lecturer)

Staff participants discussed how they had adopted the use of alternative phraseology such as formative 'activities' or formative 'tasks' instead of 'assessment' despite the wording used in formal university documentation. Student participants acknowledged that this had made a difference to their perceptions;

> *I think use of the word task is better than assessment. I think don't use the word assessment…for me, that has got negative connotations. It changes the emphasis and people become a bit more flustered. I mean I am one for the use of language. I guess I'd say to you, how important is it as a lecturer that you have to use the word assessment?* (Gail, student)

> *so kind of labelling it as an assessment, you know, something like that, it just puts people on edge and makes them stressed, which then will have a negative impact because when people are stressed they don't take stuff in.* (Dawn, student)

On the other hand however, there was some acknowledgement from Christopher (lecturer) that the term 'assessment' did have the benefit of emphasising the importance of the activity to the students;

> *but then I want them to take it seriously and I'm not sure how to do that without using the word 'assessment'.*

6.6 Chapter summary

This chapter has presented four themes that were identified in the data collected from the fieldwork investigation. These themes explore staff and students' perceptions of formative assessment at the practice site. These are: 'formative assessment as preparation for the 'big event'', 'it's just extra work', 'who am I, or my peers to judge' and 'formative assessment as a 'thing' to be feared or just a part of the learning process'.

Chapter 7: Discussion

7.1 Chapter introduction

This chapter will integrate findings from the field study along with relevant issues that arose from the literature review findings. The discussion will draw on Self-Determination Theory (Ryan and Deci, 2017) to explore how students' and lecturers' behaviour in relation to formative assessment practice is regulated, and the subsequent impact that this has on motivation. This will be supported by using the Theory of Practice Architectures (Kemmis and Grootenboer, 2008) to gain an understanding of the arrangements that constrain and enable the practice of formative assessment in higher education and specifically within the institution that was studied. Discourses around neoliberalism, marketisation and consumerism within higher education are considered to illuminate how the practice arrangements influence practice. The theoretical concept of ecologies of practice (Kemmis *et al.*, 2012b) will also help to consider how formative assessment within the institution is enmeshed with the arrangements of other practices, both within and external to the institution. The chapter will conclude with a summary of the discussion points.

Although analysis of the literature review and fieldwork findings has identified a number of themes, a common thread which permeates across most of these is the inextricable relationship between formative and summative assessment.

7.2 Formative and summative assessment: A complex relationship

The main observation from the findings of this research relates to the perceived inseparability of the relationship between formative and summative assessment. In the fieldwork study, this was evident in the way that both lecturer and student participants viewed both types of assessment as being inextricably linked, with the purported purpose of formative assessment being to improve performance in summative work. This proposition had been 'sold' to the lecturers when the university initiated a formal policy which mandated the use of formative assessment strategies. In turn the

lecturers passed this idea on to the students in an attempt to secure their engagement with the practice. Similarly, findings from the literature review revealed that formative assessment is often used as a strategy to enhance summative performance targets, owing to an educational culture that prioritises measurement and grading over other 'softer' educational outcomes. (Asghar, 2012; Carless, 2007; Ecclestone, 2006). The findings of both the literature review and the fieldwork study therefore are at odds with theoretical notions which view formative assessment as a much broader learning and teaching strategy with wide-ranging benefits extending beyond the improvement of grades (Asghar, 2012; Clark, 2012; López-Pastor and Sicilia-Camacho, 2017; McCallum and Milner, 2021; Nicol and Macfarlane-Dick, 2006; Panadero *et al.*, 2018; Sadler, 1989; Vonderwell and Boboc, 2013; Willis, 2007).

In the fieldwork study, pressure to enhance summative grades came in the form of a rigid policy directive that a formative assessment must be included in every module and clearly outlined in each module descriptor and handbook. Conversely, findings from the literature review revealed that higher education institutions rarely implement policies relating to formative assessment and that it tends to be largely absent from programme documentation (Crook, Gross and Dymott, 2006; DeLuca and Volante, 2016; Jessop, McNab and Gubby, 2012; Torrance, 2012; Jessop, El Hakim and Gibbs, 2014). The lack of formative assessment policies referred to in the literature review is due to institutions giving complete precedence to summative assessment practices. In relation to its implementation, both the absence of, and presence of formative assessment policies are problematic for different reasons. The absence of policies sends an implicit message that formative assessment is not important or valued at all. On the other hand, a rigid procedural approach to formative assessment generated concerns around increasing workloads for both lecturers and students which impacted on their perceived value of it. Furthermore, the emphasis that was placed on the use of formative assessment in enhancing summative assessment grades also meant that its function in enhancing learning in a broader sense was not recognised. In both cases therefore, the potential benefits of formative assessment in enhancing learning are unlikely to be realised.

Such a focus on summative assessment grades could be considered as an extrinsic form of regulation, directing behaviour through the use of externally controlled rewards and/or externally administered punishments according to self-determination theory

(SDT) (Ryan and Deci, 2017). In an educational context, encouraging students to engage in formative assessment as a means to achieve higher grades could be seen as an externally controlled reward strategy, whilst the threat that non-engagement could result in lower grades or even failing an assessment can be described as examples of externally administered punishment strategies. This was evident in the field data as student participants confirmed that their main motivation for engaging in formative assessments was to gain higher grades or even to avoid failing in the summative assessments. Additionally, some students reported that they only engaged in the assessment tasks simply because they were "told to" which also indicates external regulation. It is argued that many people believe that the higher the incentives, the greater will be the reward, however proponents of SDT refute this idea (ten Cate, Kusurkar and Williams, 2011). Whilst it is suggested that external regulation can be successful in driving behaviour in the short term, SDT argues that in the long term, it fosters a low quality form of motivation that often undermines motives that are more self-determined. Moreover, it is suggested that external regulation poses risks to student wellbeing by triggering high anxiety and reduced social-emotional functioning (Howard *et al.*, 2021).

A further form of extrinsic regulation is that of introjection which describes how behaviour is driven by ego involving motives where the goal is to gain and maintain approval from others and oneself. Introjection can be tied up with an individual's desire to avoid feelings of guilt or shame and to seek pride in order to boost self-esteem. It is therefore very much focused on performance goals and social comparison (Howard *et al.*, 2021). This is evident in findings from both the fieldwork study and the literature review which illustrate how students are strongly motivated by a desire to achieve success in terms of summative grades. The fieldwork findings indicated that the main motivating factor for students engaging in formative assessment tasks was the implication that it would increase summative grades. The literature review on the other hand revealed a lack of willingness in students to engage in formative assessment because they did not see its relevance to summative grades. Consequently they did not did not consider formative assessment to be an effective use of their time, instead choosing to focus all of their effort on work that would contribute to summative grading which was clearly their priority.

Introjected regulation can also occur through a lecturer's praise of a student's academic work (Howard *et al.*, 2021). Such a strategy has been accused of acting as a type of controlling authority which pressures individuals to act through seductive techniques (Black and Deci, 2000). The emphasis that student participants placed on receiving approval from lecturers in the fieldwork study suggests that introjected regulation may also have driven their motivation to engage in formative assessment. Similarly, as with externally controlled regulation, introjected regulation is associated with maladaptive consequences such as anxiety and negative affect in students (Howard *et al.*, 2021). This is supported in the fieldwork findings as both staff and student participants reported how formative assessment triggered feelings of tension, anxiety, stress and panic in students.

It is also relevant to note that these extrinsically regulated behaviours were not limited to just the students in this research. It is evident within the findings of the fieldwork study that the lecturers were themselves being coerced into implementing formative assessment activities in their working practices and were therefore also subjected to controlling authority through forceful methods of formative assessment policy directives from higher management within the institution. This very rigid procedural approach mandated that a formative assessment task must be written into every module and be explicitly documented in the module descriptor forms and handbooks. Consequently, staff participants perceived it as something that they had been instructed to implement rather than a learning strategy that they had chosen to use. Pelletier and Sharp (2009) discuss how educators who work in institutions where administration systems control educators through pressure to conform to certain teaching methods, demand that students achieve high standards, and use performance evaluations, tend to experience lower needs satisfaction in relation to autonomy, competence and relatedness. Consequently, they are less autonomous in their motivation for teaching. Similarly, Vermote *et al.* (2020) argue that teachers who work in autonomy controlling environments are only motivated to put effort into their work because it is expected of them. Their investment in teaching activities is therefore functional to avoid feelings of guilt or enhance their feelings of self-worth. Whilst staff participants in the fieldwork study certainly acknowledged that they were obligated by management to implement formative assessments in every module, there was no indication that they were driven by motives to avoid guilt or enhance their self-worth.

