Remaking the university curriculum: what counts as knowledge in new forms of online learning

Katherine O'Connor

ORCHID: 0000-0002-0190-7830

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University of Melbourne

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Abstract

The purposes of a university education and the knowledge it should seek to impart are today very much in question. Teaching within universities is becoming increasingly focused on generic instrumental and vocational agendas, and there are strong drives to improve teaching and make greater use of online technologies in response to a widening student body. The significance and implications of these trends for different aspects of university work have been widely debated, but there has been little attention to the changing dynamics of curriculum making and the assumptions at work in how subjects are being put together.

Within this context, this thesis investigates the question 'what counts as knowledge in new forms of online learning'. It focuses on the differences and similarities evident in the purposes, assumptions and constraints recognised by those working in different kinds of knowledge fields; and on the coherence of the conceptions of knowledge at work within the framing and development of new online initiatives and subjects.

The thesis approaches these questions through a qualitative study of online initiatives developed at two Australian universities. The research draws on traditions of curriculum inquiry and policy sociology to focus on how those responsible for the development of the new online initiatives and subjects grapple with questions of knowledge and its teaching in their aims and practices. It considers the institutional policy framings informing the new online initiatives and undertakes case studies of the curriculum development of particular subjects, drawing on interviews with policy leaders and lecturers, and analyses of policy documentation and curriculum materials.

For the policy leaders, the thesis shows that while their rhetoric is concerned with students' own knowledge constructions, their approach positions curriculum content as settled and predefined. For the lecturers, it highlights significant differences in how those located in disciplinary and professional fields conceptualised knowledge and approached their curriculum development, but also that these orientations were undermined to an extent in the process of working with the new platforms. It shows the lecturers' practices here led to more 'instructivist' rather than 'constructivist' teaching, and a greater emphasis on knowledge as a defined body of content to be taught.

The thesis uncovers three problems arising in current university developments. One is the neglect of the differences between disciplines and professional knowledge fields, and the ways in which the different purposes and orientations of these fields shape curriculum development. A second is the neglect of the conditions required to encourage constructivist teaching practices online, including in relation to questions of substance. And a third is the neglect of the complex relations between curriculum and pedagogical form in building what counts as knowledge. The thesis explores the effects of these policy blindspots on lecturers' practices of curriculum making and on the forms of education made possible as a result. In doing so, it opens up some new ways for researchers and institutional leaders to engage with questions of knowledge and curriculum within higher education.

Declaration page

This is to certify that (i) the thesis comprises only my original work towards the PhD; (ii) due acknowledgement has been made in the text to all other material used; and (iii) the thesis is fewer than 100,000 words in length, exclusive of tables, maps, bibliographies and appendices.

Signed: Katherine O'Connor Date: 14 December 2017

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List of acronyms and abbreviations

AQF – Australian Qualifications Framework

IPPR – Institute for Public Policy Research

OECD – Organisation for Economic Cooperation and Development

OER – Open Educational Resources

OUA – Open Universities Australia

MIT – Massachusetts Institute of Technology

MOOCs – Massive Open Online Courses

- xMOOCs – institutionalised form of MOOCs
- cMOOCs – experimental MOOCs informed by 'connectivist' pedagogies

TAFE – Technical and Further Education

TEL – Technology Enhanced Learning

TEQSA – Tertiary Education Quality Standards Agency

Table of contents

Chapter 1: Introduction

In the first half of 2012, three new education platforms were launched promising to offer free, world-class university-level education to anyone in the world with an internet connection. These new ventures were called Coursera, EdX and Udacity, and all were associated with professors from 'top' universities, including Stanford, Harvard and MIT. Their free offerings were termed MOOCs, an acronym for massive open online courses. They were typically short subjects, taken individually and asynchronously by large numbers of students concurrently and assessed via automation or peer review. The global response was overwhelming. Hundreds of thousands of students enrolled to undertake the new free MOOCs and hundreds of universities signed on to partnerships to develop the new courseware. Many new 'open education' initiatives were formed incorporating universities from across the globe, including Khan Academy, OER University, the OER Consortium, University of the People, Peer to Peer University, Marginal Revolution University, FutureLearn, Canvas Network and Desire2Learn. Suddenly, MOOCs and open educational initiatives were everywhere.

The New York Times declared 2012 'the year of the MOOC' (Pappano, 2012) and newspaper headlines and public commentators were full of pronouncements about their revolutionary potential. The president of Stanford University, John Hennessy, declared that 'a tsunami is coming' that will eradicate universities not prepared to adapt to the reality of new digital technologies (Brooks, 2012). EdX president Anant Agarwal called 2012 'the year of disruption' (Pappano, 2012). And Udacity founder Sebastian Thrun proposed that in fifty years, the world's higher education could be delivered by only ten institutions (Leckart, 2012). According to the commentary, universities were in crisis. Digital technologies would disrupt higher education as they had media, manufacturing and other industries. Online education could be more affordable and more effective than face-to-face teaching, and was what students were looking for. In the age of digital technologies, knowledge was not just the purview of the elite, but developed collaboratively between many and open to all. Universities had to recognise this and to teach in new ways which embraced these possibilities, and MOOCs were one way they could do this. This commentary raised questions for universities about the form of education they should provide in 'new times' and what is feasible and possible in

relation to that; about the purposes of universities and of university education; and about the university's role as a knowledge institution, and the ways knowledge is developed and disseminated.

However, the furore with which MOOCs were catapulted into the global consciousness was over almost as quickly as it had begun. By the end of 2013, commentators were already asking if MOOCs could live up to the hype, and Sebastian Thrun pronounced his own educational offering 'a lousy product' (Stokes & Gallagher, 2013). Early analysis of MOOCs showed the vast majority of enrolled students failed to complete the subjects and John Hennessy decided that MOOCs were too large to successfully engage and motivate most students, declaring 'two words are wrong in 'MOOC': massive and open' (Drake, 2014). In the US state of California, an attempt to require public universities to grant credit for externally offered low cost online subjects was roundly defeated (Rivard, 2013). The MOOCs moment passed. Yet the questions it raised about knowledge, about teaching and about the purpose of university education did not.

