Influential factors in the design and implementation of electronic assessment at a research-led university

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This thesis is submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

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This thesis results entirely from my own work and has not been offered previously for any other degree or diploma.

Signature .....

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Abstract

Of the many challenges faced by those in higher education (HE), the use of technology to support teaching, learning and assessment activities have been particularly prominent in recent years. Adopting a critical realist perspective, and drawing upon institutional ethnography and social practice theory, this thesis set out to examine how academic and professional services staff at a pre-1992, research-led university engaged with electronic assessment (e-assessment), and the extent to which the structures and formal policies impacted on design and implementation. Data were collected through a review of institutional documentation and face-to-face interviews with 23 participants, which were then analysed using the Framework method.

The findings suggest that institutional priorities not only have a direct impact on the culture of the institution, but also the visibility and importance of e-assessment. In turn, those engaged in the practice of e-assessment are actively engaged in workarounds, as they negotiate institutional structures and formal policies. Whilst external factors have contributed to the visibility and desire for adopting e-assessment, successful engagement by academics is largely dependent on the reliability of the institution's technological infrastructure and leadership at the local level, to support the operational aspects of delivery and more crucially, the enactment of institutional policies in disciplinary contexts. The findings also indicate that whilst institutional communities of practice are a valuable resource for sharing best practice, there is still a disconnect between academics and professional services staff with regards to what e-assessment entails, as to whether it is a process, a method, or a tool. Future efforts should focus on developing a shared vocabulary and recognition that e-assessment practice exhibits characteristics of the "third space" between academics and

professional services staff, encouraging a reflection of the key roles that each play in the design and implementation of e-assessment.

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Alston, P. (2017). Technology-informed Curriculum Design: Getting it right from the start. *Using e-learning to improve student engagement in the biosciences: a workshop for HE.* 20 March. The Biochemistry Society. London, UK.

Alston, P. (2017). Technology-informed Curriculum Design: Challenges Faced & Lessons Learned. *HEA STEM Conference 2017: Achieving Excellence in Teaching and Learning.* 1-2 February. Manchester Conference Centre, Manchester, UK.

Alston, P. & Levin, D. (2017). Educating Millenials (I). *BETT Show 2017*. 25-28 January. ExCeL London, UK.

Alston, P. (2016). 'Evolving' Curriculum Design: Incorporate effective use of technology. *Blended Learning 2016*. 26-27 October. London, UK.

Alston, P. (2016). Implementing Continuous Online Assessment: Top Tips and Lessons Learned. *Transformative Teaching in EMEA – A Virtual Event*. 7 June. McGraw-Hill Education.

Alston, P. (2016). Getting it Right From the Start: Starting with Faculty Personnel. *Next Generation Learning Spaces Conference*. 21-23 March. London, UK.

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List of abbreviations

APVC	Associate Pro-Vice Chancellor
CAA	Computer Aided Assessment
CBA	Computer Based Assessment
CPD	Continuing Professional Development
CfTAL	Centre for Teaching and Learning
CS	Computer Services
CUT	Central University Team(s)
DVC	Deputy Vice Chancellor
e-assessment	Electronic Assessment
e-feedback	Electronic Feedback
e-marking	Electronic Marking
e-portfolio	Electronic Portfolio
e-submission	Electronic Submission
EMA	Electronic Management of Assessment
ExtU	External University (generic term used to reference a university other than OldU)
FE&S	Faculty of Engineering and Sciences
FLHS	Faculty of Life and Health Sciences
FSoSH	Faculty of Social Sciences and Humanities
HeLF	Heads of e-eLearning Forum
HoD	Head of Department
HoU	Head of Unit
HEI	Higher Education Institution
IT	Information Technology
MCQ	Multiple Choice Question
MOOC	Massive Open Online Course
NewChU	A university based in China that operates in a partnership with OldU

NSS	National Student Survey
OldU	A fictitious name used for the university in this study
OldUTELC	OldU Technology Committee
OPfA	OldU Policy for Assessment
OTAF	OldU Teaching Accreditation Framework
PG Cert	Post Graduate Certificate
PS	Professional Services
PVC	Pro-Vice Chancellor
REF	Research Excellence Framework
SMT	Senior Management Team
SSR	Staff-Student Ratio
TEF	Teaching Excellence Framework
TEL	Technology Enhanced Learning
TEA	Technology Enhanced Assessment
TLA	Teaching, Learning and Assessment
UGroup	A group of universities sharing similar characteristics and priorities to OldU
VC	Vice Chancellor
VLE	Virtual Learning Environment

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Chapter 1 - Introduction

1.1. Context

Teaching and learning in an online environment is rapidly becoming commonplace in an educator's everyday practices (Larreamendy-Joerns & Leinhardt, 2006) and is a feature of many higher education (HE) courses (Gikandi, Morrow, & Davis, 2011; Rowley, Lujan, & Dolence, 1998). Norton and Wiburg (2003) describe the shift in delivering teaching, learning and assessment to an online environment as a 'defining technology', in that the shift from a traditional 'print' learning environment to one where electronic resources are, almost, expected by the students, requires the pedagogy of teaching, learning and assessment to be reconsidered. The socio-cultural implications of this require educators to consider how students, who live in an ever-changing technological landscape, can fully engage in a meaningful learning experience.

Perhaps one of the biggest challenges in this shift is for educators to re-think their assessment practices, in part due to the increase in the use of electronic assessment (e-assessment) within HE (c.f. Bax et al., 2006; Beebe, Vonderwell, & Boboc, 2010; Buckley & Cowap, 2013; Gikandi et al., 2011; Pitt & Gunn, 2004; Ricketts & Wilks, 2002). Many studies have reported on the positive effect of electronic assessment (c.f. Buchanan, 2000; Marriott, 2009; Scott, MacLean, Marshall, & Van Asperen, 2008; Voelkel, 2013) and there are obvious benefits for students, not least the savings in time and money needed to physically submit a paper-copy of an assignment (Bridge & Appleyard, 2008). However, whilst there is a plethora of research on policy and practice for traditional face-to-face assessment, there is little empirical research guiding educators on the development of policies and guidance for e-assessment (Milam, Voorhees, & Bedard-Vorhees, 2004).

Many HE institutions have attempted to account for the design and implementation of e-assessment within existing, traditional assessment practices, whilst others have attempted to implement specific policies to deal with this challenge. However, there does not appear to be any consensus on what constitutes 'e-assessment', and therefore there is a clear challenge on how to facilitate such practice.

1.2. Motivations for the study

My own motivations for this study began with my appointment to OldU, a pre-1992, research-led English university. At the time, my role was one of five new technology-related academic positions within the university, all of which were based within one of the three faculties. Tasked with enabling my Department to deliver its e-learning strategy, the role required me to: contribute to the strategic direction of technology enhanced learning (TEL); lead on projects that embed innovative e-learning approaches into the department's programmes; support staff in the development of online resources that will enhance their teaching; and leading in the development of new ways of using learning technologies within the learning environment, via online and blended learning approaches. Just before I started at OldU, the Department had recently completed a Curriculum Review exercise, whereby it was decided that all modules would contain a substantial amount of 'in-course assessment', enabling students to receive feedback on their learning during a module. For first and second year modules, particularly, it was envisioned that this requirement would be met using online tests and the electronic submission of essays/reports.

As part of my job, I believe that it is of vital importance that there is consistency in what the department set out to do. In this instance, it would be beneficial to refer to institutional policies and guidelines for the design and implementation for e-assessment. However, at the time of writing, there were no such policies at OldU for staff to refer to. Within the Department, the only reference points for e-assessment are OldU's Policy for Assessment (OPfA) and my own experience of

implementing e-assessment that can be referred to. This however presents several issues, with the most pressing points for concern being that OPfA does not make any reference to e-assessment, and my own experiences of implementing e-assessment were gained at an institution considerably smaller than OldU.

1.3. Literature Gap

Whitelock and Brasher's (2006) early attempts to identify the enablers and barriers to e-assessment was crucial in identifying the issues impacting on the widespread use of e-assessment. Surveying experts in the field, they explored their visions for e-assessment, and what barriers were preventing this from happening. Whilst the findings suggested that e-assessment would be "prevalent from primary school through to university" (p. 12) by 2014, there were several barriers identified, including: the need for a shift in institutional culture; infrastructure; the attitudes and training of staff involved; and, the lack institutional policy to govern the quality, accessibility and reliability of e-assessment. But given that we are now in 2017, and e-assessment is perhaps not as prevalent as suggested by Whitelock and Brasher, are the barriers that they describe still evident?

My own earlier work on the challenges for implementing continuous online assessment similarly noted that a culture change within institutions with respect to e-assessment is likely to be difficult to facilitate, since many assessment strategies are often rooted in departmental historical practices (Alston, 2015). It was at this point, were I began to examine the literature to uncover what other work considered the impact of e-assessment within institutions, and the implications on practice. Timmis, Broadfoot, Sutherland et al. (2016) suggest that the issues uncovered in my earlier work, and many of those identified several years ago by Whitelock and Brasher (2006) still exist today. But whilst Timmis et al. (2016) note the need for more discourse in educational and policy circles regarding the use of technology in the assessment process, they predicate this

view on a need for a better understanding of how technology can be used to support and transform. This particular view is however somewhat aspirational, given the design and implementation challenges that still need to be overcome. Tomas, Borg and McNeil's (2015) institutional inquiry provides some evidence to this claim, suggesting that these issues exist within institutions. They argue that whilst much of the literature on e-assessment has focused on the benefits of use and adoption, there is a greater need to understand the developmental and implementation challenges faced by those involved with e-assessment.

But whilst Tomas et al. (2015) do investigate the issues at one institution, there is no indication of what type of institution this is (the authors are from a pre-1992, research led institution, and a post-1992 institution), the demographics of those involved (do academics face the same design and implementation issues as those in an administrative role), or how the term e-assessment is understood by those involved in the design and implementation processes. This latter point is particularly pertinent in educational literature where it is commonplace to see technology related practices referred to using a variety of terms in a range of contexts (Gikandi et al., 2011; Guri-Rosenblit, 2010; Moore, Dickson-Deane, & Galyen, 2011; Timmis et al., 2016). Gikandi et al. (2011) have attempted to address some of these concerns regarding the definitions in the literature, but whilst they provide clarity regarding a number of key terms, they stopped short of defining other terms, notably e-assessment. Given that e-assessment is perhaps a more commonly used term than online assessment, this begs the question as to how those involved in the design and implementation of e-assessment understand the term.

1.4. Overview of the investigation

Given the notable gaps regarding terminology, and the design and implementation challenges associated with e-assessment, the aim of the research study was to examine the practices and experiences of academic and PS staff at OldU in the design and implementation of e-assessment. This required an

understanding of what they understood by the term ‘e-assessment', and the practices they adopted in the design and implementation of e-assessment.

1.4.1. Research Questions

Considering an approach which uncovered the understanding of those involved in the design and implementation of e-assessment, the research questions would contribute to a gap in the literature regrading terminology, which was perhaps overlooked by both Gikandi et al. (2011) and Tomas et al. (2015). Additionally, an insight into the practices of academics and PS staff would extend beyond the work of Tomas et al. (2015), illuminating any differences between the practices of academic and PS staff involved in the design and implementation of e-assessment. Crucially for those at OldU, the lack of formal policies relating to the design or implementation of e-assessment meant that many were undertaking the practice of e-assessment without any guidance from the institution, which would impact on how e-assessment is enacted across the various departments across OldU.

Armed with the knowledge from my own earlier work on the historical practices evident within institutions with regards to assessment practices (Alston, 2015), it would also be crucial to consider the ‘so what’ aspect of PhD research, with regards to the implications for future e-assessment at OldU and other institutions. Therefore, it was important that the research would build on the work of Tomas et al. (2015) - affording the opportunity for the reader to examine their own context and compare to that presented in this thesis – and Timmis et al. (2016), and acknowledge that whilst an aspirational approach to TEA is advantageous, there are still a number of challenges that need to be overcome for this to happen. Consequently, the research questions derived for this study are:

1. How do academic and professional services staff at a pre-1992, research-led English university (OldU) interpret the term 'e-assessment'?

2. Based on the experiences of the staff identified in RQ1, what are the enabling and restraining factors in the design and implementation of e-assessment at OldU?

3. Based on the experiences of the staff identified in RQ1, to what extent do OldU's structures and formal policies support or inhibit the successful design and implementation of e-assessment?

4. What are the implications for the research findings in the design and implementation of e-assessment at OldU and, potentially, other universities?

1.4.2. Theoretical Framework

The foundation for this research originated from an ambition to understand the processes within OldU, with regards to the design and implementation of electronic assessment. Within this, the focal point of the study is on the individual perspective, considering the activities and experiences of those involved with e-assessment. This includes those employed on academic or PS contracts, who are required to teach and conduct research, and provide technical and administrative support respectively. Since the intended focal point of this research is on the e-assessment practices of the academic and PS staff within OldU, a framework that focuses on this and considers the social nature of these practices was selected for the study.

Deriving from early work on practice theory (Bourdieu, 1977; Foucault, 1984; Giddens, 1984), and more recently the work of Archer (1995), Schatzki (1996), Reckwitz (2002) and Warde (2005), social practice theory (SPT) identifies people as 'carriers' of routine activities, which are underpinned by socially situated and acquired knowledge, ways of understanding, feeling and wanting (Reckwitz, 2002). People often engage in localised practices in the workplace, which result in a particular set of behaviours and meanings regarding the 'world' they are interacting with. These behaviours and meanings are usually confined

to a particular locale, without which may lead to confusion about the practices taking place. Universities are no different to this, often employing a 'multiple cultural configuration', whereby social practices in different locations "are received and understood in different ways in different contexts" (Trowler & Knight, 2002, p. 147). It is important for this study that attention is paid to how e-assessment is designed and implemented across OldU, by considering the differing practices that will most likely exist in the various departments. **3.5** provides more detail about social practice theory and how it relates to this study.

1.4.3. Methodology

Case study research is often used when an in-depth understanding of an event, process or phenomenon is needed (Cresswell, 2002; Eckstein, 2002; Yin, 2009) and is well to suited to inquiries regarding "processes & relationships" (Denscombe, 2007, p. 38). Presenting a specific, unique and bounded example of a real-life situation with real people (Cohen, Manion, & Morrison, 2007), it enables a researcher to investigate issues in the environment in which they naturally occur, producing descriptive and analytical accounts (Cousin, 2009) which can be aligned to a particular research paradigm (Lauckner, Paterson, & Krupa, 2012).

By considering the case of Old U and the research questions posed, I am presented with an opportunity to 'drill down' further into the context of a case study, and utilise an institutional ethnographic approach (Smith, 2005). Whilst the notion of institutional ethnography is, at best, a "complex [and] diverse approach in many respects" (Dent, 2015, p. 6), Smith (2005) best describes it as an approach that "explores people's activities as they co-ordinate them in those forms we call institutions" (p. 13). Grounded in the insights of feminist theory, Marxist materialism, politics and ethnomethodolgy (Slade, 2010), an institutional ethnography begins by locating a particular perspective within an 'institution' as a point of entry, which can then be explored through people's experiences. This is then expanded to consider the larger social relations at play which, through

texts and discourses, form the relations of ruling (Devault, 2006; Slade, 2010; Trowler, 2012)

Whilst it shares many similarities with case study research, such as the initial point of entry to the study, the aim of institutional ethnography is not to afford generalisability or comparison with other cases. The goal is to simply highlight how local experience is shaped by the larger power relations that are in play (Slade, 2010). As such, it is suggested that institutional ethnographies can be described as 'extended case studies' (Slade, 2010) focusing on how disconnected, local practices are coordinated through their working practices and power ruling relations in place. Given the focus on texts and discourses, and lived experiences, institutional ethnography falls within the interpretivist/constructivist paradigm, similar to Stake's (1995, 2000) view of case study research, which aims to seek out the perspectives of those involved to gather a collective agreement about what has occurred. Adopting a critical realist position as a researcher, I acknowledge that there is a real world that exists independent of our own perceptions and constructions (ontological), however our *understanding* of the world is undeniably a construction from our own perspectives (epistemological) (Maxwell, 2012).

As an insider researcher (Trowler, 2012), adopting an institutional ethnographic approach makes sense, given its ability to "see local practices in terms of the larger picture" (chapter 3, section 5, para. 7). By adopting this stance to the research, it will permit me to comment on how the research findings may, or may not, impact the design and implementation of e-assessment policy at this and other UK universities. Although the nature and size of the sample may hinder the findings, it is envisaged that they will afford 'particularisation' (Stake, 1995) and 'specification' (Patton, 2002) in that they can offer an insight into the challenges experienced by staff at OldU and the procedures and policies currently in place.

1.4.4. Truth claims

Set entire entirely within OldU, this study is concerned with experiences of academic and PS staff involved with e-assessment, this research is likely to yield several criticisms, particularly since it takes the form of a single case (Flyvbjerg, 2006). As a consequence, Trowler (2012) argues that those involved in insider research have to be clear about truth claims, more so than other research designs. However, Thomas (2011) believes that those involved in insider research can elicit exemplary knowledge, which provides legitimacy based in the context of experience, as opposed to theory. Those who engage in insider research judge the robustness of data and conclusions based on the privilege of insider knowledge and can make judgements based on the context, from their position as a reflective practitioner (Eraut, 2000; Schon, 1983; Trowler, 2012). Bamber, Trowler, Saunders et al. (2009) have already used a similar approach to Thomas in identifying the value of insider research using a single locale, stressing the significance and importance of *context*, and that "translation, reconstruction and bridging are more likely to succeed" (p. 5) than any attempts to generalise.

It is however worth acknowledging what value the findings have from this research, particularly since participants involved may not necessarily be representative of all staff within OldU - some of whom may have more experience of e-assessment than others. In this instance, I am drawn to the work of Sayer (2010) and Trowler (2012), who provide some insight regarding the value of research findings. Sayer's attempts to distinguish between research that aims to establish 'truth' against that which intends to provide 'practical adequacy', does indeed appeal to an insider researcher. However, Trowler acknowledges the presence of 'wicked issues' (Bore & Wright, 2009) in HE environments, suggesting that they are often socially complex in character and can be understood in multiple, and perhaps conflicting ways. It is in this instance where find myself aligned with both Trowler, and Bassey (2001), who argue that it is not just the researcher that has responsibility for generating value in the

findings; it also lies with those reading the work, and how it empowers them to make good decisions based on their own context.

1.4.5. Contribution to knowledge

This study indicates that the design and implementation of e-assessment is a complex practice, which at OldU, is impacted by several factors relating to institutional culture, student demand, the presence of local leadership to support both the design and implementation of e-assessment, and the enactment of institutional policy within the local context. But whilst the culture of OldU appears to be 'geared' towards research activity, the reluctance from academics to engage in e-assessment is not primarily governed by this, or their own personal beliefs; rather, it is more related to previous negative experiences of using technology at OldU in a teaching related context.

More importantly, there appears to be a disconnect between academics and PS staff at OldU regarding what *e-assessment* entails, in whether it is a *method*, a *tool*, or a *process*. The consequences of this may be of some cause for concern in future e-assessment practice, when considering the nature of policy as a both a product of *text* and the *discursive processes* that go with it.

1.5. Time Frame

During this research, OldU appointed to several senior positions within the institution; a new Vice Chancellor, a newly created Pro-Vice Chancellor (Education) position, and a newly created Associate Pro-Vice Chancellor (Online Education) position. After the appointment of the new VC, OldU were engaged in consultation with staff and students to define a new strategic plan for the period 2016-2026. Additionally, the recruitment of the PVC and APVC saw dedicated roles at a senior level to provide strategic leadership and champion the enhancement of learning and teaching, and oversight and responsibility for embedding the use of technology-enhanced learning across OldU's curriculum.

Given the changes at the senior management level at OldU, it is important to acknowledge the time frame in which research was conducted for this study, given the potential impact these appointments had on the findings presented here. Therefore, the time frame in which this research was conducted is between July 2014 and August 2015.

1.6. Structure of thesis

The next chapter discusses the setting for this study and contextualises the research, by introducing OldU and examining the 'current state of play'. Chapter Three situates the research in the fields of electronic assessment and social practice theory, and the relevance to this study. Chapter Four discusses the research design, data collection methods, approach to analysis, and considers the nature of insider research. The practice of e-assessment at OldU is presented in Chapter Five, with a discussion of the findings following in Chapter Six. Chapter Seven concludes the thesis, reflecting on the research with respect to the research questions and considers the implications for policy, practice and research.

1.7. Summary

This chapter examined the background for the thesis, beginning with the wider context for the research and my own motivations for the study, then moving on to outline the research questions, the theoretical framework to be used, the methodology adopted, the intended audience, and the scope and limitations of the study.

The next chapter continues the discussion of the background material to place this study in context, by examining the research setting; OldU.

Chapter 2 - Research Setting

This chapter sets the scene for the upcoming literature review and data analysis chapters by contextualising the research setting. Starting with a brief historical overview of OldU, it then moves on to discuss the 'current state of play' with regards to the organisational structure, the use of TEL and e-assessment, and the formal policies and strategies in place to support such activities.

2.1. OldU: A brief history

OldU, a 'red-brick' university founded in the late 19th century, is based in the heart of a busy industrial city. Considered to be in the top 1% of universities worldwide, OldU is a member of UGroup; a national group of universities committed to maintaining teaching and research excellence. With an annual turnover of over £450 million, including more than £80 million for research, OldU is committed, through the teaching and research of its staff, to advancing the learning of its students. In recent years, OldU has attempted to improve the student experience that it provides, by heavily investing in the development of new student accommodation, teaching space and research facilities. This is a remarkable achievement given the university's close city centre proximity and the limited space on which to construct new buildings. Most of the university's teaching & accommodation facilities are in fairly close proximity to each other within the city centre, with further accommodation & teaching facilities located on the outskirts of the city.

After starting life with just under 600 students, OldU can today be considered a fairly large university, with student numbers having more than doubled in the past 20 years since 1995/1996 (OldU, 2014a). The latest figures for student numbers indicate that there are almost 23,000 students studying at OldU, of which just over 18,000 are studying for an undergraduate degree, giving a SSR of

just under 1:13. With respect to the student profile, the most recent university figures at the time of writing indicate that almost 85% of undergraduate (UG) students are under 21 years of age, with females accounting for a little over 52% of the UG population. For post-graduate (PG) students, the average age increases to the mid-twenties for both taught and research programmes, with taught programmes studied predominantly by females. Just under 10,000 students are studying a range of wholly online postgraduate programmes delivered in partnership with an external provider, ExtOnline, with students awarded degrees accredited by OldU (OldU, 2013a). The most recent National Student Survey (NSS) places OldU in the top 100 with regards to overall student satisfaction (THE, 2015).

Over the past four years, there has been an increase in numbers of staff, with around 5500 people employed at the university. Around 70% of the workforce are employed on full-time, permanent contracts, with over 1300 appointed to an academic position, and a further 680 working in research. The gender balance has shifted slightly during this period, with a 30% increase in male staff meaning that they now make up 53% of the workforce. The most notable shifts include an increase of more than 50% in males working in a PS role and the Faculty of Health and Life Sciences, whilst the Faculty of Science and Engineering bucks this trend, with a 270% increase in female staff. With regards to age, 35% of staff employed at the institution are under the age of 35. When considering staff employed within one of the three faculties only, this figure rises to close to 40%. The latest Research Excellence Framework (REF) exercise, indicates that over 80% of the university's research was ranked either internationally excellent or world-leading (OldU, 2014b), with 90% of the university's research having a considerable impact on society.

OldU has also been in working in partnership with a research university in China for the past decade, the result of which has led to the establishment of a new autonomous institution - NewChU. At the time of writing, there are over 6,000 students studying at NewChU with a further 1,600 studying at OldU, having been

given the opportunity to complete the final two years of their undergraduate studies at OldU. In addition to the NewChU collaboration, OldU also has several other international university partners from countries including Chile, Spain, Singapore and the USA. One of the most recent projects at OldU is the development of massive open online courses (MOOCs) in a variety of subject areas. Working in partnership with a well-known MOOC provider, OldU has already delivered five MOOCs at the time of writing, with more than 100,000 participants having already signed up to OldU MOOCs (OldU, 2016b).

2.1.1. OldU Structure

OldU has an organisational structure similar to other comparable universities: three academic faculties, responsible for teaching and research within the university; and a professional services (PS) offering, which houses the University's support and administrative departments for various institutional activities. In 2011, the university made a substantial change to its organisational structure that involved reducing the number of faculties from six to three, whilst also moving departments from one faculty into another. At the time of writing, there are a total of 50 departments, centres or schools within the academic faculties, and around 15 professional service related departments (OldU, 2015a).

Whilst two of the three faculties that exist today operate within a 'traditional' faculty structure seen at most HE institutions, one faculty contains six units to manage teaching and research. The first of these units is home to the faculty's teaching provision, housing the six departments that contribute to the undergraduate and taught postgraduate teaching within the faculty. Academics employed within this unit are typically appointed to 'teaching and scholarship positions', whose role is to primarily teach and contribute to scholarly research. The remaining five units support the faculty's key research areas and postgraduate research. Academics here are often appointed to 'teaching and research' positions, contributing primarily to research within their subject discipline, whilst also providing a substantial contribution to undergraduate and

postgraduate teaching provision delivered in one or more departments within the teaching unit. The tension between research excellence and high-quality teaching is one that institutions similar to OldU will have experience of, however, this does appear to be more enhanced at OldU given the formal structure of its largest faculty.

For the most part, OldU agrees and implements strategy and policy through a variety of faculty and institutional committees, which cover a variety of activities relating to teaching and learning, research, online provision and collaborative partnerships. Many committees within the institution draw upon the knowledge and experiences of staff within the institution, with both academic and PS colleagues from all areas being represented at department, faculty, and institutional level committees. Whilst these structures encourage and promote consensus amongst those involved, this is often at the expense of the speed in which decisions are made and put into practice.

2.2. Technology Enhanced Learning (TEL) at OldU

There have been two relatively separate strands for the use of TEL to support learning and teaching at OldU. The first of these is historical, by means of a partnership with ExtOnline to deliver postgraduate programmes completely online. The second, which has increased in capacity over recent years, focuses on on-campus undergraduate and postgraduate provision.

2.2.1. The ExtOnline partnership

OldU has worked in partnership with ExtOnline since the turn of the century to deliver wholly online programmes, with a contributing factor to this partnership being the lack of an institutional virtual learning environment (VLE) at OldU and dedicated support for TEL, which was not put into place until some years later. ExtOnline has partnerships with a range of institutions from around the world, with the OldU partnership offering over 40 online programmes ranging from postgraduate certificates, through to masters degrees, and professional

doctorates (OldU, 2016a). Students are registered with ExtOnline and receive an accredited qualification from OldU, with programmes delivered using ExtOnline's systems and VLE. Students have access to OldU's library and some IT provision, but there is little in the way of integration with on-campus provision.

ExtOnline's focus is on delivering courses on a mass scale and, on occasion, make use of OldU staff subject knowledge and expertise to develop course content. Historically, there has been some reluctance for OldU staff to develop module content because of concerns that ExtOnline will assume ownership of the module and any content, and repurpose it for course by other institutions where a similar partnership agreement is in place. This is a generally unfounded concern, since many of the modules and programmes developed by OldU staff rarely reach the scale required to match ExtOnline's business model. The recent appointment of an academic at senior management level to manage OldU's online provision has seen them take a much bigger role in managing the partnership with ExtOnline, and working to alleviate some of the concerns of staff who are involved with developing content for the online programs.

2.2.2. On-campus online provision

Since the purchase of the institutional VLE to provide a common platform to support teaching and learning just after the turn of the century, OldU has taken the steps to ensure that their undergraduate and postgraduate provision has an online presence, with each module of study having its own dedicated space on the VLE, and a standard set of content available to students. The VLE is based on an industry standard package and affords several tools for staff to make teaching and learning materials available for students, as well as to support the design and implementation of e-assessment, from submission, to marking, and feedback. This also includes the use of an external online tool that aids in the detection of plagiarism and collusion in work submitted electronically. Prior to the use of an institutional VLE, staff made use of institutionally hosted Web pages assigned to their university computer account in which to post course content,

the remnants of which can still be found across the university, notably in departments belonging to FE&S.

The VLE provides a unified platform for staff and students at OldU, housing a multitude of teaching and learning tools including course content, communications, and assessment, with a key benefit being the ability to tie it in with an institution's central systems and resources (Beastall & Walker, 2007; Stiles, 2007). However, implementing such a powerful resource within an institution is no easy feat, with Johnson et al. (2007) suggesting that those institutions that are centred on the use of a VLE can prove to be somewhat inflexible in meeting the needs of its end users. Indeed, without careful and effective implementation of a VLE, many of the tools that can be utilised to enhance teaching, learning and assessment practices, often go unused (Russell, 2009; Sharpe, Benfield, & Francis, 2006).

This particular point was evident during discussions with the participants involved in this study, who indicated that they often find the VLE to be restrictive when it comes to designing and implementing e-assessment (see **Chapter 5**), and many often make use of external tools to facilitate their objectives – a practice which is not actively discouraged within OldU, so long as there are no privacy concerns regarding student data. A consequence of this is that there are plenty of examples around OldU where staff are using technologies that are not formally supported by OldU, with the use of such systems varying between the departments that use them. As OldU moves forward as an institution, a greater understanding of these challenges associated with institutional systems that are faced by staff when it comes to e-assessment would prove to be beneficial.

Recent events at OldU with regards to its on-campus online provision have seen the introduction of a 'baseline' level of resources available within each module area from the start of the 2015/16 academic year, in accordance with OldU's TEL strategy (see **Chapter 2.3**). The introduction of a 'baseline' level of content for each module area is seen a positive step in helping to reduce the variation in student user experience of the VLE across the institution.

2.2.3. Support for e-assessment

With respect to central support for TEL activities, there are two PS departments available to staff at OldU. The Computer Services (CS) central team maintains and supports the technical infrastructure at the institution, whilst the Centre for Teaching and Learning (CfTAL) is a central team that supports staff in their pedagogical activities, offering a range of accredited, post-graduate programmes. Within CfTAL, the TEL team offers pedagogical advice and support to those wanting to engage with TEL based initiatives, including the use of e-assessment. Comprising a team of four learning technologists and a head of department, they provide a wide variety of workshops and guides on a range of activities and tools available to staff, with both novice and expert users of TEL catered for. Staff from the department also contribute to the Centre's postgraduate provision, delivering teaching on modules that feature the use of TEL within teaching and learning. Outside of the central TEL department, support for e-assessment, and TEL in general, varies across the faculties. Two out of the three faculties rely heavily on enthusiastic academics and the central TEL department to support and champion the use of innovative tools within departments, which often places added pressure on their already increasing workloads. The third faculty, which can also access the resources from the central team, takes a different and more structured approach.

The third faculty houses a dedicated eLearning team comprising of both academics and PS staff - 7 academics and 9 PS staff - whose function is to primarily to serve the TEL needs of the faculty. The eLearning academics, of which I am one of, are based in either one of the six teaching departments, or within the teaching unit itself, operating at a strategic level across the respective teaching departments and unit. The main roles of the eLearning academics, alongside contributing to the teaching of the undergraduate and postgraduate programmes within their respective departments, are to: develop an evidence-base of pedagogical research for TEL; and to promote the development and evaluation of TEL initiatives to facilitate and support student learning. Those in

the eLearning support team are responsible for supporting learning, teaching and research activities across the whole of the faculty, which also includes supporting the activities of the five research units. For those in an eLearning support role, not only are they allocated to a specific department within the teaching unit, but they also allocated to a research unit, to provide a range of support for technical activities, including key university systems, the VLE, and developing content using specialist applications.

With respect to the operational aspects of the faculty eLearning team, the management of the team is somewhat different to that of the central TEL team. The eLearning academics report directly to either an academic head of department within the teaching unit, or directly to the academic head of the teaching unit, depending on where they are deployed. Staff in the support team are managed centrally from the teaching unit by an eLearning manager, who operates in a PS capacity. For those in the support team, their structure is closely aligned to that of the central TEL team, however they are responsible for dealing with the needs of the faculty, rather than the whole institution.

For those in a faculty eLearning support role, they have no direct line management within the teaching departments that the academics work in, who are responsible for driving pedagogical innovations in TEL. Nor are all members of the faculty eLearning team accountable to the same person within the teaching unit. As such, when initiatives are to be implemented, the working relationships between the TEL academics and support staff operate very much on an informal basis.

2.3. Policies & Strategies at OldU

Despite having no formal policies or strategies relating to the design or implementation of e-assessment, there are several existing policies and strategies at OldU which either consider the use of TEL for teaching and learning purposes, or the process of assessment. Those which pertain to the use of TEL

are OldU's overarching Strategic Plan and the institutional TEL strategy. With regards to assessment, relevant policies include OPfA; the policy for non-payment of tuition and/or university accommodation fees and the resulting impact on access to university systems; and, the upcoming Coursework Submission Policy.

2.3.1. Support for TEL

At the time of writing, OldU's strategic plan (2009-2014) identified five key priorities to enable the university to continue to focus on existing strengths, whilst also offering an opportunity for growth. These included: research; internationalisation, knowledge exchange; student experience; and, widening participation (OldU, 2009). The plan makes a specific reference to the university's online presence and use of innovative e-resources as part of their aim to promote internationalisation and enhance the student experience.

OldU has recognised the opportunities that are afforded by the use of TEL, and a university strategy for TEL (OldU, 2013b) was approved in March 2013, with a view to providing an academic experience that is enhanced through the use of appropriate technology. The strategy was developed by a group comprising academics from each of the three faculties, key representatives from central PS departments and the Deputy President of the OldU Student Union. The strategy comprises several processes, policies and plans that focus on differing areas of TEL at OldU, including: innovation; staff development; student development; research; and a baseline level of content for the VLE. The latter is a policy which builds on a report authored by OldU's Student Union which presented the student perspective on the use of information technology (OldU Student Union, 2013), and presents a series of policy recommendations for OldU to consider implementing.

2.3.2. Support for e-assessment

As discussed by the participants (see **Chapter 5**), many have often relied on OPfA to guide them, since this is the policy that governs how assessment takes place at OldU. Despite the absence of active policies/strategies for e-assessment, OldU operates a series of penalties restricting student access to university systems (OldU, 2015b), should they fail to pay university tuition and/or accommodation fees. The second of these penalties, financial suspension, which removes student access to all University IT systems, including the VLE where many e-assessment activities are located, was discussed at length by many of the participants (see **Chapter 5**) as being a real obstacle when it comes to deciding on whether to use e-assessment or not.

There is however some movement on this, with a new Coursework Submission Policy having been approved in mid-2015, to come into effect for the 2016/17 academic year. As part of the policy, it is expected, as a minimum requirement, that all coursework items will be submitted electronically. In instances where coursework cannot be marked electronically, it is the responsibility of individual departments to decide how marking will be completed, and how feedback would be returned to students. In addition, the policy indicates that all students should be provided with guidance on the process of e-submission for their respective module/programme before the assessment begins, whilst also absolving OldU of any responsibility with regards to technical problems that are not related to its systems, including a student's internet connection speed.

2.4. Summary

This chapter introduced OldU as the setting for this research study, presenting a brief history and some insight into the organisational structure of the institution. It also discussed how TEL has evolved in the institution, highlighting its partnership with an external provider for online postgraduate study, and how e-assessment activities are supported across the institution for those studying on

campus. Finally, it identified the formal policies and strategies associated with TEL activities, noting how, at the time of writing, there are no active policies or strategies in place at OldU that relate to the design or implementation of e-assessment.

Chapter 3 continues the discussion of the context of this study by introducing the term 'e-assessment', examining a variety of definitions of the term evident in the literature, and how these equate to the understanding demonstrated by participants involved in this study. The benefits and challenges of e-assessment are then considered, then moving on to examine the 'practice' e-assessment, and introducing the theoretical framework used in this study.

Chapter 3 - Literature Review

The aim of this chapter is not to provide an exhaustive and comprehensive account of the various issues relating to the topics described. Instead, it highlights the key issues central to the approach taken in this study and the potential impact they have on subsequent conclusions.

3.1. Introduction

Much has been written with regards to the importance of assessment within HE and the key role it plays in the student experience (Adams & McNab, 2012; Biggs, 2003; Bloxham & Boyd, 2007; Brown & Knight, 1994; Bryan & Clegg, 2006; Nicol, 2009; Ramsden, 2003). However, there have long been calls in the UK HE sector to improve assessment and feedback, given that the lowest scores in the annual National Student Survey (NSS) are typically related to assessment and feedback practices (Beaumont, O'Doherty, & Shannon, 2011; Nicol, 2009; Williams & Kane, 2009). Owing, in part, to an acknowledgement that 'conventional' methods of assessment and feedback are increasingly unfit for purpose in a university context (Boud & Molloy, 2013; Hattie & Timperley, 2007; Nicol & Macfarlane-Dick, 2006), some consider the traditional method of 'pen and paper' assessment to be an outdated practice (Parshall, Spray, Kalohn, & Davey, 2002).

Despite the growing evidence base reporting on the use of e-assessment in a variety of contexts, Stödberg (2012) argues that the use of e-assessment in HE is still considered to be a relatively new practice. However, the use of technology to support assessment practice has been around for many years (Llamas-Nistal, Fernández-Iglesias, González-Tato, & Mikic-Fonte, 2013), with Bennett's (1998) three 'generations' of e-assessment describing much of what is in practice today: replicas of paper based tests (First Generation); the inclusion of multimedia and automatic scoring (Next Generation); and, the use of complex scenarios and

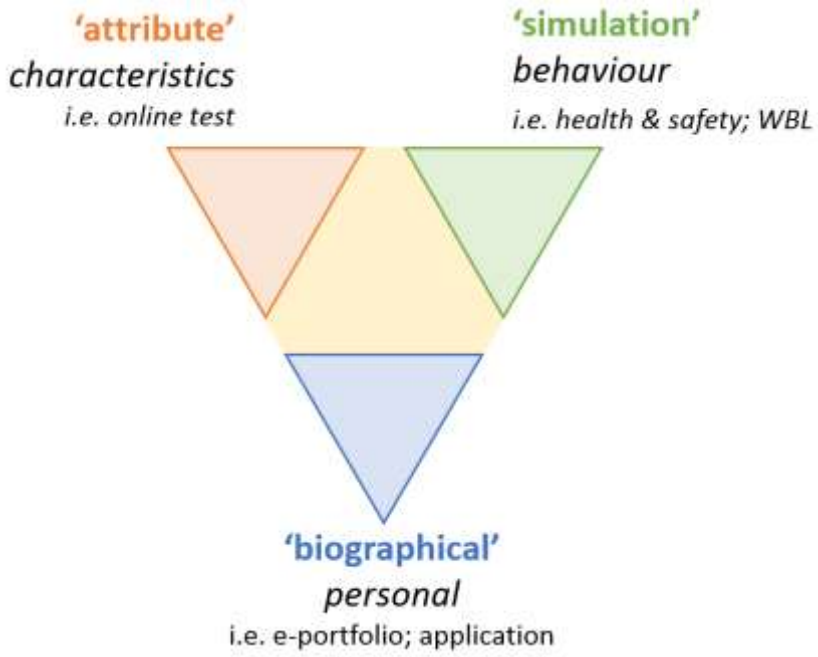

Figure 3.1 Approaches to e-assessment (adapted from Laumer et al., 2009)

intelligent tutors (Generation "R"), which Bennett argued would "break tradition in several ways" (p. 11). Laumer et al.'s (2009) extension of this classification, takes into account more familiar 'uses' of e-assessment evident in practice (**Figure 3.1**). The use of technology to help support more general educational goals is also seen as a positive, with current methods of assessment having difficulty in validly measuring students' intellectual and psychosocial skills (Clarke-Midura & Dede, 2010; Ridgway, McCusker, & Pead, 2005).

Claxton (2009) posits that there is growing need to prepare students of today for the world of work, with digital literacy skills now seen as a necessity rather than a choice. From a policy perspective, it is not only important that students are assessed using consistently applied procedures and regulations, but there is also a desire to develop student competencies for 'lifelong learning' (Council of the European Union, 2006; ENQA, 2009). As a result, there have been moves to revise assessment strategies, so as to more adequately reflect the skills needed to navigate a digital world (Redecker & Johannessen, 2013; Timmis et al., 2016), with problem-solving, reflection, creativity, and critical thinking skills becoming increasingly more important to employers (Cachia, Ferrari, Ala-Mutka, & Punie,

2011). Technology is creating new possibilities for assessment and the evidence that technology-based assessment affords for learning is unparalleled (Clarke-Midura & Dede, 2010). From supporting the need for large-scale testing to improve efficiency and reduce costs because of the increase in student numbers (JISC, 2010; Pellegrino & Quellmalz, 2010), there is a realisation that well-designed and well-deployed e-assessment initiatives help foster more effective learning practices encouraging a student-centred learning approach (Chapman, 2006; Gunn, 2006; JISC, 2010; Sharpe, Benfield, Roberts, & Francis, 2006; Vovides, Sanchez-Alonso, Mitropoulou, & Nickmans, 2007).

3.2. The language of e-assessment

Whilst it is evident from the literature that there has been interest in reporting on staff and student perceptions of e-assessment (c.f. Alston, 2015; Dermo, 2009; Sheader, Gouldsborough, & Grady, 2006; Sorensen, 2013; Walker, Topping, & Rodrigues, 2008), there have been calls to consider other areas, including the effect and impact of e-assessment on the student experience, and the impact on study behaviour (Alexander, 2001; Walker et al., 2008). There is however another area that has limited coverage in the literature, and that is how the term 'e-assessment' is understood by those who are involved in its use. This last area is particularly crucial in the education domain, where it is commonplace to see technology related practices in a variety of contexts, referred to using an assortment of terms, and even defined differently when discussing particular aspects (Gikandi et al., 2011; Guri-Rosenblit, 2010; Moore et al., 2011; Timmis et al., 2016; Twigg, 2001). Sim, Holifield and Brown's (2004) suggestion that there is a lack of consent in the literature regarding terminology still seems evident almost 15 years later.

When describing the various forms of learning capable through technology, Guri-Rosenblit (2005) notes "at least a dozen different terms" (p. 468) used in the literature, including *web-based learning, e-learning, computer-mediated communication (CMC), online instruction, distributed learning and distance*

learning, with Twigg (2001) remarking that the terms *distance education, distributed learning* and *online learning* have also been used synonymously in the literature. Such practice has led to Lowenthal and Wilson (2010) suggesting that as technology continues to evolve, it will prove to be elusive for practitioners and researchers to agree on a set of common definitions and terminologies. The same is also true of assessment involving the use of technology, with a variety of terms also used interchangeably: o*nline assessment, e-assessment, computer-based assessment*, and *computer-mediated assessment*, to name but a few. Given that e-assessment is rapidly becoming more commonplace in HE, and in line with the view that there is a constant need to identify knowledge gaps in the literature for academic fields experiencing rapid growth (Cresswell, 2002; Webster & Watson, 2002), it is important to take stock of the terminology used in the literature, to see how it matches up with what is used in practice.

Whilst this may seem like a trivial point, many have suggested that within HE, policy makers, scholars, and professional bodies who use these terms interchangeably continue to add to the confusion (c.f. Evans & Nation, 2000; Lowenthal & Wilson, 2010; Moore et al., 2011; Perry & Pilati, 2011; Phipps & Merisotis, 1999; Selinger & Pearson, 1999). Bell and Federman (2013) believe that the proliferation of terms only serves to add to the "seemingly endless combinations and variants of technologies [which] create different e-learning applications with very different capabilities" (p. 167). Yet, Timmis et al. (2016) argue that an evolution in terminology does not necessarily suggest that there has been a fundamental transformation in the scope of assessment; rather it suggests that the use of technology for assessment has become much more broad. Gikandi et al. (2011) have already made some inroads into distinguishing the differences between a number of synonymous terms used in relation to TEL, particularly around *e-learning* and *assessment*.

However, whilst Gikandi et al. (2011) provided some clarity around the definition of *online formative assessment*, they stopped short of defining other terms, notably e-assessment. Given the synonymous nature of terminology

evident within the literature, the first research question in this study set out to examine this, and contrast this with the perspectives of the participants at OldU (the participant perspective is presented in **Chapter 5.2**).

3.2.1. The 'academy' perspective

Heywood (2000) argues that the use of the term 'assessment' in an educational context is synonymous with other terms such as *evaluation*, *testing,* and *examining*, again highlighting the importance of defining terms used in this study. The use of the term 'evaluation' in an educational context, particularly in the US (Taras, 2005), requires more attention than the latter two, and can be attributed as a *method* of assessment. Historically, evaluation was the process by which educational objectives were realised, with such information used for decision-making purposes (Alkin, 1969; Cronbach, 1963; Tyler, 1950). By the early 1980's, 'evaluation' was used to describe the assessment of merit or worth (Eisner, 1979; House, 1980), thus giving further evidence to the confusion.

More recently, and more commonplace in a UK setting, 'evaluation' is associated with the measurement of non-person entities, such as programmes, modules and policies (Keeves, 1994; Wellington, 2008). This contrasts with term the term 'assessment', which is intended to measure the achievements of a person in relation to a set of outcomes, and this is the definition used for this study. Assessment in HE performs a variety of functions (Boud, 1995; Carless, Joughin, & Mok, 2006) however at its most basic level, it is seen as a measurement of a learner's achievement through a learning process, by which we can ensure and express academic standards (Higher Education Academy, 2012; Keeves, 1994; Quality Assurance Agency for Higher Education, 2013; Reeves & Hedberg, 2009). Assessment is a powerful tool for educators to influence the way in which students respond and behave, but it can also illuminate teaching effectiveness, institutional quality assurance and the student experience (Biggs, 2003; Brown & Knight, 1994; Gibbs, 1999; Kuh, Kinzie, Schuh, & Whitt, 2005; Ramsden, 2003).

The use of technology in the assessment process has been discussed frequently in the literature, given the opportunities it affords to provide innovative and authentic educational experiences (Llamas-Nistal et al., 2013; Pachler, Daly, Mor, & Mellar, 2010; Säljö, 2010). The rise of 'Web 2.0' brought new opportunities for contributing to content development, and the participation in online communities offered much promise for those in HE (Alston, 2009; Crook & Harrison, 2008; Dohn, 2009). Indeed, both Alston (2009) and Elliot (2007) called for many of the Web 2.0 'big ideas' to be incorporated into HE learning and assessment strategies, in an effort to provide more authentic, and personalised, educational experiences for students to prepare them for life in the 21st century.

From a literature perspective, the term *e-assessment* is relatively broad, encompassing a range of activities in which technology plays a crucial role. JISC's (2007) definition is often cited in the literature as the 'go-to' when referring to the activities it entails:

> *"…the end-to-end e-assessment processes where ICT is used for the presentation of assessment activity, and the recording of responses. This includes the end-to-end assessment process from the perspective of learners, tutors, learning establishments, awarding bodies and regulators, and the general public"* (p. 6)

The Qualifications and Curriculum Authority (QCA) (2007) concur with JISC, suggesting that e-assessment incorporates "one or more of e-testing, e-portfolios and e-marking" (p. 6), giving several examples to illustrate the point. These include - the design and delivery of formative and summative assessment; the marking of such assessment; analysis and reporting of grades; and the storage and submission of student work. Tomas et al. (2015) draw on the work of JISC to provide a broader definition, which has informed the definition used in this thesis:

E-assessment is an umbrella term for the use of ICT in the mediation of any part of the assessment process, which includes both computer-based assessment (CBA) and computer-aided assessment (CAA).

We can now differentiate e-assessment from other synonymous terms, with o*nline assessment* relying on the use of a Web-based/Internet mediated learning environment for the assessment process and is typically, although not exclusively, associated with automated testing (Buchanan, 2002; Llamas-Nistal et al., 2013; Pachler et al., 2010; Spivey & McMillan, 2014). As such, we could argue that *online assessment* is a mode of *delivery* for e-assessment, in the same way that *online learning* is mode of *delivery* for e-learning (Allen, Seaman, & Garrett, 2007; Bell & Federman, 2013; Conrad, 2002; Dabbagh & Bannan-Ritland, 2005). Technology-enhanced assessment (TEA) is also used in the same context as e-assessment, as a term to "complement the established use of technology enhanced learning" (Timmis et al., 2016, p. 455). TEA is concerned with the use of digital technologies to *enhance* formative and summative assessment (Huertas & Mor, 2014; Timmis et al., 2016), and as a result, it appears to almost preclude a much simpler approach to the support and/or mediation of assessment.