The lecturers' behaviours would therefore be better explained by external regulation than by introjected regulation.

In turn, lower levels of autonomous motivation and needs satisfaction experienced by educators can impact on the teaching styles and the learning environments that they create for their own students. Ultimately, the consequence of this is that students then go on to demonstrate a controlled motivation orientation. Educators who experience more controlling conditions in their jobs, have been noted to be more controlling in their teaching by demonstrating more demanding and domineering approaches. They are less likely to demonstrate understanding, give support or provide meaningful rationales for learning tasks, and are more likely to be critical of students (Pelletier and Sharp, 2009; Vermote *et al.*, 2020). Pelletier and Sharp (2009) go on to explain an interesting notion of reciprocity where a lack of motivation and low performance in students reinforces the administration's perception that something needs to be done. As a result, educators perceive pressure to assert a more controlling approach to ensure that the administration's standards are achieved. In the fieldwork findings there was certainly a perception amongst the staff participants that the lecturers felt the need to 'sell' the concept of formative assessments to the students (as discussed previously by linking it to summative grades). This suggested that they had difficulties in constructing rationales that they considered to be genuinely *meaningful.* There was not however any indication that their approaches were 'demanding', 'domineering' or 'controlling', or that the lecturers were overly critical or lacking in understanding or support for their students.

Whilst SDT offers a useful framework here for considering how extrinsic forms of regulation impact on the learning and teaching behaviours of students and lecturers, and the potential consequences of these; the theory does not have capacity to consider the wider structural forces that determine the extent to which learning environments become supportive or controlling. The Theory of Practice Architectures can go some way towards explaining how external factors influence the practice of formative assessment (Kemmis and Grootenboer, 2008)

The Theory of Practice Architectures (Kemmis and Grootenboer, 2008) offers a useful way of understanding the issues discussed in the previous section, through interrogation of the social-political and cultural-discursive arrangements of formative

assessment practice within the fieldwork site. Implementation of the formative assessment policy is an example of how social-political arrangements formed through the university's power structures, have constrained the practice of formative assessment through enforcement of a rigid mandate. The failure of formative assessment to realise the benefits of improving summative assessment grades, as professed by management, led to lecturing staff relating quite negatively to the practice and subsequently expressing resentment towards the managerial power structures that had imposed the policy.

The theoretical concept of ecologies of practice also offers scope to consider how the wider arena of higher education has influenced the practice of formative assessment within the specific institution. Ecologies of practice refer to how practices are not only shaped by the knowledge and actions of their participants but also by external conditions. Conditions and arrangements beyond the practice site itself can enable and constrain what goes on within it (Kemmis *et al.*, 2012b). In this case, the practice of formative assessment within the occupational therapy department is influenced by the leadership of the university which in turn is influenced by broader forces such as the rise of a neoliberalist regime and the subsequent marketisation of higher education.

As a result of privatisation and the reduction of state funding, universities have been forced to increasingly adopt corporate business models to secure custom in the form of student recruitment and retention (O'Donovan, 2017). The consequent growth of consumerism has intensified competition between universities which largely centres around ranking systems and league tables based on complex performance metrics (Croucher and Lacy, 2022; Zhang, 2024). New governing techniques such as performance targets and audits are based on 'New Public Management logic' (Raaper and Olssen, 2016, p.151) that emphasises performativity over intellectual enquiry and debate. Under neoliberalism, power has shifted away from academics to external managers and policy elites who have more of a say in higher education (Raaper and Olssen, 2016) Despite debates about their reliability and validity, the use of student satisfaction surveys are an example of a strategy that is used to market institutions as an indication of their quality of service provision (Gibbs, 2010; Bedggood and Donovan, 2012). In the United Kingdom, the National Student Survey is a powerful influence, with Gibbs claiming that institutional behaviours and processes are being

driven by its data to ‘an unprecedented extent’ (Gibbs, 2010, p.14). Assessment and feedback are reported to be continued sources of dissatisfaction within National Student Survey outcomes (Deeley *et al.*, 2019; Tomas and Jessop, 2019) and the institution in the fieldwork study is no exception.

Such a focus on summative assessment is the result of a pervasive educational culture that is based on measurement of performance standards and attainment (Garvey, Hodgson and Tighe, 2022; Maclellan, 2001; Yorke, 2003; Jessop, McNab and Gubby, 2012). Principles relating to this are passed down from policy makers to institutions, and from institutions to lecturers and students. It is hardly surprising therefore that students place so much prominence on the achievement of good grades which can then impact on their levels of satisfaction with the course and ultimately influence institutional reputation (Adachi, Tai and Dawson, 2018; Asghar, 2012; Chen, Zhang and Li, 2021; Deeley *et al.*, 2019; DeLuca and Volante, 2016; McGrath, Scott and Logue, 2020; Tomas and Jessop, 2019; Maclellan, 2001; Jessop, El Hakim and Gibbs, 2014; Taras and Davies, 2017). The belief that the implementation of formative assessment could improve summative grades therefore suggests that it is used as a stratagem to enhance student satisfaction and institutional ratings. Torrance (2012) emphasises this point in expressing his disillusionment that the practice of formative assessment is limited in scope and does not use the full range of possible approaches that are associated with it. He contends that formative assessment has become a normative exercise based on making course objectives and assessment criteria more explicit, to the disappointment of those who are interested in facilitating development in learning. The predominance of positive comments received in relation to the marking sample assignments activity in the fieldwork data certainly supports this point.

This highlights the neoliberalist perspective that university education has been reduced to serve an economic utility function. The notion of students as ‘consumers’ and ‘customers’ has transformed the purpose of education from an intrinsic ‘use’ value to an instrumental ‘exchange’ value in which they learn what they need to do in order secure a good job (Zhang, 2024). Employability is the primary concern where students are viewed as private investors pursuing a university degree for a financial return in the form of increased employability skills (Naidoo and Williams, 2015). The use of business management practices minimise the traditional role of the university and its wider educational values. The more customary pursuits of higher education such as

knowledge creation, intellectual engagement or the development of critical thinking skills are of little significance in a neoliberalist, corporate world where impact is measured in economic terms such as productivity and efficiency (Taylor, 2017).

Certainly, the findings of the fieldwork study indicated that student participants placed considerable emphasis on the receiving good grades. The staff participants also highlighted that the students were to a large extent 'assessment focused'. This illustrates an example therefore of how the practice of the institution is influenced by broader practices within the higher education sector, such as those described above. Staff participants in the fieldwork study believed that the rigid formative assessment policy was introduced with the assumption that it would enhance grades and that this would equate to increased student satisfaction. This presents an example of how the social-political arrangements of the institution constrained the practice of the lecturers through the medium of power (Mahon *et al.*, 2017).

The issue of 'power' in relation to the implementation of policy directives can be explained in relation to the rise of neoliberalism. The expansion of corporate business models within universities as a result of neoliberalism, has created autocratic and hierarchical management structures where decisions made at higher levels are dictated downwards. Management structures such as these do not recognise any need to confer with employees about business operations. Workers have no rights to engage in discussions around the conduct of the business nor to question or change management decisions. The traditional university structure characterised by representative collaboration between faculty and administration would be considered a hindrance to such top-down management approaches (Taylor, 2017). Power has therefore shifted away from academics to executives, managers and administrators, many of whom have never been academics and have been drawn from the business community (Raaper and Olssen, 2016).

Raaper and Olssen (2016) discuss how pressure on universities to vie for business in an increasingly competitive market is driving more disciplinary power and aggressive management styles characterised by 'heavy handed directives' (p.152) as they strive to improve their league table rankings. The consequence of this is that educational policies and processes relating to learning, teaching and especially assessment, are increasingly shaped and regulated via centrally prescribed institutional strategies with

which academics having no democratic involvement. Assessment regulations in neoliberal universities therefore will prioritise performative and economic discourses at the expense of authentic pedagogical expertise (Ball, 2000; Clegg and Smith, 2010; Raaper, 2016). Raaper and Olssen (2016) go on to argue that neoliberalism has led to 'a slow, deliberate and ongoing deprofessionalisation of academics' (p.154) which leaves them at the mercy of management dictates. Furthermore, they refer to the reshaping of academics as 'hounded and pressurised subjects' (p.157) who are forced to comply with objectives imposed by the institution. Complex and diffused power relations characterised by increasingly regulated systems within the neoliberal university context, result in a process of control and 'subjectification' of academic staff (Raaper, 2016, p.183). These sentiments resonate somewhat with those expressed by the lecturers in the fieldwork findings of this study.