Such questions go beyond MOOCs and have been fraught within the university context for some time. Across the world, the aims, content and structure of universities and the educational knowledge they seek to impart and develop are very much in question. While questions about knowledge have long been contested, new issues have emerged as the focus of these debates in recent decades, including in relation to issues of disciplinarity and the relevance of disciplines compared with professional fields and new cross-disciplinary collaborations, the implications of new technologies and modes of communication for academic knowledge and its teaching, and concerns about how best to teach a widening and diversifying student body. These debates and dilemmas (discussed in more detail in Chapter 2) are raising new questions for universities about the forms of knowledge promoted within teaching and the pedagogies which underpin them. What knowledge should be taught in new times and to prepare students for a changing world? Does content matter in the age of the internet? Should teaching focus on knowledge or skills? How can students own concepts and histories and ways of understanding be recognised? And what does 'good teaching' look like in a massified, diversified context?

MOOCs emerged within this context, and some elements of these wider debates are evident within the MOOCs commentary. However, many important questions have also

been left unchallenged. As the furore over MOOCs unfolded, I became interested in the silences and assumptions evident within these broader debates and in their intersections with wider questions about knowledge and curriculum. This research then arises in a context where there are some important changes occurring in how curriculum and teaching are being positioned within universities, both in relation to online learning and more broadly, but the substantive attention to the intended and unintended changes to knowledge that accompany the move to new emphases and practices has been limited. My thesis examines in detail a number of new online initiatives at two Australian universities, with an intent to unpack some of the assumptions about knowledge evident and the implications of those directions. In doing so, it aims to gain a better perspective on the contemporary questions about purposes and the role of universities alluded to above.

The research question

The core research question this thesis asks is *'What counts as knowledge in new forms of online learning?* This question arises from curriculum inquiry, where the issue of 'what counts as knowledge' has long been understood as a critical concern (Bernstein, 1976; Deng & Luke, 2008; Green, 2010, 2018). It is also a question which has taken on renewed salience in the context of current debates about knowledge and curriculum and the directions taken within universities in respect of online learning.

The thesis is concerned with two aspects of this question in particular. Firstly, it asks '*Are the new forms in which curriculum is being required to develop changing the knowledge taught in significant ways, particularly in relation to distinctions between disciplinary and professional forms of knowledge?'* And secondly, it seeks to understand *'How coherent are the conceptions of knowledge evident at the institutional level and in the curriculum development of new subjects*[1]*?'*

In relation to the first sub-question, there has been a longstanding debate in the literature over the current role of disciplinary knowledge and its potential to be undermined in the face of new agendas. Many suggest that disciplinary knowledges are being replaced or

[1] The terms used to describe a single unit of study and a wider degree program vary significantly across the globe, with what constitutes a university unit or course or program understood in nationally-specific ways. In this thesis, I use the term subject to refer to a single unit of study, and focus predominantly on individual subjects rather than the wider degree programs in which they might be situated.

sidelined by new collaborative and interdisciplinary forms of knowledge development (Gibbons et al., 1994) and by a context in which there is an increasing tendency to privilege generic vocationally-oriented agendas (Muller & Young, 2014). Questions have been raised about the extent to which disciplines continue to matter and the extent to which research in higher education should take disciplinarity and the differences between different forms and fields of knowledge as a frame of analysis as a result (Trowler, Saunders, & Bamber, 2013). In the literature on disciplinarity and forms of knowledge, a binary is frequently drawn between disciplines that orient towards 'truth' or knowledge itself such as chemistry or philosophy, and professional fields which orient towards vocational practice and the application of knowledge, such as medicine or law (see Becher, 1989; Bernstein, 1996; Muller, 2009)[2] Work drawing on these distinctions has raised questions about whether the current directions in universities are impacting more significantly on traditionally inward-facing disciplines (e.g. Yates, Woelert, Millar, & O'Connor, 2017).

In relation to these debates, this thesis aims to examine the ways in which the curriculum development of those located in disciplines compared with those located in professional fields takes up different or similar agendas, and the ways these agendas are changed and not changed by the requirements of new online forms. It considers the similarities and differences evident in the ways disciplines and professional fields are being impacted or reshaped by new online forms and the ways in which different disciplinary ways of constructing curriculum are being acknowledged at the level of institutional policy.

In relation to the second sub-question, there is significant discussion today about what curriculum and teaching should look like, what it should emphasise and how it can be better structured to meet the needs of more diverse student populations. There has been a strong focus on moving university teaching away from a so-called 'instructivist', lecture-centred mode, in which the focus is on what teachers are doing, towards a more student-centred 'constructivist' approach, centred on active learning and students' own

[2] Within this literature, the term disciplines is used at times to refer to only those inward-facing 'pure' disciplines, and at times to refer to all fields of knowledge taught within universities including the professions. In this thesis, I use the terms disciplines and professional fields to distinguish between the two forms and knowledge fields to cover both.

constructions of knowledge rather than teacher-developed content (e.g. Barr & Tagg, 1995; Chickering & Gamson, 1987; Porcaro, 2011). These arguments have been particularly influential within the literature on online learning, where the online mode is seen to align well with a constructivist emphasis on student activity and engagement (see Selwyn, 2011). At the same time, arguments for outcomes-based education have become increasingly prominent, with calls to focus curriculum design on the desired end-point, rather than the content to be taught (Biggs & Tang, 2011). Teaching within universities has become more managed and more subject to central oversight and accountability measures and there has been a greater emphasis on generic skills and graduate attributes and on the instrumental purposes of higher education (Muller & Young, 2014, Yates et al., 2017).

A number of scholars have drawn attention to problems with these directions, arguing that the particular approaches advocated for give rise to both negative as well as positive effects, and are not universally appropriate for all educational purposes and forms of knowledge (Barnett & Coate, 2005; Biesta, 2009, 2010, 2014; González Arnal & Burwood, 2003; Karseth 2008). There are suggestions that the emphasis on constructivism is based on an ill-defined sense of what that actually means in practice (Sjøberg, 2010) and that the attention to outcomes positions curriculum knowledge as settled and unproblematic (Goodson, 2008).