It is also commonplace for e-assessment to describe a subset of these tasks, such as the use of computers for the delivery and/or assessment of exams/tests (c.f. Laumer et al., 2009; WJEC, 2015). This then leads us on to *computer-based assessment* (CBA) and *computer-aided assessment* (CAA), which, again, are *methods* of delivery, since both rely on the use of technology or more specifically, a computer (JISC, 2007; Terzis & Economides, 2011; Thelwall, 2000; Tomas et al., 2015). In distinguishing one from the other, CBA describes assessment delivered and marked by a computer (such as automated tests), whilst the CAA uses a computer as *part* of the assessment process, thus relying on some human input at specific points.

3.3. The promise of e-assessment

The use of technology in the assessment process provides new opportunities, encouraging educators to re-think their practices; VLE's afford the prospect of capturing rich data about student learning and authentic studying behaviours, offering much promise which might not otherwise be reflected through

traditional forms of assessment (Buzzetto-More & Alade, 2006; Clarke-Midura & Dede, 2010). Although the literature on e-assessment is somewhat skewed towards a summative approach (Gikandi et al., 2011; Pachler et al., 2010; Wang, Wang, & Huang, 2008), many have reported on the positive effect of e-assessment, highlighting numerous pedagogic and administrative benefits, notably: efficiency; reduction in manual handling of submissions; the transformative nature of e-assessment; greater access; and, the ability to track student grades and feedback (c.f. Buchanan, 2000; Djordjevic & Milward, 2012; Ellis & Reynolds, 2013; Gikandi et al., 2011; Gilbert, Whitelock, & Gale, 2011; Oldfield, Broadfoot, Sutherland, & Timmis, 2012; Ridgway et al., 2005; Scott et al., 2008; Stödberg, 2012; Warburton, 2009). The continued growth within UK HE (Browne et al., 2008; Browne et al., 2010; Walker et al., 2012, 2014, 2016) now sees 87% of institutions making use of e-assessment in a formative setting, and 85% in a summative setting; a practice that appears to be the norm across a range of institutions, and the sector as a whole (Walker et al., 2016). There has also been an increased institutional focus on e-assessment provision; 52% of UK institutions are to review their e-assessment systems within the next two years, with Russell Group institutions indicating that it is their highest priority (Walker et al., 2016).

Whitelock and Brasher (2006) have attributed the increased use of e-assessment within UK HE to changing academic practices, since it affords learners the opportunity to self-assess, get instant feedback on learning, and improve performance in terminal assessments (c.f. Bax et al., 2006; Beebe et al., 2010; B. C. Buckley & Quellmalz, 2013; Gikandi et al., 2011; Pitt & Gunn, 2004; Ricketts & Wilks, 2002). Whilst some students may appreciate the savings in time and money from a paper-based submission (Bridge & Appleyard, 2008; Dahl, 2007), there is also a perception that e-submission, and therefore, e-marking equates to better feedback, since they can receive their marks and electronic feedback much more conveniently (Ellis & Reynolds, 2013; Fitzgibbon, 2013). This is not a view shared by all, with some suggesting that they would still prefer feedback to be delivered in person, whilst others believe the electronic nature of the feedback

makes it easier collate instances of inconsistencies in feedback (Howe, 2013; Newman & Beetham, 2017). Overall, the most recent UCISA TEL Survey indicates that the use of e-assessment, in general, has had a positive impact on the student experience (Walker et al., 2016). The benefits of e-assessment have also been recognised in the commercial sector, with UK Awarding Bodies now 'accepting' the administrative and flexibility benefits on offer, leading to increased usage of e-assessment the delivery of programmes across a variety of domains (Chapman, 2006; City & Guilds, 2016; Scottish Qualifications Authority (SQA), 2016).

3.3.1. 'Familiar' concerns

The concern that much of the broader literature on TEL in general does not consider fundamental teaching and learning issues (Kirkwood & Price, 2013) is timely, with a suggestion that a more scholarly approach is needed to maximise the effectiveness of TEL practice. Whilst some institutions have attempted to account for the use of e-assessment within existing assessment practices, others have attempted to implement specific policies to deal with this challenge. One could argue that the choice of technology to be used demands the most attention, not least because of the number of options available. However, there are other issues to contend with, including ensuring the 'right' fit with the discipline and pedagogy at a departmental level, and examining the impact at a larger scale on institutional policy and culture. Although face-to-face assessment practices can be used as a basis for e-assessment, the fundamental issues of validity, reliability and dishonesty require the upmost attention.

Warburton (2009) has attributed the slow uptake in the adoption of large scale, computer-assisted assessment within UK HE to technological concerns, with the 'fear' of failure, difficulty in use, and the need to mitigate risk noted as key concerns amongst staff. But these issues are not solely limited to the UK context; others have reported similar technological issues, in addition to those that that may not necessarily be of immediate concern in the UK, including accessibility, security, language translation, technical infrastructure, integration with existing

systems, and cost (Brink & Lautenbach, 2011; Ferrell, 2014; Honarmand, 2009; Osuji, 2012; Sangi, 2008). From a pedagogical perspective, the lack of visual cues and asynchronous communication typified through e-assessment suggest it cannot be conducted in the same way as face-to-face assessment (Garrison & Anderson, 2003; Reeves, 2000), with my own earlier work reporting on HE academics engaging with e-assessment noting concerns regarding 'ownership' of work, and the need to mitigate academic dishonesty (Alston, 2015).

The adoption of e-assessment is a complex task, with some suggesting that a re-think of existing pedagogical practices is essential, since a student's approach to learning can often be influenced by the teaching and assessment practices utilised by educators (Buzzetto-More & Alade, 2006; Kirkwood & Price, 2008). Not only does this put an onus on educators to consider their own practice to promote a positive attitude towards learning and assessment, and discourage surface learning approaches (Oosterhof, Conrad, & Ely, 2008), but they, in turn, will be looking to see what tools they have at their disposal, and for guidance on how they should be implemented. Such a move requires a large time commitment from those involved, which is perhaps even more apparent in an era where technology "permeates our lives both inside and outside of institutions of higher education" (Miller, Martineau, & Clark, 2000, p. 228). This is becoming more ostensible with the growing use of e-assessment impacting on variety of 'traditional' university policies and processes and educator practices (c.f. Cassidy, 2015; Chatzigavriil, Fernando, & Werner, 2014; Gikandi et al., 2011; Larreamendy-Joerns & Leinhardt, 2006; Rowley, Lujan, & Dolence, 1998; University of Ulster, 2016; Voce, 2015).

3.4. The challenge of e-assessment

Brown's (2011) review of HE concluded that it is not the same today as it was 10, or even 20 years ago, owing to an "expansion in the number of universities, a reduction in the formal categories of provision, and a growth in the number and proportion of comprehensive multi-campus institutions" (p. 20). Institutions can

seemingly no longer rely on traditional assessment methods for their students; they need to adapt and address the growing demand of innovative educators wanting to extend their teaching and learning practices, and from the current 'millennial' generation (Howe & Strauss, 2003) of students that have grown up in a 'quasi-corporate' society, who see HE as a purchased commodity, and demand so much more (Nilson, 2010). However, whilst many have suggested that institutions need to re-think 'culture' so as to create a fit with e-assessment (Boboc, Beebe, & Vonderwell, 2006; Bull, 2001; Reeves, 2000; Whitelock & Brasher, 2006), such a task can prove to be particularly cumbersome, especially since many assessment strategies are often rooted in departmental historical practices (Alston, 2015).

Although the literature on e-assessment practice across a range of disciplines and contexts, and the benefits it affords, is plentiful, there have been calls for more work to be done examining the developmental and implementation aspects of e-assessment (c.f. Crisp, 2012; Ferrell, 2014; Hiltz, Kim, & Shea, 2007; McCann, 2010; Milam, Voorhees, & Bedard-Vorhees, 2004; Tomas, Borg, & McNeil, 2015). Tomas et al.'s (2015) claim that much of the literature on e-assessment is "dominated by a focus on investigating the benefits of use and adoption" (p. 588) is warranted, which has, in turn, contributed to highly contextualised insights that can be hard to generalise from, suggesting that a better understanding of the impact within institutions is needed to "tackle the inherent complexity of e-assessment" (p. 591).

But this issue is not limited to e-assessment, with the wider literature on assessment practices sporting reflective accounts of lecturers' assessment of students, and guidance to educators on how they can improve their practice around the issues of validity, transparency and efficiency a regular occurrence (James, 2000; Leathwood, 2005). Given that the reporting of context-specific small-scale studies is not uncommon, particularly in technology focused research (Dillon, 1992; Jones & Behrens, 2003), Kirkwood and Price (2013) believe that small-scale studies can contribute to a lack of understanding with regards to the

processes involved, and subsequently become pigeonholed as "examples of good practice" (Gilbert, Gale, Warburton, & Wills, 2009), due to the nature of the of the localised practices involved. Such phenomena have also been observed by the HEA (2012), who note that this is a practice all too common within HE, with small-scale initiatives unable to become more widely embedded across an institution since they often only address specific problems rather than addressing the 'bigger picture'. So, what do we need to address?

Yorke (1998) noted almost two decades ago that the literature on assessment management – an area that covers a number of domains, including teaching and learning, assessment practice and quality assurance - was scarce and had yet to be fully addressed. Ellis and Reynolds (2013) have argued that this is still pertinent today, with work of Alistair Mutch (2002) a noteworthy exception, who suggested that whilst academics often spend time thinking strategically about assessment, there is often less time spent on understanding what is actually meant by the term 'strategy'. Ellis and Reynolds' (2013) attempt to address the concerns raised by Yorke, in light of the "ever-increasing array of [e-assessment management] tools and strategies" (p. 22), saw them focus on establishing systems for assessment activity, specifically those concerned with the collection, marking and returning of assignments; and a consideration of the workload implications related to this. Indeed, this appears to be becoming the norm across the sector, with several institutions (notably post-1992) having established policies requiring students to submit their work electronically (UCISA, 2016). But the focus on the management and collection of assessment in an electronic format seems to neglect not only other aspects of e-assessment, but the fit with institutional processes.

There have been some attempts to consider the impact at faculty and/or institutional level (c.f. Bancroft, Hynd, Dal Santo, & Reye, 2003; Brink & Lautenbach, 2011; Djordjevic & Milward, 2012; Downton, Glasfurd-Brown, & Mossop, 2006; Vergés Bausili, 2017), but much of this is done under the guise of *EMA*, rather than *e-assessment*. Indeed, the literature on EMA tends to only

consider the processes associated with one specific type of assessment; the submission of an essay/report/document by an individual, which is often quickly followed by the discussion of a specific type of tool to support the process, such as Turnitin (c.f. Canterbury Christ Church University, 2017; Ellis & Reynolds, 2013; Ferrell, 2014; The University of Sheffield, 2017; University of Brighton, 2015). One could also argue for the consideration of group-based assessment, non-text based assessment - such as a video or audio submission, and even the use of CBA/CAA, which as we have seen, is extremely popular in HE. Gray and Ferrell's (2013) view that implementation requires "careful planning to ensure all of the right pieces, relating to people, processes and technology infrastructure, are in place" (Implementing EAM, para. 1), and that "business processes are well designed and consistently implemented" (ibid, Implementing EAM, para. 2), is a good one. However, it again only focuses on the processes involved in implementing EMA - and not necessarily e-assessment - rather than the fit with existing institutional processes.

Whilst Laurillard's (2005) suggestion that e-learning would have been embraced in HE more rapidly had it been driven by educators seems plausible, the reality has indicated that this is not necessarily the case. Whilst it may well be the case that higher education is still suffering from "institutional sclerosis" (Maassen & Gornitzka, 1999), Bamber et al. (2009), argue that there is a much bigger problem. They contend that there often appears to be an underlying assumption that "people on the ground […] act in 'logical ways'" (p. 9), and whilst it should be possible for initiatives, such as e-assessment to be 'rolled out' at a broader scale, this particular view does not hold up to examination in university contexts. The 'professional bureaucratic' (Mintzberg, 1980) and 'organised anarchy' (Cohen, March, & Olsen, 1972) tendencies exhibited by universities are often accompanied by a resistance to change, with penchant to preserve the 'status quo' even when it is clearly ineffective to do so (Rumelt, 1995). As 'harbingers of convention', with a cultural and historical identity which is resistant to change (Becher & Trowler, 2001; Prichard & Willmott, 1997), universities are often "characterized by a multiple cultural configuration [whereby] change initiatives

are received and understood in different ways in different contexts" (Trowler & Knight, 2002, p. 147). Given that the literature on changing practices in HE with respect to TEL seems to focus on mostly generalised examples on what is beneficial at a local level, many do not necessarily account for the variety of challenges nor provide sufficient reflection on the processes encountered (Elton, 1999; Ferlie, Musselin, & Andresani, 2008; Findlow, 2012; Grant, 2003), the question of how a change in practice within institutions can be encouraged and overseen is somewhat complex (Rebora & Turri, 2010). Trowler, Ashwin and Saunders (2013) contend that the perennial problem is the use of an inappropriate theory of change – one which highlights innovators as 'beacons' – since the exact conditions in which innovative practice would create changes on a larger scale are often not made explicitly clear.

To get a better understanding of the processes involved the use of e-assessment, Bergquist (1992) would argue that a focus on context-based (micro-level) data is needed, through studying the individuals involved in the practice, to understand how and why particular practices operate. However, as already discussed, the difficulty of working at this level, is that such accounts become too contextualised to be useful to others and it may well ignore the preferences, habits and behaviours exhibited by those closely involved in e-assessment, and understand how the behaviour is shared more widely (Holtz, 2014; Kezar & Eckel, 2002). Consequently, an examination at the institutional level (macro-level) and the policies and structures available to support e-assessment would also fail to give an accurate understanding, given the lack of clarity with regards to what formal policies and structures are provided by institutions to support e-assessment, and the ways which in policies are enacted.

A review of the policy landscape with respect to e-assessment in HE notes that only 50% of UK institutions have an e-assessment/e-submission policy; a figure which drops to 44% when considering only pre-1992 universities (Walker et al., 2016). However, the latest HeLF survey (Newland & Martin, 2016) reports a higher figure of 64% of institutions having institution-wide policy, or code of

practice for e-submission, with policies for e-marking (25%), e-feedback (38.5%), and the electronic return of work to students (30.7%) less established. There have been many suggestions put forward with regards to why institutions have yet to update procedural documents to take into account e-assessment, including a lack of awareness of the complex challenges e-assessment brings, a lack of existing assessment strategies or policies to be updated, resistance from academic staff, and issues associated with the reliability of the technology (Ellis & Reynolds, 2013; Ferrell, 2014; Voce, 2015), but the continued synonymous use of the terms *e-assessment*, *e-submission* and *EMA* by UCISA poses perhaps one of the more concerning.

Of even more concern is that whilst the documentation on EMA often refers to the 'fit' of e-assessment within an institution's existing policies and formal structures, there has been little in the way of empirical evidence to support this. Whilst accurate results are difficult to obtain, given that the two most common surveys of UK HE TEL usage report on different aspects, it appears that the development of institutional policies for e-assessment have not kept pace with university technological implementations (Newland, Martin, Bird, & Masika, 2013; Voce, 2015). Even where institutions have attempted to embrace e-assessment (c.f. Newcastle University, 2010; University of Dundee, 2010; University of Manchester, 2012; University of Nottingham, 2017; University of the West of England, 2013), the practice is inconsistent. Some have disconnected e-assessment from 'traditional', paper-based assessment policy, with e-assessment seen as an 'add-on', to the point where they are even presented in separate documents, focusing only on specific aspects of e-assessment, such as e-submission, whilst another example highlights the implementation of a comprehensive policy covering submission, marking and feedback, but only in one faculty (Ferrell, 2014).

Newland and Martin (2016) have also noted that there are no universities with an institutional wide approach to the delivery of summative online examinations, which some claim is the de-facto description of the term 'e-assessment' (Bull &

McKenna, 2004; Conole & Warburton, 2005; Gipps, 2005; Lopez & Willis, 2004; Wills et al., 2009). However, the suggestion that institutions need a policy that covers the provision of e-assessment might well be a naïve one, since the literature presents an interesting perspective. At the time of writing, OldU does not have any specific policies for e-assessment in place at either the institutional or faculty level. However, there is a Coursework Submission Policy due to be implemented in 2016/17 academic year, which does address the requirements for-submission at the institutional level (see **Chapter 2.3**).

3.5. Examining the 'practice' of e-assessment

The challenge herein is to find a middle ground between institution (macro) and individual (micro), identifying findings which are informative at a level which can make a real difference. And although there have been many interventions at both the individual and institutional level, they will, and often do, merge into each other (Trowler, Fanghanel, & Wareham, 2005). It is at this level, the *meso* level, where we consider the influence of cultures, contexts, and communities of practice (CoP) (Becher, 1994; Becher & Trowler, 2001; Bergquist & Pawlak, 2008; Eckel & Kezar, 2003; Kezar & Eckel, 2002; Tierney, 2008; Trowler et al., 2005; Wenger, 1998), and there have been calls for more work to be done which considers the how institutional cultures impact on change processes, since they are often circumvented if they disrupt what is considered to be the norm (Bergquist, 1992). Whilst the meso- , or 'basic unit' (Becher & Kogan, 1992) typically relates to the departmental/faculty level, Pegg (2013) has noted that leadership and a shared vision is required at all levels in an attempt to support whole institutional change. However, within universities, Nicol and Draper (2009) suggest that, historically, it is at the faculty level where change initiatives are often disseminated from, since the institutional structures adopted often result power being devolved to faculty academics and leaders.

As such, there have been calls for a sociological and analytical approach to assessment in HE, to better understand why assessment initiatives might not be

successful, where it is crucial to understand the historical, social and political contexts in which assessment is created (Bamber et al., 2009; Crossouard, 2010; Leathwood, 2005). Crossouard (2010) believes that sociocultural learning theories "have [the] potential for supporting HE in developing [their] assessment practices" (p. 255), particularly since assessment, despite being predominantly bound within texts, is a socially constructed activity that is often interweaved with power relations (Filer, 2000).

3.5.1. A 'social practice' approach

Practice theory has a long and rich history and the unequivocal nature of the discourse is reflected in differing philosophical groundings (Heidegger, 1969; Wittgenstein, 1953) and the work of social and cultural theorists (Bourdieu, 1977; Giddens, 1984; Lave & Wenger, 1991), and seeks to examine the middle level between agency and structure (Hargreaves, 2011; Hopwood, 2010; Kemmis, 2012; Reckwitz, 2002; Schatzki, 2012; Shove, 2010; Trowler, 2014; Warde, 2005). Taking Giddens' (1984) structuration theory as a starting point, the basic domain of study of the social sciences is not the individual or the structures that surround them; it is the social practices that become the core unit of analysis. Social practice theory (SPT) therefore diverts the focus away from moments of individual decision making and on the 'doing' of various social, situated practices (Reckwitz, 2002; Schatzki, 1996; Shove, Pantzar, & Watson, 2012; Trowler, 2014). Indeed, Reckwitz's definition is the often-cited definition in the literature (Holtz, 2014; Trowler, 2014) and highlights the focus on the 'middle ground', focusing on the activities that take place in-situ:

> *… a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. (2002, p. 249)*

The varied background of practice theory means that it is not viewed as a coherent, unified theory. Instead, it can be typified by several theoretical

perspectives, each of which having implications for analysis, given the difference in their epistemological and ontological orientations (Kemmis, 2009; Moring & Lloyd, 2013). Although the field of practice theory is a "broad intellectual landscape" (Feldman & Orlikowski, 2011, p. 1241) and the discourse 'richly patterned', rather than 'unequivocal' (Hopwood, 2010), Antonacopoulou and Pesqueux (2010) suggest that the varied background provides richness in the concept of practice "opening up a myriad of possibilities" (p. 13). But despite the diverse contexts, there are common features that all practice theory perspectives share, which 'loosely' binds them together (Reckwitz, 2002; Schatzki, 2012). Schatzki contends that one of the principles which unites people in their united view is that practices are the primary social phenomenon through which other aspects of society - actions, institutions, orders, structures, etc. – can be understood.

At this point, it is worth noting the distinction between behaviour and social practices, particularly since it features in Reckwitz's 'go to' definition. A key difference between the two lies in their theoretical origins, which in turn determine the focus of attention (Strengers & Maller, 2015). Theories of behaviour have emerged primarily from theories of action where the individual (agent) is the focus of attention, with Reckwitz (2002) suggesting that agents are either self-interested individuals, or norm-following, rule-conforming social actors. However, it is clear that individual's do not exist in a 'social vacuum' (Hargreaves, 2011) and in some cases, it is the context which overrides many of the cognitive factors included in models of human behaviour (Stern, 2000). This then leads to theories of social practice, which do not endorse individual or structural modes of action; rather "the world is populated, first and foremost, by social practices in which people participate" (Strengers & Maller, 2015, p. 3).

This has led to the notion that social structures and technologies do not exist outside of the individual (or above), but are instead reproduced through the routine activities enacted by the 'carriers' of social practices (Reckwitz, 2002; Shove et al., 2012), with social practice theories aiming to overcome social

determinism and methodological individualism (Strengers & Maller, 2015). Whilst the distinction between behaviour and social practice has lead Shove (2010) to argue that the two are incommensurable, and more like 'chalk and cheese' (p. 1279), behaviour can be viewed as the "tip of the [practice] iceberg' (Spurling, McMeekin, Shove et al., 2013, p. 8). But whilst the study of practice does not necessarily render the individual completely passive, since they actively perform a wide range of practices in the normal course of everyday life (Hargreaves, 2011), it is important to note agency alone cannot account solely for structure (Kuijer, 2014).

3.5.2. Relevance to this study

As a theory of change, SPT is linked to an ideology of power, which operates through empowerment, collaboration, community of practice and collegiality (Boag, 2010). It is at this point where the 'practice' of e-assessment by academics in institutions can be likened to Lave and Wenger's (1991, 1999) communities of practice, which many believe are very much commonplace in organisations, providing a useful vehicle to better describe the dynamics and actions of people involved, as well as capturing the tacit knowledge that they produce (de Freitas & Oliver, 2005; McDermott & Archibald, 2010; Wenger, 1998). At the heart of any CoP is the notion of 'practice', which Wenger claims is always social in nature:

> *The concept of practice connotes doing, but not just doing in and of itself. It is doing in a historical and social context that gives structure and meaning to what we do. In this sense, practice is always social practice (1998, p. 47).*

Smith (2006) expands on the concept of practice, suggesting that it considers both the 'explicit' – the formal procedures, documents and language - and the 'tacit' – the shared world view, intuitions, and underlying assumptions. But whilst CoPs appear to place more emphasis on the negotiated nature of practice and a learning system, 'social practice' is more concerned with how they emerge,

and happen, in relation to other practices. Trowler (2014) posits that social practice theory views the social world as 'ensembles of practices', describing them as "regular sets of behaviours, ways of understanding and know-how and states of emotion that are enacted by groups configured to achieve specific outcomes through their activities" (p. 21). In the HE domain, such 'practice' can be likened to Trowler and Cooper's (2002) concept of teaching and learning regimes (TLR), with individuals actively involved the creation and enactment of 'culture', many of which are often invisible since they are often considered to be the norm.

Despite having been adopted in range of contexts, including: organisational studies (Antonacopoulou & Pesqueux, 2010; Feldman & Orlikowski, 2011; Holtz, 2014; Warde, 2005; Wilkinson & Kemmis, 2014); information literacy and science (Cox, 2012; Moring & Lloyd, 2013); professional practice (Binns, 2015; Lindberg & Rantatalo, 2014) and environmental change (Hargreaves, 2011), there has only been limited application of SPT in HE contexts (Trowler & Knight, 2002), with only a handful of examples considering the use of technology in learning and teaching (Bolldén, 2016; Brown & Duguid, 1991; Goodyear, 1995; Trowler, 2014). Given the similarities of SPT with a number of methodological approaches, including ethnomethodology, phenomenology and structural functionalism (Hopwood, 2010; Knight & Trowler, 2001), SPT provides a "more holistic and grounded perspective on behaviour change processes as they occur in situ" (Hargreaves, 2011, p. 79), illuminating the difficulties when attempting to challenge and change 'practices'; an issue all too familiar in a university context (Binns, 2015; Wilkinson & Kemmis, 2014).

3.6. Summary

The issue of synonymous terminology in the education domain has long been acknowledged for many years, yet there still appears to be a range of terms in use today to describe technology related practices. Tomas et al.'s (2015) claim that the apparent focus in the literature on the benefits of use and adoption of e-

assessment rings true in that it has somewhat masked some of the bigger problems involved in the design and implementation of e-assessment, which are more crucial to solve to ensure its success, rather than whether it has or has not worked in a particular context. But whilst Gikandi et al.'s (2011) extensive literature review has indeed served as a starting point to solving some of the issues surrounding terminology, the exclusion of defining 'e-assessment', only serves to add to the confusion regarding what it actually entails. If we are to move forward as aim for a more aspirational approaches towards enhancing assessment through technology as suggested by Timmis et al. (2016), then it is only right that we examine the terminology used by those involved in the design and implementation of e-assessment, and uncover to what extent the synonymous use of terminology has impacted on practice.

Whitelock and Brasher's (2006) early attempts to identify the enablers and barriers to e-assessment was crucial in identifying the issues impacting on the widespread use of e-assessment, many of which are still evident in practice today: institutional culture; infrastructure; the attitudes and training of staff involved; and, the lack institutional policy to govern the quality, accessibility and reliability of e-assessment. My own earlier work on the challenges for implementing continuous online assessment reported the evidence of historical practices with regards to assessment strategies (Alston, 2015), but this study was carried out at a small scale and focused on only academics in one department. Similarly, whilst Tomas et al.'s (2015) institutional level study confirmed the existence a number of these barriers, there is no indication as to the type of institution involved given the differing affiliations of the authors, and only the views of academic staff were represented, without consideration of those in PS roles who often play an important part in the operational aspects of educational technologies. Do academics and PS align/differ in their views with regards to the barriers that impact on the successful design and implementation of e-assessment? Similarly, do they align/differ with regards to the impact of the structures and formal policies on e-assessment?

The gap uncovered in this chapter which this thesis aims to contribute to is that more needs to be done to examine the impact of e-assessment on culture, context, communities of practice, and the resulting change processes within HE institutions. To pursue this, social practice theory - which has only seen a limited application within HE and the use of technology in teaching and learning (Bolldén, 2016; Brown & Duguid, 1991; Goodyear, 1995; Trowler, 2014) – is adopted as a theoretical framework to examine the situated practices of e-assessment within OldU, since they can often contribute to the creation and enactment of 'culture' within institutions (Trowler & Cooper, 2002).

Chapter 4 presents the approach taken to the research study, detailing the rationale for the chosen methodology, the data collection methods, the participants involved in the study and the data analysis framework. Finally, the quality of the research is considered, with regards to trustworthiness and limitations of the study, concluding with a discussion of the ethical considerations.

Chapter 4 - Research Design

This chapter describes the qualitative approach taken to this study in terms of the methodology used, the data collection methods adopted, the participants involved, and the approach to analysing the data. It also considers the researcher's ontological and epistemological assumptions and how they related to the design of the study, whilst also highlighting the issues around insider research. Finally, the quality of the research is considered with regards to the trustworthiness and limitations of the study, concluding with a discussion of the ethical considerations.

The aim of this chapter is not to provide an exhaustive and comprehensive account of the various issues relating to the topics described. Instead, it highlights the key issues central to the approach taken in this study and the potential impact they have on subsequent conclusions.

4.1. Overview

Adopting institutional ethnography as a methodology, this study was conducted from a 'critical realist' perspective, combining a realist ontology and constructivist epistemology. Ethical approval for the study was gained from both Lancaster University and OldU before the study commenced. A two-stage sampling strategy yielded a total of 23 participants taking part in the study, from a range of departments across OldU. Two additional members of staff (1 academic; 1 PS) were also recruited to participate in a pilot study. Participants were informed of their rights in relation their contribution to the study, and gave signed informed consent before participating. All data included in this study has been pseudo-anonymised, with the removal of identifiable features for both the institution and the participants involved.

The main study participants were involved in semi-structured interviews, which were audio recorded so that they could be transcribed for use in the analysis

process, with data collected from the pilot study not included in the subsequent analysis process. Relevant institutional policies and strategies were also reviewed in relation to the study, whilst a reflective journal was used to document my thoughts and experiences as the study progressed. Interview transcripts were then analysed using the Framework method, providing a systematic approach to the analytical process.

4.2. The Researcher

4.2.1. Research Position

Cohen et al. (2011) argue that there are several competing views of the social sciences, which stem from the "differing conceptions of social reality and of individual and social behaviour" (p. 5). These views, or 'paradigms', describe an agreed model or pattern for how we view reality (Cohen et al., 2011; Guba & Lincoln, 1994; Kuhn, 1962; Mason, 2002), defining a shared set of beliefs and principles within a particular domain, and a view of what is accepted as correct scientific knowledge. Underpinned by implicit assumptions that illuminate the differing ways in which people view and construct the world we live (Burrell & Morgan, 1979; Cohen & Crabtree, 2006; Cohen et al., 2011; Silverman, 2013), it is essential that a researcher's epistemological and ontological assumptions are firmly established for a research study. However, as a novice researcher, it can often prove to be challenging when trying to identify one's stance, with a qualitative researcher's views often fluctuating over a variety of positions (Butler-Kisber, 2010).

The practices and experiences of the participants involved in this study are 'subjective' accounts, as they interpret their actions in relation to 'texts' within their own disciplinary context. Alluding to the use of a qualitative approach and starting with a focus on human behaviour (Cohen et al., 2011; Creswell, 2007) to examine the construction of the individual realities of the participants, such a

starting point aligns with my own philosophical stance as researcher, which Maxwell (2012) would describe as a that of a 'critical realist'.

Maxwell's take on critical realism draws on the work of philosophers, physicists, linguists, evaluation researchers and qualitative researchers (c.f. Barad, 2007; Campbell, 1988; Cartwright, 2007; Hammersley, 2002; Lakoff & Johnson, 1999; Pawson, 2006), in that one retains ontological realism, whilst accepting a form of epistemological constructivism and relativism. Whilst departing from "the most prominent manifestation" of critical realism – Bhaskar's 'emancipatory perspective' (c.f. Bhaskar, 2011; Corson, 1991; Hammersley, 2002) - Maxwell does agree with Bhaskar on the importance of distinguishing ontology from epistemology. Maxwell states that much of the discourse on realism highlights a distinctive feature common amongst all forms; realists deny that we can have an *objective* knowledge of the world, instead accepting "the possibility of alternative valid accounts of any phenomenon" (2012, p. 5). A world view is grounded in a particular perspective, and as such, realism suggests that there can be more than one correct, scientific way of understanding reality (Frazer & Lacey, 1993; Lakoff, 1987). As a critical realist, I therefore acknowledge that there is a real world that exists independent of our own perceptions and constructions (ontological), however our *understanding* of the world is undeniably a construction from our own perspectives (epistemological).

As a critical realist, I find myself aligning with Maxwell's view that "an individual's physical contexts have a casual influence on their beliefs and perspectives" (Maxwell, 2012, p. 20). As such, it is my epistemological position that there is a need to focus upon the 'details' and the reality behind them, which are detailed in people's experiences of e-assessment and how they interact with the various facets of the institution in a particular context, setting and time (Cohen & Crabtree, 2006). Whilst constructivists and some post-positivists dismiss reality or the importance of individual perspectives, realists posit that individuals' perspectives and their situations are not only real phenomena, but they are indeed separate entities that can interact with each other (Maxwell,

2012). Constructivists also often claim that the term 'reality' implies that there is only one correct description – a "God's eye view" (Putnam, 1999), however Maxwell (2012) suggests that obtaining a purely objective account, independent from all other perspectives, is impossible. Whilst a critical realist *rejects* the idea of 'multiple realities', with independent worlds constructed in society decidedly incommensurable, it is, nevertheless, compatible to have different, valid *perspectives* on reality, with the role of a researcher then to make sense of these interactions in order to understand a person's personal view of a situation (Creswell, 2007; Maxwell, 2012).

4.2.2. 'Insider' Research

Maruyama's (1974) view on this research would suggest that this study is 'endogenous', since I am employed at OldU whilst carrying out this study. My role within the study means that I could potentially be classed as an 'insider' (Herr & Anderson, 2005; Trowler, 2011, 2012); one who is doing research within their place of work. There is, however, a 'grey' area about what constitutes insider research within the literature, with some positing that it is better to visualise a continuum between 'insider' and 'outsider' research, rather than them being at opposite ends of the scale (c.f. Carter, 2004; Labaree, 2002). Others, however argue that the two positions are incommensurable (c.f. Merton, 1972; Titchen & Hobson, 2011), in that at researcher should be clearly in grounded in one or the other. Merton argues this point further, suggesting this is a misconception, in that we are rarely ever located at one end of the scale. In the instance of communicating with participants, whether they are known to me or not, the notion of insider research provides me with many affordances. These include a shared mutual knowledge (Smith, 1982) and an ability to understand the underlying meanings of statements, in what Hull (1985) identifies as the 'second record'. Being literate in the culture at 'OldU' affords me the opportunity to produce emic accounts; accurate depictions of the participants' social world, which highlight a specific frame of reference and context.

Despite the multitude of benefits, there is a potential risk of introducing bias into the research which could undermine any conclusions drawn (Costley & Gibbs, 2006). Literacy in OldU culture could also prove to be a hindrance for the same reasons as it being advantageous. Given my varying roles in this study, the term 'insider' is likely to be loosely applied. In some respects, I will be interacting with colleagues that I may or may not know, whilst simultaneously researching aspects of the intuition that are previously unbeknown to me. If the research were to be strictly conducted within my own department at OldU, then I would argue that the term 'insider' would be more strictly applied, with references to power imbalances likely to be more prominent.

4.2.3. Reflexivity

It is at this point where I must acknowledge that my age, gender, training and qualifications will differ from those of the participants involved, and may have an impact on how they perceive me. In addition, my position as a PhD researcher and academic within OldU may also have an impact on participants and could have blurred the lines with regards to my actual role during the research. In this instance, the aim was to ensure that I was very much the 'student', and that that interviewee was the 'expert' as they recall their experiences in the design and implementation of e-assessment at OldU. This was facilitated through the email invitation which stressed the importance of eliciting the experiences of the participants, and how they would inform the research that would take place. My role as a member of OldU's technology committee (OldUTELC) enables me to interact with senior university figures on a regular basis, with such a position granting me privileged access to knowledge within OldU. It is in this respect that I see myself aligning more with the 'continuum' approach to insider researcher; the sliding scale rule clearly applies here, depending on the aspect of the study, or participant, I am involved with at a particular point in time.

Producing socially and culturally neutral accounts of participant experiences may prove to be challenging, since I may well be 'normalised' to the practices

within OldU and may lose sight of what is important. Conversely, participants involved in the study may already know me in a particular context and could inadvertently introduce bias in their own responses, and only 'tell me what I want to hear'. Indeed, Ormston, Spencer, Barnard et al. (2014) acknowledge that it can be difficult to achieve 'empathetic neutrality' in research conduct, but one should strive to avoid bias and be as neutral as possible in all stages of the research process. Trowler (2012) suggests that some of these concerns may be alleviated by introducing 'polyocularity' into the study, whereby an observer has another perspective on which they can draw upon which may be in their 'blind spot' (Alrøe & Noe, 2014). To alleviate such concerns, the study population includes two participants who have a similar role to myself within the institution. Here, I am afforded the opportunity to use their experiences to validate my own assumptions and beliefs represented in the study.

4.3. Research Paradigm

With feminist, Marxist, ethnomethodology and phenomenology influences (DeVault, 2007; Quinlan, 2009; Smith, 2005, 2007), Institutional Ethnography (IE) is an approach developed by Dorothy Smith (1987, 1990b, 1993, 2005) which set out to better understand the everyday experiences of women and how these were shaped by power relations. Smith believed that many of the methodological approaches in sociology research did not account for the ways in people understood their own experiences, and proposed a method of enquiry that would instead begin with the embodied experience of a person, and then move to investigate the social and institutional factors impacting on that experience. She argued that individuals' experiences were often taken as 'data' by researchers, who then proceeded to try and 'fit' it to a theoretical framework, thus losing the actual lived experience (Smith, 2007), but taking an IE approach sees people treated as the *subjects* of knowledge rather than *objects* of study, with researchers learning from the lived experiences of individuals:

> *"[Institutional Ethnography] explores the social world as it is known experientially, and it explores it as people's activities or doings in the actual local situations and conditions of our lives. The idea is to discover and map that world so that now it is being put together and can be made observable from the point of view of those caught up in it." (Smith, 2007, p. 411)*

It is this point where we see both the similarities and departures of IE from both ethnomethodology and phenomenology. Whilst all are interested in the 'local knowledge' of the individual, an ethnomethodological approach perhaps only 'scratches the surface' with respect to an individual, in that the focus on the individual and conversation does not provide any clarification on the organisational structures, or the linkages between individuals (Smith, 1990a; Walby, 2013). Conversely, a phenomenological approach seeks to understand the essence of a phenomenon and the meaning individuals attach to their experiences (Giorgi, 1997; Heidegger, 1988), rather than attempt to disentangle the factors impacting on their experiences. Smith's critiques of the two approaches suggest that they only view the 'social' as coordinating peoples activities, with ethnomethodological accounts relying on a 'knowing', which happens before conversations take place, and phenomenology privileging etic knowledge (Smith, 1987, 1990a).

As an empirical approach combining both theory and method, IE seeks to investigate the links between local settings and the processes of administration and governance through texts embedded within an 'institution' (DeVault & McCoy, 2003; Ng et al., 2013; Smith, 2005; Walby, 2005). It has a commitment to begin and develop inquiry in the world we live in, examining the experiences of individuals in their day to day activities, and to reveal how these experiences are organised, connected to and shaped by the mechanisms of power operating through institutions and how these structure, and govern, the lived experiences, often referred to as the 'ruling relations' (Babbie, 2008; Slade, 2010; Smith, 2005; Walby, 2005). DeVault and McCoy (2004) explain that the use of the term *institution* does not imply that this approach is specifically for one type of

organisation; rather, it is focused on understanding how institutional processes co-ordinate activities across multiple sites at the local level. Similarly, the use of *ethnography* illustrates the importance of using research methods that can explore these everyday activities. Such methods have the ability to reveal the 'ruling relations' that exist, which are typically the textual venues where power is generated and disseminated across multiple sites (Wright & Rocco, 2007). DeVault and McCoy (2004) argue that this is crucial, so as to understand the processes that produce experiences of subordination. As such, Patel (2015) argues that IE is well suited for professions where 'caring' and being 'helpful' are prominent, which is often hindered as a result of organisational practices obstructing the way. IE has been a popular research approach in a range of disciplines, including health (Prodinger, Shaw, Rudman, & Townsend, 2012; Quinlan, 2009; Rankin & Campbell, 2009), education (McCloskey, 2016; Ng et al., 2013; Tummons, 2010; Vaughan, 2015), policy studies (Gerrard & Farrell, 2013; Nichols & Griffith, 2009; Teghtsoonian, 2015) and more recently, for human geographers to better understand institutions (Billo & Mountz, 2016).

For those adopting an IE approach, it is crucial to start with individuals, in order to trace the 'texts', which include procedures, policies and even cultural practices that disclose how power is embedded and perpetuated within social institutions and structures (Wright & Rocco, 2007). The purpose of this is to show "how people are aligning their activities with relevances produced elsewhere in order to illuminate the forces that shape experiences" (p. 294), particularly since the implementation of policies and procedures "inevitably affects local practice" (Longhofer, Floersch, & Hoy, 2012, p. 84). Campbell and Gregor (2004) highlight the importance of this, suggesting that the individual provides an entry point into the actualities of the world by revealing the material effects of policy decisions. Smith's draw to the concept of 'alienation' (Campbell & Gregor, 2004) is well placed here, since the actions and language of workers are shaped by their environment and institutional practices, as they become estranged from their working practices. As Trowler (2012) suggests, IE affords the opportunity to

view local practices in terms of the bigger picture, regardless of the perspective within the institution.

It is here that IE proves to be a useful tool for studying the impact of 'texts', since it is a recognised method for studying the social processes of organisational life (Longhofer et al., 2012). McCoy (2004) proposes that such an approach to research would instead yield knowledge *for* people, rather than *about* them, mapping work processes, discourses and social practices that are shaped by the environment and institutional processes. At this point, Smith's journey to develop IE becomes clearer. It affords the opportunity for a researcher to engage with the scrutiny of 'material text' within an institution, whilst also considering the social aspect and the people involved; a critique which Taylor (1997) presents of traditional policy analysis, which is often "dominated by commentary […] rather than empirical research" (p. 23).

Texts are often an integral part of what people do every day and they are held in high regard in IE, since they can uncover details regarding how people's textual practices are a source of data that can illuminate the connections between differing sites (Bisaillon & Rankin, 2012). Described as the "central nervous system running through and coordinating different sites" (DeVault & McCoy, 2004, p. 765), Bisaillon and Rankin (2012) argue that texts are replicated across place and time, helping to connect the local and wider settings. It is in this instance where we see the value of texts, as their circulation and reproduction within an institution transmits the standardised messages that rule and regulate the way people live and work (Bisaillon & Rankin, 2012).

IE adopts methods often seen in other ethnographic approaches, notably observations and in-depth interviews with participants (Hammersley & Atkinson, 2007) to gain a deeper understanding (Geertz, 2003; Ponterotto, 2006). The use of the interview serves as a 'window' in identifying the problem, or towards people who are 'experts' (Wright & Rocco, 2007), however, this is where IE differs from traditional ethnographic approaches. The aim is not the discovery of meaning or to produce a 'thick description'; it is to discover the

customs of coordination and control that shape the everyday lives of people, with the data serving as an 'entry' to the social relations of a setting (Campbell, 1998; Smith, 2005). It is this 'starting' point that Campbell highlights how IE departs from other ethnographic approaches:

> *"Experience is the ground zero of analysis. The analysis begins and returns to it, having explicated how the experience came to happen as it did. The objective of making the analysis is to open up possibilities for people who live these experiences to have more room to move and act, on the basis of more knowledge about them" (p. 56)*

IE requires *entry level* data that focuses on the individual and the local setting, and *translocal* data, which extends beyond the individual accounts to include social relations outside of the local setting (Deveau, 2008; Smith, 2005; Wright & Rocco, 2007). To obtain such data, IE researchers must investigate the 'local' experience from an individual standpoint, enabling them to analyse the processes and the larger social organisation through the lived experiences. It is only then can they begin to discover the connections between the macro and micro relations (Smith, 1987). Given the research-led nature of OldU, and my own experiences as an academic working there, an IE approach lends itself well to the study to uncover ruling relations that govern an individual's e-assessment activities, and how these are coordinated across multiple areas of the university.

4.3.1. Critiques of IE

Walby (2013) argues that the role of an institutional ethnographer is to "listen for and ask about the texts people work with in organisations" (p. 143); a point which Smith (2005) suggests is important since it is the secondary dialogue between the institutional ethnographer and transcript where the experiences of the people involved come to the fore. Yet it is in this point of secondary dialogue where the researcher makes sense of what has been said, reassembling the experience in to something that can be easily read back. Walby (2013) contends that it is at this point of the reassembling of the transcript during the process of

data analysis, that there is a danger of altering the story that has been told. Weston et al. concur, suggesting that the way in which a transcript is put back together can alter the story being told, potentially producing unintended outcomes.

But whilst the process of data analysis can be an incredibly subjective process, the issue of 'editing' or reassembling the data raises concerns about what is included and excluded during this process when working within the confines of IE (Walby, 2013). Given IE is positioned as an ongoing process of discovery and explication to find out more about the institutional connections that shape the local experiences (Grahame, 1999), Devault (1999) argues that the resulting analysis continually leads to the formulation of new questions to be asked and thus the analysis can never be truly finished. As a result, Walby (2007) maintains that IE has a difficulty in fully transcending objectification, in that the researcher will always maintain a relatively high degree of authority over how subjects are ultimately represented.

4.3.2. Extending the paradigm

As already discussed, a critical realist perspective declares the existence of a natural and social world, whilst enabling a resolution of theory and practice consistencies through a re-telling of an experience (Longshore Smith, 2006). A critical realist approach also encourages a holistic approach to examining e-assessment practice, drawing on multiple research questions and research methods to uncover the ruling relations and 'wicked issues' at play (Bore & Wright, 2009). By negating the need for repeated observations, since the cause of an event or practice is not dependent on the number of times it is observed, the critical realist perspective provides the opportunity to account for the complex, casual explanations for e-assessment practice that "unfold in open and continuously dynamic practice settings" (Longhofer et al., 2012, p. 30) as they occur within the local environment.

The adoption of an IE approach to this research is indeed representative of a critical realist perspective, since the ruling relations evident within HE contexts often consist of many layers of causal mechanisms, suggesting that a practice approach is needed to examine the how ruling relations impact those at OldU, and help to illuminate the complexity of HE environments (Houston, 2005; Longhofer et al., 2012). Espousing an SPT perspective on the research takes this further, illuminating the difficulties that occur when attempting to challenge and change practices, particularly where institutional ruling relations govern how such practices should take place. The key here will be to shed light on how e-assessment practice is perpetually affected by institutional cultures and the enactment of institutional policies at the local level.

4.4. Research Sample

4.4.1. Study Population

One of the first steps in sample design is to identify who or what is to be sampled (Ritchie, Lewis, Elam, Tennant, & Rahim, 2014). For this study, the research site was defined as OldU and the study population was determined to be the academic and PS staff who work within the institution, with participation based on their experience of designing and/or implementing e-assessment at OldU. The research sample was selected for the following reasons:

- The sample chosen had to be sufficiently large to enable the results to be meaningfully discussed in the context of the research questions identified in **Chapter 1**;
- The sample needed to provide a breadth of data, to enable both academic and professional service views to be set against the local and national context;
- The data to be collected by the methods discussed below would be extremely 'rich'; therefore, the size of the sample would have to be restricted to preclude an overload of data.

4.4.2. Sample Frame

The issue of sample size in qualitative research is widely contested in the literature (cf. Caelli, Ray, & Mill, 2003; Tracy, 2010), and the use of small sample sizes where there is a focus on the individual is not uncommon (Cresswell, 1998; Crouch & McKenzie, 2006; Morse, 1998). Whilst many believe that it is only large sample sizes which offer the promise of validity in qualitative research, Crouch and McKenzie (2006) argue that "the labour-intensive nature of research focused on depth (including, sometimes, 'reflexivity') can be evoked to justify a small sample size" (p. 484). Baker and Edwards' (2012) discussion paper goes some way in highlighting the difficulties in determining a sample size for qualitative research, presenting a number of responses from 'experts'. Daniel Miller's ideal number of zero suggests that it is better to be immersed in people's lives and practices, rather than engaging in the "artificial procedure that we call an interview" (p. 31), whilst Fyvbjerg's (2006) suggestion that the emphasis on a single case, akin to a 'black swan', is useful for testing a general rule. Ultimately, the collective agreement suggests that sample size depends on several factors, unique to both the research and the topic in question.

A number strategies for devising the sample frame were considered, and subsequently dismissed as discussed below. Firstly, a purposive sampling strategy (Mason, 2002; Patton, 2002) considered selecting only academic participants from one faculty, whilst those in a PS role would be selected from across the institution. This was in part due to the size of the institution, the active use of e-assessment within this faculty, and the pragmatics of time. A stratified purposive sample (Creswell, 2007; Patton, 2002) would have given an opportunity to elicit varying experiences from those involved, whilst an approach likened to Thompson's (2002) first type of snowball sampling, considered asking colleagues who work in a similar role to me within the faculty to identify participants who they knew had experience of e-assessment.