In her study of how academics negotiate assessment policy within a neoliberal higher education context, Raaper (2016) found little evidence of overt resistance to management strategies being used. Whilst her participants were unhappy about the ways that they were controlled by regulations, she describes how they accepted and adapted to the management initiatives. Referring to a process of 'inculcation' (p.83) she goes on to explain how academics tend to adopt neoliberal discourses and ways of thinking so that these come to be beneficial to them. In some instances however, Raaper describes how academics can be seen to be 'manoeuvring within the regulatory context' and 'flexing the rules' to protect themselves as academic subject (p.185). Similarly, Raaper and Olssen (2016, p.159) discuss strategies of 'mutual accommodation' and 'connivance between colleagues' as safer ways of coping with administrative regimes, that might not be considered as active resistance or refusal to comply. Such strategies were evident in the fieldwork findings of this study for example when Moira spoke about integrating formative assessments throughout the module and where a number of staff participants spoke of changing the terminology from 'assessment' to 'activities' or 'tasks'. As with Raaper's (2016) findings, there was no evidence of staff participants overtly refusing to implement the policy in this study.

Also relating to the relationship between summative and formative assessment, is the idea that the cultural-discursive arrangements of the practice site provide an explanation of how the institution in the fieldwork study has created a discourse that is centred around a direct relationship between formative assessment and summative

grades. Such a discourse then determines conversations that lecturers have with their students and consequently, how students think about formative assessment. It was apparent that the introduction of formative assessment had been 'sold' by the university management to lecturers on the basis that it would improve grades and reduce failure rates (thereby reducing the workload in terms of reassessment support and additional marking). This message had subsequently been passed on from lecturers to students as a means of securing their engagement in the process. This illustrates how the cultural-discursive conditions place limits on what is said about the purpose and functions of formative assessment within the specific context of the programme, which then impacts on attitudes towards it, particularly when the espoused benefits were not considered to be borne out in reality. As part of the practice architecture, these cultural-discursive arrangements prefigure the idea that formative assessment is solely a tool for enhancing summative performance and hold this conception in place.

7.3 The burden of formative assessment

The notion that engagement in formative assessment would lead to improvement in summative grades was problematic for the institution in the fieldwork study. When this proposition did not come to fruition, formative assessment had come to be viewed by lecturers as a futile exercise that just created extra work on top of their already busy schedules. It was reported to place additional demands on the workloads of lecturers, first, in terms of having to design and plan these tasks, but probably more so in terms of the increased marking load. Having to do this in every module was reported by lecturer participants to be particularly burdensome. Heavy workloads, time pressures and structural issues were also prevalent in the literature review (Crook, Gross and Dymott, 2006; McLean, 2018; Yorke, 2003) as being factors that impact on the implementation of, and engagement in formative assessment for staff and students respectively.

This illustrates how the material-economic arrangements (Kemmis *et al.*, 2013) constrain the practice of formative assessment through insufficient funding and the consequent impact on staffing resources. Autonomy and competence supportive practices which regard students as individuals, acknowledge their feelings and

preferences, engage with them reflectively to direct their learning, help them to make sense of feedback and develop strategies to deal with it constructively are considered to be necessary for successful educational outcomes according to SDT (Black and Deci, 2000). Such practices are however considered to be time consuming and therefore challenging to achieve in the face of large student cohorts heavy workloads and time pressures (Asghar, 2012; Al-Wassia *et al.*, 2015; Chen, Zhang and Li, 2021; Deeley *et al.*, 2019; Goos, Gannaway and Hughes, 2011; Hernandez, 2012; Khajeloo *et al.*, 2021; McCallum and Milner, 2021; Price, Handley and Millar, 2011; Xu and Harfitt, 2019).

The staff participants in the fieldwork study were aware that students had a preference for personalised formative feedback. Despite this, they were all too aware of the difficulties of balancing their workloads whilst managing the expectations of students. They explained that they had initially attempted to implement formative assessment activities which involved the provision of written individual feedback. This had however quickly proven to be unsustainable in terms of the amount of time that it consumed. A preference for individualised feedback on drafts and the difficulties of sustaining this was also strongly identified in the literature review findings (Asghar, 2012; Al-Wassia *et al.*, 2015; Chen, Zhang and Li, 2021; Deeley *et al.*, 2019; Goos, Gannaway and Hughes, 2011; Hernandez, 2012; Khajeloo *et al.*, 2021; McCallum and Milner, 2021; Price, Handley and Millar, 2011; Xu and Harfitt, 2019). Similar to the field study findings, Khajeloo *et al.* (2021) found that not having time to provide individualised feedback was an ongoing source of frustration for academic staff who had to provide formative feedback on the basis of what the majority of students struggled with. This relates to a point nicely summed up by Shepherd (2009), that labelling an activity as formative assessment does not necessarily make it so, and the idea that it is how the instrument is used that is important rather than simply use of an instrument itself.

The lecturer participants in the fieldwork study expressed indignation that the formative assessment policy had been introduced in the absence of any additional resources to help with its implementation. Neither had the additional time that it consumed been accounted for in their workload management plans. Furthermore, little consideration had been given to providing lecturing staff with any protected time for professional development to enhance their knowledge and skills in applying formative assessment activities. These material-economic arrangements therefore place considerable

constraints on the practice of implementing formative assessment. Lack of staff resources and heavy workloads impacts on the capacity of staff to facilitate practices that support autonomy, competence and relatedness. This does not necessarily mean that they were using thwarting practices. It was clear from the literature review and the fieldwork findings that there was a willingness and enthusiasm amongst lecturers to implement formative assessment tasks that would support students' broader learning and development; however this was accompanied by frustration that they did not have sufficient time to be able to effectively fulfil this.

These findings resonate with Raaper and Olssen's (2016), assertion that one of the biggest implications of neoliberalism concerns the emotional consequences for academic staff surrounding job satisfaction, morale, personal stress, the ability to deal with increasing workloads and to manage unrealistic expectations. Raaper and Olssen go on to discuss how neoliberalism "engineers low trust environments" (p.158). In terms of material-economic arrangements, the labour costs of academic staff are the largest expense for most universities. In an enterprise model, labour is commodified, and its costs need to be carefully controlled by administrators whose main priority is to expand the commercial interests of the organisation (Taylor, 2017).

As well as being burdensome for lecturers, formative assessment was also identified in the literature review to increase the perceived workload of students. This was attributed particularly to the concept of modularisation in higher education which often results in multiple simultaneous assessment deadlines. High volumes of summative work mean that students often feel that they have little time to engage in formative assessment. Furthermore modularisation means that students do not see the utility of feedback from one module to another and place emphasis on short term gains of each module (Jessop, McNab and Gubby, 2012; Jessop, El Hakim and Gibbs, 2014; Harland *et al.*, 2015).

7.4 Formative assessment literacy

Lecturer participants in the fieldwork study also identified that there had been little opportunity to explore what formative assessment actually was or how it should be implemented. This is well supported by the literature which revealed widespread lack

of understanding amongst academic staff with regard to the theoretical aspects of formative assessment (Taras and Davies, 2013; Asghar, 2012; Chen, Zhang and Li, 2021; Sabah and Du, 2018; McLean, 2018; Al-Wassia *et al.*, 2015; Hanefar, Anny and Rahman, 2022; Taras and Davies, 2017). A lack of formative assessment literacy therefore means that its potential benefits as a learning strategy are unlikely to be fulfilled. Furthermore, a lack of understanding is likely to reduce lecturers' commitment to using it in their teaching.