Debates about online learning have engaged with these questions, but within some limited frames. There has been discussion of open educational practices from the perspective of their value in new ways of producing and disseminating knowledge (e.g. Peters, 2007, 2016), but little critical examination of how this relates to the disciplinary structures of knowledge still evident within the university context, and the particular ways in which these might be being changed and not changed by new practices and configurations (Wellmon, 2015). There have been widespread critiques of the didactic pedagogies underpinning popular MOOCs and their value compared with constructivist pedagogies (e.g. Bates, 2015), but little interrogation of what the latter actually entails and the ways it might work differently in different contexts (Sjøberg, 2010).

While the MOOCs hype is generally acknowledged as overblown and most commentators do not see online education as wholly replacing on-campus education, there is strong agreement that the use of digital technology is changing how higher

education teaching occurs, particularly in terms of the relationships between teachers and students and the ways in which curriculum knowledge is disseminated and taken up (e.g. Land, 2011; Peters, 2007). This research raises some interesting questions, but it tends to focus too strongly on the potential for change rather than the detail of what is currently happening, and on what students are doing within educational situations but not how this relates to the content taught or the wider context within which the education is situated (see Ashwin, 2014; Barnett & Coate, 2005; Biesta, 2012). Both within discussions of university teaching and on online learning, there is a tendency to neglect the role of formal knowledge in education and to position questions around 'what' is taught as being outside the frame of debate.

In response, this thesis explores the assumptions about 'good' teaching and curriculum development evident at the policy level of universities and in the curriculum work of those developing new subjects in relation to new online reforms. It considers the different agendas and points of reference evident in how the policy leaders and lecturers interpreted and approached their work, the concepts of knowledge at work underpinning those agendas, and the ways in which these were put together.

In its approach to the question of 'what counts as knowledge', this research does not aim to produce or test a particular theory of knowledge or knowing, but to focus on what is happening within particular contexts and environments in relation to the questions highlighted above. Its approach to the question of 'what counts as knowledge' is less concerned with epistemological questions – how we know what we know and how knowledge is validated – and more with sociological questions – what is being emphasised and enacted in relation to knowledge, and with what implications. In other words, in this research 'what counts as knowledge' is not framed as an abstract philosophical question, but as one which aims to elucidate how this question is approached by selected people in particular university contexts. Its focus is on how those engaged in directing curriculum redevelopment in universities are interpreting the contexts in which they work and the assumptions about knowledge underpinning that.

The research approach

This research focuses on new online initiatives being developed at two different Australian universities, one well-established research university and one former technical college. In particular, it explores in detail elements of these reforms which

tend to be overlooked within studies of online learning and university teaching, specifically the institutional policies and understandings framing the development and uptake of new online initiatives, and the development of new curriculum materials for the new online subjects and the thinking and practices of the lecturers informing that. It analyses the policy framings underpinning two new online initiatives at each institution and undertakes case studies of eight selected subjects (four at each institution) being developed as part of those initiatives.

The research is sociological and interpretive in design and comprised interviews with the policy leaders responsible for those initiatives, multiple interviews with the lecturers responsible for developing the new subjects and documentary analysis of the related institutional policy and curriculum materials. The case study subjects were selected to engage with debates about the implications of current directions on different forms of knowledge, and included subjects located within both disciplines and professional fields.

Theoretically, the approach is grounded in traditions of curriculum inquiry (Bernstein, 1976; Deng & Luke, 2008; Karseth, 2006; Yates, 2006; Yates et al., 2017) and policy sociology (Ball, 2006; Gale, 1999, 2001; Rizvi & Kemmis, 1987; Rizvi & Lingard, 2010). In line with these traditions, it focuses on the intentions, decisions and practices of those responsible for new online initiatives and subjects, and the emphases, assumptions and contradictions evident in how they grapple with questions of knowledge and its teaching.

Curriculum is a term which tends not to be in favour within university policy documents where phrases such as 'learning and teaching' dominate. But it is the term I take up in this thesis to signal an approach which, contrary to the 'learning and teaching' agenda, takes the curriculum as its starting point. As Aoki (1980/2005, p. 94) writes, 'The term *curriculum* is many things to many people'. In this thesis, I approach curriculum as a knowledge practice that is both boundary enforcing, defining what counts as legitimate knowledge within a field and enrolling students within particular knowledge traditions (Barnett & Coate, 2005; Becher, 1989; Nerland & Jensen, 2012; Nespor, 1994) but also as a potential site of change that enables the building of new knowledge and the development of new trajectories towards an unknown future (Bernstein, 1976; Biesta, 2010; Yates, 2012). In other words, curriculum is understood as a practice that is both

about the reinforcing of current ways of thinking but also about the potential for change. As part of this, I understand curriculum as a 'site of struggle' (Ashwin, 2014) and 'socio-political and cultural process of decision-making' (Karseth, 2006) which is inevitably infused with points of contestation about what matters within a disciplinary field and for the education of students. Curriculum here is understood to define 'what counts as knowledge' in complex ways, including via pedagogical form and assessment design (Bernstein, 1976). The research focuses on the particular ways individuals are struggling with their curriculum decisions and the competing values and tensions that are part of that, taking into account what knowledge is selected and how it is put together and the rationales and purposes behind those selections.

In the research, I also engage with curriculum as a material practice, subject to and productive of particular constraints and conditions. The research approaches curriculum not just in terms of lecturers' thinking and practices but also in terms of the ways in which those are situated within institutional contexts and policy agendas. Drawing on the literature on policy sociology, I understand policy here as concerned with the 'interpretation of interpretations' (Rizvi & Kemmis, 1987) by policy actors, including both policy leaders and lecturers. I focus on the ways in which those actors interpret and construct the contexts in which they work, and the assumptions that are part of that. Policies are here understood as discursively produced, with effects that are non-linear but interpreted and contested differently across different sites of practice (Ball, 2006).