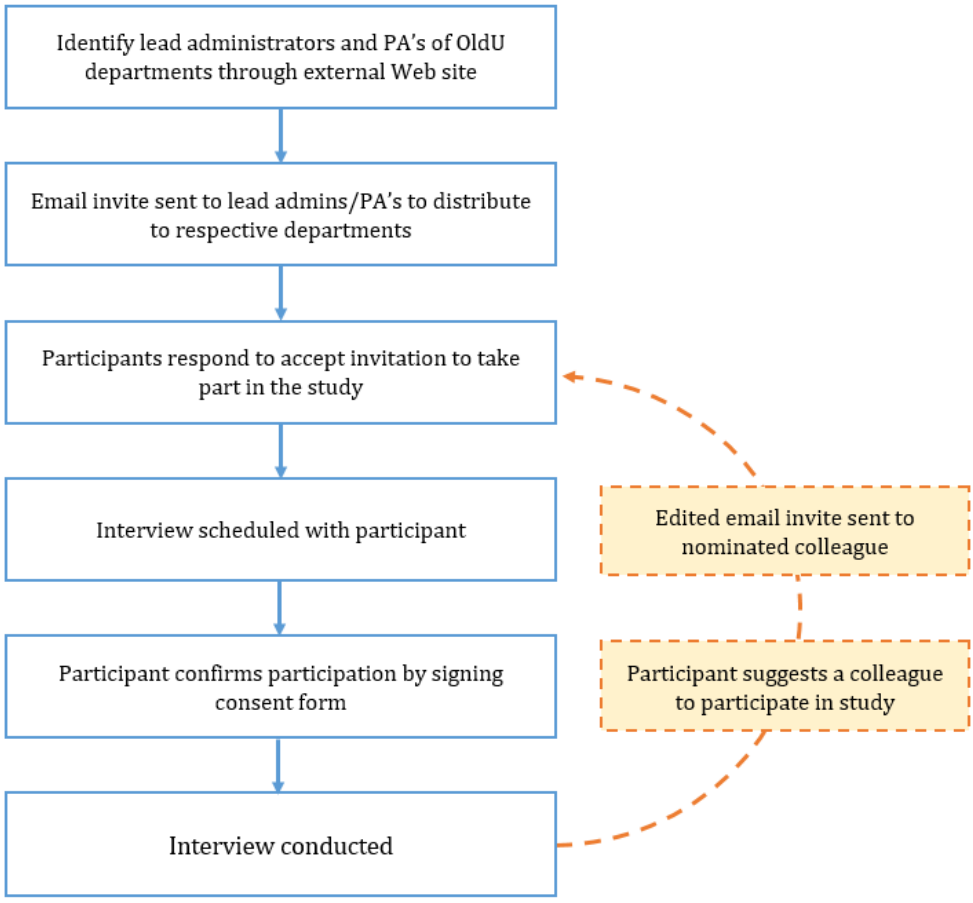

Figure 4.1 Participant selection and recruitment process

Neither of these strategies were adopted since both could potentially preclude a variety of experience from other academics, ultimately imposing limitations on the validity of the findings (Berg & Lune, 2016). Whilst some argue a 'snowball' approach may well compromise the diversity of the sample, it is well suited to this study since it is useful for populations that are difficult to identify, and can be used to supplement other methods to obtain a sample frame (Newby, 2014; Ritchie et al., 2014). Given the above, the following two stage strategy was adopted and the process is summarised in **Figure 4.1.**

A stratified purposive sample was initiated by devising a list of 'top level' departments within each of the faculties within OldU's organisational structure. From this list, the Lead Administrator, and personal assistant (PA), within each department was identified via the contact details on each individual department Web page on OldU's Web site, yielding 16 top level departments identified for

the study. The Lead Administrators (and respective PAs) were then sent an email, asking them to forward on the email to all academic and PS colleagues within their department. Involvement in the study would then be based on participant self-selection, based on their experiences of designing and/or implementing e-assessment at OldU. Whilst there are obvious limitations to adopting a self-selecting sample, not least in that it can encourage enthusiasts or those with strong opinions to come to the forefront, Newby (2014) suggests that it can be useful for those in an organisation to express their opinions, particularly where the issue in question is likely to prove sensitive in nature. A consequence of this is that any findings should be treated with caution. From this sampling phase, eight administrators confirmed that the email invite had been forwarded onto their respective departments, offering the potential of recruiting participants from 22 sub-departments across OldU. This generated 11 participants responding to opt-in to the study. Given the size of OldU as an institution, it was believed that the small number of participants opting to take part in the study would not provide enough data to competently answer the research questions presented in **Chapter 1.4.1** and with this, a second stage of sampling was planned.

During the early stages of data collection, many participants referred to colleagues, suggesting that I contact them in relation to the study. Adopting a 'snowball' approach to access these 'hard to reach' participants resulted in a further 15 possible participants being identified. These were then sent a separate email invitation, indicating that they had been recommended by a colleague to take part in the study. Participants from CUT typically recommended colleagues from outside of their own department, thus helping to diversify the sample frame. Although Ritchie et al. (2014) note that there is a danger when adopting such an approach to generating a study population, they do suggest that this can be mitigated to some extent by specifying required characteristics, which was indicated in the second email invitation. From this recruitment phase, 12 colleagues responded and expressed an interest to take part in the study, resulting in a total 23 participants for the study. **Table 4.1**

provides an overview of the distribution of participants, whilst **Figure 4.2** shows a demographic overview of the participants.

Area	Roles represented
Central University Teams (CUT)	Academic; Professional Services
Faculty of Engineering and Science (FE&S)	Senior Lecturer; Lecturer; Post-Doctoral Researcher
Faculty of Life and Health Science (FLHS)	Professor; Reader; Senior Lecturer; Lecturer; Professional Services;
Faculty of Social Science and Humanities (FSoSH)	Senior Lecturer; Lecturer

Table 4.1 Distribution of the OldU participants involved in the study

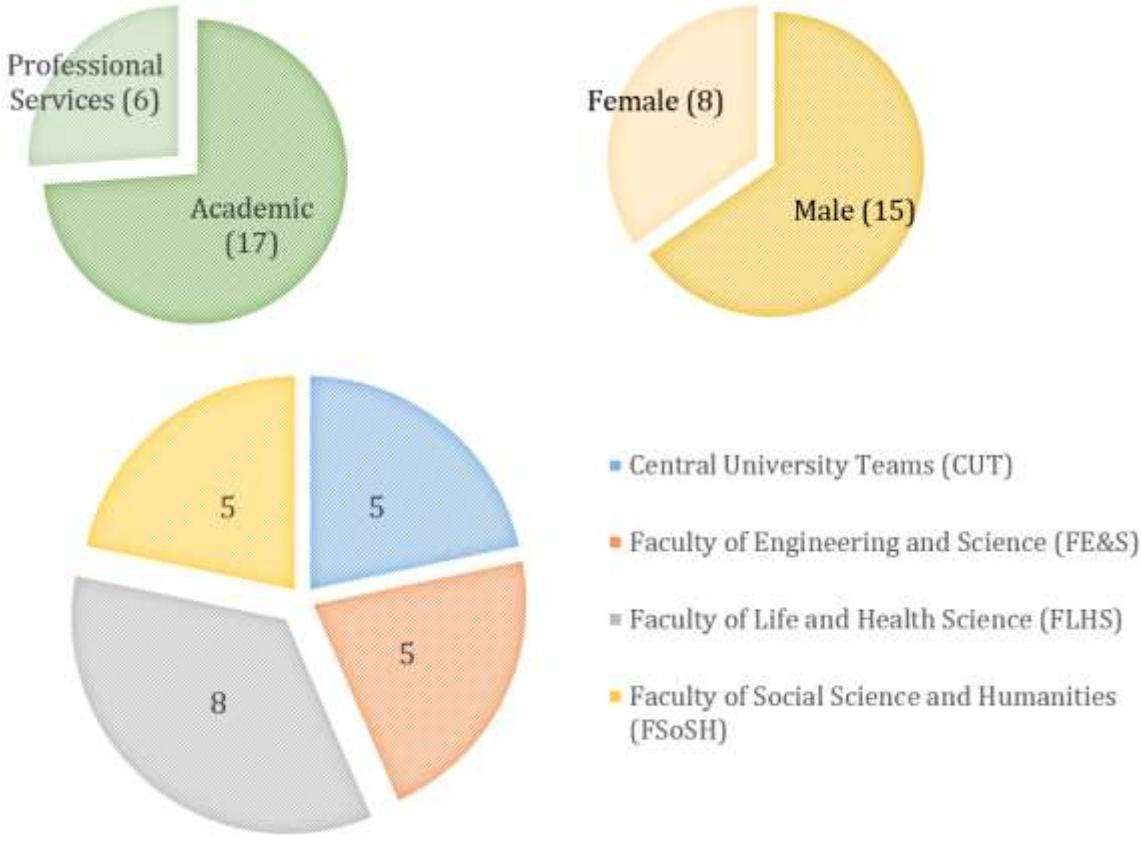

Figure 4.2 Demographic information of OldU participants involved in the study

4.5. Research Methods

4.5.1. Institutional Documentation

At the time of writing, OldU was preparing for an institutional audit and was in the process of formalising where and how official documentation could be located electronically. The reviewing of documentation would prove to be a time-consuming task, since each of the policies and strategies indicated above were not located in similar locations. For example, OldU's strategy for TEL was located on the central TEL department Web pages, whilst the policy on payment of student fees – which explains what 'financial suspension' entails, was located under the Student Administration Department.

Given the lack of formal policies and strategies relating to the design and implementation of e-assessment at OldU, a review of existing OldU documentation was undertaken to identify any policies/strategies that would likely impact on the participants experiences of e-assessment. These included OldU's strategy for TEL (OldU, 2013b); the Policy for Assessment (OPfA); the policy on payment of student fees (OldU, 2015b), particularly the circumstances surrounding when 'financial suspension' is applied to students and what this affects; and, the most current university strategic plan (OldU, 2009). Further details regarding each of these documents can be found in **Chapter 2.3**.

The lack of formal policies relating to the design and implementation of e-assessment not only influenced the formulation to the research questions for this study, but also contributed to the questions devised as part of the interview protocol. This was in part owing to that whilst it was evident that e-assessment was being conducted across OldU, it was doing so without any guidance from the institution, thus likely creating localised practices regarding its use. Indeed, this line of enquiry of integrating texts into data collection and analysis, affords the opportunity to uncover the knowledge about how texts work (Bisaillon &

Rankin, 2012), and thus contributed to the line of questioning in the subsequent interviews.

4.5.2. Interview Protocol

Interviews are widely used in research as a principle means of gathering data through language for analysis (Cohen et al., 2011; Denscombe, 2007; Kvale, 1996), since they enable people to express their point of view, enabling others to see the world from perspectives other than their own (Rubin & Rubin, 2012). Interview styles vary, from the more formal, comparable to a questionnaire, through to the less formal, non-directive interview whereby participants are responsible for initiating and guiding the course of the interview (Cohen et al., 2011). DeVault and McCoy (2004) agree, suggesting that a more suitable term instead of interviewing might be "talking to people" (p. 756) since it stretches across a continuum.

The use of a questionnaire to gather data is often designed to gather a limited number of predetermined numbers, and as a method associated with a positivist paradigm, it does not fit with this study. Neither does the use of a non-directive approach since there are specific research questions to be addressed for this study, meaning that the discussion, to some extent, needs to be directed. Of the remaining approaches, the semi-structured, focused interview was chosen. The term 'focused' alludes to the fact that all participants would be able to provide data on their experiences with e-assessment at OldU, not matter how limited, whether it be as an academic or as a PS member of staff.

Atkinson and Silverman (1997) note that whilst the interview presents a pragmatic way to gather rich data, they are synonymous of the 'interview society' that we live in today. This is a view shared by many, with a suggestion that the over-reliance on the 'interview' is reflective of modern social and cultural trends (c.f. Berg & Lune, 2016; Gubrium & Holstein, 2011). Others argue that the 'flavour' of an interview stems from the interviewer's epistemological standpoint (Kvale & Brinkman, 2009; Silverman, 2011), and thus the model

adopted should align to the overarching paradigm. Adopting Kvale and Brinkman's (2009) metaphor of the interviewer as a 'traveller', aligning with Silverman's (2011) constructionist model, fits well with the paradigm adopted for this study. Here, the interviewer "walks along with the local inhabitants" (Kvale & Brinkman, 2009, p. 48), as they encourage the participant to tell their own stories of their lived experience, asking questions along the way. This approach does not set out to search for established truths; rather it sees knowledge as something that is created and negotiated during the interview, with both parties playing an active role in its construction.

Whilst some have taken a broadly pragmatic view on the role of the interviewer in this approach (Kvale & Brinkman, 2009; Mann, 2010; Rubin & Rubin, 2012), Yeo et al. (2014) suggest that the adoption of an extreme postmodern position, whereby the interview serves as a platform for a participant to share a transient interaction of one of their different 'selves' would prove unwise:

> *"[it would] deny the possibility of participants being able to share their experiences and views with researchers meaningfully at all." (p. 180)*

The use of a semi-structured focused interview with each participant would provide enough structure to elicit data from the participants which could be reviewed during the analysis process, but with the added flexibility to allow for responses to be explored and for topics to be covered in the most appropriate order for the participant (Robotham, 2004; Yeo et al., 2014). Indeed, DeVault and McCoy's (2004) work on interviewing in institutional ethnography advocates the use of non-standardised interviews, since the aim is to "build up an understanding of the coordination of activity" (p. 757) However, Silverman's (2011) concerns that the data obtained during an interview presents a potentially 'narrow view' have been acknowledged, in that it only represents a snapshot of the participant's view at that time set against the backdrop of the interview itself. To add further complexity, evidence suggests that individuals respond differently according to their perceptions of the interviewer (Kvale,

1996; Yeo et al., 2014), adding an extra dimension to the research process given my role as an 'insider researcher' (see **Chapter 4.2.2**). With both researcher and participant having their own preferences and predispositions, the establishment of mutual trust and respect is crucial to the development of rich, valid and meaningful data in which to answer the research questions. Additionally, the need for empathic neutrality is key, ensuring that the researcher does not become over-involved (Yeo et al., 2014).

After a review of the literature, and the formal policies available within OldU, an interview protocol was devised (see **Appendix Two** – Interview Protocol) to address the research questions for this study. To explore the research questions in detail, participants were asked to consider the use of e-assessment in their own departments and faculty, whilst also considering their own reasons for using e-assessment at OldU. Here, I wanted to explore the rationale for using e-assessment, which would give the participants the opportunity to discuss the enabling and restraining factors for them to use e-assessment at OldU, and how OldU's structures and formal policies supported or inhibited the successful design and implementation of e-assessment. In identifying the most appropriate questions for the study, an initial interview schedule to cover both types of participants was devised, and then discussed with my supervisor. From this, I took the decision to undertake a pilot study to hone my interview skills and test out the interview schedule, to see if would afford me the opportunity to elicit a rich dataset for the study.

Pilot Study

Berg and Lune (2016) liken the interview process to that of a 'dramatic composition', with an opening and finale bookending the narrative featuring in between. Similarly, Kvale and Brinkman (2009) note that the interview process is not a mechanical one, requiring practice and reflection to hone the necessary skills. As such, there is often a need to perform a 'dress-rehearsal' to ensure that an interview runs smoothly, giving the interviewer the opportunity to 'iron out'

any flaws. Sampson (2004) argues that the use of a pilot study gives an opportunity to refine the research methods being utilised, whilst also "highlighting gaps and wastage in data collection" (p. 383). Others agree, adding that it affords the opportunity to consider the use of language and how to address problematic topics (Arthur, Mitchell, Lewis, & McNaughton Nicholls, 2014).

For the pilot study, two colleagues were invited to take part consisting of one academic from a faculty, and one PS colleague from a central university team. These participants were selected based on their roles within OldU and that they would give some insight as to how participants within similar roles may react to the interview process. In addition, I was also confident in their ability to provide critical feedback on the process which would inform the data collection process (Cohen et al., 2011), affording me the opportunity to elicit rich data from future interviews. Following Sampson's (2004) advice, I part-transcribed the audio recordings so as to get a feel of the data that had been gathered, and carried out a subsequent analysis to see whether the data was rich enough to answer the research questions, since a thorough and proper interrogation of pilot study data will yield better results. Armed with the comments from the participants involved in the pilot study, and discussions with my supervisor, the following points where identified:

- *Interview schedule*: The questions were refined, removing those which would gather redundant data not pertaining to the research questions. Additionally, it was recognised that there were likely to be differences between the experiences of an academic involved with e-assessment, and those of PS staff. As such, two schedules were devised with additional suggested questions included for academics. Questions which were used for spot checking of knowledge were removed, to ensure that participants were not encouraged to digress from the initial question which occurred during one of the pilot interviews. Finally, the wording used in questions was modified to ensure that they were much more

'open', giving participants the opportunity to speak freely where appropriate.

- *Research diary*: I kept a research diary as part of the study, which was split in two parts. The first was used as an aide-memoire during the interview process, enabling me to make notes on the conversations taking place and formulating additional questions, without interrupting the flow of the interview. The second part was used to keep note of any specific statements and ideas that arose from the data collection process that could prove to be relevant during subsequent analysis. These notes were made both immediately after each interview, and when reviewing the audio transcriptions of the interviews.
- *Audio transcription & analysis*: Apprehensive of the data to be collected via the pilot study, I part-transcribed the two interviews focusing only on the data to answer research questions 1 and 2. To record the themes emerging from the pilot data (Braun & Clarke, 2006), I used NVivo 10 (QSR International, 2016). Using NVivo for this study was one of my own personal goals since in previous studies, I hand-coded data using a series of coloured highlighters which proved difficult to manage and maintain. Having experienced the manual process on several occasions, I felt it was important for a study of this size to use a qualitative computer software package to help me keep track of the data obtained from the study. Whilst Arthur et al. (2014) suggest that pilot data does not need to be excluded from the final data set for analysis, I took the decision to exclude the data on the grounds that it served the purpose of testing the interview schedule for any deficiencies. Additionally, I was also confident that subsequent participants in the study would be sourced from similar departments to those involved in the pilot.

4.6. Data Collection & Analysis

4.6.1. Interviews

At the start of each interview, each participant was given a paper copy of the participant information sheet, which provided the details of the study. I then briefly described the purpose of the study and highlighted how their participation would 'fit in' with the research. The participants were then given a consent form which, if they were happy to proceed, they were asked to sign. The consent form confirmed that: they had voluntarily agreed to take part in the study; they could withdraw at any time without explanation; that the interviews would be audio-recorded; and, that they would not be identified by name in any subsequent documentation.

Whilst the interviews were intended to be conversational in nature, a small number of open-ended, entry questions formed the basis of each interview. These questions were derived after a review of the literature, the formal policies available within OldU, and the research questions identified for this study (see **Chapter 1.4.1**). This was to ensure consistency in the data gathered, rather than consistency in the way the questions would be asked. The questions were pilot tested (see **Chapter 4.5.2**) with two colleagues, and subsequently refined where necessary. Considering subsequent data analysis, which was conducted in parallel with the interviews, refining the questions in an iterative manner proved useful since it provided a validation check of the data being collected. It also offered the opportunity to identify unexpected issues, which could be explored in subsequent interviews. An example of this was a question regarding the 'nature' of the institution, and whether this had an impact on participant e-assessment activities. This question was not included in the original set of questions, but was incorporated into subsequent interviews.

Interviews were conducted face to face in a setting familiar with the participant, which was usually their staff office at OldU, ensuring a balance between comfort

and professionalism for the research to take place (Bartholomew, Henderson, & Marcia, 2000). Interviews with the participants typically lasted between 45-70 minutes and were audio recorded. During the interviews, a research diary was used to make notes of the conversation and where necessary, used to devise follow up questions during the interview.

4.6.2. Interview transcription

To assist in the analysis phase, transcripts of the interviews were created to ensure that the data was a "true description of the experience" (Miller, Veletsianos, & Doering, 2008), enabling them to be searched and cross-referenced more easily. All 23 audio-recordings were completely transcribed and anonymised, with 12 transcribed by me so that I could immerse myself in the data that was being collected. The remaining 11 interviews were then transcribed by a professional transcriber, who was required to sign a non-disclosure agreement (NDA). Once the transcripts had been created, each participant was assigned a pseudonym, to ensure their identities remained hidden (see **Chapter 4.8.3**). I was also careful in ensuring that the chosen pseudonyms did not match the real names of staff working in the participant's department at the time of writing.

Whilst some argue that the use of 'member checking' helps to promote transparency in qualitative research (Lincoln & Guba, 1985; Mercer, 2007), it was not employed for this study in the reviewing of participant interview transcripts. McConnell-Henry, Chapman & Francis (2011) believe that such practice only serves to present a "potential threat to the rigour of interpretive studies" (p. 30), encouraging a 'halo effect' amongst participants. McConnell-Henry et al. (2011) go further, suggesting that the choice to revisit participant accounts goes against many methodological approaches, particularly those which seek out participant experiences based in a given context:

> *"Why are these chosen participants in positions to make judgements on what is truth, when they understand truth only through their own lenses?" (ibid)*

Given that the interview process is often time consuming, it raises questions as to why one would want to employ member checking in the hope of obtaining richer data; a point illustrated by Taylor (1995) who notes that participants are often likely to recall wide ranging recollections when they are revisited. McConnell-Henry et al. (2011) take a much simpler, sharper standpoint, suggesting that the use of member checking is perhaps a way of covering up poor interview technique, or a lack of understanding of the underpinning methodological approach. As such, the audio recordings were taken as a record of the participant's experiences at that time, and the only 'checking' that took place was that the transcripts were an accurate reflection of the interview that took place.

4.6.3. Data analysis

Undertaking an interpretive approach to the research study necessitates the need for an iterative and continuous process, often requiring a mix of creativity, systematic searching, inspiration and diligence (Spencer, Ritchie, & O'Connor, 2003; Spencer, Ritchie, Ormston et al., 2014). Whilst there are no clearly agreed rules or protocols for analysing qualitative data, several approaches do exist with each not only differing in their epistemological assumptions and the 'location' of the researcher, but also in terms of their focus and aims of the analytical process. However, many qualitative analytic approaches share a generic method to systematically work through data to discover patterns and meaning within the data. A 'thematic analysis' focuses on reducing the data into a number of topics that are integrated together into key themes, which help to address the research questions posed (Braun & Clarke, 2006; Guest, 2012; Joffe, 2012). However, thematic analytic approaches are often criticised for lacking depth, being subjective, and lacking in transparency during the development of themes (Attride-Stirling, 2001). With this in mind, I have attempted to provide an audit

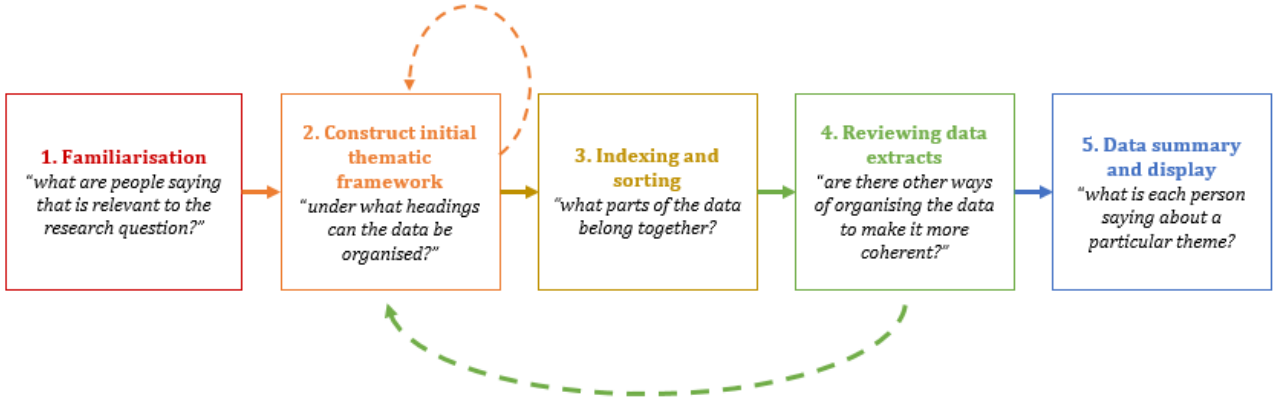

Figure 4.3 Overview of Framework analysis process, based on the description of Framework by Spencer et al. (2014)

trail of the steps followed during the analysis process, to illustrate how the data and conclusions that have been drawn are related (Carcary, 2009; Shento, 2004; White, Oelke, & Friesen, 2012). This was achieved through the use of Spencer et al.'s (2003; 2014) 'Framework' method as an analytical tool.

Framework method

Developed in the 1980's for use in large-scale policy research (Ritchie & Lewis, 2003; Smith & Firth, 2011; Srivastava & Thomson, 2009), Framework is an analytical tool which supports the data analysis and management process (Spencer et al., 2003; Spencer, Ritchie, Ormston, et al., 2014). Building on the work of Miles and Huberman's (1994) view of qualitative data analysis, and adopting a process similar to the generic method of thematic analysis (Ryan & Bernard, 2000), Framework (**Figure 4.3**) includes the process of indexing and sorting of data, to obtain descriptive themes and sub themes from the data, which are then constructed into a framework for indexing the data. The development of themes is not uncommon across many qualitative approaches, nor is the use of the 'constant comparative method' to make comparisons across the themes in order to refine them further (Glaser & Strauss, 1967).

Unlike a grounded theory approach, the Framework method does not seek to generate social theory; rather, it facilitates constant comparative techniques when reviewing the data across the matrices (Gale, Heath, Cameron, Rashid, & Redwood, 2013). It's popularity has seen the approach adopted in a number fields, including psychology, social policy, and health (c.f. Ayatollahi, Bath, & Goodacre, 2010; Gale et al., 2013; Gargon, Williamson, & Young, 2017; Heath et al., 2012; Murtagh, Dixey, & Rudolf, 2006; Parkinson, Eatough, Holmes, Stapley, & Midgley, 2016), where there is an emphasis on systematic approaches and transparency.

Arguably, the Framework method's strength lies in its ability to facilitate data management through a series of thematic matrices, which afford the opportunity to move back and forth through the differing levels of abstraction, whilst still keeping sight of the raw data, facilitating both cross-case and within-case analyses (Spencer et al., 2003; Spencer, Ritchie, Ormston, et al., 2014). The matrices serve to present an outline of the data, whereby each participant is allocated a row, and each column denotes a separate sub theme. The data are then summarised by each participant and by subtheme, and a summary entered in to an appropriate cell. Gale et al. (2013) explains that whilst the method can be 'seductive' because of its spreadsheet approach, which seems more closely aligned to a more positivist paradigm, it still demonstrates the issues commonly associated with qualitative data analysis. However, the systematic process that is set out in the Framework method provides clear steps to follow in the analysis process (Lacey & Luff, 2007), whilst also producing highly structured output of summarised data. This is particularly useful where a holistic, descriptive overview of an entire data set is needed (Gale et al., 2013; Smith & Firth, 2011).

Whilst the Framework method is not aligned to a particular epistemological or philosophical approach, it was selected for this study for many reasons. Firstly, it is based on a substantive, cross-sectional approach to analysis, enabling different aspects of the phenomena under investigation to be captured (Spencer et al., 2003; Spencer, Ritchie, Ormston, et al., 2014). Second, it facilitates both pre-

determined and novel ideas emerging from the data, allowing the interview schedule questions to be explored and developed without limiting the development of new themes. Third, the use of matrices to represent the data ensures that researchers' interpretations of the data are transparent (Smith & Firth, 2011; Spencer et al., 2003; Spencer, Ritchie, Ormston, et al., 2014), since it facilitates access to the original data. Finally, the systematic process can provide a timely aide for novice qualitative researchers, such as myself, when moving from data management to the development of sufficient analysis when attempting to answer research questions.

Application of the Framework Method

The first stage of the framework method requires researchers to immerse themselves in the data, to gain an understanding of the content and substantive topics contained within. This involved me reading the interview transcripts, to gain an insight into the participant's experiences. I also consulted my research diary with respect to each of the interviews, to include any additional contributing information to the analysis process. The next step involved constructing an initial thematic framework, under which the views, experiences and behaviour of the participants can be organised. This is an iterative process, which involves identifying a list of topics, which can then be sorted into a series of themes and subthemes to construct the initial framework. Such a framework is likely to contain a mix of emerging themes, including those identified from the research questions and those contained within the interview questions. **Figure A3.1** in **Appendix Three** – Excerpts from Data Analysis shows an excerpt of the thematic framework used within this study.

Next, using the initial thematic framework, the data was indexed and sorted, in a process what Saldana (2009) refers to as 'topic coding', using NVivo 10 (QSR International, 2016). The data was then reviewed and refinements made to the initial framework, to see if larger themes needed to be broken down further to reflect the differentiation in the content. For this study, the process was the

opposite, in that subthemes were merged together as they were too refined, resulting in fragmented data. Finally, framework matrices were then developed for each of the themes in Microsoft Excel 2013 (Microsoft, 2016). Where gaps appeared in the matrix, I consulted the research diary to see if the participant had discussed the theme in question. Each of the cells contains a precis of the content discussed by a participant under a particular theme, thus affording the opportunity to not only examine a participant's experiences across a theme, but to also compare them to other participants. An excerpt of a framework matrix from this study is shown in **Table A3.1** in **Appendix Three** – Excerpts from Data Analysis**.**

Upon completion of the data management process, the final step is to then summarise the themes, comparing the responses provided by the participants, to devise categories and identifying linkages between them. The process that Spencer, Ritchie, O'Connor et al. (2014) describe as 'detecting elements', involves reviewing the range of views and experiences which have been labelled under a particular theme, and then identifying the elements and dimensions between them. This then affords the opportunity to "distil the basic concept or theme that encapsulates what the variation is about" (p. 311). An excerpt of this process is shown in **Table A3.2** in **Appendix Three** – Excerpts from Data Analysis An initial outline of the detected elements identified within the first ten interviews was shared with my supervisor early in the process, so as to identify whether the data collected were able to answer the research questions.

4.7. Research Quality

A recent comprehensive review of a range of guidelines assessing the quality of qualitative research revealed that whilst there are some similarities across the differing approaches, there is no consistency on the naming of criteria to be used (Santiago-Delefosse, Gavin, Bruchez, Roux, & Stephen, 2016); a result which Mays and Pope (2000) argue contributes to the belief that qualitative research can be 'confusing' and 'unreliable'. Miller (2008) agrees, suggesting that it would

be “overly simplistic [and] indeed inaccurate” (p. 909) to define an overarching set of criteria for validity in qualitative research. Silverman (2013) takes a more simple stance, suggesting that one “should not be overly defensive” (p. 286) when it comes to validity of qualitative research, but it is important to avoid the “problem of anecdotalism” (ibid); a view which both Hammersley (1990) and Miller (2008) appear to share, suggesting that it is more practical for qualitative researchers to consider the community they are working within, and it’s discourse, when assessing the validity of their research. Maxwell (2012) believes that it is for this very reason that many constructivist researchers reject the notion of ‘validity’, since it is “too closely tied to positivist ideas of a singular, [objective] reality” (p. 127).

Hammersley, Miller, and Silverman’s approach to validity differs from those who suggest that qualitative research should be judged on different criteria (Altheide & Johnson, 2011; Guba & Lincoln, 1994), arguing that ‘authenticity’ is a more expedient measure, with validity dependent on the paradigm adopted. Whilst there are similarities between the approaches of quantitative positivists and qualitative constructivists when it comes to judgements of validity or trustworthiness in qualitative research (Maxwell, 2012), these generally refer to procedural criteria which are ultimately derived from quantitative, science-based research. Terms such as credibility, transferability, trustworthiness, and authenticity have been put forward as more appropriate concepts for qualitative research (Denzin & Lincoln, 2005; Maxwell, 2012). Since the data obtained are a consequence of the interaction between both procedure and phenomena (Barad, 2007), a realist position suggests it is important to note that the use of ‘procedural criteria’ with regards to quality should be avoided; ‘quality’ should relate to the conclusions reached via particular methods used in a *particular* context, and not the actual methods themselves (Hammersley, 1992; Lincoln & Guba, 1985; Porter, 2007; Seale, 1999).

4.7.1. Trustworthiness

In attempt to evaluate the validity, or trustworthiness of this research, I find myself drawn to Maxwell's (2012) view, to adopt Seale's (1999) criteria for evaluating qualitative research. Seale's criteria are in turn informed by Hammersley's (1992) notion of 'subtle realism', suggesting that research involves subjective insights and observations, and thus the use of different methods will in turn produce different representations of the participants involved (Duncan & Nicol, 2004). Seale's criteria focus on the *relationships* between the components involved in the research, starting with the appropriateness of the participants involved in the study, and the research methods adopted. Both have already been addressed earlier in this chapter, in sections **4.4** and **4.5** respectively. Secondly, there is a need to address the *context* of the study, ensuring that events are studied in their social context. Again, this issue is addressed in the research questions (see **Chapter 1.4.1**) and the use of IE as the research paradigm for this study. Finally, there is desire to address the use of data as *evidence* to support the conclusions that are drawn. The use of the Framework method (see **Chapter 4.6.3**) is ideal for this study, since it not only provides a suitable structure to the data analysis and management process, but is has also known for its use in large-scale policy research (Ritchie & Lewis, 2003; Smith & Firth, 2011; Srivastava & Thomson, 2009).

However, whilst I agree with Seale that the expectation of complete replication is perhaps, "a somewhat unrealistic demand" (1999, p. 158), I do believe that there is a level of expectation from a researcher to be as transparent as possible in their procedures. It is my view that reliability and replication do have some significance in qualitative research, and should not be treated, as what Lewis et al. (2014) suggest, as 'alien' concepts. Given a study such as this which is concerned with the impact on future policy for OldU and other institutions and where replicability is key for any wider inference to be made, it is important to demonstrate the robustness of the procedures so that the findings can be taken in 'good faith'.

4.8. Ethics and Confidentiality

4.8.1. Ethics

The British Educational Research Association (BERA, 2011) provides detailed guidelines with respect to the ethical standards that are required for educational research. Here, the emphasis is on the researcher and their responsibility to their participants who partake in a research study. In a study, such as this, conducted within a participant's workplace, it is crucial that ethical procedures are followed accordingly with respect to both the researcher and the participants. Therefore, this research study fully complied with the ethical practice guidelines of both Lancaster University and OldU. Approval for the study from both institutions was confirmed before data collection commenced, since the participants could reveal sensitive data regarding the OldU's strategic direction and/or the participants involved.

Trowler (2012) notes that for insider research within HE institutions, there are a number of corollaries to be considered with regards to the decisions taken by a researcher, particularly when it concerns 'power relations' between researcher and participant. In addition, there is the notion that assurance that may be sought from senior management that the research will not cause undue harm on the institution under investigation. With respect to participants, it is also worth exploring Holian and Brooks' (2004) ethical concerns with respect to this study. The first of these - the relationship between the researcher and participant - has already been discussed (see **Chapter 4.2**). Issues of informed consent, data ownership and release, and participant anonymity will be discussed next.

4.8.2. Informed consent

Informed consent is based around individual autonomy and rights, whereby an individual's participation in a research study is based on informed decisions (Plankey-Videla, 2012). Alby, Zuccerhmaglio & Fatigante's (2014) study of informed consent across a range of disciplines stresses the important of such

consent, suggesting they should be "sensitive to [a] participant's information demands" (p. 71) and not just the researcher's community needs.

All participants were provided with a detailed participant information sheet before they contributed to the study, which was distributed both electronically when they were invited to take part, and a hard copy before commencing the interview. This was as honest an account that I could give to participants with regards to the purpose and intended outcomes of the research at the time. All participants gave signed, informed consent prior to the interview taking place after reviewing the participant information sheet. Participants were informed that they could withdraw from the study at any time, without having to provide any explanation. Consent for audio recording the interview was also included as part of the consent process prior to the interview taking place.

4.8.3. Data protection and participant anonymity

The research study complied with the Data Protection Act of 1988, with respect to the handling, processing and storage of data. All physical data pertaining to the study were kept in secure, locked physical locations. With regards to electronic data, this was stored in an electronic file store, with access limited to the researcher only. In accordance with both Lancaster University and OldU research data management policies, audio recordings will be kept for no more than one year after publication of the study, whilst all other research data (consent forms, interview transcripts, field notes) will be kept in locked physical locations and/or password protected university computers for ten years. For those interviews transcribed by a 3rd party, a signed non-disclosure agreement (NDA) was obtained to ensure that the strictest of data management practices were adhered to.

Whilst there are a number of steps that can be taken to anonymise organisations and people involved in research studies, Trowler (2012) advises this can prove to be challenging when a researcher is on the 'inside', especially if the audience knows that the researcher is part of the institution involved. The laying of 'false'

trails with regards to the characteristics of the participants, such as pseudonyms, or obscuring the name of the institution under investigation is often used, but this raises concerns regarding both the methodological and ontological impact of such decisions (Ezzy, 2002; Vainio, 2013), not least the principle of transparency. However, Vainio (2013) questions the assumption that anonymity is only needed for ethical purposes, suggesting that ontologically, anonymity is "a way of turning 'data' into what someone has said" (p. 685) whilst from an analytical perspective, it "turns the participants into example of specific theoretical categories, and as such is a part of the data analysis." (ibid).

All data included in this study has been pseudo-anonymised, with the removal of identifiable features for both the institution and the participants involved in the study investigation. Following Trowler's (2012) suggestions, the name of the institution and the four main units in which the participants operate (**Table 4.1**), and details relating to institutional publications have been obscured. Additionally, the characteristics of each of the participants involved in the study (**Appendix One** – Interview Sample) contain several 'false trails', such as interchanging the gender of the participants, their age and experience in HE. However, the information given is accurate for the group as a whole. Furthermore, participants were offered the opportunity to review drafts of chapters that involve identifying data, affording them the opportunity to ascertain whether the measures taken adequately obscure their identity and role.

4.9. Summary

Combining a realist ontology and constructivist epistemology, this study was conducted from a 'critical realist' perspective, enabling the resolution of theory and practice through a re-telling of experiences from academics and PS staff at OldU. Affording a holistic approach to examination e-assessment practice at OldU, the adoption of IE and SPT (see **Chapter 3.5**) sets this study in the context of the wider institution, but also presents the opportunity to view local practices

in terms of the bigger picture. At the core of these practices are the texts that exist (or not) in OldU, which are key to uncovering the details regarding the connections and coordination of practices across different sites. These texts provide the ruling relations across an institution are replicated across place and time, and shape people's practices by connecting the local perspective from the individual standpoint to the wider institutional context. As an insider researcher, being literature in OldU texts and culture affords the opportunity to produce emic accounts of the practices taking place.

A review of existing institutional OldU documentation contributed to the development of the interview protocol, guiding the questions that would be asked to participants during the audio recorded, semi-structured interviews. Despite the challenges noted in the literature of conducting data analysis within IE with respect to the reassembling of texts, the audio recordings were transcribed for use in the data analysis process. To mitigate the concerns noted in the literature, the transcripts were analysed using the Framework method, providing a systematic and transparent approach to the analytical process. As opposed to generating social theory, the Framework method facilitates constant comparative techniques of the data, and the production of thematic matrices. These matrices enable a researcher to move through the varying levels of abstraction, keeping sight of the raw data (the individual perspective) whilst facilitating analysis across and between perspectives.

Ultimately, IE does not aim to produce the 'thick description' that is characteristic of typical ethnographic approaches. Rather, it aims to discover the customs of coordination that control and shape people's lives, by investigating the local experiences from the individual standpoint. For this study, it is key to uncover the ruling relation that govern the practice of e-assessment at OldU, and these are coordinated across the varying areas of the institution.

This chapter has described the approach taken to the research study, detailing the rationale for the chosen methodology (and acknowledging the critiques), the data collection methods, the participants involved in the study and the data

analysis framework. Finally, the quality of the research was considered, with regards to trustworthiness and limitations of the study, concluding with a discussion of the ethical considerations. A summary of this is illustrated in **Table 4.2**.

Chapter 5 presents a descriptive account of the practice of e-assessment at OldU, as told by the participants.

Researcher Position	Critical realist - acknowledgment that there is a real world that exists independent of our own perceptions and constructions, however our understanding of the world is undeniably a construction from our own perspectives. As an insider researcher, a reflexive approach is needed to achieve empathetic neutrality in the conclusions drawn, and so the adoption of 'polyocularity' via the inclusion of two participants in a similar role to me should help alleviate such concerns.	**Chapter 4.2**
Methodology	Institutional ethnography, informed by social practice theory, to examine the experiences of individuals in the relation to their day to day activities with e-assessment, and reveal how these experiences are organised, connected to, and shaped by the power mechanisms operating through OldU, and how they structure and govern the lived experiences of the participants.	**Chapter 4.3**
'Identifying' the institutional processes	Semi-structured interviews (23; 2 pilot interviews **not included** in subsequent data analysis), review of institutional policies and documentation depicting formal structures, research diary, reflexive account of own practices as an 'insider' researcher, observations of daily practices within own role and department.	**Chapters 0, 4.2 4.5, & 4.6.1**
Interview Sample	Two stage sampling strategy to elicit participants from across OldU; a stratified purposive sample to elicit self-selecting participants, followed up by a snowball sample based on participant referral.	**Chapter 4.4**
Data analysis	Use of the Framework method, via computer-assisted thematic analysis (NVivo) and data management (Microsoft Excel), based on data immersion, data coding, reviewing of thematic matrices and data summaries.	**Chapter 4.6.3**
Limitations	A small sample size may limit the range of individuals on which to draw experiences from, with majority of participants based in one faculty and the limited number of PS staff outside of central university teams and biggest faculty. The focus on a single institution may limit the applicability of the findings to other institutions, however the results are not intended to be generalisable, since the design and implementation of e-assessment is influenced by many factors, which are deemed significant by those involved.	**Chapter 4.7**

Table 4.2 Summary of methodological decisions

Chapter 5 - The practice of e-assessment at OldU

5.1. Introduction

Earlier in this thesis, a review of OldU institutional documentation concluded that there were no active policies or strategies that related to the design or implementation of e-assessment (see **Chapter 2.3**). This presents an interesting juxtaposition, that despite the lack explicit texts governing e-assessment practice at OldU, the absence of the texts has contributed to a subversive discourse regarding how e-assessment practice takes place. Rather than pointing to appropriate texts that determine how e-assessment practice should take place (the ruling relations), the analysis highlighted a need to uncover the ideological practices that have produced the knowledge practical to the task of e-assessment (Sharma, 2001). Whilst my role as an 'insider researcher' means I have been exposed to some of these practices, it is important to 'talk to people' (DeVault & McCoy, 2006) and find out how practices are standardised across local settings.

This chapter, therefore, presents the participant perspective with regards to the practice of e-assessment. First, the issue regarding terminology is explored, presenting the views of the participants involved, how these vary depending on the role and position of the participant within OldU, and how they compare with the definitions presented in the literature. Next, the participants' perspectives on the enabling and restraining factors for the design and implementation of e-assessment are presented, followed by an exploration of the how OldU's structures and formal policies support or inhibit the design and implementation of e-assessment.

All participants have been given a pseudonym to preserve anonymity, with brief biographical details for each of the participants presented in **Appendix One** – Interview Sample. Direct quotations from participants are presented in *italics*, with longer statements shown as indented sections. Where participants directly reference a member of staff, their names have also been changed to preserve

anonymity of the institution, with the names *'John Doe'* or *'Jane Doe'* used in their place. As a reminder for the reader, the acronyms used for each of the four main areas are:

- CUT – Central University Team(s)
- FE&S – Faculty of Engineering and Sciences
- FLHS – Faculty of Life and Health Sciences
- FSoSH– Faculty of Social Sciences/Humanities

5.2. Interpreting 'e-assessment'

Much like the perspective evident in the literature (see **Chapter 3.2**), the participants were also varied in their understanding of the term e-assessment, which was evident across both units (faculty or CUT), and roles (academic or PS). E-assessment was described as serving several different functions, with **Figure 5.1** highlighting the variation in understanding. Participants tended to associate e-assessment as either a *student-focused, tutor-focused, technology-focused, or assessment-focused* activity. Whilst Sam argued that the definition could change on a regular basis *"when new forms of potential assessment come out"*, they argued that most staff believed it to be a *student-focused* activity, such as the completion of online MCQ tests. Bob, who had earlier stated that e-assessment was a set of processes, further highlighted the lack of common, shared understanding amongst staff by also offering a more *"basic level"* definition, in that it *"is simply the submission of assignments to be collected electronically"*. As a *student-focused* activity, the emphasis here was on the 'real time' activity completed by a student, with e-assessment seen as *method* of assessment.

Those suggesting e-assessment is a *tutor-focused* activity referred to the need for the 'human' element in the *assessing* of student work to provide marks and feedback as measurement of learner achievement. Adrian's view that that technology played a role in assisting the assessment process was shared by others, with Gareth pointing to the need for tutor involvement with the

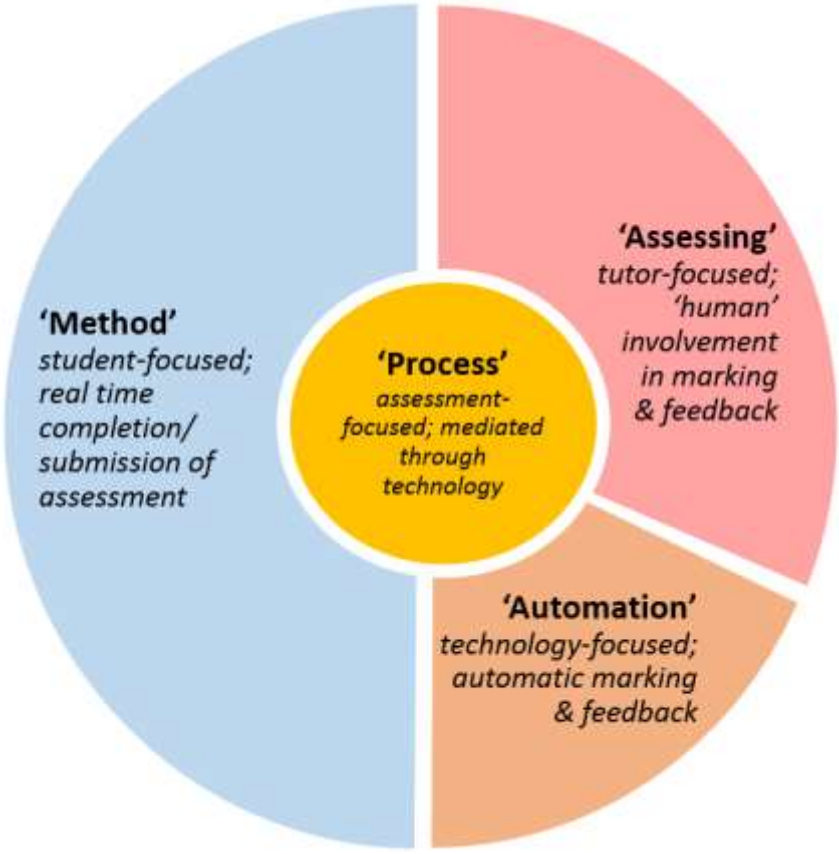

Figure 5.1 Variation in participant understanding of the term 'e-assessment'

technology; "*I read it online, and I provide feedback online, and I provide marks online*". Here, Gareth emphasised the importance on assessments that contained a 'narrative', noting that the technology would be unable to relate to 'the story' being told by the student. Carol agreed, suggesting that e-assessment was perhaps more related to the marking and/or feedback associated with assessment, and specifically discounted the submission element from their definition. As a *technology-focused* activity, this centred on the *automated* nature of measuring learner achievement. Leigh's suggestion that this mainly concerned the use of objectively marked MCQ quizzes/tests was one that resonated with others. Jeff and Brian also noted the requirement for automated marking, with the latter suggesting a possible overlap with a *tutor-focused* activity, adding that this could include the generation of marks and feedback by the technology based tutor input.

For PS staff in an 'operational' role for e-assessment - those actively involved in designing and implementing assessment directly within the tools available at OldU - they tended to gravitate towards e-assessment as a *student-focused* or *technology-focused* activity. Lindsey and Martin shared the view that e-assessment was about the 'student', and how they are *"able to use electronic systems [to] post things for assessment, or to actually do that assessment in real-time"*. This contrasted with Tom and Scott, who suggested the emphasis was on how technology is used to *mediate* the delivery of tests/quizzes for students, suggesting it could be *"anything that isn't your kind of 'sat in a cold room with a pen and paper".* However, for PS staff in a policy role at OldU, the suggestion here was that e-assessment required 'human' input to review student work, provide marks and feedback, and return it to students.

Such a definition somewhat alludes to the agreement from academics across the faculties in that 'e-assessment' refers to set of processes mediated by technology, but there was also some ambiguity when it was discussed further. Describing e-assessment as the *"whole electronic management of assessment*", Elliot's view was one which other academics resonated with, including Alice, Bob and Georgia, who all described a series of functions involved in a larger '*process'* of assessment, including the setting of an assessment; the distribution to students, the submission, marking and feedback; the moderation of marking; and, the distribution of the marks and feedback to students via the student record system.

5.2.1. Summary

Similar to the synonymous use of terminology evident in the literature (see **Chapter 3.2**), the participants from OldU were equally varied in their understanding of the term 'e-assessment', with variation occurring across both units (faculty or CUT) and roles (academic or PS). E-assessment is viewed by the participants as potentially serving several different functions (**Figure 5.1**), with participants unable to provide a consistent, OldU view of what constitutes e-assessment:

- a *student-focused* activity, with an emphasis on the real-time completion or submission of an assignment;
- a *tutor-focused* activity, which requires the involvement of an academic to mark and provide feedback on an assessment task;
- a *technology-focused* activity, via the use of objectively marked, automated tests;
- an *assessment-focused* activity, whereby the whole of the assessment process is mediated using technology, like that discussed in the context of EMA.