These difficulties are related to the doings of the practice which to a great extent are constrained by the material-economic arrangements since opportunities for training and professional development are resource dependent (Kemmis *et al.*, 2013). Findings from both the field study and the literature review revealed a lack of opportunities for training and practical workshops as well as a lack of time for professional development activities in relation to formative assessment (DeLuca and Volante, 2016; Khajeloo *et al.*, 2021; Sharma *et al.*, 2015; Taras and Davies, 2017; Chen, Zhang and Li, 2021; van Schalkwyk, 2010). Lecturer participants in the fieldwork study expressed that when training was eventually provided following their requests, that they did not find it to be particularly helpful and that they were advised to use peer review activities which they found to be problematic. The literature review also found that training opportunities in relation to formative assessment were not always necessarily helpful due to inconsistencies amongst staff developers' understandings (Davies and Taras, 2018). Taras and Davies (2017) discuss how differing interpretations and individual differences in understanding are therefore passed on from educational developers to academic staff and then to students, as was evident in the fieldwork study in terms of the link between formative assessment and summative grades. In relation to ecologies of practice (Kemmis *et al.*, 2012b), this illustrates how the cultural-discursive arrangements of the practice of a department of an institution, such as academic development teams, can influence the sayings, thinkings and doings of how the practice of formative assessment is carried out in disciplinary departments. A lack of clear discourses regarding the purpose and functions of formative assessment therefore, leads to ineffective implementation driven by anecdotal beliefs and personal choice rather than empirical research regarding best practice (Asghar, 2012).

Assessment and feedback literacy was also identified in the literature review as being an issue for students (Deeley *et al.*, 2019; Winstone *et al.*, 2017; Noble *et al.*, 2019; Price *et al.*, 2010; Price, Handley and Millar, 2011; Carless and Boud, 2018; O'Donovan, 2017; Hernandez, 2012; Skinner, 2014).

7.5 The issue of peer review

As stated previously, staff participants in the fieldwork study explained how peer review had been recommended by academic developers as a useful type of formative assessment activity to implement into their modules. A perception that peer review activities were less demanding on staff time had largely driven the use of such a strategy in order to fulfil their obligations to implement formative assessment whilst trying to balance this with their workload pressures. Similarly, some of the studies in the literature review reported use of peer review activities as a form of formative assessment (Adachi, Tai and Dawson, 2018; Liu and Carless, 2006; Rawlusyk, 2018).

Findings from both the literature review and the fieldwork study reported challenges in relation to the use of peer review activities as a method of formative assessment. In each set of findings, both lecturer and student participants reported that students do not have the skills to use assessment criteria or to evaluate the quality of someone's work and consequently that students do not value peer feedback as they do not perceive their classmates to be qualified to provide it. This leads to them participating in peer review tasks at rather a superficial level as they look to their lecturers for what they consider to be more authoritative feedback. It was also noted that students lack confidence and competence in providing feedback, and furthermore that they are reluctant to be honest at times due to fear of offending or upsetting their peers or friends. There was very much a sense amongst lecturers and students from both the literature review and the fieldwork, that peer review was not effective as a formative assessment strategy.

This demonstrates how the social-political arrangements constrain the practice of formative assessment within the university setting. The social-political conditions are composed of resources that demonstrate how people in the practice site relate to each other in terms of roles and power relations for example (Kemmis *et al.*, 2013). The

tendency for students to view lecturers as authority figures and the power relations that ensue from the process of judging and grading students' work constrains the way that students relate to each other in terms of giving and receiving feedback. Ultimately, this occurs as a consequence of the emphasis on an educational culture that is based on the measurement of performance standards. Additionally, this also illustrates an interrelationship between the social-political arrangements and cultural-discursive arrangements. The lack of value placed on peer feedback by students is because they see formative assessment as being essentially related to their summative grades. It is hardly surprising therefore that they struggle to see the usefulness of peer feedback in this context and that they seek feedback from lecturers who are responsible for marking their work. A discourse that links formative assessment with summative grades therefore influences the relatings between students and lecturers in terms of power positions and between students as peers. Consequently, the cultural-discursive arrangements of discourse impact on the social-political arrangements of power and roles as they combine to become constraining forces in the practice.

The lack of value that students have for peer review activities, along with an emphasis on summative grades, can to some extent be explained by the notion of 'passive consumerism'. Naidoo and Williams (2015) explain this as an assumption on the part of students that they will gain qualifications in return for a specified level of work and payment of a fee. They go on to explain how bureaucratic tools such as student charters are responsible for the growth of passive consumerism. The commodification of higher education has led to government policy making it mandatory for universities to develop charters. Such charters can be defined as written statements of mutual expectations. Students are provided with information about the level of service they can expect to receive as well as the expectations for them to behave in a particular way. Naidoo and Williams (2015) criticise charters for suggesting that students can expect a guaranteed outcome in return for particular behaviours. Learning therefore becomes reduced to behavioural acts such as classroom attendance and meeting deadlines rather than commitment and effort. Students who internalise such a consumer identity are less likely to accept responsibility for their own learning (Naidoo and Williams, 2015).

Furthermore, Naidoo and Williams (2015) discuss how the use of charters erodes the relationship of trust between lecturers and students by suggesting that they have conflicting interests which require external regulation as discussed previously. Constraints placed on the practice of formative assessment through these cultural-discursive and the social-political arrangements obstruct the creation of a learning environment that can effectively support the relatedness needs of its students. If students do not value their peers, and their relationships with lecturers are based on concepts of power and authority, this will surely impact on their ability to establish relationships that are based on trust, mutual value, respect and care; to have a sense of belonging and connectedness; and to feel that they have a significance to the organisation in which they can make a meaningful contribution to others. According to SDT, conditions that inhibit these relatedness needs can reduce motivation and ultimately impact on wellness (Ryan and Deci, 2017; Ryan and Deci, 2020).

There was some acknowledgement amongst lecturer participants in the fieldwork study that students were not adequately prepared for engaging in peer review activities. They recognised that evaluating the quality of someone's work and giving feedback were very specific skills that were not explicitly taught on the course and consequently appeared to be accepting responsibility for its lack of effectiveness as a formative assessment strategy. Whilst they talked about the potential usefulness of providing some support with this, their workloads had prevented them from having the time to do so. Lecturer participants in the literature review also reported that training students to judge quality and use assessment criteria was time consuming. Furthermore, the concept of modularisation prevented a co-ordinated approach to this. In the fieldwork findings however, lecturers identified that building these competencies in from the very beginning of the course could be a useful strategy beginning with self-assessment before moving on to peer assessment. Additionally, positive feedback from student participants in relation to marking the sample assignments from previous cohorts, suggests that such a task could be a useful precursor to peer review as it removes the risk of upsetting or offending people. Lecturer participants also discussed the need to provide students with support in terms of giving and receiving feedback.

The suggestions above from lecturer participants may potentially be instrumental in the development of a learning environment that could help to fulfil the autonomy, competence and relatedness needs of students. Facilitating them to be able to reflect

on and evaluate their own work provides the conditions to direct their own learning and thereby increase their perceptions of autonomy; incremental tasks that help them to make sense of feedback and develop strategies to deal with it constructively builds a sense of mastery and a perception of competence; supporting them to establish relationships based on trust and mutual value encourages a sense of relatedness (Ryan and Deci, 2017). Furthermore, occupational therapy students need to be encouraged to recognise the provisional nature of knowledge and to see their own role in the construction of this, rather than looking to their lecturers for conclusive feedback providing dualistic answers about what is right or wrong. Establishing conditions for a supportive learning environment could impact on the social-political relationships in the practice setting in a way that enables its relatings between students and lecturers and students relatings with each other, rather than constraining these.

7.6 Integration of formative assessment

The idea that formative assessment could be implemented in more of a structured way across the whole of the programme also relates the point that lecturer participants in the fieldwork study made about formative assessment being "a thing" and just "something that has to be done". This idea seemed to lead to quite negative perceptions of it as a burdensome requirement that they did not see the value in. It also suggests that the lecturers had little autonomy with regard to how they implemented it and as discussed previously, lecturers who experience more autonomy controlling conditions in their work are more likely to be more controlling and demanding in their teaching (Pelletier and Sharp, 2009; Vermote *et al.*, 2020). The requirement that "a" formative assessment had to be documented in every module is at odds with the theoretical notion that formative assessment should be continuous and integrated into teaching activities (Barnard and Mostert, 2015; Elshami and Abdalla, 2017). This is another example of how the social-political arrangements of the practice site (in terms of the formative assessment policy) constrained the "doings" of the lecturers and consequently of the students. Some lecturers discussed how they did integrate formative tasks throughout their modules (whilst still complying with the policy by completing the required documentation). Student participants discussed how building the tasks into the module teaching sessions was effective as they seemed to

be a routine part of the learning process. In this sense they did not perceive the tasks to be extra work but just as general classroom activities that formed part of their everyday learning and teaching regime. This therefore has the potential to reduce external and introjected regulation and to enhance autonomous learning.