In part, the purpose of this thesis is to show what kinds of insights about universities and their activities become evident when research on university teaching takes curriculum and curriculum development as a starting point, compared with a focus on students, pedagogy and learning. When I designed my study, one of my primary concerns was being able to contribute something 'different' to the kinds of discussions about learning and pedagogy which dominate research in higher education on learning and teaching and on online learning and the use of educational technology. In contrast to this research, I wanted my thesis to focus on what was being taught and why rather than how. As Morgan and Lambert (2018, pp. 42-43) write, 'curriculum making takes in pedagogic perspectives, [but] it is led by the question of what to teach'. Although I began with an understanding of curriculum and pedagogy as intricately entwined (cf. Bernstein, 1976; Yates, 2009; Biesta 2010), following Yates (2005) I saw an important

distinction in taking curriculum rather than pedagogy as a starting point. As this work highlights, while pedagogy is readily associated with issues about how effectively students learn or are engaged, curriculum draws attention to what, substantively, they are being drawn into as knowledge, and these different foci allow for different kinds of questions and insights.

When I developed my original proposal, my plan was to look at the question of 'what counts as knowledge in new forms of online learning?' via the lens of 'epistemic authority'. At the time, I was working on a research project examining questions of knowledge and change in relation to the core disciplines of history and physics (see Yates et al., 2017), and envisaged a central question for this thesis as the extent to which the disciplinary field of research remains the prime reference point in curriculum development in different kinds of fields. This focus shifted during the process of research as I found that the aim to focus on 'curriculum' and as much as possible to bracket out 'pedagogy' and 'learning' to be inadequate in conveying what I was finding in the research (discussed further in Chapter 3). But taking 'curriculum' rather than 'pedagogy' as a starting point was an important frame that guided the design and the development of the research, and was intended to foreground concerns which tend to be neglected within analyses of online learning approaches. It located the focus of the research on the details of each subject in ways which are often absent from broader studies of policy shifts.

In this research, I focus on the intended curriculum, on what lecturers and policy leaders wanted to achieve and the struggles that are part of that, rather than what is realised overall. Within curriculum inquiry there is significant critique of work which frames curriculum too strongly in terms of what is intended, and the ways such work positions curriculum knowledge as something transmitted from teacher to student, rather than something developed within educational contexts as part of the pedagogical relationship (e.g. Barnett & Coate, 2005; Goodson, 2008). My research does not deny the important role that students play in knowledge development and co-constructing knowledge within the classroom, but focuses on the lecturer side of this relationship as a perspective which has tended to be marginalised in contemporary studies of university teaching. The development of new subjects for the new initiatives was also seen as an opportunity to get at the kinds of struggles underpinning curriculum development in a

new context where those developing the curriculum are forced to elaborate and make deliberative decisions about what is important.

Additionally, while the research focuses on institutional contexts and on the institutional framings of new initiatives and the ways in which particular lecturers engage with them, it is not a study of higher education governance, or a study of the political economy or implementation of new online initiatives. Instead its focus is on the assumptions about knowledge evident within universities and within the thinking and practices of the people working within them.

The initiatives I consider include the kinds of MOOCs introduced above, and other online initiatives which like MOOCs were offered on platforms and via entities external to the university but which unlike MOOCs were offered as part of formal university degrees and subject to tuition fees and formal enrolment practices. These forms of online initiatives are new within the Australian context, and in selecting them I hoped to glean some insights into what was changing about 'what counts as knowledge' in terms of new emphases and reference points.

In the context of the MOOCs debate, I wanted to include initiatives that were both removed to an extent from formal university teaching, as well as those that were embedded within them. Each of the two institutions I looked at had engaged with both kinds of initiatives and I was also interested in the ways in which similar initiatives were being played out in different university contexts. MOOCs differ from formal online initiatives in that they typically do not attract fees and are not credit-bearing. They are therefore not subject to the same degrees of control formal initiatives are in terms of government and academic regulatory requirements, including academic board and departmental approvals (Czerniewicz, Deacon, Small, & Walji, 2014). However, while MOOCs constitute informal learning, the institutional uptake of MOOCs is nevertheless part of broader strategies for university teaching and online learning (see O'Connor, 2014). In this thesis, I consider both informal MOOCs and formal online initiatives within the context of these wider institutional policies.

Online learning is a term which can be used to capture swath of divergent teaching practices, and is frequently used interchangeably with other labels such as eLearning, technology-enhanced learning (TEL), learning with technology and blended learning

(see Conole, 2013; Norton, 2013a). Practices associated with online learning vary widely, and include both teaching that is conducted wholly online and forms of blended learning, where some materials and activities occur online alongside some form of face-to-face teaching. These different teaching practices enable different kinds of educational possibilities, and in this thesis I consider only those initiatives where teaching is conducted wholly online with no on-campus or face-to-face component. Such initiatives provide better scope for considering the kinds of concerns raised in relation to online learning, although it is acknowledged that broader possibilities might be evident in different kinds of blended constructions. In this thesis, I use the term online learning to refer only to wholly online forms, and discuss the use of educational technology in relation to the broader ways in which such technologies are taken up in practice.

Within the literature on online learning, there is also a significant debate concerning the differences between categories of MOOCs. The term MOOC did not emerge with the story introduced above but was first used to describe an experimental free non-credit online subject offered by the University of Manitoba in Canada, which in contrast to the later MOOCs focused on networking and content contributed by the subject participants, informed by the principles of connectivism (Siemens, 2005). In the literature, a distinction is frequently drawn between the 'cMOOCs' that followed this original subject which are seen to emphasise learner autonomy, openness and interactivity, and the later institutionalised 'xMOOCs' developed by Coursera, EdX and Udacity, which are seen to focus on the transmission of information (e.g. Bates, 2015; Daniel, 2012; Knox, 2013; Peters, 2016; Siemens, 2013). Such differences are indicative of the different emphases of those located within the educational technology field, who favour a cMOOC approach, and those located within university management, who favour an xMOOC approach. In this research, my interest was in predominantly institutional rather than experimental developments, but one of the MOOC case study subjects I investigate was partially informed by the cMOOC perspective, and while I use the term MOOCs to refer predominantly to institutionalised forms, I also touch on these distinctions where relevant.

Overall, this thesis takes an empirical approach to the question of what counts as knowledge, focusing on the details of the ways in which university actors are struggling with that question in relation to their policy or curriculum-development work. Its focus

is on the particular questions highlighted above, in relation to the differences and similarities evident in the purposes, assumptions and constraints recognised by those working in different kinds of knowledge fields; and the coherence of the conceptions of knowledge at work within the framing and development of new online initiatives and subjects.