However, an interesting point of note emerging from these findings in whilst PS staff tended to be more unified in their view that e-assessment is an activity closely associated with *students* and *technology* - using automated, objectively marked tests - there was no agreement amongst academics, both within and across faculties, with regards to what constitutes e-assessment. Academics in FE&S are the most aligned, leaning more towards e-assessment as a tutor activity related to e-assessment, whilst those in FSoSH are equivocal as to whether it is a *technology*- or *tutor-focused* activity, but they do align with the views of those in PS. In FLHS, the biggest variation was observed with academics, ranging across all perspectives; those in teaching and scholarship roles view it as a *student/technology focused* activity; those employed in teaching and research roles stressed the need for *tutor* involvement in the marking and feedback of work, whilst the Faculty's e-Learning lecturers aligned with e-assessment as an *assessment-focused* activity.

5.3. E-assessment is enabled by …

5.3.1. Student demand

Georgia suggested that the use of online methods in increasing class sizes was now "*more of a necessity*", whilst Tom believed that that the number of electronic devices available to students meant that there was an expectation for content to

be delivered in an electronic format. Bob agreed, adding that student's prior experiences of technology at school, and then their expectation that it comes as standard at University, encouraged the use of e-assessment and *"arguably, forced it."* Despite the increased workload of creating e-assessment, Leigh suggested that the additional effort was worthwhile when working with large groups:

> *Yeah, so it was worth the effort when we have bigger student numbers and when your class sizes are that large, and they're first year classes, then that seemed a worthwhile investment of my time.*

This was a view shared by others, with a belief that the increase in student numbers would require a rethink as to how students are assessed, with 'efficiency' and 'streamlined processes' frequently discussed. Sam talked about such an instance, whereby they had used an online MCQ test in a module with over 400 students and suggested that the ability for students to get individualised feedback at the end means *"it's as much of a learning exercise as it is an assessment."* Carla suggested that the ability to reuse pre-set comments was very useful when marking student work electronically, but also noted that an increase in student numbers next year to 80 on a module where they were the sole marker would make it *"interesting"*.

Martin pointed to the OldU Student Union IT Report (OldU Student Union, 2013), which considered the institution's overall use of technology enhanced learning, as further evidence of the student demand for technology. The report harnessed the views of the student population and provided a series of policy recommendations to OldU regarding technology implementation in future years. Martin believed that this would encourage a rethink of the priorities at OldU, and how students could be involved in this:

> *With the [Student Union Report], that's had such a massive impact on getting things changed for the technology strategy and everything … So, I'm beginning to think we actually need to really*

> *look at what our key drivers are; the students can be used in that – that's where we've got to come from.*

5.3.2. Intrinsic motivation

Jeff believes that where there has been real innovation and progress with TEL related activities at OldU, it has been the *"living, breathing day and night work of one committed individual who has driven it"* and unless you had the time and the personality for it, *"it's very difficult to do that"*. Gareth, despite being primarily employed in a research role, suggested that despite not needing to engage in any teaching related activities because they were funded by an outside group, they did so *"because it's enjoyable."* Bob agreed, suggesting that there were lots of individuals across the faculties at OldU that were very committed to teaching, and spend a lot of time on teaching related activities. Leigh was also keen to express that a personal interest in e-assessment was key in their involvement as they were *"stimulated by it"* and *"found it a challenge".* Describing how they felt that their subject area suffers from *"artsy luddites"*, one participant believed that e-assessment presented a 'way in' to the subject for more general use of IT:

> *IT embeds an awareness in [our] subject that could otherwise be purely artsy. I've said this in other forums before, but I think we suffer a little bit in our subject from what I call 'artsy luddites', which are people who have self-consciously chosen to go into artsy subjects because they don't have to engage with IT. But this [e-assessment] would be one way of introducing IT via the back door I think. (Academic, FSoSH)*

Many cited how the fact there was no discouragement in them using e-assessment, was an incentive itself. Alice suggested that they've always had *"free reign to investigate and develop"*, whilst Carla stated that not having to defend what they did in a formal setting was encouraging, and that as long they got the marks for the students, then the department wasn't fussed about the details. Brian argued that the level of freedom in OldU institution was unlike anything they had experienced before:

So I couldn't believe when I came here how much freedom to do what I liked pedagogically. I've come from a place that prided itself in teaching but constantly constrained what we could do. So when I came here, no one was doing anything like that whatsoever. That's almost completely true, probably [John Doe] was. Nobody would stop or give two frigs what I was doing. They just didn't care. It was great. They still … that freedom's still sort of there isn't it? So sometimes I have to go to whoever's leading QEG and just say "I'm not doing that, for these good reasons." And you know, and when it was [John Doe], he'd often surprisingly agree.

5.3.3. Technology available

For some, the technology and infrastructure available at OldU was seen to be encouraging for those wanting to make use of e-assessment. Sharon noted the support offered by the central CS central team, and the tools available encourages the use of technology mediated assessment. Adrian believed that running e-assessment at OldU had become *"easier*" since the underlying computer network at OldU had been improved; they had often experienced delays when running assessments, with up to 60 students all trying to login to the software that they were using. Georgia was also complimentary of the technology/infrastructure and the ability to facilitate e-submission of student work via the new scanners available on campus. Tom added that the VLE *"is a lot better [and] a lot more robust"*, with recent improvements in the WiFi infrastructure providing opportunities for both staff and students alike, particularly with the increase in smart device usage.

Sam had seen how the use of online tools integrated within their teaching had helped to *"blur the lines between assessment and professional practice"* for students. In one example, they described how they had asked students to work collaboratively on a document, with the technology being used helping to support the drafting process as well. For Sam, they believed that exposing them to the drafting process "*is one of the main skills we want students to develop"*. Bob

pointed to the software available to staff for e-marking, and how it had helped increased transparency and consistency far better than what had been achieved previously using a paper based method:

> *Something like GradeMark for instance allows us to [manage feedback], in a much better way than we previously managed [...] We see that as a way of the students getting very valuable feedback rather than what they had before, which was a grade [but] not a number; it was 'satisfactory', 'good', 'excellent' or 'fail' and not really told why it was as bad as that. It was just 'this is what happens, this is the mark I gave you and get on with it' [...] Now and again, you get something like "referencing poor" - very basic bit of text - but the annotation as the staff are marking it over the top of the work in place, added to a rubric that maps directly against the comments, we're hoping that improves the consistency and quality of the feedback.*

5.3.4. Review of existing practice

Participants noted that opportunities for reviewing assessment methods afforded the opportunity to exploring the use of e-assessment. Such opportunities where possible through formal mechanisms such as attending CPD sessions, departmental curriculum reviews, reviewing competitor offerings, and other more informal mechanisms. Formal curriculum reviews were discussed by several participants, with Scott describing how they had been used by many departments. They recalled back to when a previous VC initiated an institutional review of courses and how their department was involved in working with academics to review their provision:

> *We did have curriculum review a few years ago; that was part of the Vice Chancellor's [vision]. When [they] came, [they] said 'I think this institution needs a really big look at its portfolio about what it does and there are certain things we should keep, certain things we should develop and get rid of certain things.' [...] There was a two year period where we [our department] reviewed programs, but they were only asked to report on*

> *internationalisation and employability - it was never really picked up. But certain departments really went for it actually and we've still got a lot of contact […] so for the programmes, the fact we had the curriculum review process I think has been a quite good enabler.*

Elliot expressed the view that the curriculum development process was particularly important when considering e-assessment, since it *"should drive what technologies we use, rather than saying we've got Turnitin; let's [get the students to] write an essay and submit it on there [VLE] and check for plagiarism."* Barry shared a similar view, and discussed how the already existing e-assessment methods in a module they taught were to be modified, as they tried to reduce the potential for collusion amongst students. Bob also had experienced a whole school curriculum review, and it was evident that this had provided an opportunity for the use of e-assessment at particular points during the course:

> *There is a new curriculum that has been implemented this year and with that, an adoption of technology enhanced learning has been embedded within that and therefore, almost all the assessment is associated with the new curriculum will be in electronic form of some kind. Apart from the final papers [exams] that the students sit; there are no plans to change, particularly the finals in [the final] year. Simply because there's no reliable exam condition environment that can handle the numbers at OldU […] but apart from that, if you look at every other element of the curriculum, it is all meant to be electronically assessed.*

Others talked about how looking outside of the institution had proved to be useful, particularly with respect to what competitors were perceived to be doing. Martin suggested that e-assessment needed to be used in the institution *"simply because our competitors are doing it"* and that if used properly, there would be benefits to doing so. Alice alluded to some of the benefits identified by Martin, when they talked about their role as an external examiner at an institution considered to be a competitor to OldU. Indeed, Alice's experiences enabled them to compare what was being done in their own department at OldU, giving them

an opportunity to present a counter argument to those who were less inclined to engage:

> *It's been really interesting because when you are marking, there is a lot of negative 'talk' about the quality of feedback going downhill, because it's easy to copy and paste things, which is kind of trivial. But what I found at ExtU was that the marking was a lot more robust. The reason because is that you can set up templates and in those templates, there is relevant information that you can 'slap on' to any essay in that cohort that has that issue or that problem, which I found was really good, because it means that everyone is getting the same quality of information [...] I can see actually, how as a marker, that really helps me actually, especially when assessing the whole cohort to make sure scaling was right and things like that. [...] So the marking is something I'd like to see here go online.*

5.3.5. Summary

With respect to the enabling of the design and implementation of e-assessment at OldU, participants pointed to several contributing factors. The increase in student numbers had left staff resorting to alternative methods to assessing students, whilst also recognising the increasing expectations from students for technology to feature as part of their learning and assessment experiences. Efficiency is key amongst the reasons for adopting e-assessment, so as to reduce workload and the subjectivity associated with assessing students work.

Added to this, many suggested an interest in exploring alternative assessment methods for their students, since they are given the freedom within their roles in which to do so. These 'motivated individuals', as identified by others, were also noted as having the perseverance to 'stick' with e-assessment, to ensure that it worked correctly for all involved. The presence of CPD that focused on the use of technology offered by the central teams was also acknowledged as contributing to the uptake of e-assessment. Such CPD would focus on the technology available at OldU, which had been recognised as improving in recent years, providing

additional tools for staff to make use of. Opportunities for reviewing assessment methods, such as departmental curriculum reviews, a reviewing of competitor offerings, CPD, and other more informal mechanisms were also recognised by the participants as being key to enabling e-assessment practice at OldU.

5.4. E-assessment is restrained by …

5.4.1. Staff conservatism

Staff conservatism and a reluctance to engage with e-assessment is a reoccurring theme at OldU. Relating more so to those in an academic role, the conservatism and limited engagement was related to anything considered to be 'new'. Bob suggested that one faculty at OldU is *"largely anti-e-assessment",* with an atmosphere of *"paranoia and cynicism"* more than any other. However, the reluctance by academics to try new things was evident across the institution:

> *Going across the whole university, not just [my subject], a lot of modules are assessed by a 2000 word essay and a 2 hour exam and there seems to be a lot of reluctance to move away from that […] I think unless it's an assessment method people are familiar with, they are very reluctant to go with that. Assessment is high stakes once you get past first year and so people are reluctant to try things. (Jeff)*

Cheryl suggested that such conservatism towards e-assessment could be explained by examining the attitudes of academics towards such activity. They had heard many academics say that they *"like to mark essays on the train going home"* and that they *"can't sit in front of a screen",* when referring to the marking student work electronically. Drawing on their own experiences of teaching, Cheryl could understand why many were of the mind-set of "*I'm used to doing it my way and I can't change, because it's too hard for me to change"*, but argued that they could get over it. Whilst there was evidence to imply that the resistance to e-assessment appears to be centred on a suggested change in practice, one participant suggested a lack of understanding from academics:

> *And again, you get this sort of almost naive resistance; "well you can't submit an architectural model electronically". Well no, of course you can't - you can't replicate its performance. "Music composition performance - you can't submit electronically" [...] So you've got to have contingencies for those kind of things. But the rest of the stuff probably can be. (PS, CUT)*

Leigh, who had previously acted in an e-learning role within their department, and had also completed a teaching qualification, believed that in some cases, e-assessment was not appropriate for use. Keen to point out that they were not an *"artsy luddite"*, Leigh argued that whilst they were happy to make use of technology in their modules, they believed that feedback required a much more personal approach by engaging with students *"rather than it just being done through the machine."* Other academics agreed, with one participant from FSoSH suggesting that their HoD would see the introduction of e-assessment in their department as *"a way to reduce standards"*, whilst another argued that the use of a technology meant that students had lost the art of crafting an assignment:

> *It took me five years to make a transition from being able to draft text, to make a first draft by hand, to making a first draft on the keyboard [...] However, I would argue that very few of our students can do that because it took me five years. (Academic, FLHS)*

A similar concern was also raised with regards to external stakeholders and the tentative nature of using innovative methods, in what would be called 'traditional subjects', at OldU. Sam believed that those subjects that focus on discourse and writing tended to be *"less creative in teaching and learning, and learning technology enhancement"*, whilst Leigh was concerned with how they could show that e-assessment is a *"robust"* form of assessment, particularly since their external examiners were *"very conservative and weren't open to any kind of innovative assessment."* Leigh suggested, in hindsight, that they should have *"shot them down in flames"* and told them to *"get with the times"*, but this was not an option for Carol, since their subject *"had to go down the route of traditional exams"* for accreditation purposes.

The *"nitty-gritty"* for Martin was that academics who were often told by their HoD that they had to use e-assessment, *"haven't got a clue how to do it"*. But as Jeff suggests, whilst individual academics could indeed be given the control to set up e-assessment themselves, on the whole, *"they can't be trusted with the responsibility."* Such a reservation was picked up on by those in a PS role, with one saying would be hard for an academic to say *"I've been to a training session and I still don't get it"*, after seeing many academics come to them for advice, rather than an academic delivering the training sessions.

Alice provided an alternative perspective on why academics may not fully engage with e-assessment, when describing the (limited) use of the VLE to support teaching and learning within their faculty from the *"older generation"* of staff, although they did suggest that this was not exclusively limited to this group of staff. Harriet gave some insight into this, suggesting that some OldU staff are *"not as tech-savvy as others"*, giving a prominent example of how most academics were unaware of alternative Web browsers that they could use when experiencing problems with e-assessment. Scott picked up on this, suggesting that the ever-changing nature of technology, and staff experiences with technology could be a contributing factor. They explained how an upgrade to the VLE in the previous year *"changed the look and feel which kind of threw everybody"* and whilst people do get used to things working in a certain way, *"they do struggle to cope with software changes".* It is in instances like this were Scott sees the *"irony"* in that whilst it can take a long time to embed working practices, *"once they are embedded, they [staff] are actually quite resistant to change."*

For those in FSoSH, there were some concerns about the health and safety issues involved with e-assessment, who often relied on assessing students via large pieces of work such as essays and reports. One academic was concerned regarding the amount of time it would require in looking at a computer screen, and hoped that OldU "*don't enforce those types of things*", since it could cause issues with both staff and students. Another argued that most of their job was

online anyway and so if they were asked to mark online, "*it would literally be 14 hours a day during marking period, sitting in front of the computer - you could not physically do it".*

5.4.2. OldU 'technologies'

As discussed earlier in this section, it was believed that some (academic) staff conservatism towards e-assessment stemmed from previous experiences with technology at OldU. Participants regularly expressed their disdain when where technology had not worked as expected, and they had many examples to share - sometimes with technology not even associated with e-assessment. Jeff noted that there was a "*reluctance to trust any software at all*" at OldU, since there had been *"a lot of high profile bad experiences"* with OldU's module planning system and the VLE, and more recently, a new e-portfolio system that *"wasn't being introduced effectively."* Shawn described a scenario where they were running an online test through the VLE, and that had students had complained in their staff-student forum that parts of the questions were often hidden from view when answering questions, due to the technical design of the VLE. Alice had experienced a similar problem in relation to displaying feedback for students, but argued that OldU should have a system that *"we were 100% confident with [...] not just in terms of the way it technically works, but the way it presented information as well."*

Georgia added their own experiences of attending a training session using the student reporting system and whilst they *"weren't trying to do anything clever"*, they noted it had several problems which was a worry, considering it was a commercial product. For Georgia, this was all too common at OldU:

> *If you're going to persuade colleagues to use something and to take on new ways of doing things, they've really got to work. They've got to be, as I say, 100% reliable. I am perfectly prepared to live at the bleeding edge of everything where things don't work and I have to work it out to make it work. That's fine, I don't mind that. But a lot of people really hate that. They encounter*

> *something that doesn't work as expected and they say "I'm not doing it; I'm never doing that again". And sometimes, you don't get them back for years [...] it has got to be so perfect.*

For some though, the issues with the reliability of the technology stemmed from the technical infrastructure within OldU, with Adrian recalling how it took 40 minutes for students to get into a room and log on to the network to complete an online test, and *"it was the best part of an hour before we were able to actually start the exam".* Bob and Susan had concerns that OldU did not have the facilities to run e-assessment effectively, with Susan suggesting that OldU *"appear to deconstruct buildings every 6 months"* and noting that the computer rooms that existed in proximity to where they were, had been made into offices for administrative staff. Thus, the lack of facilities to seat large groups of students to complete online tests often meant that they were often completed off campus, with students asked to complete them in their own time.

From a marking and feedback perspective, staff were also critical of the technical infrastructure at OldU. Carol noted that *"it takes five minutes to log on [to the system] and [in that time,] I could have already marked some work"*. A consequence of this meant that they specifically chose the way to mark student work to suit the type of assessment that had been set. This, in part, was due to the time-lag of the University network that meant that they *"could not do it [electronically mark] with 300 [assignments] within the timeframe"* set by the university. Martin was particularly critical of how the institutional systems *"don't mix well"* with the institutional processes, describing how student grades do not go into the student record system automatically, resulting in a manual import which is likely into introduce errors in the process. Elliot offered some insight into the infrastructure concerns, describing how some of the problems experienced were not unique to OldU:

> *If you're going to do e-assessment [and] you mark the work online [...] in an ideal world, that grade would synchronise across the whole system and it'll be recorded there. But it's very seldom done that way. There was project at ExtU which did aim to do that -*

> *they used [their VLE] and they [have a] building block. Actually, it only fed one way, so the default position which was you have to input the marks into the student record system and then the marks fed through to the VLE, so students could see them and the next phase of that was that to make it two-way kind of transfer. But this type of work is still embryonic across the sector; it's not embedded at all really.*

Academics from across the three faculties commented on how they felt that the use of technology often disrupted the assessment process, proving to be a hindrance in most instances. Aaron discussed how they had tried to involve students in the assessment process, through peer marking, but the use of technology affected the assessment process that they wanted to follow, and it *"became a bit of a faff"* when they had to manually add dates to their calendar to remind them of submission dates. Scott argued that the software available within the VLE for colleagues to use is *"quite limited"* with regards to what is possible with e-assessment, which was a *"long standing issue"* within OldU. This was a point picked up on by others, including Adrian, who regularly used alternative software, for which support and development was now discontinued, to run terminal assessments. Leigh described how working with student e-portfolios was incredibly difficult since you *"can't keep flicking between the bibliography and their writing"* when marking their work and whilst they had to "*learn another system just in order to be able to assess portfolios",* it would have been much easier for students to just scan their paper based work for e-submission. It was in instances like this where Leigh believes that they are "*are constantly being deskilled by these policies and programmes that come from above"*, since they *"have invested so much of my life in these systems that come and go*". In most instances, such systems, *"[don't] fit in with the way we work".*

Even when the technology was not considered to be a limiting factor in the assessment process, the task of creating the assessment often proved to be a challenging one, expressed in the frustration of one academic:

> *It's a fucking nightmare to use! All these pools, tests, canvases that kind of shite. The whole language of it [the VLE] is completely counter-intuitive. [The VLE] is a fucking nightmare. Setting the questions is easy enough, but Jesus ... and then a lot of the time, there's images and stuff and ... fucking copyright, Jesus! [...] It's fiddly, but that's fine. But is all the "what's a test canvas? What's a ..." - you just give up the will to live; it's just a nightmare. [...] and the other thing is, you only do it once a year.*

Lindsey was regularly involved in the setting up and implementation of e-assessment in their faculty, and raised concerns about the complicated process required when working with more than one tutor marking their work. They explained that one small mistake in setting an adaptive release could mean that one tutor would see two groups of students' work to mark, whilst another might not see anything. And whilst Lindsey noted that it would be *"dead easy to do"*, they *"can't imagine that's a particularly unique thing to this university*." Aaron, who considered themselves to be more of an advanced user of e-assessment, also commented on the difficulties of using such tools, suggesting that the terminology may contribute to the confusion. Whilst they believed that many academics could *"muddle through the basics"*, the terminology used in some of the systems *"might not be overly accessible to everyone"*, pointing to the use of the term 'Post Date' in the e-submission system as an example of something that is *"not always clear"* as to what it means.

As Leigh noted, the problems associated with e-assessment are likely to re-emerge on an annual basis since these types of activities are only carried out once a year; a view shared by others across the institution. Martin recalled how they had discovered the same concern amongst staff in a research study they had previously engaged with, with the situation often resulting in a *"huge negative motivation for getting involved with it [e-assessment]"*. Carol had also experienced this first-hand, describing how they had to 're-learn' the process every year after, and it was this that they took issue with:

> *And that concerns me a little bit when we ... if we are thinking about imposing online marking across the Faculty. I am not the most computer literate person here; I've done the same thing for three years and I still don't get it right.*

5.4.3. Institutional priorities

Whilst Alice argued that the use of technology *"should make things easier"*, it was examples like this that Scott referred to as *"deal-breakers"*, since the technology available to staff often presented *"technical barriers"* for the way people wanted to use e-assessment. Martin agreed, suggesting how e-assessment technology is still in its *"infancy"* with regards to how people want to work:

> *In my mind, this comes down to the fact that it's [e-assessment] still in its infancy. And all the systems that do it are all still immature and so as is usually the case with this sort of stuff, you get lots of programming issues that haven't fully appreciated all the potential pitfalls and risks. And I think as this becomes more mainstream then some of these silly issues in the VLE that are massive gates open to oblivion at the minute, will be locked down [...] [but] we're using systems that are not well-developed, not well-understood and it is a massive risk.*

Bob had seen first-hand how, over successive VC's, that there was *"a skew towards research"* at OldU, *"making sure that certain world class research departments force us up the league tables"*. And whilst they could understand why this was done from a strategic perspective, Bob argued that this was to *"detriment of the teaching that goes on within the campus"*, which people on campus knew about. Barry, employed primarily in a research role, had some interest in teaching, but knew that if they said to their line manager that they would like to take some time to do a teaching qualification, they knew they would be told that *"your job is to get research funding"*. This left Barry in a strange position, as in the department which they headed up, they were open to supporting their own staff who wanted to engage in their own personal development in pedagogy. However, knowing that their department would

"judged purely on research income and research outputs", Barry believed that teaching related activities were *"something which means that we don't go too far into the red as a [department] every year"*.

Alice suggested that their role as a teaching and scholarship academic at OldU made them feel like a *"second class citizen"* compared to their counterparts on teaching and research contracts, whilst Georgia suggested that the top line statement about OldU of that it *"prides itself on being a research-led university"*, means that teaching will never be regarded as highly as research based activity. Moreover, Georgia believes that there are a lot of people in OldU who take their teaching seriously, *"but that doesn't mean they will get any recognition [...] and in the end, it must have a demotivating effect on everything concerned in teaching."* Aaron summed it up well, when they argued that there was a culture of failing researchers *"getting shifted on to teaching and scholarship"* pathway, which they believed was a hindrance to those on that pathway since it *"devalues a lot of what we do".*

Those employed in a PS role within the institution were also agreement about the perceived institutional priorities. Martin was adamant that OldU had not paid as much recognition to teaching as they should have done, *"even though [they] say they do"*, which they believed was in part due to the way the academic faculties were structured. Tom believed many of those employed on a teaching and research contracts *"tend[ed] to be on that track because they are not interested in teaching"* and if their practices had worked for the past ten years, *"they don't see a good reason to change that"*. Elliot agreed, suggesting that it was *"easy"* for some to get stuck *"in the institutional ways",* especially if they did not have the experience of working at other institutions.

Cheryl believed that there was an air of *"snobbery"* at OldU, and that there was often a reluctance amongst some to accept that other universities, particularly newer ones, could do things better than what they were doing at OldU. As a result, others believed that that anything related to teaching, including e-assessment, would be seen in a lesser light compared research related activities.

Two academics from a faculty that focuses heavily on research shared their views on the matter:

> *I think in a university, you've got a broad basis of academic staff. You might have people who are primarily involved in research, and teaching is a small aspect of their role. They might not have teaching qualifications ... there's a drive across the sector to improve that. For a lot of staff, research is their 'bread and butter', and they'll just do the bare minimum. So, when they're involved, e-assessment can suffer – if it's thought of at all.*
>
> *What I've seen in the university over the last seven years is that a lot of academic staff who are actively discouraged from teaching because they [those doing the discouragement] see it as something that gets in the way of their career and their promotion and their career. So, therefore, e-assessment, and assessment in general, is inherently associated with teaching [so] it follows on that it's not seen as an important activity […] that is the Head of Department explicitly telling someone who is in their [department] "what are you doing messing about with this teaching? It's getting in the way of your research" [and] until that situation is fixed at OldU, nothing else will improve.*

Many of the academics questioned how they were supposed to find time for staff development for teaching related activities, particularly if they were not seen as important within the institution. Here, the consensus was that it was important to become comfortable with the technology *before* having to use it in a live teaching environment:

> *Staff have really struggled to work how to use it [electronic assessment system] and they've had to use it in … had to learn it in quite short time periods […] I know the time [needed] of setting up the first time … I know the time costs can be massive and then [I] watch all of my colleagues run around going, pardon my language, "Fucking hell, this is horrendous" […] And then once they've had a year of hell of setting it up, it just rolls forward, then, doesn't it? (Academic, FLHS)*

Brian argued that there was a need for staff development in relation to teaching at OldU, which was often overlooked in annual performance reviews. Believing that staff should have to show that they are up-to-date with their subject content and their teaching practice, *"just like a vet or a doctor has to carry on keeping up-to-date in their area"*, Brian suggested that staff should have to explain what staff development they have engaged with and show it relates to what they are doing as teachers. For some, they could trace the need mandatory staff development back to when they started at OldU, when two participants they stated they had received no formal induction to teaching:

> *Since I got here, so seven years, I've received no training for teaching [laughs]. Because I came in as a Professor, I didn't realise [that] everyone else was doing training. So that was a problem [...] I think it might have been because the contracts with Professors are just different. I know people who started at the same time at Lecturer/Senior Lecturer level had to complete the PG Cert stuff, but when I arrived, I didn't even realise it was something I hadn't done until I'd been here for two years. (Academic, FLHS)*

Even where staff development was available for colleagues to participate in, views were mixed. Lindsey reported on how they were on the receiving end of the *"fall out"* after local staff development sessions that were not necessarily pitched at the right level, whilst Aaron suggested that communication regarding centrally offered staff development does not necessarily come at a time when staff were thinking about tasks they needed to do. More worryingly though, were the comments from participants questioning the incentive to engage in such activities, given the perceived institutional priorities.

One academic in a research oriented role noted that trying gaining accreditation for their teaching via OldU's teaching accreditation framework (OTAF) *"wouldn't play terribly well"* in their annual appraisal, since they were expected to write research grants. They argued however that if the institution stated that they wanted to staff to be accredited for their teaching, then that would be great for

them since there would be an incentive to do it. This was important for them since they had spent a few years focusing more on teaching and if they did any more, *"they're [line manager] going to assume I don't want to research anymore and they're going to change my job".* Carol believes that colleagues are *"penalised"* for wanting to innovate, since the cost of investing time in teaching and innovation meant that you were not spending time on research, whilst another questioned why they should use a university system to allow to students to submit assignments electronically:

> *What's the incentive? Why should we? What's in it for me to do that? I did it the first time round out of personal interest because I wanted to give the students an enhanced learning experience. But the [student] feedback; nobody pays any attention to it - it's not going to get me a promotion, nobody gives a toss frankly, so what's the point? (Leigh)*

5.4.4. Summary

The re-occurring discussion regarding staff conservatism and limited engagement with anything considered new with e-assessment suggests that is indeed a restraining factor. The use of TEL in teaching, learning and assessment activities is seen by some to reduce standards, with a naïve/limited understanding of what is involved and what the technology can achieve contributing to this in some way. Additionally, for those in FSoSH, issues regarding the health and safety implications associated with e-assessment were of key concern, however, interestingly, these were not noted by any other participants.

A more substantial rationale for staff conservatism towards e-assessment was given, previous experiences with technology, in a teaching related context impacting on decisions. Issues of reliability and trust were raised, alongside functionality issues, as staff struggled to the tasks they needed to do. Despite the improvements in the technology available to provide e-assessment, the technology infrastructure at OldU is noted as a cause for concern, with

difficulties accessing the network away from campus, and a lack of facilities available on campus to seat large groups of students at the same time to complete an online test. The terminology used in some of the institutional supported technologies was also noted as being difficult to work with, contributing to a more complicated process for using e-assessment. Whilst technology was viewed by some as providing numerous benefits, the numerous technical barriers, or 'deal breakers', meant that e-assessment is still very much in its infancy at OldU.

For the participants, the issues relating to conservatism and technology stemmed from what were perceived as the priorities of the institution. A resounding voice from the participants suggested that given the emphasis on research activity at OldU, it left little opportunity for people to experiment and be comfortable in using the tools/technology available before utilising them in a live environment. For some, finding time for staff development for teaching related activities was difficult to achieve within OldU. For those in a PS role, they pointed to the structures within the institution as evidence for this, which in one faculty (FLHS), gave more emphasis to research activities. Indeed, for one research academic in FLHS, they noted that they would not be attempting to gain accreditation for their teaching commitments, since it would not be in line with what their line manager would be expecting them to do.

5.5. Structures and formal policies support e-assessment through …

5.5.1. Local leadership

Whilst there was a concern about leadership at the senior management level of OldU, it was evident from the conversations with participants that where e-assessment has worked well in OldU, it is owing to the leadership at a local level. Martin was particularly strong in their view that having a leader in a department clearly made a difference, and those departments had also provided the support for doing it as well. Georgia echoed Martin's views, believing that in their role as a lead for learning and teaching in their department, it was very much up to them

to provide leadership for their colleagues in using e-assessment. As part of this role, they were happy to tell colleagues how to they could use e-assessment and even *"show them how to do it"*.

Some even talked about how support from a HoD had often been a catalyst when it came to using e-assessment. Bob explained how their HoD was a catalyst when it came to e-assessment, and they *"trust[ed] me to do that [e-assessment] because that's my area of responsibility within the Department."* Martin was also of the opinion that some heads of department had helped to encourage the use of e-assessment, in that that they were willing to *"come on board with it"*. Even those employed in a teaching and research role commented on how their HoD had encouraged them to make use of e-assessment:

> *Paradoxically, our Head of Department, while at the same time, you know, forced to cane you, to cane your buttocks for lack of grant applications and successes, [they've] also actually been very encouraging of what is known in a place like this as a teaching innovation. And I think it's gone very well. You look at the modules where we've done that. The feedback is terrific [...] It's really much better and in my view, the students are much more engaged. So, in that respect, those are big enablers - actually the head of department going "Yeah, let's do this. It's a really good idea."*

There was also evidence that this leadership extended out of individual departments, with Jeff believing that the Vice-Chancellor designate would provide a new impetus to re-address the way students were being assessed at OldU. Scott also gave praise to a previous senior manager in FE&S who was a *"really good champion of this kind of stuff [e-assessment]*" as they were involved in several initiatives in their department before they left. More recently though, Scott had noticed that there was 'new breed of senior management' within faculties, who *"have actually been practicing academics and actually used technologies"*, and how they *"actually understand this stuff [TEL] both from an operational and an academic point of view."*

5.5.2. Local, dedicated support

Whilst it was evident that leadership at the local level was key to the success of e-assessment at OldU, some suggested that a dedicated role within departments to focus on TEL related activities would be extremely beneficial. When speaking to Shawn - who was aware of my role within my own department - about how their department was engaging with e-assessment, they believed that those who had the time to focus on teaching would use it [dedicated role], but many *"don't have time or don't spend time to do it."* Carol, was also complimentary of the dedicated role suggesting it *"would be great if we had something [similar]"*, whilst Alice had noticed a *"renewed interest*" in their department, *"in getting access to people who can help develop technology enhanced learning, not just assessment".* Leigh explained how they had been an e-learning advocate in their department in the past, and helped to model good practice in e-assessment for others, but was unaware if the department still had such a role.

Martin argued that the dedicated posts at the local level, like mine, were crucial since those in CUT did not have the capacity to focus on all the issues connected with e-assessment:

> *Part of the reason that you've done that [been able to focus on the issues associated with e-submission] is because you've been brought in post and you've had the time to do that. When you look at it on an institutional level, we just don't have time at the minute to do that, to put that in without somebody up high saying this is an institutional project that requires a lot of resource. Otherwise you just can't do it. And if you imagine the amount of time it's taken you […] then there's no way [we] spend that amount of time.*

This particular point raised by Martin was picked up by other participants, whose role at OldU is similar to mine, in that they are responsible for TEL within their respective departments. The first of these noted how they could see a *"massive gap"* with respect to TEL, and that we have been able to introduce

policies, guidance and training for use at various levels across the faculty. As a result, they had people regularly say to them that your faculty *"is way ahead of the times because of [your] roles"*. The second noted that their role had contributed to the uptake of e-assessment in their department:

> *I think the creation of our posts have helped; certain key people pushing it continually and these posts are a big part of that now. Spanning that middle ground between the subject specialist academics and the 'techies'. I think that has really helped [...] You either do it that way [a specialist academic in each school], or you massively 'beef up' the central team. And it's one or the other. Like I say, having seen both sides now in OldU, right now, I think if you put people in [departments], it's better, I really do [...]*

Many of the participants in faculties were reticent in relying only on the resources of the central teams for e-assessment, suggesting it is useful to have a 'fall back' available within departments. Scott agreed, believing that roles like mine meant that there was *"dedicated [departmental] support"*, which they viewed as *"one of the biggest enablers"* for e-assessment. Bob argued that having an Assessment Director within their department was useful in making sure that *"what we are thinking about doing [regarding e-assessment] adheres to University wide policies*". One participant believed that their faculty was much stronger compared to the others and the people directing how e-assessment was running each department meant that it would not end up like the *"wild west [where] everybody does their own thing.*" With the dedicated, local support available for individual departments in their faculty, they believed that it had more than helped to raise awareness of e-assessment:

> *There's a lot of support for staff and having dedicated members of staff meant that it increased the visibility of it [e-assessment]. And people get more engaged in it, basically, because they know that there is somebody there that they can approach.*

In the other faculties, academics noted the support offered by PS staff within their own departments who provided a point of reference for staff at the local

level when needed. But the level of support offered did appear to vary between the faculties. Alice commented that whilst there were no *"tech people"* identified in their department to help with e-assessment, the PS staff are *"just as trained in Turnitin as we are",* although *"they won't do it for us"*. In contrast, the PS staff in Carla's department were more willing to engage with the implementation aspects of e-assessment, and were "*happy to set up the online submission for the assignments because they have to do that for every module".* Carol joked that some staff in their department can *"just about upload slides - with help"* and so they would need support in setting up an e-submission. However, whilst they have a colleague in their PS team whose role was to help academics with e-learning related activities, they also work on the departmental timetable and program planning, and *"so [they don't] have a lot of time for e-learning"*. Shawn was less optimistic, suggesting that whilst they had plans to do more online assessment for their students, they would need to acquire funding to pay someone to do it, as they *"don't have time to sit and learn to do it myself."*

5.5.3. Communities of Practice

Many of those involved with e-assessment at OldU often relied on engagement with informal 'networks', with evidence of these networks existing at both departmental and institutional level. Participants viewed them as a valuable resource for sharing examples of practice and fostering discussions around e-assessment, and in some cases, more general TEL related activities. For some, having access to informal networks in their own department proved possible because of proximity of people who were able inform others and share practice. For the academics who had earlier stated that they did not receive any formal training after starting in post at OldU, access to these networks in their respective departments proved to be useful in their early days at OldU. One of the academics from FE&S believed that part of their role as an academic was that *"you have to be reasonably pro-active"* and find out what other colleagues have to say, whilst the FLHS academic commented that they relied on two or three specific academics who were *"generally recognised as being people who are good*

at teaching delivery". After discussions with their colleagues, they believed taking the PG Cert qualification when they had started at OldU might have proved to be useful, since they would "*get a network of people that you can get advice from, which I think would have been most useful."*

Carla commented that their line manager proved a valuable resource whenever they had any questions about using Turnitin for student assessment, whilst Aaron & Georgia both talked about how they were seen as leaders for e-assessment in their department and so staff knew who to go to if they need help. Alice spoke positively about the informal network available in their department that ensured that anything they created could be run by the *"right people",* to ensure that it could be *"sanctioned correctly through the university"*. Sam believed that the *"organic connection"* within the department was possible because of the proximity of colleagues to them for support and any obstacle to those sorts of conversations, such as being on the other side of campus, *"will restrict the extent to which there is an outcome."*

The importance of having access to an informal network of people was particularly important to those who perceived there to be a void in the formal faculty structure to share practice. Barry noted that whilst a previous restructure of their faculty may well have removed some of the formal administrative structures that they were used to, they still maintained an informal network to help foster discussions around teaching and learning, since *"research can be quite a lonely*". Alice and Carol agreed, suggesting that a void at their respective faculty level meant that it was even more important to keep the informal networks going, since it was difficult for staff to share practice in a formal manner across the departments.

Whilst local networks were seen as a useful resource, participants were very keen to praise the role of the OldU eNetwork; a community of practice facilitated by the TEL central team, providing participants with an opportunity to communicate through regular face to face meetings and an active mailing list. Adrian had noted that after attending an OldU eNetwork meeting, they had

learned about some of the more advanced features of the VLE, which they would be encouraging their colleagues to use. Sharon shared similar experiences, commenting that they had only found out from attending the meetings that other colleagues across the institution where using the same e-portfolio tool as them. This was particularly important for Sharon, who argued that without the support network to call upon to discuss integration problems with the e-portfolio system, then they *were "not likely to use [it]"* within their department.

However, whilst describing the OldU eNetwork as being *"very encouraging"* of e-assessment and offering collegial support for those that want to go down the same path, Bob was conscious of the limited influence that such a network might have, given that is was an informal gathering meaning it had no official recognition and only limited power. Leigh & Tom believed that even though the meetings proved to be a useful forum for sharing practice, there was a tendency to always see *"the same old faces"*. Elliot provided an insight into why this might be, suggesting that people are on the OldU eNetwork mailing list if they want to be on it, and so it is a *"self-selecting sample"* network of colleagues from across the institution.

5.5.4. Summary

For those participants involved in the design and implementation at OldU, there is an acknowledgement that leadership at the local level has been extremely beneficial. At OldU, these leadership roles have manifested themselves in several ways, from having a dedicated lead for teaching and learning, through to a head of department acting as a catalyst for encouraging the use of e-assessment. Added to this, having dedicated posts within departments to focus on TEL activities has also proved to be beneficial, particularly when dealing with the operational aspects of e-assessment. In FLHS, they have also benefitted with dedicated e-Learning academics helping to model good practice for others within individual departments. Being situated in the local context, and having knowledge of a particular subject discipline and how it operates has certainly

contributed to the update of e-assessment and other TEL activity, with many others from outside of the faculty relying on the support offered by the CUT.

Engagement with informal networks within OldU is also a common practice, with many pointing to the CoP available within their own department to support them in their engagement with e-assessment. More collectively, participants acknowledged the value of the OldU eNetwork; an institutional CoP that provides staff at OldU with an opportunity to communicate face to face and an active mailings list on all matters relating to TEL. Offering an insight into the experiences of others from across the institution, participants praised the role it plays within OldU, despite admitting that it tends to be the same faces at each of the meetings.

5.6. Structures and formal policies inhibit e-assessment through …

5.6.1. The 'language' of existing policy

Participants commented on the content of the formal policies at OldU, noting how they were often restrictive because of the language used. Aaron discussed their experience of working with OldU's Policy for Assessment (OPfA), suggesting that it was *"inaccessible"* to a lot of people, *"even [for] someone who is engaged with this type of stuff".* Whilst they had suggested at a recent staff development sessions about making the OPfA *"streamlined [and] somehow made easy for staff and students to understand"*, the message from senior management was it could not be simplified since it *"opens cans of worms if they [policies] are misinterpreted*". Although understanding the point that had been made, Aaron argued that if staff were to fully engage with formal policy, *"it needs to be in simple terminology":*

> *Yes, we're intelligent people, but our job is not, what you could say, is it our job to know the nitty gritty about all the little bits of assessments protocol? You could say "Yes it is", but it's not the most accessible thing to read.*

Linking back to Brian's earlier point regarding staff development, Aaron suggested that staff should attend mandatory training concerning assessment policy *before* they are allowed assess students on a module. Here, the suggestion was that it would ensure that staff would receive the information first hand, rather than them receiving it from colleagues who *may not* have fully understood the policy themselves. The uncertainty around understanding formal policy was picked up on by Sam, who argued that the willingness to embrace technology was often difficult for many people, as there was *"a fear of doing that [innovating in assessment] because you're not sure whether you've strayed from university policy."* But as Bob pointed out, some of OldU's policies were relatively flexible and staff had some freedom when interpreting them:

> *What I've experienced at OldU; there may be policies but when you get to the detail of what they say, they tend to be so vague that you could run a bus through the gaps in them and effectively do what you like to a certain extent.*

Given the top-down nature of OldU, Bob believed that many people would just *"ignore"* any information that came down from the university, in that was not their responsibility to interact with policy. But they did not believe this was a problem limited to OldU in that *"you get that across loads of universities, especially [UGroup] universities."* Scott went so far as suggesting that staff could circumvent some university policy, providing they had *"good pedagogical reasons",* as they were relatively flexible. This was evident with the many instances offered by the participants of staff choosing what information they would follow or not. Perhaps the most extreme example of this was how one academic described their engagement with a local level policy regarding the running of a module:

> *"But actually, I don't follow the rules. [John Doe] knows I don't follow the rules! I follow the rules because I deliver to him, for example, on the [name of course] over the years and he's been in charge it all three years […] But I never follow the rules. Why?*

Because, they're for different people. They're different levels of development." (Academic, FLHS)

5.6.2. The absence of policy

Whilst the language used in existing OldU policies was noted for its difficulty in implementing at the operational level, what was more apparent was the absence of specific policy at OldU for designing and implementing e-assessment. Bob argued that in their time at OldU, there had never been an *"explicit strategy, top level policy"* related to teaching and learning for the institution, but senior people in the university had said that there should be an electronic assessment policy, seeing it as a *"separate thing and not embedded"* in the activities that were already going on. Jeff was keen to point out that there was no guidance for staff on the use of e-assessment, particularly for those who wanted to engage and create their own assessments. Scott explained that their department had already said previously that there was a need for institutional guidance and/or policy for e-assessment, particularly when it came to the use of summative online tests, as they believed there was *"a danger of people trying to do lots of MCQ type exams to save marking."* Harriet agreed on the need for some institutional instruction on e-assessment, arguing that there needed to be some coherence as to how e-assessment was run at OldU, particularly with regards to how it would be supported by the central teams. As it currently stands, Harriet argued that the central teams *"have no way of knowing"* if an academic suddenly decides to use the VLE to run a test on a specific day, which could cause problems if there were issues with the technical infrastructure at OldU.

Even when it came to the thought process around the buying of technology for e-assessment purposes, as previously raised by Martin, many pointed to an apparent gap:

For example, [the CS central team] looked at the institutional licence for PollEverywhere and they came back at £25k a year and they immediately said "that's too expensive" […] but no criteria to actually analyse the cost effectiveness, the pedagogical

> *impact or anything like that. It's just like "No - we're not paying that." […] That's what I'm saying about detail; there's nobody in there who would go "Hang on a minute, this could really be beneficial pedagogically - this could really help with student feedback, engagement" or whatever, or working with large groups. There's no sense of having a deeper set of criteria or issues.*

Given the void regarding e-assessment at the institutional level, it often led to participants talking about how they had worked with e-assessment in their own departments, and the varying ways in which it had been implemented. Brian was particularly critical of the lack of policy at institutional level, but chose to focus more at the lack of policy at the local level to support staff in the use of e-assessment:

> *In my idea, they [the department] haven't provided any kind of framework for the staff to reflect on how they should be using it [e-assessment]. They've provided frameworks for how long it should go live and how many questions should be asked for a certain time period. And that's all good, but there hasn't been any of that pedagogic direction, and part of that pedagogic direction must be a cost-effectiveness calculation […]*

Even with the impending approval of the coursework submission policy at OldU, one academic in FLHS who had seen the draft policy noted that whilst there was reference to e-submission, which was a *"significant aspect"*, it was still *"only one aspect of e-assessment."* Adrian, like many others, was particularly open when talking about their e-assessment practices and the challenges they faced because "*there were no regulations at all [and] asking about it just sort of drew blanks."* Thus, they, like others, many where left to decide for themselves:

> *We just made all the rules up ourselves, but based them on the rules that were there for written exams.*

As Adrian and Bob highlighted earlier, the lack of specific regulations for e-assessment often meant that staff were left to create their own rules, often based

on existing University policy. In doing so, staff were effectively trying to ensure that any e-assessment practice was kept within the existing rules set out by the institution. Inadvertently, they were about to expose some of the challenges for e-assessment using existing University policy, since they mainly governed how paper based assessment was dealt with.

Sam was critical of the system in place for approving module specifications, describing how they were unable to specify an online MCQ test in the system, since only two categories of assessment existed at that time - exam or coursework – with both subject to a different set of rules and regulations within the OPfA. Susan's experience of using of video conferencing software for a student to complete their PhD viva-voce had been *"time consuming"*, since those responsible for monitoring PhD students in the department were ready to *"let [the student] off"* because they were unsure of how to handle it. Carol was also dismayed at how assignment marks were accidentally revealed to students before OldU's mandatory moderation process had been completed, which was difficult to complete in an online environment with the technology available to them. Shawn also found it difficult implementing an online test which students completed over a 4-day period, as they then had to account for the mandatory 5-day late submission period set by the institution.

5.6.3. 'Clashes' with existing policy

PS staff shared similar problems whilst trying to adhere to existing University policy regarding anonymous marking and feedback, with Scott believing that whilst people *"genuinely want[ed] to engage"* with e-assessment, the technology available "*just doesn't do what people want*". Lindsey also had similar problems working with staff locally, describing the difficulties they had experienced when setting up e-submission:

> *I suppose the thing that surprised me was how complicated it got. You have all the different groups I think that have all got something to say. So the assessment group needed to get involved,*

> *the differences between the directorates and how they handle students handing stuff in. It did get really complicated. So we ended up ... you had a draft assignment that was set up, that wasn't marked but it was so the students could see an originality report, so that was set up first. And then there was electronic submission for marking. And that had to be anonymised, and then it was "how do we split them into groups?" And then it was, "well, when this was handing in physically, they used to sign a sheet, so how do we replicate that?"*

Leigh argued that the policy for anonymous marking actually went against the 'good practice' they were exposed to when completing their teaching qualification. By enforcing anonymous marking of student work, they argued that the technology encouraged a 'cut and paste' culture amongst staff, with students *"getting the same suite of comments, which [are not] individualised to them."* Such use of *"stock answers",* in Leigh's view, was not necessarily good practice for feedback, and was a potentially a contributing factor as why OldU were *"getting shit marks on the NSS"*. There was even a suggestion that OldU's formal policies seemed to work against a particular subject discipline:

> *I would say [our subject] is a difficult area to look after in relation to the University, because of its vocational nature, competency nature; it's over 5 years not 3, and the non-modular structure of it means that it does automatically fall out of the University structures most of the time. And almost always, we have to find a work around and that's particularly the case when it comes to technology because of the institutional set up and frameworks that doesn't work for [our subject] automatically, because it is a year based course rather than modular.*

Whilst there were many other examples illustrated by the participants from across OldU where they had 'clashed' with existing University policy, one issue stood out from all others as being a real challenge when it came to e-assessment; financial suspension. Used describe students who have their access to of all electronic systems (e-mail, VLE, student intranet, etc.) restricted due to the non-payment of fees, any student on financial suspension would be unable to

complete any e-assessment delivered using an OldU system (e.g. VLE). However, students would still be able to complete paper-based assessments that did not require access to university systems.