Furthermore, the integration of formative tasks into routine module teaching reduces the emphasis on them being 'assessments'. The meaning that students ascribed to the term 'assessment' in the fieldwork findings was found to provoke feelings of stress and anxiety. The lecturer participants had also observed this impact and reported having issues with the use of the term because of that. Whilst adhering to the policy of writing a formative assessment into the module documentation, some of the staff participants had compensated for this by referring to them as 'tasks' during more informal interactions with students. Again, this demonstrates how the language and discourse used within the setting can constrain the practice. The simple act of changing a term from 'assessment' to 'task' was reported by students to change the emphasis from one that holds negative connotations and therefore enable a more supportive learning practice. One of the student participants questioned why it even had to be given a label as they saw the activities as being a general part of learning and teaching, and not really akin to assessment at all.

7.7 Implications

The complex relationship that has been created between formative assessment and summative grading outcomes is a pervasive thread that provokes many of the challenges to engaging students in the practice. Many of the themes that are discussed in this chapter ultimately come back to the issue that students, lecturers, university management, and the wider higher education community as a whole value summative assessment performance at the expense of wider learning. It would be extremely naïve to suggest that a single practice setting can do anything to influence such an entrenched societal position. By constantly emphasising a link between formative assessment and summative grades however, the institution in this study is complicit in perpetuating this idea.

All three of the arrangements which make up the Theory of Practice Architectures are relevant as constraining factors within the practice context. Social-political arrangements explain the way that the directive around formative assessment had been imposed. This had clearly triggered dissatisfaction amongst the lecturers due to the lack of consideration regarding the impact that it was having on their workloads along with limited support to implement it. The lecturers indicated resentment towards the university management groups and it was apparent that they felt powerless in their situation.

This highlights Trowler's (2020) point about how institutions fail to consider the implications of their decisions on the experiences at ground level such as a perception of increased workloads, contradictory role expectations and confused priorities. This was evident for both lecturers and students in this study. In relation to change management strategies, Trowler (p.115) criticises 'general platitudes' that are suggested such as communicating well or encouraging people to be open to new ideas. Instead he describes a number of underlying preconditions that are necessary to successfully achieve and sustain innovation. These include adequate resources maintained over a period of time, adequate inductions to the new approach and a satisfactory 'causal theory' to underly the reform (p.122). Such preconditions were clearly missing from how the policy was implemented in these fieldwork findings. It seems that no attempt was made to increase resources in terms of staffing or addressing workloads, minimal training was provided to introduce the new approach, and the hypothesis or 'causal theory' that summative grades would improve, was not borne out in reality. Trowler explains that the frequent absence of such features in higher education prevents innovations from achieving the aspirations which drive them.

Trowler (2020) goes on to criticise authoritative top down management tools that would be more appropriate to 'train dogs' (p.125) and arguing that they fail to acknowledge the perceptions, values and motivations of those at ground level. He also considers the naivety of 'rational-purposive' (p.127) management strategies that assume that attitudes and behaviours can easily be changed by demonstrating the obvious value of a project whilst failing to appreciate the challenges and obstacles that change can present. Essentially such tools and strategies lack an appreciation of the power and resilience of historically entrenched social practices that are resistant to

change. Poorly designed change initiatives are more likely to prompt superficial or reluctant compliance without any sense of ownership.

This appeared to be the case in this study. Whilst lecturers in the fieldwork did comply with the policy directive, it appeared that over time they had come to view it just as something that they had to do and expressed little value for it, particularly since they had noticed little impact on failure rates and summative marks as had been implied. This implication became part of the cultural-discursive arrangements that dictated the discourse within the practice setting and was reinforced as it was passed on from lecturers to students. Lecturers discussed strategic ways in which they had implemented formative assessment so that they could demonstrate their compliance whilst minimising the impact on their workloads. Mostly this comprised the use of peer review activities as previously discussed. This demonstrates the interrelationship between social-political arrangements and material-economic arrangements as constraining factors.

Social political arrangements in this study also influence how each party perceives their role. Students very much saw the responsibility of assessment and feedback as being that of the lecturers whilst the lecturers felt that the students should take more accountability. According to the literature, formative assessment ought to be a shared responsibility between staff and students with feedback being used by both parties to improve teaching strategies (for staff) and learning strategies (for students). The lecturers acknowledged that they did not adjust their teaching as a result of formative assessment outcomes as they very much saw it as the students' responsibility to respond to the feedback.

Another example of how cultural-discursive arrangements influence the practice is regarding use of the term 'assessment'. Both lecturer and student participants expressed concern regarding use of the word 'assessment'. Lecturers acknowledged how it immediately provoked a sense of anxiety and tension in students with some conceding that they had stopped using the term 'assessment' in favour of formative 'tasks' or 'activities'. Similarly, student participants discussed the negative connotations associated with the word 'assessment' and felt that it provoked stress and panic. This issue of language and terminology illustrates an example of how the

cultural-discursive arrangements composed of the language used interrelate with the material-economic arrangements to influence the doings of the practice.

In this study, the Theory of Practice Architectures (Kemmis and Grootenboer, 2008) has provided a framework for exploring how and why universities, departments, programme teams and individual lecturers are coerced into creating autonomy controlling environments which then leads to autonomy controlled students (Ryan and Deci, 2017). It is important to remember however, that whilst the arrangements of the practice can influence how supportive or controlling the learning environments are, the people involved in the practice are responsible for maintaining and changing that practice. As previously stated in chapter 2, the mediating role between practice and practice architectures is mutual. Whilst practices are *mediated by* practice architectures, practices can also *mediate* practice architectures.

Much of the discussion has focused on the arrangements of the practice as constraining factors, however it should also be recognised that these arrangements can be changed. It could be argued that although the institutional formative assessment policy of the fieldwork site does stipulate about a formative assessment in each module, it does not dictate that lecturers explicitly link the two when discussing this with the students. This seems to be a convention that has emerged as a result of the cultural-discursive arrangements of the setting and has subsequently restricted the practice. There is a need to untie formative assessment from summative grades in order to create more supportive learning environments that do not rely on extrinsic forms of regulation.

It should not be ignored however that the findings from the fieldwork study do suggest that performing well in the summative assessment is a strong motivator for student engagement in formative work. Whilst this should not be dismissed, the literature review findings suggest that assessment and feedback literacy in students is a barrier to performance in summative work. The implication that engaging in formative assessments will enhance their grades in every module could be setting up unrealistic expectations and consequently could have the reverse effect of diminishing motivation to engage. If the purpose of formative assessment is to enhance learning in a broader sense, it needs to be viewed as more of a long term developmental strategy that requires a programmatic approach rather than a modular one. Improvement of grades

would hopefully be an ultimate longer term outcome but articulating a direct link between them should be discouraged.

A programmatic approach to the implementation of formative assessment would be helpful in achieving this longer term outcome of broader learning achievements and in assisting students to develop assessment and feedback literacy. Incremental training for students in receiving and providing feedback over the duration of the programme would enhance their understanding and provide autonomy and competence supportive environments. Enhancing their skills to engage effectively in peer review activities would also create more relatedness supportive conditions. A shift in emphasis to a discourse centred on formative assessment as empowering learners, may increase the perception that peer review activities might be an appropriate choice in determining a successful outcome. A structured approach involving the whole course team would enable lecturers to help students to see connections in learning between modules rather than viewing each module as a separate entity which has no relevance to future development. Commentary on summative assessment from one module can therefore be viewed as formative feedback for the next. Greater continuity and less fragmentation of programmes may also enhance the relational dimension between students and lecturers.

Disguising formative tasks as continuous elements of standard learning strategies within routine module teaching sessions would reduce the perceived workload and pressure for students. Furthermore, replacement of the word ‘assessment’ with less provocative terms such as ‘activity’ or ‘task’ could reduce the stress and anxiety that is experienced by students. Additionally, this could increase students’ inclination to engage since they view assessment as something that should be carried out by staff.