The research context

This research takes place within Australia, and in this section I discuss the wider context in which the emergence of the new online initiatives is situated and the constraints and pressures to which universities are currently subject. Since the mid-1990s, public funding of universities has been in steady decline. There has been an increased tendency to make students responsible for the cost of their studies, higher accountability and reporting expectations for universities, an increased tendency for funds to be tied to specific priorities and pressures for universities to be more entrepreneurial to remain financially viable (Meek & Hayden, 2005). Between 1995 and 2002, Australia both markedly increased private funding and markedly reduced public funding, and is the only OECD nation to have done so. Public funding was cut in 1997 and any increases since have been at levels below inflation (Norton, 2016, p. 44). In 2007, the government share of total university income was 45 per cent, down from 91 per cent in 1983 (Marginson, 2011), and in 2013 was only two-thirds of the OECD average as a proportion of GDP (Marginson, 2013). Public funding of higher education is not an issue of strong public concern in Australia (especially compared with school funding), and both left and right leaning governments have presided over these funding cuts, with more currently proposed by the federal government.

At the same time, student numbers, both domestic and international, have more than doubled over the past 20 years. In 2014, there were over one million domestic students and around 350,000 international students enrolled in Australian universities (Norton, 2016, p. 3). The majority of these students are undergraduates, but over the last 30 years the per cent of students studying postgraduate coursework has risen from 11 to 22 per cent (Norton, 2016, p. 20). Rapid enrolment increases have been particularly evident since the introduction of a demand-driven funding model in 2012 which removed previous limits on student numbers in public universities. Participation rates for students aged 17 to 29 years have more than doubled between 1982 and 2014 (Norton, 2016, p.

22). International student numbers have also risen substantially and international student fees contribute significantly to university revenues. Not counting those enrolled at international campuses, approximately one in five students enrolled in Australian universities is an international student (Norton, 2016, p. 23). International student fees accounted for more than $4.7 billion of university revenue in 2014 (Norton, 2016, p. 41).

These shifts have led to a greater diversification of the student body, and have meant that universities now enrol students who would not previously have gone on to tertiary study (Norton, 2013b). Although socio-economic differences in university participation remain significant, the number of students entering university whose parents do not have tertiary qualifications has increased substantially. Norton (2016, p. 27) reports that in 2014, of people aged 20-24 years, 20 per cent of the children of machinery operators, drivers and labourers, 39 per cent of the children of community, clerical and sales workers and 28 per cent of the children of technicians and trade workers were in higher education or had a degree.

As a result, universities are being required to teach greater numbers of more diverse students with less public funding. These pressures are also exacerbated by the importance attached to global university rankings in Australia, which has further eroded resources for teaching by leading universities to divert funding towards research where possible. According to Marginson (2013), in 2008 almost 30.3 per cent of the total $6.7 billion spent on research by universities was funded by government and student funding for domestic teaching, international student fees, investments and philanthropy, with the vast majority deriving from tuition payments.

In response to these pressures, universities have increasingly moved towards casualised teaching appointments and larger class sizes. Most academic staff employed to teach are now employed on a casual or sessional basis (Norton, 2013b) and on a headcount basis, casually-employed academics represent a majority of the university workforce (May 2011). According to Norton (2016, p. 34) casual staff currently now account for around 20 per cent of the academic workforce. Academic staff numbers have not risen in accordance with student numbers and the average staff to student ratio has increased substantially (from 13 to 1 in 1984, to 20 to 1 in 2004) (Marginson, 2011). As a result,

many undergraduate classes are now too large to facilitate developmental relations between lecturers and students (Marginson, 2013).

More broadly, societal expectations for university teaching have also shifted and become more instrumentally and vocationally driven. University education is increasingly defined in terms of employment needs and economic concerns, and there is heightened concern with the skills students are taking away from university and the ways those are being developed. These emphases are evident in the shifts towards outcomes-based ways of configuring university curriculum, and towards focusing on the generic as well as particular skills students are developing (Karseth, 2008; Yates et al., 2017).

Universities are under strong pressure to change their teaching practices, and are frequently told that they need to dramatically adapt to meet the needs of a changing world. Harvard Business School professor Clayton Christensen's theory of 'disruptive innovation' has been particularly influential in thinking about change in higher education and the rise of online learning, including within the Australian context. In the book, *The Innovative University: Changing the DNA of Higher Education from the Inside Out*, Christensen and Eyring (2011) suggest that new innovations in online learning threaten universities by offering affordable alternatives to higher education, and that unless universities embrace the new opportunities offered by digital technologies they will risk obsolescence. These claims are echoed within popular reports. David Putman is quoted on the front of the IPPR Report *An Avalanche is Coming: Higher education and the revolution ahead* (Barber, Donnelly & Rizvi, 2013) as saying 'should we fail to radically change our approach to education, the same cohort we're attempting to "protect" could find that their entire future is scuttled by our timidity'. And the report itself claims 'The solid classical buildings of great universities may look permanent but the storms of change now threaten them […] we have sought to describe the threat posed to traditional 20th century universities if key institutions don't change radically, as well as the huge opportunities open to them if they do' (Barber et al., 2013, p. 1).

Within Australia, teaching quality is frequently highlighted as an issue, particularly in terms of graduate employability and return on investment. There are concerns about diminishing standards in response to growth and about the skills students are taking

from their degrees and their alignment with what business is looking for (e.g. Bradley, 2008; Norton, 2016). Training of university teachers within learning and teaching units is becoming common practice and the professionalisation of tertiary teaching has been identified as a growing concern (Norton, 2013b). Despite the reductions in government funding of universities, government regulation and oversight of university teaching has increased substantially. In 2011, a new national auditing body, the Tertiary Education Quality and Standards Agency (TEQSA) was introduced, requiring universities to comply with a wide range of teaching standards. TEQSA has been tasked with enforcing compliance with the 2010 Australian Qualifications Framework (AQF) which specifies standards for educational qualifications from TAFE certificates through to the PhD. This framework brought in new requirements for degree programs including the mandating of research-based capstone subjects within Masters degrees and generic learning outcomes for the PhD, developments which are part of broader global shifts towards curriculum standardisation and qualification setting (Karseth, 2008). Efforts to enhance academic teaching practice are increasingly managed centrally, and programs tend to focus on learning and teaching knowledge and expertise and are not specific to particular disciplines or fields (Brew, Boud & Namgung, 2011).