Participants from all areas of the institution (academic and PS) were unanimous in their contempt for this policy, with one letting out an audible 'groan' when asked for their thoughts on the matter. Elliot said that it *"is a pain in the ass*" in that there was a *"massive inequity"*, since students could still turn up to class and complete paper based assessments without any problems. But if students were completing work in a group, then there was an even bigger problem:

> *So you can be involved in a group and I could be the person that's due to submit my work for the group, but I'm financially suspended. I don't realise this until the day I'm due to submit. So I can't submit, so we submit late. What's the consequence for my fellow group members?*

One PS participant described how mediating a meeting regarding financial suspension felt like *"facilitating peace talks between Russia and the Ukraine"*, with academics and administrative staff on either side *"ranting"* at each other trying to get their point across. Much of this unrest, however, was down to a lack of communication regarding how and when financial suspension was applied, Scott explained that students had been placed on financial suspension for *"quite minor things, like not paying for a lab coat"*, but the message coming from the central teams was that it was only applied for *"major things[,] like not paying fees"*. Given the inconsistent message, and application of the policy, Scott argued that staff were then having to compensate "*because they're [students] still technically here"*, which put a lot of pressure on them, particularly on courses with large numbers of students. Having worked at OldU for several years, Bob could give an interesting insight into the financial suspension issue and how similar policies have impacted on e-assessment:

> *[…] the knock-on effect for electronic assessment is massive because it means anyone under financial suspension, and it's a*

> *decent amount of students at any one time are financially suspended, they can't participate in electronic assessment usually. So that's where you get to the fine detail of something, making sure you are not being unfair and discriminating against those students. And as it stands, OldU haven't solved that individual problem, but there may be other details like that, that have to be worked through. But that's not necessarily a policy; that's just making sure any electronic assessment activities are dealt with in the same way as face to face assessment activities.*

When pressed further, Bob was particularly critical of the lack of 'forward thinking' at OldU, and how some policies may need reviewing in the light of recent events. They suggested that there was a *"lack of joined up thinking around the university",* with some central departments coming up with their own set of rules in a *"detached bubble",* without realising what was going on in other parts of the university. With respect to the financial suspension issue, Bob believed it had only become a real challenge when larger departments started moving to using online tests and e-submission and they believed that *"someone along the lines should have foreseen that"*. Conversely, Brian argued that the mass uptake of e-assessment in their department could not have been envisaged, believing that the likely problem was that the implementation had not been managed well and pointed to how the department only bought an e-assessment software package two months before teaching started.

5.6.4. The need for 'workarounds'

The notion for some of OldU's policies to be reviewed in light of e-assessment practice was shared by many of the participants, who believed that the University was operating on an 'outdated' way of working. Carol argued that whilst there was *"some scope for innovation"*, it was incredibly difficult, in part, because of the processes in place. Like Alice's experiences discussed earlier, they explained how the suggestion of using non-traditional assessment methods, such as e-assessment, within a course were queried at a validation event. Elliot was of the opinion that if OldU was to provide policies to increase the use of e-

assessment, *"then some of those traditional processes [need] to change"*, since *"education today isn't exactly the same as what it was a long time ago, and technology's a major factor in changing things."* Martin agreed, noting that *"there isn't similar policies or processes in place for electronic stuff as there is for other things"* which was a real issue, since there was no equitability.

The 'clashing' with existing policies resulted in many stories about how people often looked for 'shortcuts' or 'workarounds' to achieve the result they wanted. Carla recalled in their department how one student had resorted to emailing the work to the module tutor for it to be marked as they were on financial suspension. As Carla noted, the financial suspension policy probably *"made sense"* when it was implemented originally, but *"things have changed"* since it was first introduced. Leigh believed if an e-submission policy were to be put into place in the institution, colleagues in their department would *"just ignore it"* and would print out the student work instead. This suggestion, however, was based around the assumption that the work submitted for their discipline would be extremely difficulty to mark in an electronic environment and that students would receive *"very poor quality feedback for a couple of years until they [staff] realise resistance is useless."* Harriet explained how when it came to getting modules created within the VLE, staff were "*regularly trying to find shortcuts"* instead of following all the processes *"that we know they should be".*

But whilst we could attribute the use of 'short-cuts' and 'workarounds' to a lack of formal training regarding the processes and policies at OldU, there is evidence to suggest that there could be another reason for it. Whilst participants were clear in their message that whilst there is a lack of policy to support the use of e-assessment and what they wanted to achieve, there was some disparity in in whether 'workarounds' were created because of an absence of university policy, or a lack of awareness that something exists. Whilst some of the participants had the opportunity to contribute to the development of the new coursework submission policy based on their involvement in specific university committees, others – including myself – were only exposed to the document when it was

shared with them in an ad-hoc manner. Carol was given access to the draft policy as part of one of their committee roles within the institution, and was able to circulate it at the local level to staff in their department for comments. However, Carol admitted that they did not always take this approach when it came to sharing information:

> *I get lots of things for consultations. I make a decision on whether or not, and how broadly to disseminate it. Because if I disseminated everything that comes down for everybody to look at, then it would just bore everyone.*

Even being a member of a relevant University committees that would have sight of the coursework submission policy did not guarantee an awareness of what was happening at OldU. One participant, who was a member of OldUTELC, which considered all aspects of technology enhanced learning within the institution, was asked if they were aware of the e-submission section within the new policy, their response was one of astonishment when they replied *"no, I didn't know that!"*

5.6.5. Central resources

Brian thought it was *"great"* that the department he worked in had brought in a dedicated person, since they were told they had to have a minimum level of coursework within modules as part of a curriculum review and *"everyone [had] raced for electronic assessment."* However, in larger departments, this was potentially a huge burden on one member of staff and potentially raising the question of additional support for academics wanting to engage. Much of the existing support for e-assessment was sourced central teams, who were praised by many of the participants. Both Brian and Adrian commented on the CS central team, with Adrian stating that they were particularly helpful with the logistics of running an online test within a classroom, especially when they were dealing with a recent change in network infrastructure. Jeff noted that the sessions on e-assessment offered centrally by the TEL central team were *"really useful*", a

sentiment shared by both Sharon and Leigh. Aaron was also very complimentary, stating that they *"rate highly"* the TEL central team since they will *"bend over backwards to help you if you ask for it"*.

Alice echoed Aaron's comments regarding how willing the staff in the TEL central team where, noting that *"they are really enthusiastic"* and that *"they've always got time to sit down and 'chew over' ideas"* when it came to using technology in alternative ways. Susan also recalled similar experiences of working with the TEL central team, stating that they helped to facilitate what she was trying to do, by taking the time to talk through what needed to be done to set up an online test for students in a second-year undergraduate module. However, despite the praise for CUT in the support they provided, there was an acknowledgement of their limited reach and resource availability for those wanting to engage with e-assessment. For those working in CUT, there was an acknowledgement that there was, as Martin referred to, a *"massive resourcing issue"* within the institution when it came to supporting e-assessment.

Scott was concerned was whilst that much of the innovation around e-assessment at OldU was increasingly being driven by staff and students, there was a lag in terms of what could be implemented. Scott argued that this was owing to the limited resources available to the VLE team who needed more staff to support it effectively, since the *"manager of the two-man team is trying to do everything"*. Harriet agreed, noting how the VLE team had often relied on 'goodwill' from other colleagues in the CS central team to provide help with particular tasks. In addition, the fact that the VLE team also looked after many other systems at OldU meant that their time and resources were also allocated to other projects, and so there was *"always more work [compared] to the resources available"*.

Those in the faculties were also aware of the limited capacity of the central teams, and more worryingly, the impact they could hope to achieve across OldU. Elliot was critical of the provision offered by the central teaching and learning department, claiming they *"don't do a particularly good job at supporting and*

getting involved with our faculty". Acknowledging that the staff in the TEL central team were *"all nice people [who are] very capable"*, they noted how members of the team focused on activities away from what they believed should be their core activity – supporting and encouraging change across the institution. A consequence of this was that their practice had limited impact across Elliot's faculty:

> *I think they focus on a small group of people to help and work with [...] there's been some good practice, but it's very isolated good practice. It's limited to a handful of people across the faculty, rather than across the board. I think a central team has to have that across the board impact. You need to raise standards as best we can for our students across the board, rather than impacting the education of twenty.*

When speaking to Shawn regarding what support was available to them for e-assessment, they acknowledged that whilst they could get help for technical problems, they did not believe there was anybody available to help them *"enhance"* e-learning, stating that no-one from the central teams was able to provide guidance on creating simulations for their discipline. Both Sharon and Alice believed that the finite numbers of qualified staff within the TEL central team for a university as big as OldU was a *"real restriction"* for e-assessment, and whilst they may indeed have ideas about want to explore something new, there was no guarantee they could get access to those with the knowledge that they required.

5.6.6. Coherence amongst central teams

Where academics and PS staff worked together as part of a University committee, those in a PS capacity were appreciative of the opportunities that the committees supporting e-assessment afforded in bringing a variety of staff together from across the campus. Both Tom and Harriet noted how they allowed a variety of people to contribute to the direction of how the university thinks strategically about e-learning and e-assessment. Cheryl suggested that this was

particularly important since it allowed for the committees to "*pull in the expertise from across the University*". However, outside of these official committees, participants painted a very different picture.

Some academics were keen to point out the apparent deficiencies in how the central teams worked together to support the faculties, even with their limited resources. For Jeff, there was a *"lack of clarity"* about the roles and responsibilities of two of the central teams when it came to implementing large projects at OldU, with the CS central team often leading on projects without the TEL central team being involved. Whilst Jeff noted that they did work together, they appeared to treat themselves as *"completely different entities"* giving the impression that *"it's almost like you think they are opposing each other"*. Georgia was of the same ilk, suggesting that the teams do not work together as well as they could, arguing there was a *"lack of trust of the individuals concerned"* with regards to the restrictions enforced by the CS central team about who could post online resources and content on the University's Web site. There was also a suggestion by one academic that the TEL central team where perhaps 'shirking' some of their responsibilities when it came to institutional projects:

> *[…] both of the things that really moved on over the past year or so have been reliant on [the CS central team]. So [the CS central team] have written the software for lecture capture, [and] have also written a building block for [the VLE] to generate minimum standards based on the data from [university systems]. Which begs the question, what the hell have the [TEL central team] been doing all this time?*

Harriet explained that even though the CS and TEL central teams held regular meetings to share best practice, they had also heard how, historically, the CS central team were often 'cut out' of conversations around learning technology initiatives at OldU. And whilst there was a consensus that communication had improved in recent years, there was still a feeling that they were involved in projects at the end, often when it was too late to do anything. Martin was able to shed some light on why some central teams were not asked to engage in

university projects, suggesting that for that for e-assessment to *"properly match the university processes"*, the buy-in from senior management was needed to manage the *"egos"* of the heads of departments involved who *"don't want to make changes because there's a knock-on effect for them."*

Not only was there a concern regarding how the PS teams worked together to support e-assessment, there was also concern regarding how they worked alongside academics. As an illustrative example, Elliot and Martin explained how a review of OldU's existing policies may not be an easy feat to achieve because of the people likely to be involved. Elliot suggested that in some cases, there would be non-academics *"impacting massively"* on academic issues, without *"really understanding what' going on"*. Elliot's ultimate concern was for the students and that some taking e-assessment may be disadvantaged because of the policies in place, and that OldU was *"potentially risking opening [themselves] to massive student complaints"*. But as Carol pointed out for their faculty, the concerns were not just limited to non-academics who impact massively on academic issues; they had an academic in their faculty who was implementing policy in a literal manner, making it a challenge to get e-assessment methods implemented.

Within FLHS, members of the dedicated eLearning team (see **Chapter 2.2.3**) commented how they often struggled to make best use of the resources that were made available to them because of the way they were structured to support all research and teaching departments. With eLearning academics situated within a teaching department and reporting to the HoD, the eLearning support were situated outside of the teaching departments and line managed externally. As one participant observed, there was a need for 'seamless management', but argued it did not exist in its current format:

> *Unless you've got superb, seamless management between the [departments] and the higher level, it automatically breaks down. If the technical support are associated with duties across a faculty and the [departments] don't know exactly what that is and can't rely on that person, the whole thing falls down. You have to react when things happen, you have to rely on someone being available*

> *[…] So you need more staff per school just supporting the technical activity and within the line management of the school to make sure that they are doing what they need to and keeping an eye on them.*

As a consequence of the structures of the faculty eLearning team, one academic believed they were too involved with administrative tasks that they *"wouldn't expect to be involved on a day to day basis once something has been set up"*, arguing that they should be working with other academics "*to make sure the pedagogical aspirations of the course are matched up with the technology available*". Conversely, a PS participant from the eLearning team was keen to stress that they had other priorities in their daily workload which "*aren't anything to do with teaching and learning a lot of the time"*, which academic staff are not aware of. However, there was a feeling that they felt 'inferior' to academics as whilst they would do whatever they wanted, barring anything *"illegal or absolute idiocy"*, they did not feel qualified to make any decisions regarding what staff and students would be allowed to do, despite acknowledging that academic staff were *"not necessarily aware of problems that can arise from what they want to do."*

5.6.7. Institutional leadership

For those already actively involved in the use of e-assessment at OldU, one of the main concerns was regarding what they described as a lack of leadership and direction setting or TEL. Arguing that OldU had a history of being 'reactive' rather than 'pro-active', both academics and PS staff were critical of the lack of leadership from OldU's SMT believing that they were more concerned with what competitors were doing when it came to the use of technology. One recalled how the first VLE that the university bought was *"the basic version, the real cheap one"*, and they had heard the decision to buy one for use at OldU was based on a senior manager's attendance at a meeting at a competitor university and decided because they had a VLE, OldU should have one as well. Another believed that a

similar 'process' was followed when deciding on whether OldU would get involved with MOOCs.

Whilst not wanting to sound *"pessimistic and difficult"*, Bob explained that they were unable to comment on anything positive regarding e-assessment at OldU. This was in part because it had been "*a constant battle to get any innovation in this area"* since there was a lack of commitment to it within the institution, which is *"a big part of the problem."* A PS participant shed some light on this, noting that there had never been a project at OldU which considered e-assessment from an institutional perspective. They argued that there had never been the 'buy in' from the member of SMT responsible for education, who could then liaise with other departments across OldU *"in order to make online assessment and feedback a possibility"*.

Although fully appreciative of the competing demands of the senior management team, Scott thought there was a *"leadership vacuum"* at OldU, with decision making limited to *"a small number of senior people who are very busy"* and thus, those involved *"can never get engaged in the level detail [and] the level of analysis that is needed."* This was a point Martin shared, who suggested that decisions around what technology to buy for the institution are *"not usually made on a consulted, learning teaching approach"* and subsequently, *"there's a lack of understanding of what the potential is of technology and what its impact is.*" Another was a little more critical of the decisions made at the top level:

> *[…] coming back to the senior team, I do think it's an issue in this institution that we have too many senior managers making snap decisions simply because they've seen something else somewhere else or somebody's whispered in their ear that this would be the thing without full consultation about the issues. And that's a bit of a bug-bear for me because then it's us [staff] that has to pick up the pieces.*

For those in the faculties, the message to them was all too apparent. Sam was of the impression that those who were leading on technology enhanced learning at

OldU were seen *"mavericks"*, intent on running a *"counter culture"* to what institution was more familiar with. They had seen how those with an eLearning responsibility had the importance of their role *"underplayed"* at a local level, with it treated as a *"periphery role"* with it only attracting a *"minor admin allocation"* in their workload. Carla agreed, noting that having recently been interviewed for a position at a more *"teaching focused"* institution, they could see how e-assessment, and other teaching related activities, was *"probably lower down on the list of priorities"* at OldU. Jeff was adamant that whilst the faculties at OldU were good at what they were doing, there needed to be someone who could bring everything together:

> *I think I just get frustrated with the lack of leadership for things like this [e-assessment]. We've got three faculties each with a student experience lead, who are all very good and doing very good work. Sometimes they get together and do even better work ... We've got an [TEL central team] and a CS central team and I think everybody is just milling along doing what they feel like. There's a lack of people setting the direction.*

Although discussed earlier, Susan argued that many staff who perceived the priority of OldU to be research, did so based on actions of OldU's SMT. In Susan's mind, they did not give much consideration to learning and teaching activities, instead choosing to focus on "*maximising [the] number of students and the amount of money".* With many commenting on the perceived emphasis on research over teaching within the institution when talking about their experiences, it led to further exploration of why so many believed this was case. This led to participants being very critical of how they believed the nature of the institution impacts on teaching related activities.

Georgia explained that the top line statement of OldU *"doesn't include anything about teaching"* and despite what many would try to argue, *"teaching is never regarded as highly as research-based activity."* Adrian argued that some departments in OldU hide behind the 'research-led' name so that they can *"ignore the learning, teaching and assessment"*, a view shared by Martin who noted that

as a *"research-led institution"*, OldU has not given much credit to teaching "*as we should have done"* in part because of the way the faculties are structured. Carol, who was employed on a teaching and research contract, suggested that there was a *"stigma"* attached to teaching and scholarship activities in their department, and had even heard colleagues say that that staff should not engage in OTAF as *"it will jeopardise your career"*, a point picked up one academic earlier.

But for those whose role was based in FLHS, they could point to a tangible piece of evidence regarding why there was a perceived emphasis on research over teaching – the formal structures that were in place which actively promoted the University's research agenda. For those employed primarily in a research role, such as Gareth and Barry, they argued that the physical separation of research from teaching in FLHS should not have happened, since it only serves to encourage a lack of interest in teaching related activities. Barry argued that the split had led to a lack of communication between the teaching and research departments, and that the heads of teaching departments *"don't have any control over the people they are depending on to give the delivery"*.

This was a concern shared by Bob who noted they had many examples of where staff had not showed up to teach their classes. However, they did understand why a decision had been taken to reorganise the faculty, with OldU being able to focus more on cross-disciplinary themes for research so as to be more attractive to funding providers. For those employed in a teaching and scholarship role in FLHS, the emphasis on research was all too apparent:

> *The fact that they restructured the faculty to lump every single school that had all the undergraduate & postgraduate students in it into one institute, which effectively has the same power as any of the other research institutes, and I would argue less power, that's explicit proof that the structure has been against it [...] So because it's a lesser priority in terms of the university, and then because of the faculty and the institute, you can see how far down you've got before you've got a little bit of money that you could potentially use to enhance the student experience through*

> *technology. Which is why I've ran up against massive brick walls when it comes to spending money … (Academic, FLHS)*

Even those outside of FLHS were critical of the decision to formally separate teaching and research activities, with one academic from FSoSH suggesting that it was *"the worst thing that the institution has ever done",* suggesting that *"everybody thinks that's [separating teaching and research activities] the most ghastly, stupid, destructive, idiot thing to do."*

5.6.8. Summary

Despite the evidence of e-assessment practice taking place across OldU, this is often done 'at odds' with the existing formal policies in place. Participants describe the current policies as being difficult to work with, and are somewhat inaccessible given the language that is used within them. There is a view that the policies are representative of the senior management within OldU, and the top-down nature of the institution suggests that people are likely to ignore the policy, and go about their practice in their own way. However, more apparent amongst the review of OldU documentation is the lack of specific policy relating to the design and implementation of e-assessment, nor was where specific guidance for staff on the use of e-assessment within their teaching and learning activities. From a central team perspective, there is also the worry that a lack of strategic oversight on the use of e-assessment, means there is no way of knowing if a member of staff is making use of e-assessment on any given day.

The lack of explicit policy relating to e-assessment often sees staff clashing within existing policies - the financial suspension policy that currently operates within OldU is the most notable, and commented on, example – as they resort to workarounds to achieve the results they are after. Such a move has seen staff left to create their own rules and regulations around the design and implementation of e-assessment, with variation occurring in practice across the institution as they each attempted to get to grips with existing OldU policy. The example of providing feedback to students anonymously and within a given time-period per

OPfA was an example of this, which was seen to encourage a 'cut and paste' culture amongst staff, and potentially contributing to OldU's low marks on the NSS. Additionally, the suggestion that OldU is operating several outdated policies and practices is evident from the participants' experiences, with use of 'workarounds' and 'shortcuts' a regular occurrence, and are not limited to e-assessment practices.

A consequence of the lack of specific policy and dedicated structures for the successful design and implementation of e-assessment, has left staff suggesting that there is a lack of coherence, and direction across the institution. The issue of financial suspension impacting on e-assessment practice is - as one participants described - a result of a lack of joined up thinking at OldU, with central departments developing their own sets of rules, for those in the faculties to then adopt. Such practices only further typify the need to re-examine the roles and responsibilities of the central teams, the resources and people they have in them available to those in the faculties, how they should and could work together more efficiently, and how they then engage with academic departments in the faculties.

Additionally, the need for strategic leadership from the top is deemed crucial for OldU going forward, since there had been a lack of commitment with regards to TEL innovation. The idea that those providing local leadership for TEL in the faculties are seen as 'mavericks' who are running a 'counter culture' is an interesting observation, given the increase use of TEL across the HE sector more generally. For participants, the situation that OldU find themselves in is owing to the formal structures in place that actively promote the University's research agenda, which leaves those employed in a teaching-related position at a disadvantage.

5.7. Summary

Much like what has been seen in the literature with regards to an understanding of what e-assessment entails, the participants differed in their perspectives, and

were unable to provide a consistent, OldU understanding. Viewed as a *student-focused*, *tutor-focused*, *technology-focused* and *assessment-focused* activity by the participants, there was very little consistency between them regarding an understanding. Whilst PS staff were more aligned in their views, academics were less equivocal, with no agreement on the terminology both within and across faculties.

When asked to describe their experiences of e-assessment at OldU, each of the participants shared their own examples of enablers and barriers most pertinent to them. Student demand has been identified as a driver for e-assessment, with the increasing student numbers requiring staff to consider alternative assessment methods (to the traditional exam) to assess students. The need for alternative assessment methods in turn led to individuals within departments, often identified as 'innovators', seeing this as an opportunity to experiment using technology and seeing what was possible, particularly as there had been recent improvements in the technology available at OldU. Such practice provides encouragement for others to review their own assessment practices, especially for those who have seen things done differently elsewhere. But whilst participants were generally positive about the use of e-assessment at OldU, staff conservatism and a reluctance to change is a reoccurring theme at OldU amongst both academics and PS staff. Further exploration of the reasons behind this viewpoint found that it was influenced primarily by participants' experiences of technology at OldU, and the perceived priorities of the research-led institution.

It was noted that leadership at the local level for the enactment of OldU policy and support with operational aspects, has helped increase the visibility of e-assessment within OldU. Alongside this, engagement with existing CoPs that operate across the institution have proved beneficial for some in the sharing of practice where structures and formal policies do not exist. However, there is an acknowledgment that these are self-selected groups that have limited power and impact within the institution. The suggestion that the language used in formal policies is inaccessible, has led to some academics questioning whether they

should be able to understand it with regards to their own day to day practices, and others simply ignoring it. The absence of existing policy within OldU referring to the specifics of e-assessment has contributed to staff actively creating workarounds on a regular basis as they clash with existing formal policies.

The need for institutional senior management setting the direction for TEL, and other teaching and learning activities, at OldU would help to address what participants described as an imbalance of research activity over any teaching-related activities. This was even more apparent in the faculties, where participants argue that the structures and formal policies favoured those in a research role. By addressing the concerns of participants over research and teaching and reviewing existing, it would also illuminate how the central Professional Services teams, with a role to play in the design and implementation of e-assessment, could work together more effectively and much a wider review of the relationship between academics and professional services colleagues with regards to broader teaching and learning related activities.

Chapter 6 presents a discussion of the findings in the context of the literature, identifying seven key themes that emerged from the data, with each one discussed in a similar order to the order in which the participant experiences were presented in this chapter.

Chapter 6 - Discussion

This chapter addresses the findings presented in the previous chapter, through a discussion of the themes identified by the participants involved in this study. The themes incrementally provide answers to the research questions, discussing the terminology used at OldU, an identification of the enablers and restraining factors in the design and implementation of e-assessment, moving towards the more underlying challenges with regards to the structures and formal policies faced by those working in the context of OldU.

6.1. Overview

In the previous chapter, several themes emerged from the experiences of the participants which impact on the successful design and implementation of e-assessment at OldU, some of which apply to a range of educational settings, with others more intrinsically linked to the context of OldU. Given the lack of consensus in the literature with regards to a definition for e-assessment, it is no surprise to see a similar outcome when asking academics and PS staff at OldU to define the term e-assessment. Whilst there is some alignment between PS staff viewing e-assessment as a method of assessment, academics are more varied, with no consistent viewpoint presented both within and across faculties.

External factors have indeed played a key role in prompting those at OldU to examine their own practices and consider the use of e-assessment, with several formal and informal opportunities contributing towards this. Additionally, leadership at the local level has also from motivated individuals, heads of department, and appointments to specific positions associated with TEL have also contributed to the uptake and use of e-assessment across OldU. Engagement in CoPs at both the local and institutional level have proved to be beneficial in help those engaged in e-assessment find solutions to problems linked to OldU's structures and formal policies, despite the acknowledgement of the limited

impact that they have, and lack of involvement from those in senior positions at OldU.

Whilst the consensus is mostly positive around engaging with e-assessment, it is important to note the conservatism and a reluctance to engage demonstrated by some is not predominantly bound by OldU's institutional culture; a more substantial rationale is previous teaching-related technology experiences, which have clearly impacted the ability of staff to trust and rely on the systems available at OldU. Whilst the language of OldU's policies has been described as inaccessible by some, as they find it difficult to immerse themselves in the policy when it comes to enactment, others openly acknowledge that they actively ignore formal policy at OldU. Those who do engage, are actively engaged in workarounds as they grapple with outdated policies and ways of working in their attempt to successfully engage with the design and implementation of e-assessment. At the core of these themes is the recognition amongst participants that the priorities of OldU are clearly positioned towards emphasising research activity, to the detriment of TLA activity. Pointing to tangible evidence in the make-up of the formal structures and formal policies, academics note the conflicting demands that they have with regards to managing their workload, with respect to whether their priorities should lie with producing research outputs, of focusing on a review of their own TLA practices.

6.2. Addressing the 'language' in e-assessment practice

It has long been observed in the literature that there is a lack of consensus in education domain regarding the terminology for technology related practices (see **Chapter 3.2**), with some practices often described differently depending on the context (Gikandi et al., 2011; Guri-Rosenblit, 2010; Moore et al., 2011; Sim et al., 2004; Timmis et al., 2016; Twigg, 2001). So, it only serves to hold true to see a similar phenomenon exists at OldU when speaking to academics and PS staff, as they describe e-assessment fulfilling a variety of roles (see **Chapter 5.2**). For PS staff, who see e-assessment as a *method* of assessment, their definition is

consistent those from the turn of the century, where e-assessment is often contrasted with paper-based assessment, with the benefits and drawbacks e-assessment presented to aid readers in the decision making process (c.f. Bull & McKenna, 2004; Clariana & Wallace, 2002; Ricketts & Wilks, 2002; Sim et al., 2004).

But the biggest variation in understanding is between academics, with clear boundaries being drawn dependent on the faculty that they reside in. Academics in FSoSH tend to align with the PS definition, whilst FE&S view it as a *tool* that supports the process of assessment – an academic activity - in that technology facilitates the grading of student work, or the detection of plagiarism. Such a definition is consistent with those presented in later literature, as the benefits of technology use are presented in terms of the efficiencies for those involved (c.f. Cox, Schleyer, Johnson, Eaton, & Reynolds, 2008; Derrick & Stevens, 2005; Youmans, 2011). In FLHS, where a local e-learning team comprising academics and PS staff resides, there appears to be even more variation. For those operating in a research role, there is a view that whilst e-assessment is a *method*, it also involves the automated marking of student work by a computer, often seen in the use of online MCQ tests which are used within the modules they interact with.

For those academics within a specific e-Learning academic role in FLHS, who are praised by many across the institution for supporting e-assessment at the local level and aiding policy enactment, they vary from viewing e-assessment as a *method*, through to e-assessment as a *process*, which is much more consistent with the work on the electronic management of assessment (EMA) process derived by JISC, in collaboration with the Heads of e-eLearning Forum (HeLF) and the University and Colleges Information Systems Association (UCISA). HeLF suggested that EMA covers four processes, including: e-submission, e-marking, e-feedback and the electronic return of work (Newland et al., 2013), whilst Ferrell and Gray (2013), writing for JISC, built on the work of the TRAFFIC Project

(Manchester Metropolitan University, 2014), have since expanded the term to encompass the whole assessment life cycle:

> *"The term electronic management of assessment (EMA) is increasingly being used to describe the way in which technology is used across the assessment life cycle to support the electronic submission of assignments, as well as marking and feedback." (Ferrell & Gray, 2013, What is EMA, para. 1)*

Many UK HE institutions are now adopting the JISC definition of EMA as part of their own formal documentation (c.f. Canterbury Christ Church University, 2017; University of Bristol, 2017; University of Central Lancashire, 2016; University of Liverpool, 2016; University of Worcester, 2015; York St John University, 2015), given the focus on the whole assessment lifecycle (**Figure 6.1**). However, Voce (2015) makes an interesting observation of EMA, noting that it appears to be only concerned with text based assignments that require human input. Whilst Voce does not expand on why tests/quizzes that can be automatically marked by a computer are excluded from the definition, it does keep in line with JISC's description and guidance for EMA. And although the JISC documentation and guidance does not specifically discount them, there is no real mention of them being considered, with much of the focus in relation to automation is regarding the benefits of common comment reuse and batch upload of student grades (Ferrell & Gray, 2013).

So why not use the term 'EMA' as the basis for this thesis? Indeed, several participants indicated during their interview that they would have like to have received the Interview Protocol (see **Appendix Two** – Interview Protocol) in advance, giving them the opportunity to refine their thoughts ahead of time. In this instance, I refer to my earlier discussions on the synonymous use of terminology in the field, and why this, which one could argue, may have introduced an element of bias into the research. Whilst EMA is becoming commonplace in the literature, Ferrell (2014)

Figure 6.1 The assessment and feedback lifecycle (adapted from Ferrell & Gray, 2013)

notes that the term is "often used interchangeably" (p. 5) with the term '*e-assessment management*' (EAM). Whilst EMA is a much broader term to cover the use of technology to support assessment related processes, Ferrell argues that EAM considers only the *management* of digital assessments, evident in EAM literature, which focuses on the *electronic submission* of assessment (c.f. Ellis, 2012; Ellis & Reynolds, 2013; Farisi, 2013; Hafeez-Baig, De George-Walker, Gururajan, & Danaher, 2011; Skrabal, Turner, Jones, Tilleman, & Coover, 2012). To further 'muddy the waters', Canterbury Christ Church University's (2017) documentation for supporting EMA is entitled "electronic assignment management", which is perhaps appropriate given that their focus is on the electronic submission of work.

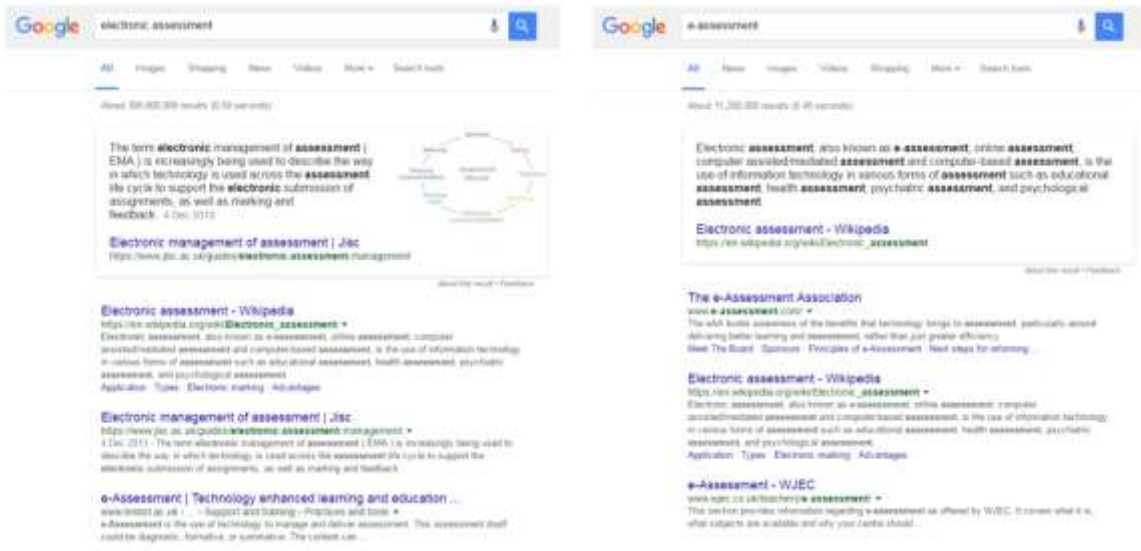

Figure 6.2 Using Google to search for content related to *'electronic assessment'* (left) and *'e-assessment'* (right)

Regarding the participants' request for the questions in advance of the interview, I can perhaps further illustrate the synonymous nature of terminology. A simple search on Google, at the time of writing, for *'electronic assessment'* returned information about EMA, with JISC's assessment lifecycle appearing at the top of the list. Conversely, a search for *'e-assessment'* returned specific definitions more in keeping with definition used as the basis for this thesis (see **Chapter 3.2**). Itis also interesting to see that that the term *'electronic assessment'* is used in the definition of *'e-assessment'*, creating an, almost, circular ambiguity (**Figure 6.2**). Whilst one could provide an explanation of this phenomena based on the intricacies search engine functionality and the use of key words, what is evident here is that depending on the term used in the initial search, two very different paths could have been forged by the participants in, perhaps, a naïve quest to clarify their understanding in preparation for participation in this study.

Whilst the variation in understanding is a key issue, the added confusion amongst participants regarding how academics and central PS departments should and could work together in the design and implementation of e-assessment is also of interest. Voce (2015) has suggested that the role of support staff is not well documented in existing e-assessment policies, thus potentially

masking the important role that they may indeed play from academics also involved in the process. This is indeed evident from OldU's CS team, who noted that historically, they were often left out of conversations relating to the use of technology in TLA activities, until the very 'last minute', whilst there was also evidence that PS staff supporting the implementation of e-assessment believe they are viewed as 'inferior' by their academic counterparts. However, Whitchurch (2013) has suggested that there is growing body of evidence for co-operation between academics and PS staff in the support of university functions, which Duke (2003) believes is happening as universities recognise they need to engage in collaborative work for innovation to take place. Through a more collaborative process between academic and PS staff in the design and implementation of e-assessment, Bulpitt (2012) argues that it offers the potential to bring together fragmented aspects of an institution to offer a more holistic, and less conflicting, approach to practice.

6.3. External factors prompt a change in practice

The increasing student numbers at OldU are prompting academics to consider more efficient assessment methods compared to the traditional end of module exam (see **Chapter 5.3.1**). Class sizes of over 100 students are not uncommon, with some larger classes across the faculties housing upwards of 400 students. Such a phenomenon is not unique to OldU, in that despite an apparent reduction in the number of applications to study in HE (UCAS), there were still over 2.28 million students studying across the 164 UK HE institutions in 2015/16 (Universities UK, 2017), with the benefits of automated marking and feedback appreciated in a range of subject disciplines (Whitworth & Wright, 2015). Indeed, for several departments at OldU, including my own, large class sizes are a common feature of core first-year undergraduate modules, with some reaching as high as 600 students.

Brink and Lautenbach (2011) have already indicated that increases in student numbers, along with limited class times, have contributed to an increase in use of

e-assessment within HE, with the opportunity to provide students with authentic learning and assessment an appealing one. Academics are keen to explore more efficient methods, particularly those related to the administrative processes, whilst also aiming to reduce subjectivity in the assessment of student work; something that can be achieved using online MCQ quizzes and tests. But whilst the technological expectations of students in education today are evolving, requiring those with a responsibility for teaching and learning to consider how technology might be better used to support a more effective pedagogy (Newman & Beetham, 2017), many are concerned that the use of e-assessment equates to the use of MCQ tests that pushes staff and students towards a surface learning mentality (Bull & Danson, 2004; Voelkel, 2013).

More formal opportunities to review existing practice at OldU, such as a departmental curriculum review, or experience as an external examiner, provide additional spaces for staff to consider assessment practices within specific modules and across a suite of programmes (see **Chapter 5.3.4**). Curriculum reviews offer the opportunity for staff to consider the implications of utilising e-assessment within courses (Stocker & Warrington, 2014), but considerable the time and effort for those involved in the process (Monkhouse, 2010; Oliver & Hyun, 2011) often uncovers the much bigger challenge. Curriculum reviews are likely to instigate cultural changes at the micro, meso and macro levels of an institution, as they are likely to instigate modifications to existing assessment policy, which are perhaps more challenging to overcome than structural issues (Fullan, 2001; Knight & Trowler, 2000).

As previously discussed, the prevalence of studies on e-assessment at the micro level tends to overlook the lack of studies considering the impact at faculty or institutional level, due to the contextualised nature of the practice that are often much more nuanced at the local level (Holtz, 2014; Kezar & Eckel, 2002). But, the role of external examiner – which academics at OldU do engage with – provides an opportunity for reciprocity and intelligence gathering about best practices taking place elsewhere (Hannan & Silver, 2006), giving insight into how other

institutions have engaged with e-assessment practice, and uncovering the challenges that may lie ahead.

The quest for alternative assessment methods has seen many individuals at referred to as 'innovators' (see **Chapter 5.3.2**), who are grasping the opportunity to experiment in their practices through the use of technology, rather waiting for strategic decisions (Daly & Waldron, 2002; O'Leary & Cook, 2001). Key to this is perseverance in the use of technology in an academic context, a characteristic which Singh and Wassermann (2016) identified in their study the implementation of e-assessment at a South African university, in that whilst successful implementation of e-assessment is indeed possible, they concluded that it is heavily reliant on the involvement of motivated academics. Despite the limited benefits for those wanting to innovate, particularly given the apparent research imperative evident in most universities (Salmon, 2005), the perceived freedom to innovate in assessment practice is embraced by many at OldU as they seek to engage with e-assessment.

Improvements to OldU's technology in recent years have certainly contributed to an uptake in e-assessment practice (see **Chapter 5.3.3**), with FLHS also benefitting from a local e-learning team who can take a pro-active lead on TEL innovations within their individual departments (see **Chapters 5.5.1** & **5.5.2**). FE&S staff also referred to 'innovators' within their departments to advance the use of TEL, perhaps owing to the presence of STEM subjects, but this was less obvious in FSoSH were the subject discipline presented a more challenging proposition. However, the *"artsy luddite"* reference from one academic in FSoSH with regards to engagement with e-assessment is perhaps a more challenging prospect for those involved in the humanities disciplines, which are often less suitable for e-assessment initiatives, given that they are slightly more subjective in nature, with STEM disciplines showcasing distinct levels of knowledge that are much easier to characterise (Gordon, 2014).

6.4. Local leadership is crucial to innovative practice

As discussed in the previous section, having staff at the local level involved in the design and implementation of e-assessment has proved extremely beneficial at OldU (see **Chapter 5.5.1**). This has been particularly welcome for those in a central PS role, who acknowledge the value of leadership in the enactment of institutional policy at the local level across the varying contexts (Cleland, Nicholson, Kelly, & Moffat, 2015; Whitchurch, 2009). Alongside dedicated e-learning positions at the local level, new appointments to management positions at the departmental level have also proved crucial in helping to challenge the OldU culture of emphasising research over teaching. Recent government initiatives, such as TEF (HEFCE, 2017) are now recognising the importance of teaching and learning activities within UK universities, and it is perhaps no surprise that incoming heads of departments are looking to challenge the status quo, since they often have accountability for teaching quality and annual NSS results.

Alongside the need for leadership in helping to enact policy and instigate a culture change, having support for the operational aspects of e-assessment is also needed (see **Chapter 5.5.2**). Whilst this is offered by central PS teams – and highly valued by those who have benefitted from their support, notably the TEL team within CfTAL – there are clear benefits recognised by those at OldU to having dedicated support positioned within departments to not only ensure reliability and careful delivery of the assessment formats, but to also maintain academic motivation and engagement levels for technology (Kuikka, Kitolab, & Laaksob, 2014; Sangi, 2008). Much of the praise for the local team in FLHS however is owing to the limited reach of the central TEL team within CfTAL, given that they only have a small number of staff to support the design and implementation of e-assessment across OldU, which is a considerable challenge (see **Chapter 5.6.5**). This observation has been observed by academics from both FE&S and FSoSH, who believe that they would also benefit from having

dedicated e-learning academics within their own departments, to help them think more holistically about the assessment process.

But whilst a 'movement' to have more leadership at the local level may seem like a 'win-win' situation for those at OldU, de Freitas and Oliver (2005) warn that bottom-up approaches to organisational change with respect to e-learning initiatives are not necessarily coordinated across an institution in the best possible way, and open up the possibility of repetition or conflicting demands. Whilst it may be possible for changes in pedagogy and culture to be reflected more broadly across the institution using this approach, they may well take a considerable amount of time to permeate through the relevant departments, and often still require the input of senior managers at the institutional level (de Freitas & Oliver, 2005; Singh & Hardaker, 2017). However, the e-learning team based in FLHS featuring academics and PS staff is co-ordinated at the *meso* level, benefitting from having academics located in specific departments within the teaching unit (see **Chapter 2.1.1**) to engage with the local context of the subject discipline in the design and implementation of e-assessment, and PS staff who work across departments to support the operational aspects of delivery.

6.5. Sharing 'practice' is invaluable, but CoPs have limited reach

Formal opportunities to review existing practices at OldU, such as a departmental Curriculum Review, or experience as an external examiner, provide spaces for academics to consider their assessment practices within specific modules and across a suite of programmes. However, many also referred to the informal networks that spanned across the institution as a vehicle to share practices, particularly where there was often void in the structures and/or formal policies at OldU (see **Chapter 5.5.3**). One such network - the OldU eNetwork - was praised by all who had engaged with it, providing a forum to share best practices and to facilitate discussion around TEL initiatives. Academics also pointed to the CoP formed from those who had engaged with the institutional CPD programme, with colleagues sharing their own experiences of

technology in TLA activities, as they worked towards completion of a post-graduate qualification. Through regular face to face meetings in a relaxed, informal setting - and an active mailing list - the OldU eNetwork fosters high levels of interdisciplinary collegiality, offering participants the ability to engage with a community of practice (Lave & Wenger, 1991).

Such meetings often provided a key moment in the decision-making process, where colleagues would be able to get first-hand knowledge from a variety of contexts of what technologies they can and should not work with. Although there are no strict guidelines for what constitutes a CoP (Hougaard, 2009), it is clear that the participants of the OldU eNetwork are actively engaging in a social community for those wanting to know more about e-assessment (and other technology related initiatives) and the design and implementation challenges pertinent to the OldU context. It is here where participants can be exposed to both tacit and the explicit experiences of e-assessment (Smith, 2006) from colleagues across the institution, as they uncover the cultural norms that exist within OldU that impact on the individual and the local settings, as they attempt to instigate a change to the traditional assessment practices (Binns, 2015; Deveau, 2008; Smith, 2005; Wilkinson & Kemmis, 2014)

Despite the obvious benefits that for those who engage in the OldU eNetwork, it is, for the most part, a self-selected group given the somewhat specialist nature of the practice involved. It is at this point where we see how those involved with e-assessment at OldU are aligning their activities and local practice with that produced elsewhere, as they begin to understand how their own experiences can be shaped by the ruling relations evident within the institution (Babbie, 2008; Slade, 2010; Smith, 2005; Walby, 2005) However, the lack of senior management representation – ranging from individual departments, through to faculty and whole institution - within the OldU eNetwork and CPD networks only serves to not only highlight a disconnect between those with a responsibility for the process of administration and governance within an institution, but also the limited impact that such groups may have on the practices of those across an

institution. If engagement with such networks that encourage the sharing of practices is not worthy of the attention of those in senior positions, then it appears that Pegg's (2013) requirement for a shared vision at all levels to support institutional change will be difficult to achieve.

6.6. Academic 'reluctance' to change not bound by culture

Whilst the consensus is mostly positive, academic staff conservatism and a reluctance to engage with e-assessment is a reoccurring theme at OldU (see **Chapter 5.4.1**). The suggestion that the conservatism is related to the appropriateness of e-assessment for the task has its merits, with some academics suggesting that senior management within departments would view e-assessment as *"a way to reduce standards"*. However, this is not necessarily a view shared by all, with one academic indicating from their perspective that the use of technology in the assessment process would decrease the level of assessment literacy amongst students - a rationale based on their own experience of taking 5 years to make the transition from the construction of written to digital text.

Such examples of conservatism might well be linked to the notion that learning in higher education is a part of a larger process of aiding students in the development of an identity within a disciplinary community of practice, further emphasising the need for the 'local' dimension in the design of e-assessment not only for students, but also for staff (Smith & Oliver, 2005). But whilst some academics were more reliant on personal beliefs towards engagement with e-assessment, others hinted towards perhaps more tangible evidence; external examiners would not be familiar with newer techniques for assessment, or where professional accreditation bodies had input into assessment format, in an attempt to ensure future graduates can demonstrate 'translational' attributes (Hughes & Barrie, 2010). However, the more collective rationale for conservatism towards e-assessment from both academics and PS staff was linked

to previous experiences of using technology at OldU in a teaching-related context.

As seen in **Chapter 5.4.2**, many recalled negative experiences of working with other teaching and learning related technologies that were supported by the institution, which had led to serious trust issues when it came to making use of other systems to support high stakes student assessment. The increases in student numbers at OldU in recent years made this even more of a concern amongst academics, who viewed the existing physical technological infrastructure at OldU as incapable of supporting e-assessment at a mass scale. Coupled with this, the concern amongst academics that the technology available today is unable to replicate the existing assessment processes and practice already in place is very real. PS staff, however, were more inclined to suggest that there is a lack of understanding – and perhaps ignorance – from academics with regards to e-assessment. Although many have indicated that technological 'ignorance' is evident amongst academics (Adams, 2011; Hamilton, 2013; Hattendorf Westney, 2000), Boud's (1995) suggestion that it is part of a bigger issue of assessment 'bad practice' only serves to highlight Greenwood *et al.*'s (2011) argument that if institutions want to incorporate e-assessment more broadly, then there is a real need for structures to be put in place to facilitate such a change.

6.7. Policy and innovation are 'two sides of the same coin'

There has been much debate about the term 'policy' in educational literature, with some often characterising it as a set of formal laws, guidelines or interventions that are put into practice. (Braun et al., 2010; Levinson, Sutton, & Winstead, 2009; Ozga, 2000; Young, 2007). Although the *text*s are indeed an important aspect of policy, Jones (2013) argues that it tends to ignore the existence of social practices of power that are at play when policy is enacted. Indeed, Jones indicates that the literature indicates that policy can be viewed as: text, values-laden actions; a process; and discursive. Ball's (1994, 1997, 2008,

2015) interpretation of policy accounts for the themes in the literature, and suggests policy is best viewed as a *process*, which is diversely and frequently questioned, and subject to interpretation when it is enacted in a variety of domains.

Having already considered the notion of policy as text, and the potential ignorance of the social practices involved, the view of policy as value-laden actions holds a similar argument in that the focus is on the ideal interpretation of policy, thus potentially ignoring the bigger picture (Jennings, 1977; Jones, 2013). Alternatively, viewing policy as discourse might well expose more of the 'bigger picture' of policy by examining the written text used in policy itself, the ways in which it is practiced and interpreted, and the context of the implementation (Jones, 2013). However, some would argue that this view offers no solutions to real world problems (Callewaert, 2006; Frank, 1989). Ball's perspective of policy as a process supports the earlier work of Prunty (1984), who argues that can be problematic to define policy in a way that decontextualises the processes involved. Such a view of policy is often in seen in research that examines implementation at the local level (Alexander, 1997; Sabatier, 1986), such as that presented in this research with regards to the practice of e-assessment by academics and PS staff at OldU. Therefore, it is the definition from Ball of policy as a process that is to be used within the context of the discussion below.

The language used in OldU's formal policies, such as OPfA, was characterised as complex and difficult to understand by many academics, who often found it difficult to immerse themselves into the context when designing and implementing e-assessment initiatives (see **Chapter 5.6.1**). One of the tensions regarding policy at OldU is the nature of it; in that senior management want the policy to be written in such a way that it does not present an opportunity for misinterpretation, aligning with the view that policy directly determines practice (Levinson et al., 2009). However, for those with working within the constraints of existing policy, they would prefer a more accessible and useable discourse that presents opportunities for more meaningful communication, perception and

understanding. It is at the implementation, or enactment level, where OldU staff are able to experience how policy inherently contains "discursive processes that are complexly configured, contextually mediated and institutionally rendered" (Ball, Maguire, & Braun, 2012, p. 3), as they attempt to engage with e-assessment.

But despite the issues regarding the 'text' component of policy, the bigger policy challenge is related to the enactment, and more specifically, how existing policies that govern how paper based assessment takes place seem to work against those who want to engage with innovative assessment methods (see **Chapter 5.6.3**). By only viewing policy as a set of rules, it inherently overlooks the problems associated with policy enactment, and does not account for the negotiation of power or room for conflict. (Jones, 2013; Scott, 1998). One such example at OldU is the contentious issue of 'financial suspension', which has caused some unrest amongst OldU staff.