7.8 Chapter summary

This chapter has integrated findings from the field study and the literature review, drawing on Self-Determination Theory and the Theory of Practice Architectures and integrating discourses of neoliberalism, marketisation and consumerism. The chapter has focused mainly on the complexity of the relationship between formative and summative assessment and has also considered the burden of formative assessment, issues around formative assessment literacy, difficulties relating to peer review and

the integration of formative assessment. The chapter concludes with a discussion of the implications of the study's findings.

Chapter 8: Analysis and Exploration Outputs

8.1 Chapter introduction

This chapter provides an overview of the outputs of the analysis and exploration phase of this study. It begins with a revised problem statement which is a more detailed version of that which was developed in the initial orientation stage and is based on the findings from the literature review and the fieldwork data. The revised problem statement also encompasses empirical explanations as to the causes of the problem. This is followed by three long range goals which specify the overall aims of the intervention that will inform the design and construction phase. Next is a table to illustrate the freedoms, opportunities and constraints that are present in the practice site where the fieldwork data were collected. Finally, there is a table which presents the partial design requirements and the initial design propositions. These represent the operational criteria and central principles that will determine the design of the intervention in the next phase of the project.

8.2 Revised problem statement

Both lecturers and students perceive that the purpose of formative assessment is to enhance summative assessment grades. Both groups perceive formative assessment to be burdensome in terms of their time and workload. For students it creates feelings of tension, stress and anxiety. Staff have negative conceptions regarding its effectiveness and therefore are not committed to its implementation. The potential benefits of formative assessment as reported in empirical literature are not being realised in the practice setting.

Explanations include:

- Lecturers and students have limited understanding regarding the functions and potential benefits of formative assessment.
- University management emphasise student satisfaction as the main indicator of teaching quality.

- The university has a rigid policy regarding the implementation of formative assessment.
- Heavy workloads limit the amount of time that lecturers have to spend on implementing formative assessment.
- There are limited professional development opportunities and a lack of support for lecturers to enhance their knowledge of formative assessment.
- A focus on individual modules has limited scope for a more cohesive formative assessment strategy across the whole duration of the programme.
- The term ‘assessment’ has stressful connotations for students.
- Marketisation of higher education – students are focused on value for money. They expect feedback from lecturers and do not value the opinions of their peers.
- Students have a dualistic and absolutist notion of knowledge, as opposed to an appreciation of its complexity and provisional nature.
- There is a societal emphasis on summative assessment and grading.

8.3 Long range goals

1. To enhance lecturers’ and students’ understanding of the purpose of formative assessment.
2. To develop a programmatic approach to the implementation of formative assessment.
3. To increase students’ assessment and feedback literacy.

8.4 Partial design requirements and initial design propositions

Table 8.1 below illustrates the freedoms, opportunities and constraints which have been used to help to formulate the initial design propositions.

Table 8.2 illustrates the partial design requirements and initial design propositions.

Freedoms, Opportunities and Constraints

Freedoms	Opportunities	Constraints
Lecturers have a high degree of autonomy relating to their own use of pedagogical strategies.	Students are motivated to engage in activities that will facilitate their learning achievements.	Rigid policy framework stipulates that a formal formative assessment must be written into the official documentation of each module.
	Lecturers are motivated to support students to enhance their wider learning.	Students prioritise summative assessment grades as measure of learning achievement.
	There is a positive relationship between lecturers and students on the course. Students value the views of the lecturers.	Marketisation of higher education influences student expectations to achieve high grades.
	Lecturers agree on the main issues in relation to the implementation of, and student engagement in formative assessment and are keen to address these.	Institutional management emphasises student satisfaction as priority.
	Lecturers have good working relationships with each other and work effectively together as a programme team.	Lack of time for lecturers to engage in professional development activities regarding empirical research around formative assessment.
	The implementation of formative assessment is a high priority for the institution.	Limited institutional training opportunities relating to effective formative assessment strategies.

Table 8.1: Freedoms, opportunities and constraints

Partial Design Requirements and Initial Design Propositions

Requirement	Proposition
Formative assessment should be implemented using a programmatic approach.	Formative assessment tasks should be introduced across the programme in a logical and systematic manner. Students should be supported to develop assessment literacy in a graded manner, for example, starting with self-assessment, then assessing anonymous work of previous cohorts before moving on to peer review activities. Lecturers should be aware of the assessment tasks used in other modules in the programme so that they can support students in building on their academic skills and help them to see the links across the programme.
Formative assessment should be used to support student learning in its broadest sense.	Programme teams should collaborate to ensure that all lecturers are delivering a consistent message regarding the purpose and function of formative assessment tasks. Students should be provided with meaningful rationales for the use of formative assessments. This should be based on empirical evidence regarding how it can improve their learning experience. Formative assessment tasks should not be discussed in relation to summative assessment grades.
Students should be supported in developing assessment and feedback literacy.	Specific attention should be given to: roles and responsibilities in the assessment and feedback process; engaging in dialogue about feedback;

	students' abilities to engage with and use assessment criteria and learning outcomes; students' abilities to give and receive constructive feedback effectively.
Formative tasks should be integrated continuously throughout modules.	Lecturers should take the focus away from the tasks being 'assessment' tasks and build them into general teaching activities so that they become a routine part of the learning process.
Careful consideration should be given to the terminology used.	Use of the word 'assessment' should be minimised in favour of terms such as 'task' or 'activity', as much as is permitted within the constraints of the institutional policy framework.
Formative tasks should not be framed as 'mandatory'.	Students should be encouraged to engage in formative tasks with the use of meaningful rationales that explain the potential benefits in terms of wider learning.

Table 8.2: Partial design requirements and initial design propositions

8.5 Chapter summary

This chapter has presented the revised problem statement, long range goals, partial design requirements and the initial design propositions. These four products are a result of the study's findings that have been analysed using the theoretical frameworks of Self-Determination Theory and the Theory of Practice Architectures. They form the main outputs of the analysis and exploration phase, and their purpose is to inform the next phase of design and construction which is not within the scope of this thesis.

Chapter 9: Conclusions

9.1 Chapter introduction

This chapter begins with an overview of how the study has answered the research questions. It then goes on to explain the study's main contributions to knowledge in this field. The limitations of the study are then addressed. Finally, recommendations for the next phase of the research are discussed.

9.2 Response to research questions

What are the challenges for academic staff in implementing formative assessment within the context of a university degree programme?

A number of challenges for academic staff were identified through this study. Resources was a key issue that arose in both the fieldwork findings and the literature review. Lack of time arising from heavy workload and competing priorities led staff to consider that they weren't able to adequately fulfil the expectations of institutions and students regarding formative assessment. Interestingly, in the fieldwork study, the policy directive led to the perception of formative assessment as an additional task that had to be implemented, even though several of the lecturers were already engaging students in tasks that might anyway be considered as formative. The policy therefore created the perspective of formative assessment being "a thing" that had to be administered in every module and consequently was an onerous task that created extra work.

A further challenge for lecturers that was identified from both the fieldwork and the literature review findings was around meaningfully engaging students in formative assessment tasks. In the fieldwork, it emerged fairly early on in the focus group interview that framing formative assessment as a strategy with which to improve summative grades had turned out to be very problematic. Lecturers' observations that this did not emerge to be the case quickly reduced their own motivation in implementing it. Subsequently, they noticed limited value for it from the students' perspectives, particularly in relation to peer review activities. The link between

formative assessment and summative grades led to students preferring tasks that involved tutor feedback which in turn led to difficulties for staff in managing expectations and increasing workloads as discussed above. Associated activities such as engaging in dialogical feedback and adequately preparing students for peer review were considered to be particularly time consuming. A heavy emphasis on summative grades was noted to be a reason for low motivation and lack of value for formative assessment in the literature review findings.

The issue above indicates a lack of assessment literacy around the purpose and function of formative assessment. Again, this was noted in the fieldwork and in the literature review findings. A perception of assessment being only about grading performance, and a lack of awareness of its role as a tool for wider learning leads to a lack of commitment to implementing it. Furthermore, a lack of opportunities for training and development in relation to formative assessment perpetuate inconsistencies in understanding what it is and limit possibilities for its use as an effective learning strategy.

In what ways do students undertaking a university degree programme experience barriers to engaging in formative assessment?