Within this context, online learning has become particularly prominent. Distance education has a long history in Australia and has never fallen below five per cent of total enrolments. However, the increasing ease of online study and the increased demands for post-graduate study have led to marked increases in the total proportion of students studying off-campus, from around 11 per cent in the early 1990s to 17 per cent in 2014 (Norton, 2016, p. 26). Distance programs are becoming increasingly salient for higher education institutions and online learning is being merged into everyday teaching practices. Most Australian universities have some online enrolments, although the majority of off-campus education is provided by regional universities (Norton, 2013a). Open Universities Australia, a for-profit provider of online education owned by seven universities has increased enrolments five-fold since 2004 (Norton, 2013a, p. 9).

Beyond online learning, universities are also increasing seeking to incorporate digital technologies within on-campus programs. Almost all universities now use learning management systems to manage course administration and distribute class materials. Many universities also offer blended learning, in which subjects are taken partially

online and partially on-campus. A range of new practices are also gaining attention. These include: 'flipped classrooms', in which content is reviewed by students outside of class and class time used for interactive activity; the analysis of subject 'learning analytics' data capturing the ways in which students engage with online material to better understand their motivations and learning practices; and the use of virtual reality simulators which enable students to experience and practice difficult procedures (Norton, 2013a).

From an institutional perspective, this enhanced attention to online learning has at least partly been driven by economic imperatives. Within wider debates, online learning is frequently seen as a means of reducing the costs of educational delivery and as an attractive option for teaching large numbers of students since once the initial set up costs are accounted for, the costs of adding additional students are low (Norton, 2013a). New wholly online initiatives have also emerged since the introduction of demand-driven funding, seeking new student markets and enhancing competition for students between institutions.

MOOCs emerged within this context and were widely taken up by Australian institutions keen to associate themselves with elite institutions and to position themselves as leaders within the online learning space. Although much of the debate about MOOCs reported in the opening section of this chapter took place within the USA, this was widely reported within Australia's mainstream media and significantly influenced decision makers at Australian institutions. By the end of 2013, more than half of Australia's forty universities were offering MOOCs or had partnered with a MOOC provider.

In summary, universities in Australia are subject to challenging times, and both the uptake of MOOCs and the wider attention to online learning are part of this broader context. The particular institutions I consider in this research are embedded within this context, and while they are different in many respects, they are both being forced to engage with similar constraints, and their decisions to engage with new online initiatives are both subject to and part of these challenges.

The context discussed is particular to Australia but it is also reflective of difficulties faced by universities globally. Around the world, universities are struggling with

growing numbers of students and with tightened teaching budgets and online learning is being afforded greater attention (e.g. Barnett & Coate, 2005; Cornford & Pollock, 2003). This thesis as a result focuses on Australia, but the issues and concerns it examines have wider global salience.

Structure of the thesis

As discussed, this thesis engages with the question of 'what counts as knowledge in new forms of online learning' via a qualitative empirical study of new online initiatives at two different Australian universities. It takes up questions about what is happening in relation to such initiatives but from a curriculum rather than a learning or technology perspective, a lens which has received less attention within dominant debates about university teaching and online learning. The thesis focuses on institutional policies and curriculum development and on the conceptions, assumptions, values and practices of university policy leaders and lecturers and their struggles with the knowledge related questions impacting their work.

The approach of the thesis and the concepts and literature which have informed that are discussed in more detail in the following two chapters. In Chapter 2, I discuss the literatures informing the research, including in relation to curriculum and its relations to knowledge; debates about knowledge and disciplinarity; curriculum inquiry in higher education; understandings of best practice in university teaching and online learning; and the implications of digital technologies. This chapter covers in more detail the thesis's grounding in the fields of curriculum inquiry and policy sociology and further develops some of the arguments made in this chapter about the limitations and assumptions evident within current debates.

In Chapter 3, I explain and justify the methodological approach in more detail. This chapter begins with an overview of the empirical design and approach of the study relative to the research questions outlined above. It discusses my approaches to case-study, to interviews and documentary analysis, and to issues of validity/trustworthiness. The chapter also reviews the specific selection of institutional sites and case studies and the details of what these looked like.

Chapters 4 to 6 present and analyse the findings of the research. In Chapter 4, I focus on the institutional policies and the ways in which the policy leaders constructed the policy

problem and policy context in relation to online learning, and the assumptions about knowledge and curriculum inherent within that. The chapter suggests two concepts of knowledge are at work within the policy framing: one oriented towards process and students' own knowledge constructions, and the other oriented to fixity and a settled sense of curriculum. The chapter also shows the lack of attention at the policy level to curriculum, as compared with 'good teaching' and student learning.

In Chapter 5, I draw on the case studies to discuss the lecturers' intentions and purposes for their subjects. This chapter gives attention not only to what these lecturers explicitly said about what they aimed to achieve, but also to indirect evidence of this from their more general discussion about their field and teaching experiences. In relation to issues raised in the literature about the different forms of disciplinary and professional knowledge, the chapter highlights the differences evident in the ways lecturers located in these different forms of knowledge approached their curriculum development.

Chapter 6 then looks more particularly at the challenges the lecturers identified in developing curriculum for the new platforms, focusing on how they approached issues of content delivery, curriculum structure, assessment and student discussion. This chapter points to a divergence evident between the concepts of knowledge emerging here, compared with the concepts evident in their aspirations as discussed in Chapter 5. In particular I show how the lecturers' engagement with the online context produced a greater attention to clarity and precision, and to a more 'instructivist' teaching approach. This chapter contributes to some of the questions about the implications of the new online forms for lecturers' practices of curriculum making.