The rules governing financial suspension makes it incredibly challenging for staff to implement e-assessment that adheres to existing institutional rules, with many choosing what aspects to attend to within their practice and domain, and ignoring others that do not align with their own agenda (Spillane, 2004). In some instances, the challenge of working within the constraints of OldU policy have been deemed too great for academics to want to even experiment with e-assessment in their courses, and these 'habits' becoming a starting point for future engagement with technology (Spurling et al., 2013). Similar comments were made of the institutional programme and module specification system, which focused heavily on a perceived 'ill-defined' set of process for making modifications to module assessment strategies. But whilst the allure of having institutional policies in place that facilitate e-assessment would seem a reasonable request by those responsible for implementation, Bharuthram and Kies (2013) warn of the dangers in the development in such policies in that it is imperative that alongside the delivery of ongoing training, academics are exposed to the current literature on the issues that are most prevalent for e-assessment to ensure that risks are considered in the same lights as the benefits.

Although evident across the institution, policy implementation challenges are considerably emphasised within FLHS, which has seen higher levels of engagement with TEL and e-assessment initiatives. This is in part due to its formal structures that employ a dedicated e-learning team comprised of academics and support staff (see **Chapter 2.2.3**) who have the opportunity to engage with Sin's (2014) additional dimension of policy enactment; that of the *policy object*, which not only considers an actor's understanding of policy, but gives a rich insight into how these translate into enactment at the local level.

Such practice may well prove to be extremely useful, as Ball *et al*.'s (2012) ethnographic study of teachers in schools noted that whilst individuals and positions are continually formed, and reformed, by policy, it may prove to be more beneficial to examine policy in the context of *policy objects*, and how they are uncovered in context-determined practice, tacit assumptions and rules (O'Connell, 2017; Sin, 2014). This point is particularly crucial since there is a danger of defining policy in such a way that it de-contextualises it's processes, given the potential impact of local actors and social practices during policy enactment (Alexander, 1997; Ball, 1993; Bell & Stevenson, 2006; Prunty, 1984). At OldU, having a specific e-learning team comprising academics and PS staff FLHS to take ownership of e-assessment and examine practice at the local level has indeed indicated in some way that policy is indeed a 'messy' and 'complex' process, and that there are a variety of ways in which it can be interpreted (Gornitzka, Kyvik, & Stensaker, 2005; Reynolds & Saunders, 1987; Trowler, 2002). Much of this local enactment of policy is illustrating a real distinction between policy *makers* and policy *implementers* at OldU; a conflict between following the rules, and how those responsible for implementing them are informed by their own beliefs, shared practices, and institutional culture (Jones, 2013; Levinson et al., 2009)

Evidence of the latter is certainly apparent at OldU, with staff actively involved in creating 'work arounds', as they negotiate existing policies and process to achieve the outcome that they want (see **Chapter 5.6.4**). Much of what is being

seen here is similar to Trowler's (1998) observations of academics at a post-1992 university, who were also developing 'work arounds' at the local level to cope with existing policy. Interestingly, Pollock (2000) observed similar behaviour by staff at an institution similar to OldU during the implementation of an enterprise management IT system, noting that "implementation would not be possible without such *ad hoc* modifications" (p. 362). However, this appears to contradict the advice from Ferrell and Gray (2013) regarding the implementation of EMA within institutions, who believe that it is crucial that processes are well designed and consistently implemented – avoiding workarounds – which can otherwise have a significant impact on the student experience.

6.8. Institutional priorities govern the institutional culture

Perhaps the most unequivocal theme emerging from this study is regarding the priorities of OldU as an institution, and the emphasis – as perceived by staff across the institution - on research related activity that is often to the detriment of TLA activities (see **Chapter 5.4.3**). For some, this emphasis is all too real, with a belief that OldU's formal structures and policies tend to favour academics employed in a research role, particularly when it came to career development and promotion. Being the type of institution that OldU is, many academics referred to the conflicting demands when it comes to managing their own workload, and deciding whether producing research outputs, or a focus on reviewing TLA practices, should take priority. The 'blame' for this perceived emphasis is very much being attributed to a lack of leadership and ownership of OldU's educational priorities, which participants believed would be crucial in helping to set the direction, and highlight the value and importance of scholarly activity at OldU (see **Chapter 5.6.7**).

There has long been debate that universities are engaged in a Humboldtian legacy of keeping a close relationship between teaching and research, which is often reinforced through their formal strategies and goals (c.f. Ash, 2006; Nybom,

2003; Palomba, 2015). This has become more increased with an influx of post-1992 HE institutions, with Olsen (2007) suggesting that universities need to consider how they make an impact on society. But despite an effort to deliver on quality and excellence in academic activities, the relationship between research and teaching in UK universities is often strained as academics in research intensive institutions - such as OldU – are required to engage with REF, which is often to the detriment of providing high quality learning for students (Barnett, 2005; Deem & Lucas, 2007; Enders & de Weert, 2009; Leisyte & Dee, 2012; Marsh & Hattie, 2002); roles that appear to be mutually exclusive for an academic. Similar demands have also been placed on academics at institutions around the world, with managers often forced to deploy strategies that satisfy institutional research agendas, with the bulk of teaching activity often delegated to less research-active staff as those with a research role contend with the pressures of maintaining a research track record (Askling, 2001; Geschwind & Broström, 2015; Mayson & Schapper, 2012; Smith & Smith, 2012).

Whilst there are a variety of schemes from institutions around the world that allow academics to 'buy' themselves out of teaching to support research activities, OldU's ability to appoint academics who focus on more on student facing activity to a teaching and scholarship contracts has attempted to address the issue of meeting the institutional research priorities. However, there is a real sense amongst those academics in a teaching and scholarship role at OldU – across all faculties - that the burden of responsibility for ensuring a high quality educational experience for students is being left to the minority, none more so than FLHS staff whose faculty structures clearly prioritise research activity, with no less than 5 of the 6 departments employing academics solely on a teaching and research role. In turn, academics felt that those employed in a teaching and research role were more likely to be rewarded for their efforts in fulfilling their research outputs through promotion to senior roles, with universities and senior managers – who are typically immersed in a research culture – find it easier to base rewards on outputs that can be clearly measured, as opposed to rewarding

good teaching based on student evaluation data (Smith & Smith, 2012; Wolverton, 1998; Young, 2006).

The emphasis of research activity over teaching activity has had a big impact on the design and implementation of e-assessment at OldU, with academics citing how they often had little time in which to experiment with technology before running it in a live teaching environment. This has already been noted in the literature (c.f. Bull & McKenna, 2004; McKenna & Bull, 2000; Warburton & Conole, 2003), as academics at OldU become concerned at how little time they have to engage with staff development activities and even more worryingly, a lack of opportunity to engage in an induction process when taking up a teaching position at OldU for the first time; a point made by a senior FLHS academic in a teaching and research role. The very nature of the use of technology in TLA activities suggests a somewhat complex learning curve as academics move towards mastery of a technique, with Boyle and O'Hare (2003) noting that staff development and training is needed to best utilise the features within a software package. But whilst the everchanging nature of technology suggests that it requires continual relearning (Baker, 2012), there is a suggestion from those in a PS role who provide support for academics that they adopt a surface approach when engaging with technology, since they often only engage with it at the point at when it is required during their practice, thus having to re-learn the processes involved each year.

Whilst OldU staff questioned the value of teaching within the institution, they were fairly unanimous in their opinion that clear leadership at the institutional level was needed going forward, to set the agenda not only for teaching activity, but also for TEL. Such a move might seem to be in conflict with the nature of OldU, but whilst most HE institutions are "lurching about" with respect to technological change (Garrison & Kanuka, 2004, p. 103), institutions need to develop strategies that match their own culture, whilst also being mindful of what is going on elsewhere in the sector (Garcia, 2004). A recent survey of academics and administrative staff within HE suggested that VC's are too far

removed from how an institution runs at the ground level, instead focusing on lobbying and maintaining external relations (Hall, 2017). But whilst there may well be a desire from OldU staff to have clear leadership for TEL at the institutional level, there is a danger that those at in senior positions might well be ignorant of the need for such leadership given the status as a research-led university and a lack of understanding of the subtle disciplinary differences (Becher, 1994). Such a position serves to further emphasise how staff on the ground level need to consider their own culture shift in viewing universities as 'total institutions' and recognising them for the multiple cultural configurations that they exhibit, where change initiatives are received and understood in a different ways and contexts (Alvesson, 2002; Silver, 2003; Trowler & Knight, 2002).

6.9. Summary

It is no surprise to see an equivocal view when asking academics and PS staff at OldU to define the term e-assessment, given the contrasting views presented in the literature. Whilst there is some alignment between PS staff viewing e-assessment as a method of assessment, the lack of consistency amongst academics is perhaps of some concern, particularly when there is no agreement within faculties about the definition of e-assessment. The clear disconnect between academics and PS staff regarding terminology is a cause for concern in future e-assessment practice OldU, particularly when policy is often viewed as both a product of *text* and the *discursive processes* that go with it. Whether e-assessment is viewed as a *method*, *tool* or *process* at OldU, there needs to be some discussion amongst those involved with e-assessment with a view to overcoming the challenges encountered with respect to existing structures and formal policies.

Formal and informal opportunities to review existing practice are likely to instigate cultural changes at all levels of an institution (micro, meso, and macro), giving rise for opportunities to assess the impact of e-assessment across the

institution, and make necessary changes to existing policy and break down the historical practices so often associated with assessment. This is particularly key with non-STEM disciplines, who often tied to more subjective forms of assessment. The adoption of local leadership within departments, providing knowledge of TEL and subject context has proved beneficial at OldU, with the eLearning academic team providing a valuable resource to other academics within their departments, as they bridge the gap between technology and discipline, maintaining motivation and engagement. Alongside the local, dedicated support for operational aspects of e-assessment, the FLHS faculty eLearning team of academics and PS staff have served to highlight the limited reach and resource of the central teams, particularly with academics from other faculties acknowledging the need for a similar team in their own contexts, to help encourage a more holistic approach to the process of assessment. Much recognition and praise is also given to OldU's local and institutional CoPs, which provide support in the decision-making process regarding challenges associated with the design and implementation of e-assessment. But whilst the existence of these groups shows how those involved are aligning their activities with those produced elsewhere and understand the nature of the institutional ruling relations, the self-selecting nature of CoPs and lack of senior engagement in these groups highlights the limited impact and disconnect between those practicing e-assessment, and those with the responsibility for setting the direction.

But whilst there is mostly positive attitude towards the use of e-assessment at OldU, conservatism and a reluctance to engage in e-assessment demonstrated by some academics is not solely related to cultural practices. Requirements from external stakeholders for accreditation purposes, the capability of the technology available, and the negative experiences associated with previous engagement with OldU technology have clearly impacted on the decision to adopt e-assessment. Additionally, the difficulty expressed when trying to work within the constraints of existing OldU formal policy, highlight the issues associated with the enactment of policy at the local level. With respect to key policies currently impacting on e-assessment practice at OldU, it is clear that the 'rules' that these

policies describe do not account for the negotiation of conflict currently taking place. The consequence of this has led to many adopting workarounds, choosing to engage with those aspects that align with their practice, and ignoring those that do not. The absence of specific policy for e-assessment is clear cause for concern given the varying practice evident at OldU, however the development of any future policy in the context of the *policy object* would prove to be beneficial to not only consider how people understand an e-assessment policy, but how this is then translated and implemented at the local level.

Core to many of these themes is the view that OldU priorities research activity over TLA activity. Whilst there is tangible evidence in the formal structures and formal policies, the focus on research activity has impacted on the design and implementation of e-assessment at OldU. The lack of time cited by academics to engage in staff development activities, coupled with the somewhat complex nature of using technology in TLA activity, has resulted in many adopting a surface learning approach to the use of technology, since workloads dictate that they should be spending their time elsewhere. However, the view from those at OldU is that there should there be a clear direction set by those in senior positions at OldU with regards to the value of TLA and TEL activity, since it would certainly afford OldU the opportunity to be mindful of what else is happening in the sector, whilst still maintaining the reputation of a research-led institution, which they have clearly earned.

Chapter 7 presents concluding thoughts on the research process, identifying the key findings from this study, a consideration of the implications for policy, practice and research related to e-assessment, and suggestions for future research.

Chapter 7 - Conclusions

This chapter reviews the rationale for the study, in relation to the original aim and research questions identified at the beginning, the key findings, and the implications for future e-assessment policy, practice and research. It also identifies the limitations to the research, the suggested contributions to knowledge, presents recommendations for further research, and some final reflections on the process.

7.1. Original Aims & Key Findings

My original aim for this study had been to explicitly focus on the barriers and enablers for staff at OldU in the design and implementation of e-assessment. However, as someone employed at OldU, the culture and practices evident within the institution made me want to look further, and see just how big a role these played in e-assessment practice. By using a methodology (see **Chapter 4.3**) that would enable me to examine how the local experience is indeed shaped by the larger power relations that are in play, this then became a study that exposed the underlying, and perhaps more complex issues at play at OldU. Adopting a lens that affords the opportunity to examine the 'multiple cultural configuration' exhibited by universities enabled me to see the impact of how the practices within departments and faculties vary across the institution, indicating that practices are indeed received and understood in different ways. This was particularly evident in one faculty at OldU where there is a clear distinction, and perception by staff across OldU that research-related activities are deemed to be of higher priority than teaching-related activities.

7.2. Research Questions & Key Findings

The research questions for this study presented an opportunity to explore several aspects related to e-assessment at OldU, considering the terminology, the

enabling and restraining factors, and how the institutional structures and formal policies support or inhibit e-assessment.

7.2.1. Language

The first research question intended to uncover the perspectives of staff at OldU, in response to an increasing use of e-assessment within the institution: *"How do academic and professional services staff at a pre-1992, research-led English university interpret the term 'e-assessment'?"*

Chapter 3 reviewed the literature on e-assessment, with a variety of terms that describe assessment involving the use of technology apparent in the literature today, many of which describe various 'implementations' of e-assessment. Indeed, the definition adopted for this study from Tomas et al. (2015) indicated that e-assessment is an umbrella term for a range of assessment processes that involve ICT. Thus, it is no surprise to see a range of terms being used interchangeably by policy makers, professional bodies and those within the HE sector, depending on the activity in question. It was this interchangeable use that prompted a response from participants to what they understood by e-assessment.

The inconsistency in terminology evident in the literature is also apparent amongst those at OldU, with a disconnect evident between academic and PS staff with regards to whether e-assessment is a *method*, a *tool*, or a *process* (see **Chapter 5.2**). Further examination of this disconnect uncovered that the variation in terminology is not related to the 'e' (electronic), but with the term 'assessment'; academics are keen to highlight their involvement in the *process* – the design aspect -, whether this be from providing marks and feedback electronically, through to an examination of the whole assessment process. PS staff are mostly consistent in their view that e-assessment is very much a *method* of assessment, consistent with the 'implementation' aspect, which very much fits in with their role and responsibilities at OldU. Whilst there may well be a belief

that academics and PS are working from the same shared vocabulary, it is clear this is not the case (see **Chapter 6.2**).

7.2.2. Factors

The second question is grounded in the examination of the local factors at OldU: *"Based on the experiences of the staff identified in RQ1, what are the enabling and restraining factors in the design and implementation of e-assessment at OldU?"*

The increase in student numbers, along with their increasing expectations for the use of technology to support their learning, has prompted many academics at OldU to consider more efficient methods of assessment. It is perhaps the clearest contributing factor for the increased use of e-assessment, as academics examine alternative ways to meet the ever-increasing TLA commitments. However, successful engagement with e-assessment is largely dependent on the reliability of OldU's technical infrastructure, with many participants sharing negative experiences of their engagement with institutional technology relating to TLA activities (see **Chapter 6.3**)

Communities of practice (CoPs) are also seen by those at OldU as key spaces for the sharing of e-assessment practices, particularly where OldU's existing structures and formal policies do not exist. There is also view held by those involved in e-assessment that such CoPs should be both actively supported and engaged with by senior management, to enable them to see first-hand how the enactment of local practices are shaped by the institution's structures and formal policies (see **Chapter 6.5**).

7.2.3. Institution

Like the previous question, the third explored, from the impact of OldU's structures and formal policies on e-assessment: *"Based on the experiences of the staff identified in RQ1, to what extent do OldU's structures and formal policies support or inhibit the successful design and implementation of e-assessment?"*

Whilst there is plenty of innovative practice relating to TLA activity, the structures that exist within OldU tend to prioritise research activity, evidenced by the distinct split of research and teaching activity in FLHS, and the separation of teaching and research, and teaching and scholarship positions amongst academics. But whilst the culture of the institution is governed by the priorities set by the senior management, academic reluctance to engage in e-assessment is not primarily governed by priorities, or their own personal beliefs; rather, there is a bigger issue to address, relating to their previous negative experiences of using technology at OldU in a teaching related context (see **Chapters 6.6** & **6.8**).

In addition, innovative practice is often done in conflict with existing institutional policies. In the case of e-assessment, staff are actively engaged in workarounds to guarantee a successful implementation. A consequence of this is that staff may well be circumventing institutional rules to carry out their practice, highlighting the conflict between policy texts, and the discursive processes associated with them. Local 'leadership' and operational support for e-assessment is key to helping drive take-up and usage within departments, particularly when it comes to the contextual enactment of formal institutional policy. For OldU, an examination of how existing formal policies may stifle innovation may prove to be useful, by examining the local practices that take place and understanding policy enactment takes a variety of forms in different contexts (see **Chapters 6.4** & **6.7**).

7.2.4. Practice

The fourth question addresses the implications for the research findings with respect to e-assessment: "*What are the implications for the research findings in the design and implementation of e-assessment at OldU and, potentially, other universities?*"

The institutional priorities, as determined by the senior management, clearly impact on the culture and visibility of e-assessment practice; this is not something that has happened over-night at OldU, but built up over time given the

nature of OldU. However, the consequence of this is that perceived priority of research activity has been instilled in academics both old and new, to the detriment of TLA related activity and staff development (see **Chapter 6.8**). Added to this, the disconnect regarding whether e-assessment is a *method*, a *tool*, or a *process*, has had an impact on the relationship between academics and PS staff with respect to how e-assessment is designed and implemented, with one PS participant suggesting felt inferior to their academic counterparts during their involvement.

The example of e-assessment at OldU further contributes to the evidence base of the alliance needed between a range of academics and PS staff to support the many functions of HE institutions (Whitchurch, 2013). Indeed, Whitchurch's (2013) concept of the 'third space' should be examined in light of what has been presented here, so as to understanding the environment that e-assessment lives within, which spans both academic and PS activities. For FLHS, the formal structures appear to have taken this into consideration, with the appointment an e-learning team comprising academics and PS staff at the local level, who can help to facilitate e-assessment within a specific context. In particular, the e-learning academics as a 'third space professional' (Whitchurch, 2013), with a remit to contribute to the strategic direction of TEL and lead on projects to embed innovative e-learning approaches within individual departments in FLHS, appears to have the necessary mix of managerial, academic and professional activities. However, the danger of developing collaborative partnerships may not necessarily equate to a harmonious practice (Macfarlane, 2011; Whitchurch, 2009, 2013), as is evident in OldU staff understanding of what e-assessment entails.

Furthermore, for academics in particular, this research very much highlights the degree to which the problems are experienced, which is very much dependent on their 'place' at OldU. By place, I am referring to two distinct aspects; the first is *faculty*, since the understanding, and use, of e-assessment is more advanced in one faculty that the others. My naïve assumption at the start of this research was

that all departments would be dealing with the same problems could not have been any further from the truth. The second is *role*, in that there is appears to be tension between those in a research-focused role and those in a teaching-focused role, with regards to the key priorities of the institution. The message from the top, which is re-enforced by the formal structures of faculties and roles in place at Old, down to those on the ground, is that research-related initiatives are perceived to have a greater importance.

7.3. Implications for policy and research

The development of policies to mediate e-assessment practice should be seen to encourage rather than stifle innovative approaches adopted by staff. For those at OldU who had sight of a new draft coursework submission policy, which had specific governances around the electronic submission of student work, they had reviewed it in a positive light for its permissiveness and room for negotiating potential conflict when enacting at the local level. With policy makers avoiding a 'one size fits all' approach - as evidenced with the financial suspension policy at OldU – and aligning those responsible for enactment to a rigid, idealised method of implementation, they can perhaps encourage much more innovation around TLA practice.

In addition, clarity needs to be sought regarding the definition of e-assessment, to determine whether it is indeed a method, tool, process, or conceivably, something else. Such clarity will help to shape future practice, and distinguish between the differing ways in which e-assessment can be designed and implemented. Policy makers should not be assuming that those involved in e-assessment practice are of 'like minds' when considering the design and implementation aspects involved; they should be explicitly stating their orientations and understandings of terms involved to ensure that those responsible for policy enactment are able to work from a common understanding. But rather than spend considerable time on defining a whole vocabulary around e-assessment, attention should be paid to working with those

already engaged at OldU to clear up any confusion regarding both the terminology, and the roles that both academics and PS staff play in a practice that spans the third space between the two. Those responsible for making policy at OldU might well benefit from examining the key findings presented here to determine the best approach for future practice.

To support this final activity, the academy needs to be more considerate of the use of synonymous terminology around e-assessment, which has indeed contributed to the disparity amongst practitioners at OldU. Having seen a range of terms used to describe the use of technology to facilitate assessment practice, it is crucial that given the latest focus on EMA, that those involved in future research in this area make a clear demarcation between the use of technology to facilitate assessment *delivery*, and its ability to manage the whole assessment *process*.

7.4. Revisiting the truth claims

Located in one institution with what some would consider - given the size of OldU - a small number of participants, who were recruited via a self-selecting and purposive strategy, the context and resulting sample will indeed impact on the findings. The critical realist in me suggests that whilst the perspectives presented here by the participants may well highlight the local experience, there may well be other valid perspectives on reality which could impact my understanding of the lived experience. However, the goal of institutional ethnography is not to provide generalisability or comparison with other cases; rather, it is to simply highlight how the local experience is shaped by larger power relations (Slade, 2010), and how local practices are coordinated through the working practices and ruling relations in place. It could also be argued that the theory used within this study may pose a problem when addressing issues at the macro level (Schatzki, 2015). IE and SPT, together, afford a focus on the individual lived experiences of e-assessment, and consideration of how the larger ruling relations and culture at play impact on these practices. However,

this is very much at the individual level and Schatzki would argue that any upscaling to the institutional level would cause difficulty from a theoretical perspective, since life is too detailed and complex to provide any meaningful perspectives at a more abstract level.

Whilst the theory used within this study gives emphasis to the individual lived experience, the design and implementation of e-assessment at OldU is influenced by many factors, which are deemed significant by the participants involved. Whilst some of these factors could well be the same for other institutions, it is also true that some may be specific to OldU. Additionally, the participants in the sample do appear to be skewed more towards one faculty, whilst there are no PS staff represented who work outside of the central university teams or FLHS. However, given that FLHS is perhaps the biggest faculty at OldU, and has its own dedicated team to support TEL activities, the ratio represents the split between the four areas appropriately. The focus on a single research-led university, described in sufficient depth and detail, should empower others to identify the 'wicked issues' evident within HE and OldU, such as the approach to this study which focused on the experiences of the participants to reveal power relationships and other attributes of the institution which they operate, which brings many advantages that outweigh the need for generalisability, not least presenting individual insights into complex social situations (Denscombe, 2007).

It would also be remiss not to acknowledge that whilst IE is a method of inquiry that makes use of interviews, observations and texts, some may perceive a reliance on reliance of interview data as the main source of data for this study as a limitation. Given that IE uses the individual standpoint as the starting point into examining organisational processes coordinated by texts, the examination of such texts as an insider researcher contributes to the starting point of primary data dialogue between the researcher and participants. Additionally, my own role as an insider researcher means that I have already engaged in many observations of e-assessment practice both in my own context, and others across OldU. In turn, it is considerably more likely that the use of interviews will further

elicit how individual practice is shaped and coordinated by the ruling relations at the local level, more so than the use of observations and the examination of institutional policies and procedures.

7.5. Contribution to knowledge

Central to the completion of a PhD and entry to the 'academy', is a consideration of how the research contributes to knowledge in the field. Given that a contribution to knowledge does not necessarily require the presentation of 'new' findings, I do believe that there several important contributions that this study makes.

7.5.1. Adopting IE and SPT to explore the practice of e-assessment

This study contributes to the literature on institutional ethnography (IE) and social practice theory (SPT), and their application to examining the 'wicked issues' evident in HE today. The 'discontent' expressed by participants in a teaching and scholarship role at OldU, has uncovered the ruling relations embedded into the institutional structures and formal policies, with clear skew towards the prioritising of research based activities. Whilst SPT provides an opportunity to examine the practice of e-assessment at OldU, uncovering how these practices emerge and how they occur in situ at the local level, IE affords the opportunity to see these experiences in context of the institution and the bigger picture (Trowler, 2012), revealing how these experiences are shaped and coordinated by the institutional mechanisms of power.

In the light of the upcoming UK TEF exercise, this skew towards favouring research activity over teaching and scholarship activity at OldU should be revisited by institutions with some urgency, and given considerable attention. The use of IE and SPT provides a vehicle in which OldU can examine the research and teaching nexus at both the local and institution levels.

7.5.2. Adopting the Framework method in the educational context

The application of the Framework method (Ritchie & Lewis, 2003) outside of the often-cited health domain for a robust process to handle qualitative data in an educational domain should be noted for future studies. The ability to keep 'sight' of the individual through the matrices derived via Framework afforded the opportunity to ensure that individual contextual experiences were not lost, and that their experiences can be easily located in the resulting overarching themes. Indeed, given the criticisms of IE regarding the reassembling of texts during the data analysis process, the use of the framework method in this study mitigates these concerns providing a systematic and transparent approach to the analytical process. As such, it enables a researcher to move through the varying levels of abstraction within the data, whilst keeping sight of the individual perspective and how it then emerges in the subsequent analysis.

7.5.3. The 'practice' of e-assessment is a complex task

The design and implementation of e-assessment at OldU is a complex practice, which is impacted on by several factors. The increasing demands of students in HE today, coupled with opportunities to review existing practices clearly impact and the successful use of e-assessment. In addition, leadership at the local level support the design and implementation of e-assessment, the enactment of institutional policy within the local context, and to drive motivation and engagement is also key. Where there is an absence of local leadership, the local and institutional CoPs provide a valuable resource in the decision-making process regarding choices made in the design and implementation of e-assessment, as they are exposed to both tacit and explicit experiences.

But whilst there are plenty of opportunities available to support staff, the limited impact and reach of CoPs, coupled with a lack membership from senior management, it is difficult to see how a shared vision to support institutional change can be achieved. In part, this is owing to the nature of OldU; a research-led institution, with many of the intuitional priorities geared towards research

activity, sometimes to the detriment of TLA activities. The lack of senior leadership and direction setting in key positions at OldU has seen many colleagues at OldU questioning the value of TLA activity, and unsure how they should be prioritising their workloads. But whilst some may suggest that the reluctance and conservatism towards e-assessment demonstrated by some academics is a consequence of institutional culture, this is not always the case. External factors and previous teaching-related technology experiences have impacted on their decisions, with concerns still evident around trusting and relying on OldU technology to achieve the intended outcomes.

Finally, the task of working within the constraints of existing formal policy and enacting them at the local level, has proved to be somewhat challenging. The lack of specific policy related to the design and implementation of e-assessment has led to many actively involved in creating workarounds to ensure that it is successful in their own contexts, whilst others acknowledge that they choose to ignore it when it does not work for them. The absence of specific policy for e-assessment is perhaps the principal cause for concern given the varying practice evident at OldU, however the development of any future policy in the context of the *policy object* (Sin, 2014) would prove to be beneficial to not only consider how people understand an e-assessment policy, but how this is then translated and implemented at the local level.

7.5.4. The 'language' of e-assessment

The apparent disconnect in language between academics and PS staff at OldU regarding what *e-assessment* entails, in whether it is a *method*, a *tool*, or a *process* needs to be examined further. The inconsistency, and synonymous, use of the term in the literature has resulted in an understanding that is very much role specific at OldU, leading to a variety amongst colleagues within the same institution. Those involved in a PS role are mostly unanimous in their view that e-assessment is a *method* of assessment, which seems to follow suit given the operational nature of their work. However, it is in the inconsistency amongst

academics both within and across faculties requires attention. Given the varying practices evident across the institution, and the inconsistency of leadership at the local level to support the design and implementation of e-assessment, it is perhaps no surprise to see differences of opinion.

The development of a shared vocabulary that everyone can work from should be a starting point (CoP), with the consequences of not engaging with such a review potentially presenting some cause for concern when considering the nature of future institutional policy to govern e-assessment practice at OldU, since it is both a both a product of *texts*, and the *discursive processes* that go with it. Additionally, the need to review the relationships between academics and PS staff in the context of Whitchurch's (2013) concept of the 'third space' should be paramount for future e-assessment practice, given it is an activity that spans both academic and PS roles

7.5.5. The 'promise' and 'challenge' of e-assessment

The adoption of e-assessment, in general, appears to have had a positive impact on the student experience, with a continued growth evident in UK HE. A large majority of institutions are now adopting it for formative and summative assessment, and there has been an increased focus on the impact it has on institutional processes and systems, with more than half looking to review their assessment systems within the next two years. But despite this increase in focus, there is still a concern that some of the key fundamental teaching and learning issues are not being addressed, with a suggestion that a more scholarly approach is needed to maximise the effectiveness of TEL practice.

At OldU, whilst there is indeed an increased use of e-assessment, the lack of specific policy for the design and implementation of e-assessment, and the varying practice across the institution do indeed pose a challenge for how this can be overseen at an institutional level. In part, this is due to the slow uptake in the adoption of large scale, e-assessment within HE more broadly, which has been attributed primarily to technological concerns, particularly amongst those

responsible for its success. One could point to overwhelming number of examples from the literature which tend to focus on the benefits and use of e-assessment as the reason for this, contributing highly contextualised insights of how it can operate under a given set of conditions thus making it difficult to fathom the inherent complexities involved. The reporting of small-scale initiatives - whilst valuable to those at the local level – only address specific problems, rather than addressing the bigger picture.

But despite this, there has been an increasing amount of work carried out under the guise of EMA, which seems to be acknowledging some of the wider issues associated with e-assessment by considering all stages of the assessment process. However, the caveat here is that much of this work is done in relation to the submission of a written assignment and the use of a particular tool to support the process, perhaps overlooking other examples of e-assessment that are in use today. Additionally, the EMA literature tends to focus on the processes involved in implementation rather than considering the fit with existing institutional practices, and the change initiatives that would need to take place in universities that are often characterised as having multiple cultural configurations.

The challenge here is to find an approach that examines the middle ground between institution and individual, to uncover the practices that take place at the local level, which are influenced by cultures, contexts and CoPs. Given that assessment is inherently a social constructed activity, it is crucial to understand the historical, social and political contexts in which is it is conducted, to expose the varying nature of these practices across an individual institution. This study has set out to do just that, exposing the differences in terminology used across the institution with regards to e-assessment, highlighting the enablers and barriers to the design and implementation of e-assessment, and uncovering just how people work within the constraints of existing structures and formal policy (and the tactics they adopt) to achieve their intended outcome.

7.6. Further Work

Presenting answers to the research questions posed at the beginning of this research is perhaps a slight contradiction, since there are further questions that developed during the study that are still to be answered. Suggestions for further work all relate to areas that I would have liked to have explored during this study, but were outside the remit of the research questions:

- How analogous are the e-assessment practices at OldU with those at similar institutions, and conversely, institutions where there has tended to be a greater emphasis on teaching-related activities?
- Given the limited involvement of senior management at OldU within this study, what would those who are responsible for setting the direction at OldU consider to be the barriers and enablers to the design and implementation of e-assessment, and how do they contrast with those presented here?
- It is apparent that there is some disagreement within the literature what e-assessment entails, which in turn, has spilled over into e-assessment practice. Would this variation still be evident in a larger sample of staff from OldU, and is this variation consistent with staff at other HE institutions?
- The literature also suggests that e-assessment is something that students are now beginning to expect as part of their engagement with higher education, but we know that this is not a view shared by all, with some still preferring feedback to be delivered in person (Howe, 2013; Newman & Beetham, 2017). What is the student perspective on e-assessment, and are there additional implications for assessment practices at OldU?
- Based on the findings presented here, what are the implications for future staff development initiatives at OldU?

References

Note: *A number of the references contained within this list refer to OldU institutional documents and policies. In the interests of the participant anonymity,* ***the URLs of these documents have been edited****, with the real name of the institution replaced. As a result, these links will not function correctly.*

Adams, J. (2011). Overcoming Barriers to Electronic Feedback. In *SEDA Conference*. Edinburgh. Retrieved from https://www.seda.ac.uk/resources/files/Presentation 26_a_Adams.pdf

Adams, J., & McNab, N. (2012). Understanding arts and humanities students' experiences of assessment and feedback. *Arts and Humanities in Higher Education*, *12*(1), 36–52. https://doi.org/10.1177/1474022212460743

Alby, F., Zucchermaglio, C., & Fatigante, M. (2014). Beyond the written words of informed consent: What participants would like to know about research. *Nordic Psychology*, *66*(2), 71–93. https://doi.org/10.1080/19012276.2014.926228

Alexander, J. (1997). Out of the closet and into the network: Sexual orientation and the computerized classroom. *Computers and Composition*, *14*(2), 207–216. https://doi.org/10.1016/S8755-4615(97)90022-0

Alexander, S. (2001). E-learning developments and experiences. *Education + Training*, *43*(4/5), 240–248. https://doi.org/10.1108/00400910110399247

Alkin, M. C. (1969). Evaluation theory development. *Evaluation Comment*, *2*, 2–7.

Allen, I. E., Seaman, J., & Garrett, R. (2007). *Blending in: The extent and promise of blended education in the United States*. *The Sloan Consortium*. Retrieved from http://files.eric.ed.gov/fulltext/ED529930.pdf

Alrøe, H. F., & Noe, E. (2014). Second-Order Science of Interdisciplinary Research: A Polyocular Framework for Wicked Problems. *Constructivist Foundations*, *10*(1), 65–76. Retrieved from http://www.univie.ac.at/constructivism/journal/10/1/065.alroe

Alston, P. (2009). *Web 2.0 Technologies in Higher Education*. Masters Thesis. Liverpool John Moores University, Liverpool, UK.

Alston, P. (2015). "How many legs does a dog have?" - Continuous online assessment in the Life Sciences. *Paper Presented at 2015 SOLSTICE Conference. 4th June. Edge Hill University, Ormskirk, UK.*

Altheide, D. L., & Johnson, J. . (2011). Reflections on interpretative adquacy in qualitative research. In N. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (4th ed., pp. 467–478). London: Sage.

Alvesson, M. (2002). *Understanding Organisational Culture*. London: Sage.

Antonacopoulou, E. P., & Pesqueux, Y. (2010). The practice of socialization and the socialization of practice. *Society and Business Review*, *5*(1), 10–21. https://doi.org/10.1108/17465681011017237

Archer, M. (1995). *Realist Social Theory: The Morphogenetic Approach*. Cambridge: Cambridge University Press.

Arthur, S., Mitchell, M., Lewis, J., & McNaughton Nicholls, C. (2014). Designing Fieldwork. In *Qualitative Research Practice - A Guide for Social Science Students and Researchers* (2nd ed., pp. 147–176). London: Sage.

Ash, M. G. (2006). Bachelor of What, Master of Whom? The Humboldt Myth and Historical Transformations of Higher Education in German-Speaking Europe and the US. *European Journal of Education*, *41*(2), 245–267. https://doi.org/10.1111/j.1465-3435.2006.00258.x

Askling, B. (2001). Higher education and academic staff in a period of policy and system change. *Higher Education*, *41*(1/2), 157–181. https://doi.org/10.1023/A:1026779132478

Atkinson, P., & Silverman, D. (1997). Kundera's Immortality: The Interview Society and the Invention of the Self. *Qualitative Inquiry*, *3*(3), 304–325. https://doi.org/10.1177/107780049700300304

Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research*, *1*(3), 385–405. https://doi.org/10.1177/146879410100100307

Ayatollahi, H., Bath, P. A., & Goodacre, S. (2010). Factors influencing the use of IT in the emergency department: A qualitative study. *Health Informatics Journal*, *16*(3), 189–200. https://doi.org/10.1177/1460458210377480

Babbie, E. (2008). *The Basics of Social Research* (4th ed.). Belmont, CA: Thomson Wadworth.

Baker, M. (2012). *Academic careers and the gender gap*. Vancouver, BC: UBC Press.

Baker, S. E., & Edwards, R. (2012). *How many qualitative interviews is enough*. *Discussion Paper*. NCRM. (Unpublished). Retrieved from http://eprints.ncrm.ac.uk/2273/

Ball, S. J. (1993). WHAT IS POLICY? TEXTS, TRAJECTORIES AND TOOLBOXES. *Discourse: Studies in the Cultural Politics of Education*, *13*(2), 10–17. https://doi.org/10.1080/0159630930130203

Ball, S. J. (1994). *Education reform: A critical and post-structural approach*.

Buckingham: Open University Press.

Ball, S. J. (1997). Policy Sociology and Critical Social Research: a personal review of recent education policy and policy research. *British Educational Research Journal*, *23*(3), 257–274. https://doi.org/10.1080/0141192970230302

Ball, S. J. (2008). *The education debate*. Bristol: Policy Press.

Ball, S. J. (2015). What is policy? 21 years later: reflections on the possibilities of policy research. *Discourse: Studies in the Cultural Politics of Education*, *36*(3), 306–318. https://doi.org/10.1080/01596306.2015.1015279

Ball, S. J., Maguire, M., & Braun, A. (2012). *How Schools do Policy: Policy enactents in secondary schools*. Abingdon: Routledge.

Bamber, V., Trowler, P., Saunders, M., & Knight, P. (2009). *Enhancing learning, teaching, assessment and curriculum in higher education: Theories, cases, practices*. Maidenhead: SRHE and Open University Press.

Bancroft, P., Hynd, J., Dal Santo, F., & Reye, J. (2003). Web-based assignment submission and electronic marking. In *Learning for an Unknown Future, Proceedings of the 26th HERDSA Annual Conference* (p. 42). Christchurch, New Zealand. Retrieved from https://herdsa.org.au/publications/conference-proceedings/research-and-development-higher-education-learning-unknown-39

Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entaglement of matter and meaning*. Durham, NC: Duke University Press.

Barnett, R. (Ed.). (2005). *Reshaping the university: New relationships between research, scholarship and teaching*. Maidenhead: McGraw-Hill and Open University Press.

Bartholomew, K., Henderson, A. J. Z., & Marcia, J. E. (2000). Coded Semi Structured Interviews in Social Psychological Research. In H. T. Reis & C. M. Judd (Eds.), *Handbook of Research Methods in Social and Personality Psychology* (pp. 286–312). Cambridge: Cambridge University Press.

Bassey, M. (2001). A solution to the problem of generalisation in educational research: fuzzy prediction. *Oxford Review of Education*, *27*(1), 5–22. https://doi.org/10.1080/3054980020030574

Bax, C., Baggott, G., Howey, E., Pellet-Many, C., Rayne, R., Neonaki, M., … White Branford White, C. (2006). Evaluation of Formative Computer-based Assessment by Cell Biology Students with Differing Entry Qualifications and Ethnicity. *Bioscience Education*, *2008*.

Beastall, L., & Walker, R. (2007). Effecting institutional change through e-learning: An implementation model for VLE deployment at the University of

York. *Journal of Organisational Transformation & Social Change*, *3*(3), 285–299. https://doi.org/10.1386/jots.3.3.285_1

Beaumont, C., O'Doherty, M., & Shannon, L. (2011). Reconceptualising assessment feedback: a key to improving student learning? *Studies in Higher Education*, *36*, 671–687.

Becher, T. (1994). The significance of disciplinary differences. *Studies in Higher Education*, *19*, 151–161. https://doi.org/10.1080/03075079412331382007

Becher, T., & Kogan, M. (1992). *Process and structure in higher education*. London: Routledge.

Becher, T., & Trowler, P. R. (2001). *Academic Tribes and Territories: Intellectual Enquiry and the Culture of Disciplines*. Buckingham: SRHE and Open University Press.

Beebe, R., Vonderwell, S., & Boboc, M. (2010). Emerging Patterns in Transferring Assessment Practices from F2f to Online Environments. *Electronic Journal of E-Learning*, *8*, 1–12.

Bell, B. S., & Federman, J. E. (2013). E-Learning in Postsecondary Education, *23*(1), 165–185. Retrieved from http://www.jstor.org/stable/23409493

Bell, L., & Stevenson, H. (2006). *Education policy: Process, themes and impact*. London: Routledge.

Bennett, R. E. (1998). *Reinventing assessment: Speculations on the future of large-scale educational testing*. Princeton, NJ: Educational Testing Service Policy Information Center. Retrieved from https://www.ets.org/Media/Research/pdf/PICREINVENT.pdf

BERA. (2011). Ethical Guidelines for Educational Research. Retrieved August 27, 2015, from https://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf

Berg, B. L., & Lune, H. (2016). *Qualitative Research Methods for the Social Sciences* (9th ed.). London: Pearson.

Bergquist, W. H. (1992). *The Four Cultures of the Academy*. San Francisco: Jossey Bass.

Bergquist, W. H., & Pawlak, K. (2008). *Engaing the Six Cultures of the Academy: Revise and Expanded Edition of The Four Cultures of the Academy*. San Francisco: Jossey Bass.

Bharuthram, S., & Kies, C. (2013). Introducing e-learning in a South African Higher Education Institution: Challenges arising from an intervention and possible responses. *British Journal of Educational Technology*, *44*(3), 410–

420. https://doi.org/10.1111/j.1467-8535.2012.01307.x

Bhaskar, R. (2011). *Critical realism: A brief introduction*. London: Routledge.

Biggs, J. B. (2003). *Teaching for quality learning at university* (2nd ed.). Buckingham: SRHE and Open University Press.

Billo, E., & Mountz, A. (2016). For institutional ethnography: Geographical approaches to institutions and the everyday. *Progress in Human Geography*, *40*(2), 199–220. https://doi.org/10.1177/0309132515572269

Binns, C. (2015). What can "social practice" theory and "socio-cultural" theory contribute to our understanding of the processes of module design? *Journal of Further and Higher Education*, *39*(5), 758–775. https://doi.org/10.1080/0309877X.2014.953462

Bisaillon, L., & Rankin, J. M. (2012). Navigating the Politics of Fieldwork Using Institutional Ethnography: Strategies for Practice. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *14*(1). Retrieved from http://www.qualitative-research.net/index.php/fqs/article/view/1829/3472

Bloxham, S., & Boyd, P. (2007). *Developing effective assessment in higher education : a practical guide* (2nd ed.). Maidenhead: Open University Press.

Boag, B. (2010). *The Role of the Programme Team in the Implementation of Policy at Institutional Level - a Case Study in the UHI Millennium Institute*. University of Sterling. Retrieved from http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.533629

Boboc, M., Beebe, R. S., & Vonderwell, S. (2006). Assessment in Online Learning Environments: Facilitators and hindrances. In *Soc* (pp. 257–261). Orlando.

Bolldén, K. (2016). The emergence of online teaching practices: a socio-material analysis. *Learning, Media and Technology*, *41*(3), 444–462. https://doi.org/10.1080/17439884.2015.1044536

Bore, A., & Wright, N. (2009). The wicked and complex in education: developing a transdisciplinary perspective for policy formulation, implementation and professional practice. *Journal of Education for Teaching*, *35*(3), 241–256. https://doi.org/10.1080/02607470903091286

Boud, D. (1995). Assessment and learning: Contradictory or complimentary. In P. Knight (Ed.), *Assessment for learning in higher education* (pp. 35–48). London: Kogan.

Boud, D., & Molloy, E. (Eds.). (2013). *Feedback in higher and professional education: Understanding it and doing it well*. Abingdon: Routledge.

Bourdieu, P. (1977). *Outline of A Theory of Practice*. Cambridge: Cambridge University Press.

Boyle, A., & O'Hare, D. (2003). Finding appropriate methods to assure quality computer-based assessment development in UK higher education. In *Proceedings of the 7th International Computer Assisted Assessment Conference*. Loughborough University, Loughborough.

Braun, A., Maguire, M., & Ball, S. J. (2010). Policy enactments in the UK secondary school: examining policy, practice and school positioning. *Journal of Education Policy*, *25*(4), 547–560. https://doi.org/10.1080/02680931003698544

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*, 77–101. https://doi.org/10.1191/1478088706qp063oa

Bridge, P., & Appleyard, R. (2008). A comparison of electronic and paper-based assignment submission and feedback. *British Journal of Educational Technology*, *39*(4), 644–650. https://doi.org/10.1111/j.1467-8535.2007.00753.x

Brink, R., & Lautenbach, G. (2011). Electronic assessment in higher education. *Educational Studies*, *37*(5), 503–512. https://doi.org/10.1080/03055698.2010.539733

Brown, J. S., & Duguid, P. (1991). Organizational Learning and Communities of Practice: Toward a unified view of working, learning and innovation. *Organization Science*, *2*(1).

Brown, R. (2011). Looking back, looking forward: the changing structure of UK higher education, 1980-2012. In J. Brennan & T. Shah (Eds.), *Higher Education and Society in Changing Times: looking back and looking forward* (pp. 13–23). Centre for Higher Education Resaerch and Information, Open University. Retrieved from https://www.open.ac.uk/cheri/documents/Lookingbackandlookingforward.pdf

Brown, S., & Knight, P. T. (1994). *Assessing learners in higher education*. (P. Knight, Ed.). London: Routledge.

Browne, T., Hewitt, R., Jenkins, M., Voce, J., Walker, R., & Yip, H. (2010). *2010 Survey of Technology Enhanced Learning for higher education in the UK*. Retrieved from https://www.ucisa.ac.uk/publications/tel_survey2010

Browne, T., Hewitt, R., Jenkins, M., & Walker, R. (2008). *2008 Survey of Technology Enhanced Learning for higher education in the UK*. Retrieved from https://www.ucisa.ac.uk/-/media/files/publications/surveys/tel

survey 2008 pdf.

Bryan, C., & Clegg, K. (2006). Introduction. In C. Bryan & K. Clegg (Eds.), *Innovative assessment in higher education* (pp. 1–7). London: Routledge.

Buchanan, T. (2000). The efficacy of a World-Wide Web mediated formative assessment. *Journal of Computer Assisted Learning*, *16*, 193–200.

Buchanan, T. (2002). Online assessment: desirable or dangerous?, *33*(2), 148–154. https://doi.org/10.1037/0735-7028.33.2.148

Buckley, B. C., & Quellmalz, E. S. (2013). Supporting and Assessing Complex Biology Learning with Computer-Based Simulations and Representations. In D. F. Treagust & C.-Y. Tsui (Eds.), *Multiple Representations in Biological Education* (Vol. 7, pp. 247–267). London: Springer.

Buckley, E., & Cowap, L. (2013). An evaluation of the use of Turnitin for electronic submission and marking and as a formative feedback tool from an educator's perspective. *British Journal of Educational Technology*, *44*(4), 562–570. https://doi.org/10.1111/bjet.12054

Bull, J. (2001). *TLTP85 Implementation and Evaluation of Computer-assisted Assessment. Final Report*. Retrieved from http://www.caacentre.ac.uk/dldocs/final_report.pdf

Bull, J., & Danson, M. (2004). *Computer-assisted assessment (CAA)*. York: LSTN Generic Centre Assessment Series 14.

Bull, J., & McKenna, C. (2004). *Blueprint for computer-assisted assessment*. London: Routledge Falmer.

Bulpitt, G. (Ed.). (2012). *Leading the student experience: super-convergence of organisation, structure and business processes*. *Research and Development Series*. London: Leadership Foundation for Higher Education.

Burrell, G., & Morgan, G. (1979). *Sociological paradigms and organisational analysis : elements of the sociology of corporate life*. London : Heinemann.

Butler-Kisber, L. (2010). *Qualitative Inquiry - Thematic, Narratie and Arts-Informed Perspectives*. Thousand Oaks, CA: SAGE Publications, Inc.

Buzzetto-More, N. a, & Alade, A. J. (2006). Best Practices in e-Assessment. *Journal of Information Technology Education*, *5*, 251–269.

Cachia, R., Ferrari, A., Ala-Mutka, K., & Punie. (2011). *Creative Learning and Innovative Teaching: Final Report on the Study on Creativity and Innovation in Education in the EU Member States*. *JRC Scientific and Thechnical Reports*. Publications Office of the European Union. https://doi.org/10.2791/52913

Caelli, K., Ray, L., & Mill, J. (2003). "Clear as Mud": Toward Greater Clarity in Generic Qualitative Research. *International Journal of Qualitative Methods*, *2*, 1–13. Retrieved from http://ejournals.library.ualberta.ca/index.php/IJQM/article/download/4521/3651

Callewaert, S. (2006). Bourdieu, Critic of Foucault. *Theory, Culture & Society*, *23*(6), 73–98. https://doi.org/10.1177/0263276406069776

Campbell, D. . (1988). *Methodology and epistemology for social science*. (S. Overman, Ed.). Chicago: Chicago University Press.