Similar to the issues relating to challenges for lecturers as described above, barriers for students to engaging in formative assessment were also found to arise from a lack of assessment literacy. For the fieldwork investigation, this was in part due to the passing down of the notion that engaging in formative assessment would improve summative grades. Consequently, they did not on the whole value certain tasks such as peer review and group discussions. Some students even expressed resentment at having to participate in these. Both student and staff participants discussed that students often lacked the skills and struggled with the emotional nuances involved in providing and receiving constructive feedback. Furthermore, students did not consider their peers to have sufficient knowledge, qualifications or status to adequately evaluate their work. As a result they tended to distrust and disregard peer feedback. This was also supported in the literature review. As stated above there was a perception that students were not adequately educated to carry out peer review effectively.

Findings from the literature review and from staff participants in the fieldwork investigation suggested that students did not see engagement with assessment and feedback as their responsibility which again is indicative of a lack of assessment literacy. Students often have a perception that feedback is unidirectional rather than part of an ongoing dialogue. The literature review found that students sometimes do not have the confidence to engage in discussions about their work with staff. Whilst this was not reported as a factor in the fieldwork investigation, it could offer an explanation as to why take up of the optional one to one tutorial activity was so low.

What factors enable and motivate students undertaking a university degree programme to engage in formative assessment?

Although considered to be problematic amongst lecturer participants, enhanced summative grades was found to be the most commonly reported motivator for students to engage in formative assessment tasks. The consequence of this however, was that students were only motivated to participate in tasks that they perceived could facilitate this. Individualised feedback from staff (through written comments on draft work or one to one tutorials) was highly valued by students but was not considered to be sustainable by lecturers in terms of their workloads. This particular finding however may have been influenced by students being told that the purpose of formative assessment was to increase their summative grades.

Students also reported valuing a formative assessment activity that involved reviewing samples of previous students' work and assessing these against the marking rubric. The samples provided concrete examples of what constituted a good or a failed assignment and helped students to engage with marking criteria and to understand how assignments were marked. Whilst still very assessment focused, tasks such as this could be useful in enhancing students' assessment literacy.

Despite a predominance of comments expressing a lack of regard for peer review activities in students, some did report that they felt that they benefitted from feedback from their peers and from the constructive dialogue and questioning that such exercises generated. The literature review findings noted that critiquing others' work

provided an opportunity to open up discussion and that students can benefit from the process of providing feedback as well as receiving it, thereby enhancing their assessment literacy.

9.3 What does this research contribute?

This thesis provides an original contribution to the research around formative assessment through its combined use of Self-Determination Theory and the Theory of Practice Architectures as theoretical lenses. The study has facilitated an exploration of how the broader, more pervasive structural elements of an institution, in terms of social-political, cultural-discursive and material-economic arrangements of the practice site have created controlling environments characterised by extrinsically regulated practices which have led to lower needs satisfaction in students. Furthermore, the study has considered how neoliberalism, marketisation and consumerism within higher education have impacted on the practice of formative assessment. The use of a design-based action research approach together with the two theoretical frameworks has produced some empirically and theoretically informed design propositions with which to design and construct a programme wide formative assessment strategy. A further original contribution therefore is the way in which key concepts from both Self-Determination Theory and the Theory of Practice Architectures have informed these propositions as illustrated in Chapter 8, Table 8.2 and as discussed in section 9.5 of this chapter.

9.4 Limitations of the research

This section provides a reflection on some of the methodological issues relating to my research design. It considers the impact that these issues could potentially have on the study's outcomes, and consideration of what I could have done differently.

9.4.1 Ethical issues of using own students as participants

Several factors that are worthy of critical reflection with regard to my research design revolve around the ethical implications of using my own students as study participants. Some researchers argue that it is not ethical at all to use one's own students as study participants due to the challenges of avoiding the harms that could potentially occur (Leentjens and Levenson, 2013). Michels expresses that unless there is a compelling reason, students from other programmes should be used to avoid the potentially conflicting relationship, adding that convenience in itself is not an acceptable justification (Michels, 2012). With regard to this point, I do feel that I am able to justify this, since the problem that I had identified was in relation to the course that I was teaching on. I wanted to find out what it was about the way that we were implementing formative assessment that was impacting on student engagement. Since this was design based action research, I felt that my own practical knowledge of formative assessment implementation on this particular course was important. Consequently my rationale for the selection of these participants went beyond reasons of mere convenience and accessibility.

The next issue is also an ethical one that relates to the principles of capacity and consent. Clark and McCann consider that vulnerable groups usually comprise for example, children, people with mental or physical health conditions, and those stigmatised by ethnic or cultural backgrounds. In contrast to groups traditionally described as vulnerable, university students are likely to have mental capacity, be able to comprehend the principles of autonomy and informed consent, and to be in reasonable health. Important questions to consider however are, do they have capacity to understand what is required, do they have the ability to make a judgment about its desirability and do they have the freedom and confidence to express decisions in regard to participation without fear of repercussions (Clark and McCann, 2005). Beauchamp and Childress point out that an individual might be competent to make decisions in general whilst not being competent in specific situations (Beauchamp and Childress, 2019). A person in a situation of being a student in an educational research scenario might be a relevant example of this. As autonomous adults, students are competent to make decisions about many aspects of their lives but when asked to take part in course related research, especially by their own lecturers, their ability to refuse could be impaired. Clark and McCann question whether students should actually be identified as a vulnerable group in situations such

as this. For research that is conducted by lecturers that teach on the student's programme of study, it could be argued there is an inherent power differential. The student is dependent on the lecturer for functions such as teaching, assessment grades and employment references (Ferguson, Yonge and Myrick, 2004). Ferguson, Yonge and Myrick go on to claim that individuals who are in dependent or restricted relationships with the researcher could be classed as "captive participants" (p.58) whilst Iphofen goes as far as putting them into the same category as prisoners (Iphofen, 2009). An unequal power relationship could lead to coercive measures being taken to by lecturers to persuade students to participate in their research (Clark and McCann, 2005).

In terms of my recruitment strategy for the student participants, I introduced the research to the students as a whole group during the first session of the module. After this initial introduction, invitations to participate in each of the questionnaire surveys, the focus group interview and the individual interviews were emailed out to the student group along with the participant information sheets. Strategies such as recruiting participants through a group and via written invitation are preferable as they allow people the opportunity to walk away without feeling pressured or coerced into participating. Email invitations also protect participants' privacy and avoid any potential for individuals to be peer pressured into participating (Loftin, Campanella and Gilbert, 2011).

The participant information sheets detailed that participation was voluntary and that not participating would not affect their studies in any way including the way that they were assessed on the course. Shi reports on a scenario where his research was such an inseparable component of the course that students had to 'opt out' of the study rather than 'opt in' to it (Shi, 2006). I would argue that the process of asking students to 'opt in' is more ethical than requiring them to 'opt out' since 'opting out' is more consistent with refusal to participate than not volunteering is.

Interestingly, in relation to the process of participant recruitment, Leentjens and Levenson use the analogy of medics conducting research with their own patients. They argue that whilst there are clear guidelines to protect the rights of patients, for example seeking consent via an appropriately qualified individual who is completely independent of the research, there is a lack of similar guidelines to protect the rights

of students (Leentjens and Levenson, 2013). Asking a colleague to introduce my research to the student group, to send out the information and to gain consent from participants are methods that I could have used to enhance the ethical aspects of the study.

A further risk to the ethical integrity of the study that is perhaps much more difficult to detect or mitigate against is that where the pressure to participate may be 'perceived' rather than 'actual' (Ferguson, Yonge and Myrick, 2004, p.59). The crucial issue here is the individual's perception of what *might* happen if they do not participate or on the other hand, what might happen if they *do* participate. The difficulty here is that the researcher may have little control over how people 'perceive' matters and therefore any perceived pressure on the part of the participant may be completely unintentional from the researcher. Examples of perceived consequences arising from a power conflict between lecturer/researcher and student might be that non-participation could results in lower grades, fewer learning opportunities, slower progress, or conversely, that consent to participate could lead to benefits such as higher grades or increased support. Ferguson, Yonge and Myrick (2004) discuss how obtaining consent from a person in a dependent, captive or status relationship with the researcher can appear to proceed very smoothly due to the desire of the more dependent participant to gain favour with the more powerful staff member; however this might not reflect the 'turmoil' that the participant has experienced in deciding to agree to participate (p. 63). They also contend that if a participant perceives that they may incur penalties or discrimination as a result of not participating or that they may benefit as a consequence, then consent is not freely given.