Finally, Chapter 7 concludes the thesis with a discussion of its core arguments and contributions. I argue here that what this thesis shows is the limited ways in which questions of knowledge and curriculum are being considered at the institutional level, and the problems this gives rise to within lecturers' practices of curriculum making. One problem identified is the neglect of the differences between disciplines and professional knowledge fields, and the ways in which the different purposes and orientations of these fields shape curriculum development. A second is the neglect of the conditions required to encourage constructivist teaching practices online, including in relation to questions of substance. And a third is the neglect of the complex relations between curriculum and pedagogical form in building what counts as knowledge. In

relation to current research, this chapter also argues that the thesis demonstrates the value of understanding the current university context in terms of the differences between disciplines and professions and different fields of knowledge and the importance of understanding curriculum and its relation to knowledge as a struggle rather than a given.

Chapter 2: Knowledge, curriculum and online learning: key concepts and debates

This thesis focuses on knowledge and curriculum in the context of contemporary Australian higher education developments in online learning. In Chapter 1, I briefly sketched the national higher education context in Australia from the perspective of this thesis. In this chapter I focus on the different strands of argument concerning knowledge, curriculum and online learning in higher education which engage with the project's research question 'what counts as knowledge in new forms of online learning'. This discussion is intended to show both the starting points of the research and wider questions and debates with which it intersects.

The literature on questions of knowledge traverses a wide theoretical terrain crossing numerous disciplinary boundaries. In this thesis, I focus on these questions from a sociological rather than epistemological perspective, and in terms of what is being assumed and enacted about knowledge within universities today. My review of the literature as a result takes up a number of different concerns which are covered across five sections.

Section 1 covers the particular understandings of curriculum and curriculum policy which informed the research, drawing on literature from the fields of curriculum inquiry and policy sociology. This section is not intended to provide a comprehensive or critical account of literature in these fields, but to clarify the understandings I derived from them which informed my readings of other bodies of literature discussed in later sections, as well as the study's methodological approach (discussed in Chapter 3).

Section 2 then provides an overview sketch of some of the different debates about knowledge and disciplinarity which been influential within higher education research. These include debates about the changing forms and politics of knowledge, as well as debates about the differences between academic knowledge fields, which are important for understanding the wider context in which the thesis is situated. This discussion is necessarily selective and broadbrush but touches on concerns which are then picked up in more detail in the later sections.

Sections 3-5 then present a more critical account of the relevant literature on university curriculum, teaching and online learning. Section 3 discusses the emerging literature on the higher education curriculum which has engaged with questions about knowledge and disciplinarity. Section 4 then considers the dominant debates about university teaching and the ways in which these have been framed. Finally, Section 5 examines the literature on online learning and arguments about the implications of digital technologies for knowledge and its teaching. Collectively, these sections show some of the limitations and problems with how these different bodies of literature have engaged with questions of knowledge.

This structure broadly follows the order in which I encountered these literatures in my research, in order to develop a narrative which captures the development of the research approach. The approach taken in this research (discussed further in Chapter 3) was not static but, as is the case with interpretive and qualitative research, evolving and iterative, and the approach of this chapter attempts to do justice to the ways in which I engaged with the relevant bodies of literature throughout the process.

Curriculum inquiry and policy sociology: key concepts and starting points

This thesis takes a focus on curriculum policy and curriculum development as its starting point. In this section, I discuss the concepts and theories derived from the fields of curriculum inquiry and policy sociology which informed my research. Both fields comprise a range of different theoretical traditions and concerns and I focus here on what was important for the directions taken in this thesis, rather than on the other wider questions and concerns these fields take up.

The questions this thesis pursues are assocated with the field of curriculum inquiry, a field which commonly prioritises questions about knowledge and what counts as knowledge. Green (2010, p. 45), for example, writes:

> The question of knowledge is central to educational theory and practice alike. Classically, what is widely regarded as the fundamental curriculum question is *What knowledge is of most worth?* – usually attributed to Herbert Spencer, writing in the latter part of the 19th century. That question is in turn commonly

> and characteristically rendered, somewhat transformed, as *What should the schools [and universities] teach?*

Green (2018) argues that such questions are about 'what' is taught but also point to issues of purpose and value. In other words, why knowledge has been selected and to what ends. The question of 'what should count as knowledge' is also identified as a key curriculum question by Deng and Luke (2008) in their chapter for *The SAGE Handbook of Curriculum and Instruction*. Deng and Luke (2008, p. 10) comment that responses given depend on individual theoretical orientations and perspectives as well as ideological and cultural investments. They suggest:

> the task of curriculum theory is to problematise and foreground different claims on the formations of subject matter; to understand their epistemological bases and their teleological assumptions about the purpose of schooling and education; to identify whose and which versions of knowledge, practice, and experience are entailed; and to understand the educational and intellectual, social and cultural bases and consequences of these particular selections.

Curriculum inquiry is a diverse field comprising a range of different theoretical traditions and orientations, and there is as a result considerable debate about the extent to which such questions continue to matter and the ways in which they should be framed (see Pinar, 2012). In this thesis, I take up Deng and Luke's (2008) particular claims about what curriculum inquiry is for, focusing on the underlying assumptions about knowledge informing curriculum practices and their implications.

In this research, I also take from curriculum inquiry an understanding of curriculum as necessarily selective and a site of struggle over the question as to what counts as knowledge. Within the curriculum literature, there has been significant attention to the politics of curriculum selection and the ways in which curriculum comes to represent the political views of the dominant class. Since the publication of the classic text *Knowledge and Control: New Directions for the Sociology of Education* (Young, 1971) in the 1970s, a significant body of curriculum research has been interested in questions about whose interests are served by different ways of constructing curriculum and assessment. In the USA, Michael Apple's (1990) work in particular has drawn attention to the nature of curriculum as a 'selective tradition', which in both theory and practice

'entails the normative selection, classification, and framing of knowledge from the archive of human knowledge' (Deng & Luke, 2008, p. 3). Within this line of thinking, the knowledge of the curriculum is understood as not given, but a construction, and one which represents the perspectives of the powerful rather than something which is universally true. Such work is typically concerned with the ways in which curriculum acts to reproduce social inequalities by reflecting the knowledge interests of the dominant class.