Campbell, M. ., & Gregor, F. (2004). *Mapping Social Relations - A Primer in Doing Institutional Ethnography*. Lanham, MD: AltaMira Press.

Campbell, M. L. (1998). Institutional Ethnography and Experience as Data. *Qualitative Sociology*, *21*(1), 55–73. https://doi.org/10.1023/A:1022171325924

Canterbury Christ Church University. (2017). Electronic Assignment Management. Retrieved January 6, 2017, from https://www.canterbury.ac.uk/learning-and-teaching-enhancement/what-we-do/policies-and-resources/electronic-assignment-management.aspx

Carcary, M. (2009). The Research Audit Trial – Enhancing Trustworthiness in Qualitative Inquiry. *Electronic Journal of Business Research Methods*, *7*(1), 11–24. Retrieved from http://www.ejbrm.com/issue/download.html?idArticle=198

Carless, D., Joughin, G., & Mok, M. M. C. (2006). Learning oriented assessment: principles and practice. *Assessment & Evaluation in Higher Education*, *31*(4), 395–398. https://doi.org/10.1080/02602930600679043

Carter, J. (2004). Research note: reflections on interviewing across the ethnic divide. *International Journal of Social Research Methodology*, *7*(4), 345–353. https://doi.org/10.1080/1364557032000094560

Cartwright, N. (2007). *Hunting causes and using them*. Cambridge: Cambridge University Press.

Cassidy, R. (2015). Electronic Management of Assessment at the White Rose Learning Technologists' Forum | Technology Enhanced Learning. Retrieved from https://blog.yorksj.ac.uk/moodle/2015/04/29/electronic-management-of-assessment-wrltf/

Chapman, G. (2006). Acceptance and usage of e-assessment for UK awarding bodies - a research study. In *10th CAA International Computer Assisted Assessment Conference* (pp. 101–106). Lougborough University. Retrieved

from https://dspace.lboro.ac.uk/2134/4539

Chatzigavriil, A., Fernando, T., & Werner, M. (2014). *e-Assessment Practice at Russell Group Universities*. Retrieved from http://lti.lse.ac.uk/wp-content/uploads/2016/08/e-Assessment-practice-at-Russell-Group-Universities1.pdf

City & Guilds. (2016). e-volve | City & Guilds. Retrieved from http://www.cityandguilds.com/what-we-offer/centres/working-with-us/e-volve

Clariana, R., & Wallace, P. (2002). Paper-based versus computer-based assessment: key factors associated with the test mode effect. *British Journal of Educational Technology*, *33*(5), 593–602. https://doi.org/10.1111/1467-8535.00294

Clarke-Midura, J., & Dede, C. (2010). Assessment, Technology, and Change. *Journal of Research on Technology in Education*, *42*(3), 309–328. https://doi.org/10.1080/15391523.2010.10782553

Claxton, G. (2009). Cultivating positive learning dispositions. In H. Daniels, H. Lauder, & J. Porter (Eds.), *Educational theories, cultures and learning: A critical perspective* (pp. 177–187). London: Routledge.

Cleland, J. A., Nicholson, S., Kelly, N., & Moffat, M. (2015). Taking context seriously: explaining widening access policy enactments in UK medical schools. *Medical Education*, *49*(1), 25–35. https://doi.org/10.1111/medu.12502

Cohen, D., & Crabtree, B. (2006). Qualitative research guidelines project. *Robert Wood Johnson Foundation*. Retrieved from http://www.qualres.org/

Cohen, L., Manion, L., Morrison, K., & Ingleby, E. (2011). *Research methods in education*. *Professional Development in Education* (7th ed., Vol. 55). Abingdon: Routledge. https://doi.org/10.1080/19415257.2011.643130

Cohen, M. D., March, J. G., & Olsen, J. P. (1972). A Garbage Can Model of Organizational Choice. *Administrative Science Quarterly*, *17*(1), 1. https://doi.org/10.2307/2392088

Conole, G., & Warburton, B. (2005). A review of computer-assisted assessment. *Research in Learning Technology*, *13*(1), 17–31. https://doi.org/10.1080/0968776042000339772

Conrad, D. (2002). Deep in the hearts of learners: Insights into the nature of online community. *Journal of Distance Education*, *17*(1), 1–19.

Corson, D. (1991). Bhaskar's Critical Realism and Educational Knowledge. *British Journal of Sociology of Education1*, *12*(2), 223–241. Retrieved from

http://www.jstor.org/stable/1392896

Costley, C., & Gibbs, P. (2006). Researching others: care as an ethic for practitioner researchers. *Studies in Higher Education*, *31*(1), 89–98. https://doi.org/10.1080/03075070500392375

Council of the European Union. (2006). Recommendation of the European Parliament and the Council of 18 December 2006 on key competences for lifelong learning. *Official Journal of the European Union*, *49*(December 2006), 10–18. Retrieved from http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=uriserv:OJ.L_.2006.394.01.0010.01.ENG

Cousin, G. (2009). *Researching Learning in Higher Education - An Introduction to Contemporary Methods and Approaches*. Oxon, UK: Routledge.

Cox, A. M. (2012). An exploration of the practice approach and its place in information science. *Journal of Information Science*, *38*(2), 176–188. https://doi.org/10.1177/0165551511435881

Cox, M. J., Schleyer, T., Johnson, L. A., Eaton, K. A., & Reynolds, P. A. (2008). Making a mark – taking assessment to technology. *BDJ*, *205*(1), 33–39. https://doi.org/10.1038/sj.bdj.2008.566

Cresswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. London: Sage Publications.

Cresswell, J. W. (2002). *Research Design: Qualitative, Quantitative, and Mixed Method approaches* (2nd ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Creswell, J. W. (2007). *Qualitative inquiry and research design : choosing among five traditions* (2nd ed.). London: Sage Publications.

Crisp, G. T. (2012). Integrative assessment: reframing assessment practice for current and future learning. *Assessment & Evaluation in Higher Education*, *37*(1), 33–43. https://doi.org/10.1080/02602938.2010.494234

Cronbach, L. (1963). Course Improvements Through Evaluation. *Teachers College Record*, *64*(8), 672–683.

Crook, C., & Harrison, C. (2008). *Web 2.0 Technologies for Learning at Key Stages 3 and 4: Summary Report*. Retrieved from http://www.becta.org.uk

Crossouard, B. (2010). Reforms to higher education assessment reporting: opportunities and challenges. *Teaching in Higher Education*, *15*(3), 247–258. https://doi.org/10.1080/13562511003740809

Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview- based qualitative research. *Social Science Information*, *45*, 483–499. https://doi.org/10.1177/0539018406069584

Dabbagh, N., & Bannan-Ritland, B. (2005). *Online learning: Concepts, strategies and application.* Upper Saddle River, NJ: Pearson Prentice Hall.

Dahl, S. (2007). Turnitin®. *Active Learning in Higher Education*, *8*(2), 173–191. https://doi.org/10.1177/1469787407074110

Daly, C., & Waldron, J. (2002). Introductory programming, problem solving and computer assisted assessment. In *Proceedings of the 6th International Computer Assisted Conference*. Lougborough University.

de Freitas, S., & Oliver, M. (2005). Does e-learning policy drive change in Higher Education?: A case study relating models of organisational change to e-learning implementation. *Journal of Higher Education Policy and Management*, *27*(1), 81–96. https://doi.org/10.1080/13600800500046255

Deem, R., & Lucas, L. (2007). Research and teaching cultures in two contrasting UK policy contexts: Academic life in Education Departments in five English and Scottish universities. *Higher Education*, *54*(1), 115–133. https://doi.org/10.1007/s10734-006-9010-z

Denscombe, M. (2007). *The Good Research Guide for Small-scale Social Research Projects* (3rd ed.). Milton Keynes: Open University Press.

Dent, S. (2015). Institutional Ethnography: Care in Higher Education. *SAGE Research Methods Cases*. https://doi.org/http://dx.doi.org/10.4135/9781446273050145550 97

Denzin, N. K., & Lincoln, Y. S. (2005). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (pp. 1–42). Thousand Oaks, CA: SAGE Publications, Inc.

Dermo, J. (2009). e-Assessment and the student learning experience: A survey of student perceptions of e-assessment. *British Journal of Educational Technology*, *40*(2), 203–214. https://doi.org/10.1111/j.1467-8535.2008.00915.x

Derrick, E. J., & Stevens, K. T. (2005). Work in Progress -- Using Emerging Technologies to Assess Student Software Development Projects. In *Proceedings Frontiers in Education 35th Annual Conference*. Indianopolis, IN: IEEE. https://doi.org/10.1109/FIE.2005.1612153

DeVault, M. L. (1999). *Liberating method: Feminism and social research*. Philadelphia: Temple University Press.

DeVault, M. L. (2006). Introduction: What is Institutional Ethnography? *Social Problems*, *53*(3), 294–298. https://doi.org/10.1525/sp.2006.53.3.294

DeVault, M. L. (2007). Bifuricated consciousness, line of fault. In G. Ritzer (Ed.),

Blackwell Encyclopedia of Sociology. Oxford: Blackwell.

DeVault, M. L., & McCoy, L. (2003). Institutional Ethnography: Using Interiews to Investigate Ruling Relations. In J. A. Holstein & J. F. Gubrium (Eds.), *Inside Interviewing: New Lenses, New Concerns* (pp. 369–394). Thousand Oaks: Sage Publications.

DeVault, M. L., & McCoy, L. (2004). Institutional Ethnography: Using Interviews to Investigate Ruling Relations. In J. Gubrium & J. Holstein (Eds.), *Handbook of Interview Research: Context and Method* (pp. 751–776). Thousand Oaks, CA: SAGE Publications, Inc.

DeVault, M. L., & McCoy, L. (2006). Institutional Ethnography: Using Interviews to Investigate Ruling Relations. In D. E. Smith (Ed.), *Institutional ethnography as practice* (pp. 15–44). Oxford: Rowman & Littlefield.

Deveau, J. L. (2008). Examining the institutional ethnographer's toolkit. *Socialist Studies*, *4*(2), 1–20. Retrieved from http://www.socialiststudies.com/index.php/sss/article/viewFile/23749/17633

Dillon, A. (1992). Reading from paper versus screens: a critical review of the empirical literature. *Ergonomics*, *35*(10), 1297–1326. https://doi.org/10.1080/00140139208967394

Djordjevic, A., & Milward, S. (2012). *OCME: Online Coursework Management Evaluation - Final Report*. Retrieved from https://as.exeter.ac.uk/media/level1/academicserviceswebsite/aboutus/biss/iws/documents/OCMEFinalReportv1.pdf

Dohn, N. B. (2009). Web 2.0: Inherent tensions and evident challenges for education. *International Journal of Computer-Supported Collaborative Learning*, *4*(3), 343–363. https://doi.org/10.1007/s11412-009-9066-8

Downton, A., Glasfurd-Brown, G., & Mossop, R. (2006). Online coursework submission from pilot to university-wide implementation: rationale, challenges and further development. In M. Danson (Ed.), *10th CAA International Computer Assisted Assessment Conference: Proceedings of the Conference on 4th and 5th July 2006* (pp. 151–156). Retrieved from https://dspace.lboro.ac.uk/2134/4558

Duke, C. (2003). Changing Identity in an Ambiguous Environment - A Work in Progress Report. *Higher Education Management and Policy*, *15*(3), 51–67.

Duncan, E. A. S., & Nicol, M. M. (2004). Subtle realism and occupational therapy: An alternative approach to knowledge generation and evaluation. *British Journal of Occupational Therapy*, *67*(10), 453–456.

Eckel, P. D., & Kezar, A. (2003). *Taking the Reins: Institutional Transformation in Higher Education*. Westport, CT: Praeger Publishers.

Eckstein, H. (2002). Case study theory in political science. In R. Gomm, M. Hammersley, & P. Foster (Eds.), *Case study method: Key issues, key texts* (pp. 119–163). London: Sage.

Eisner, E. . (1979). *The educational imagination*. New York: Macmillan.

Elliot, B. (2007). *SCOTTISH QUALIFICATIONS AUTHORITY*. Retrieved from http://wiki.cetis.ac.uk/images/d/de/Assessment_2_v2.pdf

Ellis, C. (2012). Streamlining plagiarism detection: The role of electronic assessment management. *International Journal for Educational Integrity*, *8*(2).

Ellis, C., & Reynolds, C. (2013). *EBEAM*. Retrieved from http://jiscdesignstudio.pbworks.com/w/file/fetch/66830875/EBEAM Project report.pdf

Elton, L. (1999). New Ways of Learning in Higher Education: Managing the Change. *Tertiary Education and Management*, *5*(3), 207–225. https://doi.org/10.1023/A:1018773506442

Enders, J., & de Weert, E. (Eds.). (2009). *The changing face of academic life: Analytical and comparative perspectives*. Basignstoke: Palgrave MacMillan.

ENQA. (2009). *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (3rd ed.). Retrieved from http://www.enqa.eu/wp-content/uploads/2013/06/ESG_3edition-2.pdf

Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. *British Journal of Educational Psychology*, *70*(1), 113–136. https://doi.org/10.1348/000709900158001

Evans, T., & Nation, D. (Eds.). (2000). *Changing University Teaching: Reflections on Creating Educational Technologies*. London: Kogan Page.

Ezzy, D. (2002). *Qualitative Analysis: Practice and innovation*. London: Routledge.

Farisi, M. I. (2013). Academic Dishonesty in Distance Higher Education: Challenges and Models for Moral Education in the Digital Era. *Turkish Online Journal of Distance Education*, *14*(4), 176–195. Retrieved from https://eric.ed.gov/?id=EJ1042597

Feldman, M. S., & Orlikowski, W. J. (2011). Theorizing Practice and Practicing Theory. *Organization Science*, *22*(5), 1240–1253. https://doi.org/10.1287/orsc.1100.0612

Ferlie, E., Musselin, C., & Andresani, G. (2008). The steering of higher education systems: a public management perspective. *Higher Education*, *56*(3), 325–348. https://doi.org/10.1007/s10734-008-9125-5

Ferrell, G. (2014). *Electronic Management of Assessment (EMA): a landscape review*. Retrieved from http://www.eunis.org/wp-content/uploads/2015/05/EMA_REPORT.pdf

Ferrell, G., & Gray, L. (2013). Electronic management of assessment | Jisc. Retrieved January 4, 2017, from https://www.jisc.ac.uk/guides/electronic-assessment-management

Filer, A. (2000). *Assessment: social practice and social product*. London: Routledge Falmer.

Findlow, S. (2012). Higher education change and professional-academic identity in newly "academic" disciplines: The case of nurse education. *Higher Education*, *63*(1), 117–133. https://doi.org/10.1007/s10734-011-9449-4

Fitzgibbon, K. (2013). *The evaluation of Assessment Diaries and GradeMark at the University of Glamorgan - Final Report*. Retrieved from http://repository.jisc.ac.uk/4993/1/JISC_Assessment_and_Feedback_-_Glamorgan_Final_Project_Report_post_JISC_feedback_Nov_2012.docx

Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, *12*(2), 219–245. https://doi.org/10.1177/1077800405284363

Foucault, M. (1984). *Le souci de soi. L'histoire de la sexualité*. Paris: Gallimard.

Frank, M. (1989). *What is Neostructuralism?* Minneapolis: University of Minnesota Press.

Frazer, E., & Lacey, N. (1993). *The politics of community: A feminist critique of the liberal-communitarian debate*. New York: Harvester Wheatsheaf.

Fullan, M. . (2001). *The new meaning of educational change* (3rd ed.). New York: Teachers College Press.

Gale, N. K., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Medical Research Methodology*, *13*(1), 117. https://doi.org/10.1186/1471-2288-13-117

Garcia, B. . (2004). E-learning in a knowledge captical: the Manchester universities experience. In *Proceedings of the Online Educa Conference*. Berlin.

Gargon, E., Williamson, P. R., & Young, B. (2017). Improving core outcome set

development: qualitative interviews with developers provided pointers to inform guidance. *Journal of Clinical Epidemiology*, *86*, 140–152. https://doi.org/10.1016/j.jclinepi.2017.04.024

Garrison, D., & Anderson, T. (2003). *E-learning in the 21st Centrury: A Framework for Research and Practice*. London: Routledge Falmer.

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, *7*(2), 95–105. https://doi.org/10.1016/j.iheduc.2004.02.001

Geertz, C. (2003). Thick Description: Toward an Interpretive Theory of Culture. In Y. . Lincoln & E. G. Guba (Eds.), *Turning Points in Qualitative Research: Tying Knots in a Handkerchief*. Walnut Creek, CA: AltaMira Press.

Gerrard, J., & Farrell, L. (2013). "Peopling" curriculum policy production: researching educational governance through institutional ethnography and Bourdieuian field analysis. *Journal of Education Policy*, *28*(1), 1–20. https://doi.org/10.1080/02680939.2012.664288

Geschwind, L., & Broström, A. (2015). Managing the teaching–research nexus: ideals and practice in research-oriented universities. *Higher Education Research & Development*, *34*(1), 60–73. https://doi.org/10.1080/07294360.2014.934332

Gibbs, G. (1999). Using Assessment Strategically to Change the Way Students Learn. In S. Brown & A. Glasner (Eds.), *Assessment Matters in Higher Education: Choosing and Using Diverse Approaches* (pp. 41–54). Buckingham: SRHE and Open University Press.

Giddens, A. (1984). *The Constitution of Society*. Berkeley, CA: University of California Press.

Gikandi, J. W., Morrow, D., & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. *Computers and Education*, *57*(4), 2333–2351. https://doi.org/10.1016/j.compedu.2011.06.004

Gilbert, L., Gale, V., Warburton, B., & Wills, G. (2009). *Report on Summative E-Assessment Quality (REAQ)*. *JISC*. Retrieved from http://www.webarchive.org.uk/wayback/archive/20140615065528/http://www.jisc.ac.uk/media/documents/projects/reaqfinalreport.pdf

Gilbert, L., Whitelock, D., & Gale, V. (2011). *Synthesis report on assessment and feedback with technology enhancement*. Southampton: Electronics and Computer Science EPrints. Retrieved from http://eprints.soton.ac.uk/273221/

Giorgi, A. (1997). The theory, practice, and evaluation of the phenomenological

method as a qualitative research procedure. *Journal of Phenomenology Psychology*, *28*, 235–260.

Gipps, C. V. (2005). What Is the Role for ICT-Based Assessment in Universities? *Studies in Higher Education*, *30*(2), 171–180. https://doi.org/10.1080/03075070500043176

Glaser, A., & Strauss, A. . (1967). *The discovery of grounded theory*. Chicago: Aldine.

Goodyear, P. (1995). Asynchronous peer interaction in distance education: the evolution of goals, practices and technology. *Training Research Journal*, *1*, 71–102.

Gordon, N. (2014). *Flexible Pedagogies: technology-enhanced learning Flexible Pedagogies: preparing for the future*. Retrieved from https://www.heacademy.ac.uk/system/files/resources/tel_report_0.pdf

Gornitzka, Å., Kyvik, S., & Stensaker, B. (2005). Implementation analysis in higher education. In *Reform and change in higher education. Analysing policy implementation* (pp. 35–57). Dordrecht: Springer.

Grahame, P. (1999). Doing qualitative research: Three problematics. *Discourse of Sociological Practice*, *2*(1), 347–360.

Grant, K. (2003). Making sense of education change at Thistle College: the existence of witchcraft, witches and shamans. *International Journal of Educational Management*, *17*(2), 71–83. https://doi.org/10.1108/09513540310460261

Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E. R., & Lounsbury, M. (2011). Institutional Complexity and Organizational Responses. *Academy of Management Annals*, *5*(1). Retrieved from http://annals.aom.org.ezproxy.lancs.ac.uk/content/5/1/317

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105–117). Thousand Oaks : Sage Publications.

Gubrium, J., & Holstein, J. (2011). Animating interview narratives. In *Qualitative Research* (3rd ed., pp. 149–167). London: Sage.

Guest, G. (2012). *Applied thematic analysis*. (K. M. MacQueen & E. E. Namey, Eds.). Thousand Oaks, Calif. ; London : SAGE.

Gunn, C. (2006). Engaging Learners Through Continuous Online Assessment. In D. Hung & M. S. Khine (Eds.), *Engaged Learning with Emerging Technologies* (pp. 255–273). Netherlands: Springer.

Guri-Rosenblit, S. (2005). “Distance education” and “e-learning”: Not the same thing. *Higher Education*, *49*(4), 467–493. https://doi.org/10.1007/s10734-004-0040-0

Guri-Rosenblit, S. (2010). *Digital technologies in higher education: Sweeping expectations and actual effects*. New York: Nova Sciences Publishers Inc. Retrieved from http://www.scopus.com/inward/record.url?eid=2-s2.0-84895251050&partnerID=tZOtx3y1

Hafeez-Baig, A., De George-Walker, L., Gururajan, R., & Danaher, P. A. (2011). Challenges and opportunities for academics adopting an online peer review innovation. *Studies in Learning, Evaluation, Innovation and Development*, *8*(1), 26–37. Retrieved from https://eprints.usq.edu.au/21257/

Hall, R. (2017). University staff: VCs are too “far away from the day-to-day reality” | Higher Education Network | The Guardian. Retrieved August 27, 2017, from https://www.theguardian.com/higher-education-network/2017/may/10/university-staff-unhappy-with-institutional-leadership

Hamilton, C. (2013). *An investigation into the relationships between the technological pedagogical content knowledge of university teacher education faculty and their age, rank, and gender*. University of North Texas. Retrieved from https://search-proquest-com.ezproxy.lancs.ac.uk/docview/1667463478?accountid=11979

Hammersley, M. (1990). *Reading Ethnographic Research: A Critical Guide*. London: Routledge.

Hammersley, M. (1992). Ethnography and realism. In M. Hammersley (Ed.), *What’s wrong with ethnography? Methodological explorations* (pp. 43–56). London: Routledge.

Hammersley, M. (2002). Research as emancipatory: the case of Bhaskar’s realism. *Journal of Critical Realism*, *1*(1), 33–48. https://doi.org/10.1558/jocr.v1i1.33

Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in Practice*. London: Routledge.

Hannan, A., & Silver, H. (2006). On being an external examiner. *Studies in Higher Education*, *31*(1), 57–69. https://doi.org/10.1080/03075070500392300

Hargreaves, T. (2011). Practice-ing behaviour change: Applying social practice theory to pro-environmental behaviour change. *Journal of Consumer Culture*, *11*(1), 79–99. https://doi.org/10.1177/1469540510390500

Hattendorf Westney, L. C. (2000). A trivial pursuit? information technology and

the tenure track. *Campus - Wide Information Systems*, *17*(4), 113–119.

Hattie, J., & Timperley, H. (2007). The Power of Feedback. *Review of Educational Research*, *77*(1), 81–112. https://doi.org/10.3102/003465430298487

Heath, G., Cameron, E., Cummins, C., Greenfield, S., Pattison, H., Kelly, D., & Redwood, S. (2012). Paediatric "care closer to home": Stake-holder views and barriers to implementation. *Health & Place*, *18*(5), 1068–1073. https://doi.org/10.1016/j.healthplace.2012.05.003

HEFCE. (2017). The Teaching Excellence Framework. Retrieved August 28, 2017, from http://www.hefce.ac.uk/lt/tef/

Heidegger, M. (1969). *Zur Sache des Denkens*. Tübingen: Niemeyer.

Heidegger, M. (1988). *Hegel's Phenomenology of Spirit.* Bloomington: Indiana University Press.

Herr, K., & Anderson, G. (2005). *The Action Research Dissertation: A Guide for Students and Faculty.* Thousand Oaks, CA: Sage.

Heywood, J. (2000). *Assessment in Higher Education: Student Learning, Teaching, Programmes and Institutions.* London: Jessica Kinglsey.

Higher Education Academy (HEA). (2012). *A Marked Improvement - Transforming assessment in higher education*. York. Retrieved from https://www.heacademy.ac.uk/sites/default/files/A_Marked_Improvement.pdf

Hiltz, S. R., Kim, E., & Shea, P. (2007). Faculty motivators and de-motivators for teaching online: Results of focus group interviews at One University. Hawaii.

Holian, R., & Brooks, R. (2004). The Australian national statement on ethical conduct in research: Application and implementation for "insider" applied research in business. *Action Research International*, *1*(7), 1–21. Retrieved from http://www.aral.com.au/ari/p-rholian04.html

Holtz, G. (2014). Generating Social Practices. *Journal of Artificial Societies and Social Simulation*, *17*(1), 17. Retrieved from http://jasss.soc.surrey.ac.uk/17/1/17.html

Honarmand, M. (2009). Computer aided assessment and its situation in higher education - A case study from the islamic Azad university in iran. *Proceedings - 2009 International Conference on Information Management and Engineering, ICIME 2009*, 736–739. https://doi.org/10.1109/ICIME.2009.137

Hopwood, N. (2010). Practice theory , ethnography and the body. *Paper Presented at the Centre for Research in Learning and Change Seminar Series*

University of Technology, Sydney Monday 13th September 2010, (September), 1–18.

Hougaard, G. . (2009). *Forum, qualitative social research*. *Forum: Qualitative Social Research* (Vol. 10). Retrieved from http://www.qualitative-research.net/index.php/fqs/article/view/1280/2750

House, E. . (1980). *Evaluating with validity*. Beverly Hills, CA: Sage.

Houston, S. (2005). Philosophy, Theory and Method in Social Work: Challenging empiricism's claim on evidence-based practice. *Journal of Social Work*, *5*(4), 720.

Howe, N., & Strauss, W. (2003). *Millenials go to college*. Washington, DC: American Association of Collegiate Registrars and Admissions Officers.

Howe, R. (2013). SaGE survey – findings and moving forward. Retrieved March 24, 2016, from http://blogs.northampton.ac.uk/sage/2013/05/05/sage-survey-findings-and-moving-forward/

Huertas, M. A., & Mor, E. (2014). Technology-Enhanced Assessment (TEA) in online education: Challenges and opportunities. In *2014 14th International Conference on Advances in ICT for Emerging Regions (ICTer)* (pp. 4–4). IEEE. https://doi.org/10.1109/ICTER.2014.7083866

Hughes, C., & Barrie, S. (2010). Influences on the assessment of graduate attributes in higher education. *Assessment & Evaluation in Higher Education*, *35*(3), 325–334. https://doi.org/10.1080/02602930903221485

Hull, C. (1985). Between the Lines: The Analysis of Interview Data as an Exact Art. *British Educational Research Journal*, *11*, 27–32. https://doi.org/10.2307/1500944

James, D. (2000). Making the graduate: perspectives on student experience of assessment in higher education. In A. Filer (Ed.), *Assessment: social practice and social product* (pp. 151–167). London: Routledge Falmer.

Jennings, R. (1977). *Education and politics: Policy making in local education authorities*. London: Batsford.

JISC. (2007). *Effective Practice with e-Assessment: An overview of technologies, policies and practice in further and higher education*. Retrieved from http://www.jisc.ac.uk/media/documents/themes/elearning/effpraceassess.pdf

JISC. (2010). *Effective Assessment in a Digital Age: A guide to technology-enhanced assessment and feedback*. Retrieved from http://www.jisc.ac.uk/media/documents/programmes/elearning/digiassass_eada.pdf

Joffe, H. (2012). Thematic analysis. In D. Harper & A. Thompson (Eds.), *Qualitative Research Methods in Mental Health and Psychotherapy: An Introduction for Students and Practicioners* (pp. 209–224). Chichester: Wiley-Blackwell.

Johnson, M., Liber, O., Wilson, S., Beauvior, P., Sharples, P., & Milligan, C. (2007). *The personal learning environment. A report on the JISC CETIS PLE project.* Retrieved from http://wiki.cetis.ac.uk/Ple/Report

Jones, D., & Behrens, S. (2003). Online assignment management: an evolutionary tale. In *Proceedings of the 36th Annual Hawaii International Conference on System Sciences.* IEEE. https://doi.org/10.1109/HICSS.2003.1174347

Jones, T. (2013). *Understanding education policy : the "Four education orientations" framework*. Dordrecht: Springer.

Keeves, J. . (1994). Assessment in schools, methods of assessment. In T. Husén & T. N. Postlethwaite (Eds.), *The International Encyclopedia of Education* (vol. 1, pp. 362–370). Oxford: Pergamon Press.

Kemmis, S. (2009). Understanding Professional Practice: A Synoptic Framework. In B. Green (Ed.), *Understanding and Researching Professional Practice* (pp. 19–38). Rotterdam: Sense Publishers.

Kemmis, S. (2012). Pedagogy, Praxis and Practice-Based Higher Education. In J. Higgs, R. Barnett, & S. Billett (Eds.), *Practice-based Education: Perspectives and Strategies* (pp. 81–100). Rotterdam: Sense Publishers.

Kezar, A. J., & Eckel, P. D. (2002). The Effect of Institutional Culture on Change Strategies in Higher Education: Universal Principles or Culturally Responsive Concepts? *The Journal of Higher Education*, *73*(4), 435–460. https://doi.org/10.1353/jhe.2002.0038

Kirkwood, A., & Price, L. (2008). Assessment and student learning: a fundamental relationship and the role of information and communication technologies. *Open Learning*, *23*.

Kirkwood, A., & Price, L. (2013). Missing: evidence of a scholarly approach to teaching and learning with technology in higher education. *Teaching in Higher Education*, *18*(3), 327–337. https://doi.org/10.1080/13562517.2013.773419

Knight, P. T., & Trowler, P. R. (2000). Department-level cultures and the improvement of learning and teaching. *Studies in Higher Education*, *25*(1), 69–83. https://doi.org/10.1080/030750700116028

Knight, P., & Trowler, P. R. (2001). *Departmental Leadership in Higher Education*. Buckingham: SRHE and Open University Press.

Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2005). *Student success in college: Creating conditions that matter*. San Francisco, CA: Jossey-Bass.

Kuhn, T. S. (1962). *The structure of scientific revolutions.* Chicago : University of Chicago Press.

Kuijer, L. (2014). *Implications of Social Practice Theory for Sustainable Design*. PhD Thesis. Delft University of Technology, Netherlands.

Kuikka, M., Kitolab, M., & Laaksob, M.-J. (2014). *Challenges when introducing electronic exam*. *Research in Learning Technology* (Vol. 22). https://doi.org/http://dx.doi.org/10.3402/rlt.v22.22817

Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA: Sage Publications.

Kvale, S., & Brinkman, S. (2009). *Interviews - Learning the Craft of Qualitative Research Interviewing*. London: Sage.

Labaree, R. (2002). The risk of "going observationalist": negotiating the hidden dilemmas of being an insider participant observer. *Qualitative Research*, *2*(1), 97–122.

Lacey, A., & Luff, D. (2007). *Qualitative Data Analysis The NIHR Research Design Service for Yorkshire & the Humber*. Retrieved from https://www.rds-yh.nihr.ac.uk/wp-content/uploads/2013/05/9_Qualitative_Data_Analysis_Revision_2009.pdf

Lakoff, G. (1987). *Women, fire, and dangerous things: What categories reveal about the mind*. Chicago: Chicago University Press.

Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to western thought*. New York: Basic Books.

Larreamendy-Joerns, J., & Leinhardt, G. (2006). Going the Distance With Online Education. *Review of Educational Research*, *76*(4), 567–605. https://doi.org/10.3102/00346543076004567

Lauckner, H., Paterson, M., & Krupa, T. (2012). Using Constructivist Case Study Methodology to Understand Community Development Processes: Proposed Methodological Questions to Guide the Research Process. *The Qualitative Report*, *17*(13). Retrieved from http://nsuworks.nova.edu/tqr/vol17/iss13/1

Laumer, S., von Stetten, A., & Eckhardt, A. (2009). E-Assessment. *Business & Information Systems Engineering*, *1*(3), 263–265. https://doi.org/10.1007/s12599-009-0051-6

Laurillard, D. (2005). E-Learning in Higher Education. In *Changing Higher*

Education: The Development of Learning and Teaching (pp. 71–84). London: Routledge.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation* (Vol. 95). Cambridge: Cambridge University Press. Retrieved from http://books.google.com/books?id=CAVIOrW3vYAC&pgis=1

Lave, J., & Wenger, E. (1999). Learning pedagogy in communities of practice. In J. Leach & B. Moon (Eds.), *Learners and Pedagogy* (pp. 21–33). London: Chapman.

Leathwood, C. (2005). Assessment policy and practice in higher education: purpose, standards and equity. *Assessment & Evaluation in Higher Education*, *30*(3), 307–324. https://doi.org/10.1080/02602930500063876

Leisyte, L., & Dee, J. R. (2012). Understanding Academic Work in a Changing Institutional Environment (pp. 123–206). Springer, Dordrecht. https://doi.org/10.1007/978-94-007-2950-6_3

Levinson, B. A. U., Sutton, M., & Winstead, T. (2009). Education Policy as a Practice of Power. *Educational Policy*, *23*(6), 767–795. https://doi.org/10.1177/0895904808320676

Lewis, J., Ritchie, J., Ormston, R., & Morrell, G. (2014). Generalising from Qualitative Research. In J. Ritchie, J. Lewis, C. McNaughton Nicholls, & R. Ormston (Eds.), *Qualitative Research Practice - A Guide for Social Science Students and Researchers* (2nd ed., pp. 347–366). London: SAGE Publications.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Beverley Hills, CA: Sage Publications.

Lindberg, O., & Rantatalo, O. (2014). Competence in professional practice: A practice theory analysis of police and doctors. *Human Relations*, *68*(4), 561–582. https://doi.org/10.1177/0018726714532666

Llamas-Nistal, M., Fernández-Iglesias, M. J., González-Tato, J., & Mikic-Fonte, F. a. (2013). Blended e-assessment: Migrating classical exams to the digital world. *Computers and Education*, *62*, 72–87. https://doi.org/10.1016/j.compedu.2012.10.021

Longhofer, J., Floersch, J., & Hoy, J. (2012). *Qualitative Methods for Practice Research*. New York, NY: Oxford University Press.

Longshore Smith, M. (2006). Overcoming theory-practice inconsistencies: Critical realism and information systems research. *Information and Organization*, *16*(3), 191–211. https://doi.org/10.1016/J.INFOANDORG.2005.10.003

Lopez, K. A., & Willis, D. G. (2004). Descriptive versus interpretive phenomenology: Their contributions to nursing knowledge. *Qualitative Health Research*, *14*, 726–735.

Lowenthal, P., & Wilson, B. G. (2010). Labels do matter! a critique of AECT's redefinition of the field. *TechTrends*, *54*(1), 38–46. https://doi.org/10.1007/s11528-009-0362-y

Maassen, P., & Gornitzka, Å. (1999). Integrating two theoretical perspectives on organizational adaptation. In B. Jongbloed, P. Maassen, & G. Neave (Eds.), *From the eye of the storm; Higher education's changing institutions* (pp. 295–316). Dordrecht: Kluwer Academic Publishers.

Macfarlane, B. (2011). The Morphing of Academic Practice: Unbundling and the Rise of the Para-academic. *Higher Education Quarterly*, *65*(1), 59–73. https://doi.org/10.1111/j.1468-2273.2010.00467.x

Manchester Metropolitan University. (2014). TRAFFIC - Transforming Assessment and Feedback for Institutional Change. Retrieved January 6, 2017, from http://www.celt.mmu.ac.uk/traffic/

Mann, S. (2010). A critical review of qualitative interviews in applied linguistics. *Applied Linguistics*, *32*(1), 6–24. https://doi.org/10.1093/applin/amq043

Marriott, P. (2009). Student's evaluation of the use of online summative assessment on an undergraduate financial accounting module. *British Journal of Educational Technology*, *40*, 237–254.

Marsh, H. W., & Hattie, J. (2002). The Relation between Research Productivity and Teaching Effectiveness. *The Journal of Higher Education*, *73*(5), 603–641. https://doi.org/10.1080/00221546.2002.11777170

Maruyama, M. (1974). Endogenous research vs "experts" from outside. *Futures*, *6*(5), 389–394. https://doi.org/10.1016/0016-3287(74)90058-5

Mason, J. (2002). *Qualitative researching* (2nd ed.). London : Sage.

Maxwell, J. A. (2012). *A Realist Approach for Qualitative Research*. Thousand Oaks, CA: SAGE Publications, Inc.

Mays, N., & Pope, C. (2000). Qualitative research in health care: Assessing quality in qualitative research. *BMJ*, *320*(7226), 50–52. https://doi.org/10.1136/bmj.320.7226.50

Mayson, S., & Schapper, J. (2012). Constructing teaching and research relations from the top: an analysis of senior manager discourses on research-led teaching. *Higher Education*, *64*(4), 473–487. https://doi.org/10.1007/s10734-012-9505-8

McCann, A. L. (2010). Factors affecting the adoption of an e-assessment system. *Assessment & Evaluation in Higher Education*, *35*(7), 799–818. https://doi.org/10.1080/02602930902981139

McCloskey, E. (2016). To the maximum extent appropriate: determining success and the least restrictive environment for a student with autism spectrum disorder. *International Journal of Inclusive Education*, *20*(11), 1204–1222. https://doi.org/10.1080/13603116.2016.1155667

McConnell-Henry, T., Chapman, Y., & Francis, K. (2011). Member checking and Heideggerian phenomenology: a redundant component. *Nurse Researcher*, *18*(2), 28–37. https://doi.org/10.7748/nr2011.01.18.2.28.c8282

McCoy, L. (2004). Book Reviews. *Health (London)*, *8*(1), 129–136. https://doi.org/10.1177/1363459304038800

McDermott, R., & Archibald, D. (2010). Harnessing your staff's internal networks. *Harvard Business Review*, *88*(3), 82–89. https://doi.org/Article

McKenna, C., & Bull, J. (2000). Quality assurance of computer-assisted assessment: practical and strategic issues. *Quality Assurance in Education*, *8*(1), 24–32. https://doi.org/10.1108/09684880010312659

Mercer, J. (2007). The challenges of insider research in educational institutions: wielding a double-edged sword and resolving delicate dilemmas. *Oxford Review of Education*, *33*(1), 1–17. https://doi.org/10.1080/03054980601094651

Merton, R. K. (1972). Insiders and Outsiders: A Chapter in the Sociology of Knowledge. *American Journal of Sociology*, *78*(1), 9–47. https://doi.org/10.2307/2776569

Microsoft. (2016). What's new in Excel 2013. Retrieved September 29, 2015, from https://support.office.com/en-us/article/What-s-new-in-Excel-2013-1cbc42cd-bfaf-43d7-9031-5688ef1392fd?ui=en-US&rs=en-US&ad=US&fromAR=1

Milam, J., Voorhees, R. A., & Bedard-Vorhees, A. (2004). Assessment of Online Education: Policies, Practices and Recommendations. *New Directions for Community Colleges*, *2004*, 73–85.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook* (2nd ed.). London: Sage.

Miller, J. W., Martineau, L. P., & Clark, R. C. (2000). Technology Infusion and Higher Education: Changing Teaching and Learning. *Innovative Higher Education*, *24*(3), 227–241. https://doi.org/10.1023/B:IHIE.0000047412.64840.1c

Miller, P. (2008). Validity. In L. Given (Ed.), *The SAGE encyclopedia of qualitative research methods* (pp. 909–910). Thousand Oaks, CA: SAGE Publications, Inc.

Mintzberg, H. (1980). Structure in 5's: A Synthesis of the Research on Organization Design. *Management Science*, *26*(3), 322–341. Retrieved from http://www.jstor.org.ezproxy.lancs.ac.uk/stable/2630506

Monkhouse, H. (2010). *Developing effective learning environment for tertiary music students and staff*. Sydney: Australian Learning and Teaching Council.

Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: Are they the same? *Internet and Higher Education*, *14*(2), 129–135. https://doi.org/10.1016/j.iheduc.2010.10.001

Moring, C., & Lloyd, A. (2013). Analytical implications of using practice theory in workplace information literacy research. *Information Research*, *18*(3), paper C35. Retrieved from http://infomationr.net/ir/18-3/colis/paperC35.html

Morse, J. M. (1998). Designing Funded Qualitative Research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of Qualitative Inquiry* (2nd ed., Vol. 2). Thousand Oaks, California: Sage Publications.

Murtagh, J., Dixey, R., & Rudolf, M. (2006). A qualitative investigation into the levers and barriers to weight loss in children: opinions of obese children. *Archives of Disease in Childhood*, *91*(11), 920–923. https://doi.org/10.1136/adc.2005.085712

Mutch, A. (2002). Thinking Strategically about Assessment. *Assessment & Evaluation in Higher Education*, *27*(2), 163–174. https://doi.org/10.1080/02602930220128733

Newby, P. (2014). *Research Methods for Education* (2nd ed.). Abingdon: Routledge.

Newcastle University. (2010). Electronic (e)-Assessment Policy. Retrieved from http://www.ncl.ac.uk/quilt/assets/documents/qsh-eassmt-policy.pdf

Newland, B., & Martin, L. (2016). *Electronic Management of Assessment in UK HE 2016*. Retrieved from http://eprints.brighton.ac.uk/16358/1/HeLFEMA2016.pdf

Newland, B., Martin, L., Bird, A., & Masika, R. (2013). *HELF - Electronic Management of Assessment Survey Report 2013*. Retrieved from http://helfuk.blogspot.co.uk/p/projects.html

Newman, T., & Beetham, H. (2017). *Student digital experience tracker 2017: the voice of 22,000 UK learners*. Retrieved from http://repository.jisc.ac.uk/6662/1/Jiscdigitalstudenttracker2017.pdf

Ng, S., Stooke, R., Regan, S., Hibbert, K., Schryer, C., Phelan, S., & Lingard, L. (2013). An institutional ethnography inquiry of health care work in special education: a research protocol. *International Journal of Integrated Care*, *13*, e033. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3812304/

Nichols, N., & Griffith, A. (2009). Talk, texts, and educational action: an institutional ethnography of policy in practice. *Cambridge Journal of Education*, *39*(2), 241–255. https://doi.org/10.1080/03057640902902286

Nicol, D. (2009). Quality Enhancement Themes: The First Year Experience. Transforming assessment and feedback: enhancing integration and empowerment in the first year. Mansfield: Quality Assurance Agency for Higher Education.

Nicol, D., & Draper, S. (2009). A blueprint for transformational organisational change in higher education: REAP as a case study. In T. Mayes, D. Morrison, H. Mellar, P. Bullen, & M. Oliver (Eds.), *Transforming Higher Education through technology-enhanced learning*. York: HEA.

Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Published in Studies in Higher Education*, *31*(2), 199–218. https://doi.org/10.1080/03075070600572090

Nilson, L. B. (2010). *Teaching At Its Best* (3rd ed.). San Francisco, CA: Jossey-Bass.

Norton, P., & Wiburg, K. M. (2003). *Teaching with technology: Designing opportunities to lean*. Belmont, CA: Thompson-Wadsworth.

Nybom, T. (2003). Institutional autonomy, von Humboldt legacy and re-engineering the contemporary European university. In E. de Corte (Ed.), *Excellence in higher education in Western Europe* (pp. 17–32). London: Portland Press.

O'Connell, C. (2017). An object-oriented approach to education policy research: Deepening the analysis through an activity-theoretical and critical discourse analytic framework. *Learning, Culture and Social Interaction*, *13*, 11–22. https://doi.org/10.1016/j.lcsi.2017.01.002

O'Leary, R., & Cook, J. (2001). Wading through treacle: CAA at the University of Bristol. In *Proceedings of the 5th International Computer Assisted Conference*. Loughborough University, Loughborough.

Oldfield, A., Broadfoot, P., Sutherland, R., & Timmis, S. (2012). *Assessment in a Digital Age: A research review*. Bristol: University of Bristol. Online Report. Retrieved from http://www.bris.ac.uk/media-library/sites/education/documents/researchreview.pdf

OldU. (2009). OldU: Strategic Plan (2009-2014). Retrieved March 31, 2015, from https://www.oldu.ac.uk/intranet/media/intranet/achievingexcellence/strategic-plan.pdf

OldU. (2013a). Learn About Our Online Programmes. Retrieved March 24, 2015, from http://www.oldu.ac.uk/study/online/about/

OldU. (2013b). Technology Enhanced Learning Strategy for OldU. Retrieved March 31, 2015, from https://www.oldu.ac.uk/media/olduacuk/tqsd/TEL_strategy.pdf

OldU. (2014a). OldU Annual Report 2014: Stories from an exceptional university. Retrieved March 30, 2015, from http://www.oldu.ac.uk/media/olduacuk/annualreport/annual-report-2014.pdf

OldU. (2014b). OldU research ranked in UK top 10. Retrieved March 30, 2015, from http://news.oldu.ac.uk/2014/12/18/oldu-research-ranked-uk-top-10-2/

OldU. (2015a). Organisational Structure. Retrieved March 26, 2015, from https://www.oldu.ac.uk/intranet/media/intranet/achievingexcellence/oldu-org-structure-v11.pdf

OldU. (2015b). Payment of Fees: Important Information. Retrieved August 16, 2015, from https://www.oldu.ac.uk/media/olduacuk/student-administration/money/documents/Payment,Reminder,-,Important,Information.pdf

OldU. (2016a). All Online Degrees and Programmes | OldU. Retrieved May 11, 2016, from https://www.online.oldu.ac.uk/programme-listing

OldU. (2016b). ELEARNING: MOOC Development. Retrieved from https://www.oldu.ac.uk/elearning/online-course-development/mooc-development/

OldU Student Union. (2013). Make the Most of IT: Campaign Report. Retrieved March 31, 2015, from http://s3-eu-west-1.amazonaws.com/document/documents/5358/oldu/MTMOIT Report FINAL.pdf

Oliver, S. L., & Hyun, E. (2011). Comprehensive curriculum reform in higher education: Collaborative engagement of faculty and administrators. *Journal of Case Studies in Education*, *2*, 1–20. Retrieved from http://files.eric.ed.gov/fulltext/EJ1057195.pdf

Olsen, J. P. (2007). The institutional dynamics of the European university. In P. Maassen & J. P. Olsen (Eds.), *University dynamics and European integration*

(pp. 25–54). Dordrecht: Springer.

Oosterhof, A., Conrad, R. M., & Ely, D. P. (2008). *Assesing learners online*. New Jersey: Pearson.

Ormston, R., Spencer, L., Barnard, M., & Snape, D. (2014). The Foundations of Qualitative Research. In J. Ritchie, J. Lewis, C. McNaughton Nicholls, & R. Ormston (Eds.), *Qualitative Research Practice - A Guide for Social Science Students and Researchers* (2nd ed., pp. 1–26). London: Sage Publications.

Osuji, U. S. a. (2012). The use of e-assessments in the Nigerian higher education system. *Turkish Online Journal of Distance Education*, *13*(4), 1–13.

Ozga, J. (2000). *Policy research in educational settings: Contested terrain*. Buckingham: Open University Press.

Pachler, N., Daly, C., Mor, Y., & Mellar, H. (2010). Formative e-assessment: Practitioner cases. *Computers and Education*, *54*(3), 715–721. https://doi.org/10.1016/j.compedu.2009.09.032

Palomba, D. (2015). Searching for an identity: The university in Italy between egalitarianism, " catching up with Europe," and the myth of Humboldt. *Encounters in Theory and History of Education*, *16*, 45–64. Retrieved from https://ojs.library.queensu.ca/index.php/encounters/article/view/5998

Parkinson, S., Eatough, V., Holmes, J., Stapley, E., & Midgley, N. (2016). Framework analysis: a worked example of a study exploring young people's experiences of depression. *Qualitative Research in Psychology*, *13*(2), 109–129. https://doi.org/10.1080/14780887.2015.1119228

Parshall, C. G., Spray, J. A., Kalohn, J. ., & Davey, T. (2002). *Practical considerations in computer-based testing*. New York: Springer.

Patel, R. (2015). *The role of reflective practice in educating about race, identity and difference*. Manchester Metropolitan University. Retrieved from http://e-space.mmu.ac.uk/582935/

Patton, M. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage Publications.

Pawson, R. (2006). *Evidence-based policy: A realist perspective*. London: Sage.