Whilst I certainly do not feel that I overtly coerced my students into participating in the study, I did not fully consider the more subtle pressures that the students may have felt to participate. Again, as stated above, use of an intermediary to obtain participant consent might have reduced any conflict that could be caused by an unequal power relationship. Bradbury-Jones and Alcock discuss how they both experienced the urgency of recruiting student participants in order to complete data collection for their doctoral programmes, much like me. They describe the tension that they experienced in relation to how far they could wield their relative power to persuade students to participate in their research. On being disappointed by initial response rates, they go on to debate the dilemma of taking a hands off approach and relying on follow up

letters versus a more direct strategy facilitated by having a captive student audience. The latter risks abuse of power whilst the former is likely to result in poor response rates (Bradbury-Jones and Alcock, 2010). Michels (2012) discusses how some level of refusal tends to make voluntariness more plausible. Whilst I cannot completely rule out any idea of perceived coercion in those who did agree to participate in this study, a response rate of 14 to 17 percent of the student group volunteering to participate in the focus group and individual interviews could reassuringly suggest that coercion was not something that was experienced by the majority. Whilst I did state on the participant information sheet that deciding not to take part would not affect their studies or the way that they were assessed on the course, I could have included more specific statements. Loftin, Campanella and Gilbert (2011) recommend unambiguous statements, for example that present and future academic relationships and grades will not be positively nor negatively impacted by the student's participation in the research. This could have been more clearly articulated in my documentation.

To sum up this interrogation of the ethical issues of using one's own students for research I have also reflected on the process of applying for and gaining institutional ethical approval. Ferguson, Yonge and Myrick (2004, p.62) claim that institutional review of research proposals provides a key safety net for researchers such as faculty who are planning to involve members of a 'captive group' as participants in their research. They go on to suggest that researchers and participants are protected by the review and that for students the review and approval is reassuring that their best interests are being considered and that potential conflicts have been identified, addressed and resolved prior to the start of the study. Mason, on the other hand takes a much more critical stance arguing that ethical codes are often written in a manner that requires only a basic minimum in ethical practice. She goes on to claim that in fact, they have a detrimental effect of encouraging researchers to concentrate on protecting their own interests in terms of litigation relating to data protection and privacy legislation, at the expense of the interests of participants (Mason, 2018).

9.4.2 Survey fatigue

As can be seen in Table 1 (Chapter 3) The response rate to the questionnaire surveys declined over the course of the data collection period. Low response rates to surveys

can be due to a number of factors including respondent burden, perceived unimportance of the survey, low interest in the research, insufficient reward and survey fatigue (Fass-Holmes, 2022). Fass-Holmes discusses how excessive use of surveys within higher education contexts has been noted to result in low participation rates due to tiredness of multiple survey invitations within a short timeframe. Whilst the reasons for non-participation in this research are not known, it is possible that requests to complete successive questionnaires in a short space of time could have resulted in survey fatigue. The low response rate could have an impact on the credibility of the findings due to lack of representativeness of the study sample.

9.4.3 Transferability

The fieldwork investigation component of the study's data collection was carried out with participants from a pre-registration programme at a single institution. This permitted an in depth exploration of a specific problem that had been identified at the university in question. The design-based action research approach emphasises investigation of a real world environment. Conducting the fieldwork study in my own practice setting was conducive in gaining an insider perspective which also helped with personal observations in the initial orientation task. The findings from the initial orientation and the fieldwork investigation tasks are supplemented with data collection from the literature review which covered a wide range of international research across a breadth of disciplines. Several similarities were noted in the challenges faced in both the fieldwork investigation and the literature review which suggests that these are not unique to this one institution or discipline alone. Although it is intended therefore that the outputs of this study will have relevance beyond this single university and programme, transferability should be cautious and should take account of contextual differences that may affect it.

9.5 Recommendations for the next phase of the research

As previously discussed, this study comprised an analysis and exploration of the issues relating to the implementation of and engagement in formative assessment with a view to informing the next EDR phase of 'design and construction'. Since the

research cycle itself is not yet complete it would be premature to make recommendations for practice. This section will therefore focus on an elaboration of the partial design requirements and initial design propositions that are presented in Table 8.2. In all, six design propositions are identified.

1. First, it should be noted that the design and construction phase will not relate to individual formative tasks. The findings of this research clearly point towards the need for a programmatic approach to formative assessment. As a learning and teaching strategy, it needs to be introduced to students in a logical and systematic manner. This will provide a means for lecturers to support students to develop an assessment literacy in a graded fashion throughout the duration of their course of study. A more systematic, programmatic approach will also enable lecturers to have an increased awareness of formative tasks that are used in modules other than those in which they teach on. This will help them to encourage students to see links across the programme and help them to build on their academic skills, rather than viewing each module as a separate unit that does not bear any relevance to the previous one, the next one or those that occur simultaneously. Whilst there was very much a sense from the lecturer participants that they would be committed to such an approach, the potential barriers created in terms of limited time and heavy workloads (material-economic arrangements) will need to be taken into account.

2. The second design proposition relates to how the concept of formative assessment is introduced to students. Again, as with the first proposition, this calls for a whole team approach to ensure that the message regarding the purpose and function of formative assessment is clear and consistently communicated. Most importantly of all, formative assessment should be completely disassociated from its current mantra as a strategy which can enhance summative grades. The most prominent outcome from this study's findings is that this was a message that was passed down from management to lecturers and then from lecturers to students. The ensuing disenchantment when this turned out to be ineffective was a continual source of frustration which clearly impacted on attitudes towards it. The design and construction phase will focus on developing some meaningful rationales for the use of formative

assessment as both a teaching and learning strategy. These will be based on empirical evidence relating to how it can improve students' learning experiences.

3. The third proposition is about students being supported to develop their assessment and feedback literacy. As discussed in the first proposition, a programmatic approach to formative assessment will help to facilitate this through a graded series of relevant tasks over the duration of the course. In terms of specific content, the findings of this study indicate several aspects that will be beneficial for the next phase:
    a. Discussion with students about their own roles and responsibilities in the assessment and feedback process, and about the ambiguous nature of knowledge as opposed to dualistic notions of 'right and wrong'.
    b. Need for more assertive attempts to engage students in dialogue about their academic performance and feedback to overcome passivity – potentially through the personal tutoring system to develop emotional readiness and trust.
    c. Lecturers to be more explicit about when feedback is being provided.
    d. Develop students' abilities to engage with and use assessment criteria; understanding academic terminology around learning outcomes; and read, interpret and use written feedback. Student participants reported finding marking exemplars with rubrics useful for this.
    e. Discussion regarding the emotional aspects involved in receiving feedback and constructive criticism.
    f. Training in how to provide constructive and empathic feedback.

    These strategies to increase students' assessment and feedback literacy could do much to enhance students' perceptions of autonomy, competence and relatedness.

4. The fourth and fifth propositions are interconnected and will therefore be considered together here. First, as recommended by theoretical perspectives relating to implementation, formative assessment tasks should be integrated continuously throughout modules as opposed to being a 'one off' event. The findings from student participants suggest that building formative tasks into

general teaching activities of a module made them seem like just a routine and natural part of the learning process rather than a specific hurdle that had to be fulfilled. Consequently, this overcomes the idea of formative assessment tasks being considered as extra work, for both students and lecturers. Furthermore, integration of formative tasks into modules can take the emphasis away from them being 'assessments'. This leads on to the fifth proposition which is to minimise the word 'assessment' and replace with terms such as 'task' or ''activity'. Both student and staff participants referred to the feelings of tension, stress, anxiety, and panic that the word 'assessment' tends to provoke in students. This begs the question as to whether the word 'assessment' actually needs to be used at all, since the concept of formative assessment is about enhancement of learning. Some of the lecturer participants in this research had already replaced 'assessment' with alternative terms such as 'task' and 'activity' during discussions with students and despite the policy directive.

5. The sixth and final proposition is that formative tasks should not be framed as mandatory. Rather, the use of meaningful rationales relating to their learning benefits should be used to encourage students to engage in them. This would help to create a more autonomy supportive environment, providing students with a greater sense of initiative and ownership over their own learning and reduce external regulation.

9.6 Chapter summary

This chapter has presented an overview of how the study has answered the research questions. It then went on to explain the study's main contributions to knowledge in this field. The limitations of the study were addressed. Finally, recommendations for the next phase of the research were discussed.

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