Pegg, A. (2013). *"We think that's the future": curriculum reform initiatives in higher education*. Retrieved from https://www.heacademy.ac.uk/system/files/curriculum_reform_final_19th_dec_1.pdf

Pellegrino, J. W., & Quellmalz, E. S. (2010). Perspectives on the Integration of Technology and Assessment. *Journal of Research on Technology in Education*,

43(2), 119–134. https://doi.org/10.1080/15391523.2010.10782565

Perry, E. H., & Pilati, M. L. (2011). Online Learning. *New Directions for Teaching and Learning2*, *2011*(128), 95–104. https://doi.org/10.1002/tl.472

Phipps, R., & Merisotis, J. (1999). *What's the difference? A review of contemporary research on the effectiveness of distance learning in higher education*. Washington. Retrieved from http://www.ihep.org/research/publications/whats-difference-review-contemporary-research-effectiveness-distance-learning

Pitt, S. J., & Gunn, A. (2004). The Value of Computer Based Formative Assessment in Undergraduate Biological Science Teaching. *Bioscience Education*, *3*.

Plankey-Videla, N. (2012). Informed Consent as Process: Problematizing Informed Consent in Organizational Ethnographies. *Qualitative Sociology*, *35*(1), 1–21. https://doi.org/10.1007/s11133-011-9212-2

Pollock, N. (2000). THE VIRTUAL UNIVERSITY AS "TIMELY AND ACCURATE INFORMATION." *Information, Communication & Society*, *3*(3), 349–365. https://doi.org/10.1080/13691180051033298

Ponterotto, J. G. (2006). Brief Note on the Origins, Evolution, and Meaning of the Qualitative Research Concept "Thick Description." *The Qualitative Report*, *11*(3), 538–549. Retrieved from http://www.nova.edu/ssss/QR/QR11-3/ponterotto.pdf

Porter, S. (2007). Validity, trustworthiness and rigour: reasserting realism in qualitative research. *Journal of Advanced Nursing*, *60*(1), 79–86. https://doi.org/10.1111/j.1365-2648.2007.04360.x

Prichard, C., & Willmott, H. (1997). Just How Managed is the McUniversity? *Organization Studies*, *18*(2), 287–316. https://doi.org/10.1177/017084069701800205

Prodinger, B., Shaw, L., Rudman, D. L., & Townsend, E. (2012). Arthritis-related occupational therapy: making invisible ruling relations visible using institutional ethnography. *British Journal of Occupational Therapy*, *75*(10). https://doi.org/10.4276/030802212X13496921049707

Prunty, J. (1984). *A critical reformulation of educational policy analysis*. Victoria: Deakin.

Putnam, H. (1999). *The threefold cord: Mind, body, and the world*. New York: Columbia University Press.

QSR International. (2016). NVivo qualitative data analysis software. Retrieved August 11, 2016, from http://www.qsrinternational.com/

Qualifications and Curriculum Authority. (2007). *Regulatory principles for e-assessment*. Retrieved from https://publications.parliament.uk/pa/cm200607/cmselect/cmeduski/memo/test&ass/ucm3102paper4.pdf

Quality Assurance Agency for Higher Education. (2013). *UK Quality Code for Higher Education. Chapter B6: Assessment of students and the recognition of prior learning*. Retrieved from http://www.qaa.ac.uk/

Quinlan, E. (2009). The "actualities" of knowledge work: an institutional ethnography of multi-disciplinary primary health care teams. *Sociology of Health & Illness*, *31*(5), 625–641. https://doi.org/10.1111/j.1467-9566.2009.01167.x

Ramsden, P. (2003). *Learning to teach in higher eduction* (2nd ed.). London: Routledge.

Rankin, J., & Campbell, M. (2009). Institutional Ethnography (IE), Nursing Work and Hospital Reform: IE's Cautionary Analysis. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *10*(2). Retrieved from http://www.qualitative-research.net/index.php/fqs/article/view/1258/2720

Rebora, G., & Turri, M. (2010). Change Management in Universities: More a question of balance than a pathway. *Tertiary Education and Management*, *16*(4), 285–302. https://doi.org/10.1080/13583883.2010.529162

Reckwitz, A. (2002). Toward a Theory of Social Practices: A Development in Culturalist Theorizing. *European Journal of Social Theory*, *5*(2), 243–263. https://doi.org/10.1177/13684310222225432

Redecker, C., & Johannessen, Ø. (2013). Changing Assessment - Towards a New Assessment Paradigm Using ICT. *European Journal of Education*, *48*(1), 79–96. https://doi.org/10.1111/ejed.12018

Reeves, T. C. (2000). Alternative approaches for online learning environments in higher education. *Journal of Educational Computing Research*, *23*, 101–111.

Reeves, T. C., & Hedberg, J. G. (2009). Evaluation strategies for open and distributed learning environments. In C. Spratt & P. Lajbcygier (Eds.), *E-Learning technologies and evidence based assessment approaches* (pp. 234–253). New York: Information Science Reference.

Reynolds, J., & Saunders, M. (1987). Teacher responses to curriculum policy: Beyond the "Delivery" metaphor. In J. Calderhead (Ed.), *Exploring teachers' thinking* (pp. 196–214). London: Cassell Education Limited.

Ricketts, C., & Wilks, S. J. (2002). Improving Student Performance Through

Computer-based Assessment: insights from recent research. *Assessment & Evaluation in Higher Education*, *27*, 475–479.

Ridgway, J., McCusker, S., & Pead, D. (2005). Literature Review of E-assessment. Bristol: NESTA Futurelab. Retrieved from https://www.nfer.ac.uk/publications/FUTL64/FUTL64literaturereview.pdf

Ritchie, J., & Lewis, J. (Eds.). (2003). *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London: Sage.

Ritchie, J., Lewis, J., Elam, G., Tennant, R., & Rahim, N. (2014). Designing and Selecting Samples. In J. Ritchie, J. Lewis, C. McNaughton Nicholls, & R. Ormston (Eds.), *Qualitative Research Practice - A Guide for Social Science Students and Researchers* (2nd ed., pp. 111–146). Thousand Oaks, CA: Sage Publications.

Robotham, D. (2004). Using interviews in researching student learning: A true and valid account? *Teaching in Higher Education*, *9*(2), 225–233. https://doi.org/10.1080/1356251042000195330

Rowley, D. J., Lujan, H. D., & Dolence, M. G. (1998). *Strategic choices for the academy : how demand for lifelong learning will re-create higher education*. San Francisco, CA: Jossey-Bass.

Rubin, H., & Rubin, I. (2012). *Qualitative Interviewing: the Art of Heating Data*. London: Sage.

Rumelt, R. P. (1995). Inertia and transformation. In C. A. Montgomery (Ed.), *Resource-based and evolutionary theories of the firm* (pp. 101–132). Boston, MA: Kluwer Academic.

Russell, C. (2009). A systemic framework for managing e-learning adoption in campus universities: individual strategies in context. *Research in Learning Technology*, *17*(1). https://doi.org/10.3402/rlt.v17i1.10771

Ryan, G. W., & Bernard, H. R. (2000). Data management and analysis methods. In N. Denzin & Y. Lincoln (Eds.), *Handbook of Qualitative Research* (2nd ed., pp. 769–802). Thousand Oaks, CA: Sage.

Sabatier, P. A. (1986). Top-down and Bottom-up Approaches to Implementation Research: A Critical Analysis and Suggested Synthesis. *Journal of Public Policy*, *6*(1), 21–48. https://doi.org/10.2307/3998354

Saldana, J. (2009). *The Coding Manual for Qualitative Researchers*. London: Sage.

Säljö, R. (2010). Digital tools and challenges to institutional traditions of learning: technologies, social memory and the performative nature of learning. *Journal of Computer Assisted Learning*, *26*(1), 53–64. https://doi.org/10.1111/j.1365-2729.2009.00341.x

Salmon, G. (2005). Flying not flapping: a strategic framework for e-learning and pedagogical innovation in higher education institutions. *Research in Learning Technology*, *13*(3), 201–218. https://doi.org/10.1080/09687760500376439

Sampson, H. (2004). Navigating the waves: the usefulness of a pilot in qualitative research. *Qualitative Research*, *4*(3), 383–402. https://doi.org/10.1177/1468794104047236

Sangi, N. a. (2008). Electronic assessment issues and practices in Pakistan: a case study. *Learning, Media and Technology*, *33*(3), 191–206. https://doi.org/10.1080/17439880802324061

Santiago-Delefosse, M., Gavin, A., Bruchez, C., Roux, P., & Stephen, S. L. (2016). Quality of qualitative research in the health sciences: Analysis of the common criteria present in 58 assessment guidelines by expert users. *Social Science & Medicine*, *148*, 142–151. https://doi.org/10.1016/j.socscimed.2015.11.007

Sayer, A. (2010). *Method in Social Science*. London: Routledge.

Schatzki, T. R. (1996). *Social practices: a Wittgensteinian approach to human activity and the social.* Cambridge: Cambridge University Press.

Schatzki, T. R. (2012). A Primer on Practices. In J. Higgs, R. Barnett, & S. Billett (Eds.), *Practice-based Education: Perspectives and Strategies* (pp. 13–26). Rotterdam: Sense Publishers.

Schatzki, T. R. (2015). Spaces of Practices and of Large Social Phenomena. *Espacestemps*. Retrieved from http://www.espacestemps.net/articles/spaces-of-practices-and-of-large-social-phenomena/

Schon, D. (1983). *The Reflective Practicioner*. London: Basic Books.

Scott, J. (1998). *Seing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press.

Scott, K. M., MacLean, J. E., Marshall, T., & Van Asperen, P. (2008). Medical student use of an online formative assessment resource. In *Proceedings ascilite Melbourne 2008* (pp. 903–907). Melbourne. Retrieved from http://www.ascilite.org/conferences/melbourne08/procs/scott.pdf

Scottish Qualifications Authority (SQA). (2016). E-assessment. Retrieved December 8, 2016, from http://www.sqa.org.uk/sqa/68750.html

Seale, C. (1999). *The Quality of Qualitative Research*. Oxford: Blackwell.

Selinger, M., & Pearson, J. (Eds.). (1999). *Telematics in Education: Trends and*

Issues. Oxford: Pergamon Press.

Sharma, N. (2001). On Being Not Canadian: The Social Organization of "Migrant Workers" in Canada*. *Canadian Review of Sociology/Revue Canadienne de Sociologie*, *38*(4), 415–439. https://doi.org/10.1111/j.1755-618X.2001.tb00980.x

Sharpe, R., Benfield, G., & Francis, R. (2006). Implementing a university e-learning strategy: levers for change within academic schools. *Research in Learning Technology*, *14*(2). https://doi.org/10.3402/rlt.v14i2.10952

Sharpe, R., Benfield, G., Roberts, G., & Francis, R. (2006). *The undergraduate experience of blended e-learning: a review of UK literature and practice Executive summary*. Retrieved from https://www.heacademy.ac.uk/system/files/sharpe_benfield_roberts_francis_0.pdf

Sheader, E., Gouldsborough, I., & Grady, R. (2006). Staff and student perceptions of computer-assisted assessment for physiology practical classes. *Advances in Physiology Education*, *30*(4), 174–180. https://doi.org/10.1152/advan.00026.2006

Shento, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, *22*(2), 63–75.

Shove, E. (2010). Beyond the ABC: Climate change policy and theories of social change. *Environment and Planning*, *42*(6), 1273–1285. https://doi.org/10.1068/a42282

Shove, E., Pantzar, M., & Watson, M. (2012). *The Dynamics of Social Practice: Everyday Life and How it Changes*. London: Sage.

Silver, H. (2003). Does a University Have a Culture? *Studies in Higher Education*, *28*(2), 157–169. https://doi.org/10.1080/0307507032000058118

Silverman, D. (2011). *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction* (4th ed.). London: Sage.

Silverman, D. (2013). *Doing Qualitative Research* (4th ed.). London: Sage.

Sim, G., Holifield, P., & Brown, M. (2004). Implementation of computer assisted assessment: lessons from the literature. *ALT-J*, *12*(3), 215–229. https://doi.org/10.1080/0968776042000259546

Sin, C. (2014). The policy object: a different perspective on policy enactment in higher education. *Higher Education*, *68*(3), 435–448. https://doi.org/10.1007/s10734-014-9721-5

Singh, G., & Hardaker, G. (2017). Change levers for unifying top-down and

bottom-up approaches to the adoption and diffusion of e-learning in higher education. *Teaching in Higher Education*, *22*(6), 736–748. https://doi.org/10.1080/13562517.2017.1289508

Singh, U. G., & Wassermann, J. M. (2016). A Story of a Journey in Implementing an E-Assessment System at a South African University. *Africa Education Review*, *13*(3–4), 1–16. https://doi.org/10.1080/18146627.2016.1202549

Skrabal, M. Z., Turner, P. D., Jones, R. M., Tilleman, J. A., & Coover, K. L. (2012). EXPERIENTIAL EDUCATION Portfolio Use and Practices in US Colleges and Schools of Pharmacy. *American Journal of Pharmaceutical Education*, *76*(3), Article 46. https://doi.org/10.5688/ajpe76346

Slade, B. (2010). Institutional Ethnography. In A. J. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research.* (pp. 462–465). Thousand Oaks, California: SAGE Publications. https://doi.org/http://dx.doi.org/10.4135/9781412957397

Smith, D. E. (1987). *The Everyday World as Problematic: A Feminist Sociology*. Boston: Northeastern University Press.

Smith, D. E. (1990a). *Texts, facts, and femininity: Exploring the relations of ruling*. London: Routledge.

Smith, D. E. (1990b). *The Conceptual Practices of Power: A Feminist Sociology of Knowledge*. Boston: Northeastern University Press.

Smith, D. E. (1993). *Texts, Facts and Feminity: Exploring the Relations of Ruling*. London: Routledge.

Smith, D. E. (2005). *Institutional Ethnography: A Sociology for People*. Toronto: AltaMira Press.

Smith, D. E. (2007). Institutional ethnography: From a sociology for women to a sociology for people. In S. N. Hesse-Biber (Ed.), *Handbook of feminist research: Theory and praxis* (pp. 409–416). Thousand Oaks, CA: SAGE Publications, Inc.

Smith, E., & Smith, A. (2012). Buying-out teaching for research: the views of academics and their managers. *Higher Education*, *63*(4), 455–472. https://doi.org/10.1007/s10734-011-9452-9

Smith, J., & Firth, J. (2011). Qualitative data analysis: the framework approach. *Nurse Researcher*, *18*(2), 52–62. https://doi.org/10.7748/nr2011.01.18.2.52.c8284

Smith, J., & Oliver, M. (2005). Exploring behaviour in the online environment: student perceptions of information literacy. *ALT-J*, *13*(1), 49–65. https://doi.org/10.1080/0968776042000339790

Smith, L. (2006). Learning across communities of practice: How postgraduate students cope with returning to higher education in an international setting. *Critical Visions: Thinking, Learning and Researching in Higher Education, 29th HERDSA Annual Conference*, 340–346.

Smith, N. V. (1982). *Mutual Knowledge*. Michigan: Academic Press.

Sorensen, E. (2013). Implementation and student perceptions of e-assessment in a Chemical Engineering module. *European Journal of Engineering Education*, *38*(2), 172–185. https://doi.org/10.1080/03043797.2012.760533

Spencer, L., Ritchie, J., & O'Connor, W. (2003). Analysis: Practices, Principles and Processes. In J. Ritchie & J. Lewis (Eds.), *Qualitative Research Practice* (pp. 199–218). Thousand Oaks, CA: Sage Publications.

Spencer, L., Ritchie, J., O'Connor, W., Morrell, G., & Ormston, R. (2014). Analysis in Practice. In J. Ritchie, J. Lewis, C. McNaughton Nicholls, & R. Ormston (Eds.), *Qualitative Research Practice - A Guide for Social Science Students and Researchers* (2nd ed., pp. 295–346). London: Sage Publications.

Spencer, L., Ritchie, J., Ormston, R., O'Connor, W., & Barnard, M. (2014). Analysis: Principles and Processes. In J. Ritchie, J. Lewis, C. McNaughton Nicholls, & R. Ormston (Eds.), *Qualitative Research Practice - A Guide for Social Science Students and Researchers* (2nd ed., pp. 269–294). Thousand Oaks, CA: Sage Publications.

Spillane, J. P. (2004). *Standards Deviation: How Schools Misunderstood Education Policy*. Cambridge, MA: Harvard University Press.

Spivey, M. F., & McMillan, J. J. (2014). Classroom Versus Online Assessment. *Journal of Education for Business*, *89*(8), 450–456. https://doi.org/10.1080/08832323.2014.937676

Spurling, N., McMeekin, A., Shove, E., Southerton, D., & Welch, D. (2013). *Interventions in practice: re-framing policy approaches to consumer behaviour*. *Sustainable Practices Research Group Report*. Retrieved from http://www.sprg.ac.uk/uploads/sprg-report-sept-2013.pdf

Srivastava, A., & Thomson, S. B. (2009). Framework Analysis : A qualitative methodology for applied policy research. *JOAAG*, *4*(2), 72–79. https://doi.org/10.7748/nr2011.01.18.2.52.c8284

Stake, R. (1995). *The Art of Case Study Research*. Thousand Oaks, CA, CA: Sage Publications.

Stake, R. (2000). Case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 435–454). Thousand Oaks, CA, CA: Sage Publications.

Stern, P. C. (2000). Toward a Coherent Theory of Environmentally Significant Behavior. *Journal of Social Issues*, *56*(3), 407–424. https://doi.org/10.1111/0022-4537.00175

Stiles, M. (2007). Death of the VLE? a challenge to a new orthodoxy. *The Journal for the Serials Community*, *20*(1), 31–36.

Stocker, A. J., & Warrington, E. M. (2014). The Introduction of Electronic Assessment into Engineering Degree Programs: Our experiences and lessons learnt. In *5th International Symposium for Engineering Education. September 2014*. The University of Manchester. Retrieved from https://lra.le.ac.uk/bitstream/2381/37098/2/StockerFormattedV2.pdf

Stödberg, U. (2012). A research review of e-assessment. *Assessment & Evaluation in Higher Education*, *37*(5), 591–604. https://doi.org/10.1080/02602938.2011.557496

Strengers, Y., & Maller, C. (2015). Introduction. In Y. Strengers & C. Maller (Eds.), *Social Practices, Intervention and Sustainability: Beyond behaviour change* (pp. 1–12). Abingdon: Routledge.

Taras, M. (2005). Assessment - Summative and formative - Some theoretical reflections. *British Journal of Educational Studies*, *53*(4), 466–478. https://doi.org/10.1111/j.1467-8527.2005.00307.x

Taylor, B. (1995). Interpreting phenomenology for nursing research. *Nurse Researcher*, *3*(2), 66–79. https://doi.org/10.7748/nr.3.2.66.s7

Taylor, S. (1997). Critical Policy Analysis: exploring contexts, texts and consequences. *Discourse: Studies in the Cultural Politics of Education*, *18*(1), 23–35. https://doi.org/10.1080/0159630970180102

Teghtsoonian, K. (2015). Methods, discourse, activism: comparing institutional ethnography and governmentality. *Critical Policy Studies*, 1–18. https://doi.org/10.1080/19460171.2015.1050426

Terzis, V., & Economides, A. a. (2011). The acceptance and use of computer based assessment. *Computers & Education*, *56*(4), 1032–1044. https://doi.org/10.1016/j.compedu.2010.11.017

The University of Sheffield. (2017). Electronic Management of Assessment. Retrieved January 6, 2017, from https://www.sheffield.ac.uk/cics/turnitin/ema

Thelwall, M. (2000). Computer-based assessment: a versatile educational tool. *Computers & Education*, *34*(1), 37–49. https://doi.org/10.1016/S0360-1315(99)00037-8

Thomas, G. (2011). The case: generalisation, theory and phronesis in case study.

Oxford Review of Education, *37*(1), 21–35. https://doi.org/10.1080/03054985.2010.521622

Thompson, S. K. (2002). *Sampling* (2nd ed.). New York: Wiley.

Tierney, W. G. (2008). Trust and Organizational Culture in Higher Education. In *Cultural Perspectives on Higher Education* (pp. 27–41). Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-1-4020-6604-7_3

Times Higher Education (THE). (2015). National Student Survey 2015: the overall satisfaction results in full. Retrieved from https://www.timeshighereducation.com/carousels/national-student-survey-2015-overall-satisfaction-results-full

Timmis, S., Broadfoot, P., Sutherland, R., & Oldfield, A. (2016). Rethinking assessment in a digital age: opportunities, challenges and risks. *British Educational Research Journal*, *42*(3), 454–476. https://doi.org/10.1002/berj.3215

Titchen, A., & Hobson, D. (2011). Understanding Phenomenology Through Reverse Perspectives. In B. Somekh & C. Lewin (Eds.), *Theory and Methods in Social Research* (2nd ed., pp. 121–130). London: Sage.

Tomas, C., Borg, M., & McNeil, J. (2015). E-assessment: Institutional development strategies and the assessment life cycle. *British Journal of Educational Technology*, *46*(3), 588–596. https://doi.org/10.1111/bjet.12153

Tracy, S. J. (2010). Qualitative Quality: Eight "Big-Tent" Criteria for Excellent Qualitative Research. *Qualitative Inquiry*, *16*, 837–851. https://doi.org/10.1177/1077800410383121

Trowler, P. (2002). *Higher education policy and institutional change: Intentions and outcomes in turbulent environments.* Buckingham: SRHE & Open University Press.

Trowler, P., Ashwin, P., & Saunders, M. (2013). The role of HEFCE in teaching and learning enhancement: a review of evaluative evidence. Retrieved from https://www.heacademy.ac.uk/system/files/downloads/The_role_of_HEFCE_in_TL_Enhancement_final_report.pdf

Trowler, P. R. (1998). *Academics Responding to Change: New Higher Education Frameworks and Academic Cultures.* Buckingham: SRHE and Open University Press.

Trowler, P. R. (2011). Researching your own institution, British Educational Research Association on-line resource. Retrieved July 28, 2015, from https://www.bera.ac.uk/researchers-resources/publications/researching-your-own-institution-higher-education

Trowler, P. R. (2012). *Doing Insider Research in Universities (Kindle Book)*. Retrieved from http://www.amazon.co.uk/Insider-Research-Universities-Doctoral-Education-ebook/dp/B006JI3SGK

Trowler, P. R. (2014). Practice-focused ethnographies of higher education: method/ological corollaries of a social practice perspective. *European Journal of Higher Education*, *4*(1), 18–29. https://doi.org/10.1080/21568235.2013.833485

Trowler, P. R., & Cooper, A. (2002). Teaching and learning regimes : implicit theories and recurrent practices in the enhancement of teaching and learning through educational development programmes. *Higher Education Research and Development*, *21*(3), 221–240. https://doi.org/10.1080/0729436022000020742

Trowler, P. R., Fanghanel, L., & Wareham, T. (2005). Freeing the chi of change: the Higher Education Academy and enhancing teaching and learning in higher education. *Studies in Higher Education*, *30*(4), 427–444. https://doi.org/10.1080/03075070500160111

Trowler, P. R., & Knight, P. (2002). Exploring the Implementation Gap: Theory and Practices in Change Interventions. In P. R. Trowler (Ed.), *Higher Education Policy and Institutional Change: Intentions and Outcomes in Turbulent Environments* (pp. 142–163). Buckingham: SRHE and Open University Press.

Tummons, J. (2010). Institutional ethnography and actor–network theory: a framework for researching the assessment of trainee teachers. *Ethnography and Education*, *5*(3), 345–357. https://doi.org/10.1080/17457823.2010.511444

Twigg, C. (2001). *Innovations in Online Learning: Moving Beyond the no Significant Difference*. Troy, NY: The Pew Learning & Technology Program.

Tyler, R. W. (1950). *Basic principles of curriculum and instruction*. Chicago: University of Chicago Press.

UCISA. (2016). *2016 Survey of Technology Enhanced Learning: case studies*. Retrieved from https://www.ucisa.ac.uk/publications/tel_casestudies2016

Universities UK. (2017). Higher education in numbers. Retrieved August 24, 2017, from http://www.universitiesuk.ac.uk/facts-and-stats/Pages/higher-education-data.aspx

University of Brighton. (2015). Electronic Management of Assessment (EMA) Guidelines. Retrieved June 14, 2016, from https://staff.brighton.ac.uk/reg/acs/docs/2016-17_Student_Contract_EMAguidelines Aug 2015.pdf

University of Bristol. (2017). e-Submission and e-marking. Retrieved January 6, 2017, from http://www.bristol.ac.uk/tel/support/tools/e-submission/

University of Central Lancashire. (2016). *Assessment Handbook Taught Programmes*. Retrieved from https://www.uclan.ac.uk/study_here/assets/assessment-handbook-0916.pdf

University of Dundee. (2010). Online Assessment: Policy and Procedures. Retrieved from http://www.dundee.ac.uk/academic/learning/archive/200910/mtg2/papero.rtf

University of Liverpool. (2016). E-submission & E-marking Departmental Planning Guide. Retrieved from http://pcwww.liv.ac.uk/csd/blackboard/Support_for_staff/Pdf/Esubmission_Emarking_Departmental_Planning_Guide.pdf

University of Manchester. (2012). eAssessment: Guidance and Procedures. Retrieved from http://documents.manchester.ac.uk/display.aspx?DocID=7695

University of Nottingham. (2017). Quality Manual | e-Assessment Policy. Retrieved from http://www.nottingham.ac.uk/academicservices/qualitymanual/assessmentandawards/e-assessment-policy.aspx

University of the West of England. (2013). Online Assessment: Policy and Guidance for Staff and Students. Retrieved from http://www2.uwe.ac.uk/services/Marketing/about-us/cas/Online_Assessment_Iimplementation_Policy_Guidance.pdf

University of Ulster. (2016). Office for Digital Learning - University of Ulster. Retrieved from http://addl.ulster.ac.uk/academicdevelopment/articles/category/policy/electronic-management-of-assessment

University of Worcester. (2015). *Technology Enhanced Learning Strategy 2015-2019 (working draft, July 2015)*. Retrieved from http://www.worc.ac.uk/edu/documents/TEL_Strategy_2015_to_2019_July_2015.docx

Vainio, A. (2013). Beyond research ethics: anonymity as "ontology", "analysis" and "independence." *Qualitative Research*, *13*(6), 685–698. https://doi.org/10.1177/1468794112459669

Vaughan, T. (2015). The work of scholars: an institutional ethnography of a McNair scholars' class. *Ethnography and Education*, 1–16.

https://doi.org/10.1080/17457823.2015.1101385

Vergés Bausili, A. (2017). From piloting e-submission to electronic management of assessment (EMA): Mapping grading journeys. *British Journal of Educational Technology*. https://doi.org/10.1111/bjet.12547

Voce, J. (2015). Reviewing institutional policies for electronic management of assessment. *Higher Education*, 915–929. https://doi.org/10.1007/s10734-014-9813-2

Voelkel, S. (2013). Combining the formative with the summative: the development of a two-stage online test to encourage engagement and provide personal feedback in largee classes. *Research in Learning Technology*, *21*(19153). https://doi.org/10.3402/rlt.v21i0.19153

Vovides, Y., Sanchez-Alonso, S., Mitropoulou, V., & Nickmans, G. (2007). The use of e-learning course management systems to support learning strategies and to improve self-regulated learning. *Educational Research Review*. https://doi.org/10.1016/j.edurev.2007.02.004

Walby, K. (2005). Institutional Ethnography and Surveillance Studies : An Outline for Inquiry . *Surveillance Society*, *3*(2–3), 158–172. Retrieved from http://library.queensu.ca/ojs/index.php/surveillance-and-society/article/view/3498/3452

Walby, K. (2007). On the Social Relations of Research: A Critical Assessment of Institutional Ethnography. *Qualitative Inquiry*, *13*(7), 1008–1030. https://doi.org/10.1177/1077800407305809

Walby, K. (2013). Institutional ethnography and data analysis: making sense of data dialogues. *International Journal of Social Research Methodology*, *16*(2), 141–154. https://doi.org/10.1080/13645579.2012.661207

Walker, D. J., Topping, K., & Rodrigues, S. (2008). Student reflections on formative e-assessment: expectations and perceptions. *Learning, Media and Technology*, *33*(3), 221–234. https://doi.org/10.1080/17439880802324178

Walker, R., Voce, J., & Ahmed, J. (2012). *2012 Survey of Technology Enhanced Learning for higher education in the UK*. Retrieved from https://www.ucisa.ac.uk/publications/tel_survey2012

Walker, R., Voce, J., Nicholls, J., Swift, E., Ahmed, J., Horrigan, S., & Vincent, P. (2014). *2014 Survey of Technology Enhanced Learning for higher education in the UK*. Retrieved from https://www.ucisa.ac.uk/publications/tel_survey2014

Walker, R., Voce, J., Swift, E., Ahmed, J., Jenkins, M., & Vincent, P. (2016). *2016*

Survey of Technology Enhanced Learning for higher education in the UK. Retrieved from https://www.ucisa.ac.uk/publications/tel_survey2016

Wang, T.-H., Wang, K.-H., & Huang, S.-C. (2008). Designing web based assessment environment for improving pre-service teacher assessment literacy. *Computers & Education*, *51*, 448–462.

Warburton, B. (2009). Quick win or slow burn: modelling UK HE CAA uptake. *Assessment & Evaluation in Higher Education*, *34*(3), 257–272. https://doi.org/10.1080/02602930802071080

Warburton, B., & Conole, G. (2003). CAA in UK HEIs - the state of the art? In *Proceedings of the 7th International Computer Assisted Assessment Conference*. Loughborough University, Loughborough.

Warde, A. (2005). Consumption and Theories of Practice. *Journal of Consumer Culture*, *5*(2), 131–153. https://doi.org/10.1177/1469540505053090

Webster, J., & Watson, R. T. (2002). Analyzing the Past to Prepare for the Future: Writing a Literature Review. *Source: MIS Quarterly*, *26*(2). Retrieved from http://www.jstor.org/stable/4132319

Wellington, J. (2008). Evaluation. In G. McCulloch & D. Crook (Eds.), *The Routledge international encyclopedia of education* (pp. 236–238). New York: Routledge.

Wenger, E. (1998). Communities of Practice: Learning, Meaning, and Identity. *Systems Thinker*, *9*, 2–3.

Whitchurch, C. (2009). The rise of the blended professional in higher education: A comparison between the United Kingdom, Australia and the United States. *Higher Education*. https://doi.org/10.1007/s10734-009-9202-4

Whitchurch, C. (2013). *Reconstructing identities in higher education: The rise of third space professionals*. London: SRHE and Open University Press.

White, D. E., Oelke, N. D., & Friesen, S. (2012). Management of a Large Qualitative Data Set: Establishing Trustworthiness of the Data. *International Journal of Qualitative Methods*, *11*(3), 244–258. https://doi.org/10.1177/160940691201100305

Whitelock, D., & Brasher, A. (2006). *Roadmap for e-assessment*. Retrieved from http://www.jisc.ac.uk/whatwedo/programmes/elearningpedagogy/assessment.aspx

Whitworth, D. E., & Wright, K. (2015). Online assessment of learning and engagement in university laboratory practicals. *British Journal of Educational Technology*, *46*(6), 1201–1213. https://doi.org/10.1111/bjet.12193

Wilkinson, J., & Kemmis, S. (2014). Practice Theory: Viewing leadership as leading. *Educational Philosophy and Theory*, (August 2015), 1–17. https://doi.org/10.1080/00131857.2014.976928

Williams, J., & Kane, D. (2009). Assessment and Feedback: Institutional Experiences of Student Feedback, 1996 to 2007. *Higher Education Quarterly*, *63*, 264–286.

Wills, G. B., Bailey, C. P., Davis, H. C., Gilbert, L., Howard, Y., Sclater, N., … Price, J. (2009). An e-learning framework for assessment (frema), (July 2015). https://doi.org/10.1080/02602930802068839

Wittgenstein, L. (1953). *Philosophical Investigations*. Oxford: Blackwell.

WJEC. (2015). e-Assessment | What is e-Assessment? Retrieved July 31, 2015, from http://www.wjec.co.uk/teachers/e-assessment/

Wolverton, M. (1998). Treading the Tenure-Track Tightrope: Finding Balance Between Research Excellence and Quality Teaching. *Innovative Higher Education*, *23*(1), 61–79. https://doi.org/10.1023/A:1022972530179

Wright, U. T., & Rocco, T. S. (2007). Institutional Ethnography: A Tool for Interrogating the Institutional and Political Conditions of Individual Experience. In *Learning In Community: Proceedings of the joint international conference of the Adult Education Research Conference (AERC) (48th National Conference) and the Canadian Association for the Study of Adult Education (CASAE)/l'Association Canadienne pour l'Ét* (pp. 643–648). Retrieved from http://newprairiepress.org/aerc/2007/papers/108/

Yeo, A., Legard, R., Keegan, J., Ward, K., McNaughton Nicholls, C., & Lewis, J. (2014). In-depth Interviews. In *Qualitative Research Practice - A Guide for Social Science Students and Researchers* (2nd ed., pp. 177–210). London: Sage.

Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Thousand Oaks, CA: SAGE Publications, Inc.

York St John University. (2015). *Technology Enhanced Learning Handbook*. Retrieved from https://www.yorksj.ac.uk/media/content-assets/academic-development/documents/Technology-Enhanced-Learning-(TEL)-Handbook-2015-18.pdf

Yorke, M. (1998). The Management of Assessment in Higher Education. *Assessment & Evaluation in Higher Education*, *23*(2), 101–116. https://doi.org/10.1080/0260293980230201

Youmans, R. J. (2011). Does the adoption of plagiarism-detection software in higher education reduce plagiarism? *Studies in Higher Education*, *36*(7),

749–761. https://doi.org/10.1080/03075079.2010.523457

Young, B. (2007). Rewriting the Book on Science Instruction. *Principal*, *87*(2), 28–31. Retrieved from https://eric.ed.gov/?id=EJ782282

Young, P. (2006). Out of balance: lecturers' perceptions of differential status and rewards in relation to teaching and research. *Teaching in Higher Education*, *11*(2), 191–202. https://doi.org/10.1080/13562510500527727

Appendix One – Interview Sample

Pseudonym	Role	Age	Experience	Non-Research
Adrian	A	O	M	
Alice	A	M	L	Y
Arron	A	Y	M	
Barry	A	M	S	
Bob	A	M	S	Y
Brian	A	M	L	Y
Carla	A	Y	M	
Carol	A	M	L	
Cheryl	PS	M	L	Y
Elliot	A	Y	L	Y
Gareth	A	O	L	
Georgia	A	M	L	
Harriet	PS	Y	M	
Jeff	A	M	M	Y
Leigh	A	M	L	
Lindsey	PS	Y	S	
Martin	PS	M	L	Y
Sam	A	M	M	
Scott	PS	M	L	
Sharon	A	M	M	
Shawn	A	M	L	
Susan	A	O	M	
Tom	PS	M	L	

In the interest of protecting participant anonymity, some false trails have been laid, such as interchanging the gender of the participants, their age and experience in Higher Education. However, the information given is accurate for the group as a whole.

Key:

Role: A = Academic; PS = Professional Services

Age: Y = Young; M = middle aged; O = older (based on my own judgement and interview data)

Experience: Experience of working in higher education. S = limited (small) experience (< 3 years); M = medium amount of experience (3-10 years); L = large amount of experience (>10 years). Judgement made based on participant's account in the interview transcript.

Non-Research: Has a background of working in a non-research intensive university

Appendix Two – Interview Protocol

Introduction to the Interview:

"Welcome and thank you for agreeing to participate in this research project concerned with electronic assessment policy in higher education. This semi-structured interview will last roughly 45-60 minutes, during which I will ask you a series of questions that have been designed to elicit your experiences on the influential factors and challenges associated with the design and implementation of electronic assessment. The intended outcomes of this research are to provide guidance to others involved in the delivery of electronic assessment and inform the design of a policy document to support the implementation of electronic assessment.
Do you have any questions before we begin?"

****Ask participant to identify job role before asking questions****
RQs are not questions to be asked; just serve as placeholders to keep the conversation focused

---

Question areas for interview

1. Terminology (what is e-assessment, formative/summative, etc.)
2. Personal experiences (what experience do you have in the design/implementation? – not necessarily OldU; what were the challenges?)
3. OldU factors (challenges/enablers here at OldU for e-assessment)
4. How would policy/guidance support/hinder you in your current role

Questions for Academic Staff

Terminology Questions
RQ1: *How do academic and professional services staff at a pre-1992, research-led English university interpret the term 'e-assessment'?*

- *Sample Questions:*
  - What does the term 'electronic assessment' mean to you?

Experience Questions (These questions should be about the staff and their different points of view)
RQ2: *Based on the experiences of the staff identified in RQ1, what are the enabling and restraining factors in the design and implementation of e-assessment at OldU?*

- *Sample Questions:*
  - How would you describe the use of electronic assessment within your department/faculty?
  - What experiences have you had in designing/implementing electronic assessment?
  - What are your reasons for using electronic assessment?

OldU Factors (These questions should be about the structures and policies)
RQ3: *Based on the experiences of the staff identified in RQ1, to what extent do OldU's structures and policies support or inhibit the successful design and implementation of e-assessment?*

- *Sample Questions:*
  - What do you believe to be the challenges for the design/implementation of e-assessment at OldU?
  - What do you believe to be the enablers for the design/implementation of e-assessment at OldU?

Introduction of policy/guidance

RQ4: *What are the implications for the research findings in the design and implementation of e-assessment at OldU and, potentially, other universities?*

- *Sample Questions:*
  - What do you believe are the key priorities in the implementation of e-assessment at OldU?
  - What are your thoughts on adopting consistent approach to the implementation of e-assessment within the University?
  - What difficulties do you foresee in getting 'buy-in' from staff for a consistent approach?
  - Who should be consulted on it the development of the consistent approach to e-assessment?
  - What reaction do you think colleagues would have to such a policy? Do you think it would lead to a lack of engagement/experimentation in innovative assessment?

Is there anything else you would like to add/clarify?

Questions for Professional Services Staff

Terminology Questions

RQ1: *How do academic and professional services staff at a pre-1992, research-led English university interpret the term 'e-assessment'?*

- *Sample Questions:*
  - What does the term 'electronic assessment' mean to you?

Experience Questions (These questions should be about the staff and their different points of view)

RQ2: *Based on the experiences of the staff identified in RQ1, what are the enabling and restraining factors in the design and implementation of e-assessment at OldU?*

- *Sample Questions:*
  - What experiences have you had in designing/implementing electronic assessment? Have you worked with academics to design/implement e-assessment?
  - How would you describe the use of electronic assessment within the university?

OldU Factors (These questions should be about the structures and policies)

RQ3: *Based on the experiences of the staff identified in RQ1, to what extent do OldU's structures and policies support or inhibit the successful design and implementation of e-assessment?*

- *Sample Questions:*
  - What do you believe to be the challenges for the design/implementation of e-assessment at OldU?
  - What do you believe to be the enablers for the design/implementation of e-assessment at OldU?

Introduction of policy/guidance

RQ4: *What are the implications for the research findings in the design and implementation of e-assessment at OldU and, potentially, other universities?*

- *Sample Questions:*
  - What do you believe are the key priorities in the implementation of e-assessment at OldU?
  - What are your thoughts on adopting consistent approach to the implementation of e-assessment within the University?

- What difficulties do you foresee in getting 'buy-in' from staff for a consistent approach?
- Who should be consulted on it the development of the consistent approach to e-assessment?
- What reaction do you think colleagues would have to such a policy? Do you think it would lead to a lack of engagement/experimentation in innovative assessment?

Is there anything else you would like to add/clarify?

Types of follow up questions

Probing questions -

Can you give me more detail about that? (Probe content without indicating dimensions/bias)

Specifying questions -

What did you actually do? How did you feel? Have you experienced this yourself?

Direct questions -

Have you ever … (use later in interview after spontaneous responses)

Indirect questions -

How do you think others feel about … (asking for views of others – may reflect their own views)

Structuring questions/comments –

Shaping the interview, moving onto a new topic

Interpreting questions –

You mean that … (rephrasing)
Is it correct that … (clarifying)

Appendix Three – Excerpts from Data Analysis

Themes

Name	Sources	References
4. Factors in design and or implementation	0	0
4.1 Enabling factors	20	127
4.2 Restraining factors	22	202
4.3 Other	19	66
4.4 Consequences of ...	1	2
5. Policies & Structures	0	0
5.1 OldU Policies	0	0
5.1.1 Support	10	12
5.1.2 Inhibit	17	54
5.1.3 Other	16	24
5.2 OldU Structures	0	0
5.2.1 Support	17	45
5.2.2 Inhibit	18	113
5.2.3 Recalling previous structures	7	16
5.2.4 Nature of the institution	21	45
5.2.5 Other	9	16
5.3 Other	6	6
6. Priorities	0	0
6.1 Policy Guidance	0	0
6.1.1 Design	20	65
6.1.2 Implementation	18	53
6.1.3 Other	6	12
6.2 Structures	11	25
6.3 Professional Development	14	27
6.4 Infrastructure	1	1
6.5 Technology	17	37
6.6 Other	13	21

Figure A3.1 Excerpt from the initial thematic framework used in this study

Structures Inhibit Mentioned under restraining factors

Central Teams - Reach/Focus/Working together

2 Lack of clarity about how central teams (*** ***) work together; lack of joined up thinking on big projects (e.g. Prog Planner) (STRUCTURAL)
4 Reach of the central teams to departments is limited; limited to individuals rather than departments
4 Focus of central team (***) needs to be defined
4 Impact of central team (***) is limited; how do they work with other central teams (***)
6 Working relationship between central teams (*** & ***) doesn't work as well as should be
7 Support for software (institutionally) isn't always available
11 Technical support is lacking within institutin (STRUCTUAL)
15 Setting up e-assessment requires a lot of support from central services (STRUCTURAL)
15 Limited local PS support to implement; focus is on other tasks
16 Limited central support (resources, staff) needs to be associated with senior management
17 No support for TEL pedagogy to help innovate in subject (institution)
18 Limited support for university systems
18 Central team (***) historically left out of conversations until very end
19 Central teams need more resources/time/people
19 Limited resources centrally (institution) *** to support the technology

Leadership - inconsistency across insitution, starting from the top

2 Lack of leadership from senior management to set the direction (participant is now APVC Online Learning)
8 Don't necessarily have consistent leadership in driving innovation across the institution (local structures)
9 Distributed nature of team causes problems for management
11 Void at faculty level (local) for sharing of good practice
15 Lack of faculty identity (local) regarding TEL
16 Reliant on middle (extra) layer of management (local – ***) to ensure support is available

Role of PS

4 PS departments have influence more say over Academic departments when it c
8 PS departments resistant to change due to newer practices
9 PS staff seen as inferior to Academics

Value of TEL

8 Senior management lack knowledge/insight into seeing what is feasible
12 Lack of awareness of nature of specialist TEL role as add on (Local)
16 Clarification around specialist role is needed (local)
12 Need for specialists with regards to TEL in general, not just e-assessment (local
19 Support for change has been difficult with regards to technology; lack of under
16 Clarification of roles regarding TEL, particularly around Academics and PS
8 Ownership surrounding decision making on procurement for technology; acade
8 Limited resources in institution to instigate big project to review if capable of e-a

Limited support at local level

13 Limited knowledge at local level to provide support (STRUCTURAL)
17 Limited support within department (local) to help with implementation (STRUC
15 Lack of knowledge regarding technology (academics) – reliance on local PS (STI
23 No support within school (local) to help with set up (STRUCTURAL)

Figure A3.2 Excerpt from the 'Structures' framework. Here the detected elements are sorted according to underlying dimensions, which are indicated in bold black text. Cells highlighted in blue are elements which were identified under a different theme

Participant	5.1.1 Policy Support	5.1.2 Policy Inhibit	5.1.3 Policy Other
#1 **Type:** Academic **Unit:** ***	N/D	Lack of regulations - when first started to do this, no regulations in place *"and asking about it just drew blanks. And so we made all the rules up ourselves, but based them on the rules that were there for written exams."* **Lack of guidance meant that own individual rules were set up based on existing methods. Danger that practices become localised and inconsistences across departments. Concern for dual honours students?**	Policy awareness - *"I guess the university maybe does have some regulations for online assessments, or not? But not that I know of. So we've just run them [tests], run it that way."* **Unaware if there is regulations around assessments, but having involved XXX, perhaps what they believe they are doing is correct?**
#3 **Type:** Academic **Unit:** ***	N/D	N/D	Professional Development as a requirement - *"My *** is a *** teacher and one of the things is that *** has to compete with all the time is that everyone thinks they can teach (laughing); because they've been to school, everyone thinks they can teach but they don't necessarily think about the profession. So yeah, we should have, as a profession, treat it as such - which requires that you have training. If you can do something without training it's not a profession is it? I've just had a lot of 'on the job' training (laughing)."* **CPD should be a requirement?**
#8 **Type:** PS **Unit:** ***	N/D	Has to be a match with the university processes - *"who's wagging what tail?"* Electronic assessment has to be done in a different way because of the VLE (Blackboard). Without senior management buy in, you can't change the minds of people being obstructive. **Referring to the financial suspension issue.** No consideration of institutional perspective - For all the PS departments, how do they need to change to make e-assessment a possibility? **Suggestion that a wider review hasn't been done before it is implemented** No specific policies - there isn't specific policies for electronic stuff as there is for other things. It is an issue; *"We've never been in a position to properly write something that says 'okay, in the physical world this is what you do and in the electronic world this is what you do', which is the issue with financial suspension, it's not equitable."* **Similar to P19**	*"But then it's how do you bring staff along with it? It's always a case of how do you bring staff along with it as well, which is one of the reasons why the baseline stuff hasn't had quite as much information going out about it because, you know, you've got to be careful about how you put it out and who it comes from. And if it comes from me saying "all staff must do this now", basically that will just end in disaster. So it has to come out from heads of departments and things, and good sound reasons why it's being used."*

Table A3.1 Excerpt from the 'Policy' framework matrix. Regular text within cell is a direct summary of participant response; italics are direct quotes from participants; bold and underline are researcher comments. 'N/D' indicates the theme was not discussed by the participant. Some of the data has been obscured to ensure anonymity, and is represented by '***'

Participant	4.2 Restraining Factors	4.3 Other	Detected Elements
12	*"Technology should make things easier shouldn't it? (laughing) It should be smooth and simple."* **Expectation from staff that the technology should make the process easier? Is it justified? Almost a contradiction with what P11 says regarding time needed to do this.** Naive understanding of the technology that is actually involved, and what needs to be one - *"Some people who are not familiar with what using software involves, think that it's just you click your fingers and you get a solution."* Staff development needed for people to understand what is actually involved and why these things take time to develop. **Ignorance/lack of understanding of staff to understand what is actually involved? Often results in those who can becoming frustrated with what work is actually required to get things done**.	Traditionalist subjects - Lot of staff on this side of campus (***) are traditionalists, not just *** lecturers. Specific subjects are more traditional than others. *"Law, philosophy, history, politics and communication studies - they do innovative stuff, but I think most of those types of subjects that are focused on debate, discourse and writing are maybe less creative in teaching and learning technology enhancement"*	12 Increase in student numbers 12 Use of online tests reduces subjectivity of assessment 12 Renewed interest within department to access people to help develop TEL, not just assessment 12 Informal networks (local) structures – proximity (STRUCTURAL) 12 Central team (***) – involved in lot of initiatives to streamline policy (POLICY) 12 University technology doesn't work correctly; doesn't match up with T&L processes (POLICY?) 12 Technology suffers from technical faults 12 Staff not confident in technology provided 12 Time needed to implement is more than what is often realised 12 Naïve understanding of the technology and what is actually involved
14	Machines are not able to make 'sense' of the work; artificial intelligence not at the level to make humans redundant. **Referring to the automated marking of essays/longer pieces of work** Difficult to read content on a computer screen - *"You cannot read on screen. And the reason for that is that ... well, I don't know what the reason is ..."* **The use of electronic submission masks some of the problems students have** - separated the two things related to submission; one is the legal aspect (documentation). Second is the ability to write a coherent document that's tidy and explains a point clearly. Notion that handwriting work is linked to a deeper understanding of a subject, **as opposed to the 'copy and paste' generation**	Use of electronic assessment masks student's ability to write. Using electronic assessment for 'coursework', but *"Why aren't we assessing handwritten work in course work? After all, we complain bitterly at exam time, I can't read this bloody thing. Well, yeah! Well, when do we tell them that their writing's crap? Well, we don't, do we? "* **Matchup between in course assessments and end of module assessments. What is the purpose?**	14 Enjoyment in engaging teaching activity 14 Infancy of technology when it comes to more complicated assessment, e.g. essays 14 Difficult to read on a computer screen 14 Transition from paper based to computer based way of working is difficult 14 Electronic nature of working masks some of the problems students have in developing understanding of subject

Table A3.2 Excerpt from the 'Enabling and Restraining Factors' framework matrix. Regular text within cell is a direct summary of participant response; italics are direct quotes from participants; bold and underline are researcher comments. Text in green indicates an element discussed as an enabling factor; red indicates a restraining factor. Some of the data has been obscured to ensure anonymity, and is represented by '***'.