In line with Deng and Luke's (2008) comments about the purposes of curriculum inquiry highlighted above, related arguments have also drawn attention to the nature of curriculum as a site of struggle rather than a given. Such work highlights the ways in which curriculum is not simply a singular construction, but one which is infused with multiple and potentially competing understandings and purposes about what matters for education and for knowledge. Karseth (2006, p. 256), for example, has defined curriculum as a 'social construction where the process of decision-making is seen as a socio-political and cultural process which takes up conflicting arguments'. She draws here on Ian Westbury's (2003, p. 194) argument that 'the term "curriculum" must always be seen as symbolizing a loosely-couple system of ideologies, symbols, discourses, organizational forms, mandates, and subject and classroom practices'. In a similar vein, Ashwin (2014) has also argued that the recontextualisation of research knowledge into curriculum knowledge encompasses 'sites of struggle in which different voices seek to impose particular versions of legitimate knowledge, curriculum and student understanding' (Ashwin, 2014, p. 124; see also Gumport, 1988; Slaughter, 2002). Others have similarly highlighted that the ways we think about what matters in curriculum necessarily take up a range of different concerns, including issues related to cognition, to identity formation and to ethics and social values (Clegg, 2011; Gerwitz & Cribb, 2009; Yates et al., 2017; Zipin, Brennan, & Fataar, 2015).

Together, this different work draws attention to the ways in which curriculum comprises a shifting and contested sense of 'what counts' as knowledge which is inflused with multiple and potentially competing perspectives. It highlights the need to attend to not just what is said to count as knowledge, but also what is evident in the underlying purposes and values of those constructing curriculum. In the design of this research, such arguments informed the study's interest in the different and competing concepts of

knowledge at work within policy leaders' and lecturers' thinking and practices. The interest in the selective nature of curriculum was here less about the politics of knowledge and whose voice is being heard, and more about the diverse pressures and assumptions underpinning curriculum decisions and the ways in which these are put together.

More particularly, my starting position on curriculum was also informed by additional research emphasising the relations between the formulation of curriculum (and pedagogy and assessment) in defining 'what counts' as knowledge. In the 1970s, Bernstein (1976, p. 85) proposed that formal educational knowledge can be understood as 'the underlying principles which shape curriculum, pedagogy and evaluation [assessment]'. He conceived of curriculum, pedagogy and assessment as the core 'message systems' of education through which formal education knowledge is realised, and suggested that the three message systems exist in complex relation to each other, with each message system informed and constrained by the others. Bernstein (1976, p. 85) writes:

> Formal educational knowledge can be considered to be realized through three message systems: curriculum, pedagogy and evaluation. Curriculum defines what counts as valid knowledge, pedagogy defines what counts as valid transmission of knowledge and evaluation defines what counts as valid realization of knowledge.

Within this formulation, pedagogy is not understood as the handmaiden to curriculum, nor are curriculum and pedagogy determined in reference to the proposed outcome or what is to be assessed, but curriculum, pedagogy and evaluation/assessment exist in relation to each other and together provide a sense of 'what counts' as knowledge within the education.

Bernstein's research also draws attention to the ways in which curriculum not only captures 'what counts' as knowledge, but also sets up its future possibilities. In his early work, Bernstein (1976) categorised curriculum as being developed via two forms which he termed collection code and integrated code. A curriculum defined by a collection code was categorised by clear subject or disciplinary boundaries and forms. Here, what counts as knowledge in each subject is derived from the authority given to the discipline

and the knowledge legitimised within that. Comparatively, within an integrated code, curriculum is defined by a topic or problem, with authority given and legitimate knowledge defined by the integrating idea. The two codes arise from different concepts of what counts as having knowledge as well as different concepts about how the knowledge is to be acquired and legitimately realised and built over time. To explore the underlying structure of the two forms of curriculum, Bernstein proposed the concepts of classification, which refers to the degree of boundary maintenance between contents, and framing, which refers to the degree of control the teacher and student possess over the selection, organisation, pacing and timing of the knowledge, and the strength of the boundary between non-school knowledge and educational knowledge. These concepts refer to the rules organising the content and the organisation of what is relayed, rather than what is actually enacted by a teacher within the moment of teaching.

Bernstein proposed that the underlying structure of the collection curriculum was based on strong classification, while an integrated curriculum was based on weak classification. He argued that curriculum with strong classification and framing (as in a collection code) is based on a visible pedagogy (evident for example in didactic methods, or where the rules are made explicit to students), while curriculum based on weak classification and framing (as in an integrated code) is based on an invisible pedagogy (evident for example in action methods). Under this framework, pedagogy can be considered visible where the criteria and manner of transmission are explicit, and invisible where the criteria is diffuse and the manner of transmission implicit. Visible pedagogies align with standardisation, mass teaching and cross-institutional comparison, while invisible pedagogies have multiple diffuse evaluation procedures that are not easily subject to precise measurement and are reliant on small class sizes and an educational architecture which together enable for individual assistance to be provided to students. These arguments draw attention to the effects of different pedagogies on what is educationally possible, and the relations between curriculum and pedagogy as part of this.

As Yates (2012, pp. 269-70) writes:

> The caution his [Bernstein's] analysis raises is that taking a particular approach at one stage can produce problematic or perverse effects at another. Integration codes do open up new ways of engaging and using the knowledge of students –

> but they have the potential danger of tying students to the dominating idea and requiring a more uniform ideology by their teachers in order to work, rather than giving students the tools to go further. Collection codes conversely pose big problems for those concerned about social inequalities, for learners lacking the right cultural capital and dispositions, and they have the potential to produce some rigidity. Nevertheless, Bernstein argued, this kind of strong disciplinary boundary work, is also a source of the later boundary breaking and creative work that happens with those who make it through to the PhD.

As Yates argues, Bernstein's work suggests that where integrated codes may tie students to the dominant idea, collection codes are problematic in some respects but potentially allow for a stronger foundation in building towards new directions over a longer period of study. Bernstein argues that a collection code curriculum 'involves a hierarchy whereby the ultimate mystery of the subject is revealed very late in educational life' (1976, p. 97). This mystery, meaning 'the potential for creating new realities' (i.e. how the research field works) is revealed only 'to a select few who have shown the signs of successful socialisation' (1976, p. 97). Bernstein wrote that only these few then experience 'the notion that knowledge is permeable, that its orderings are provisional, that the dialectic of knowledge is closure and openness', while for the many socialisation of knowledge is socialisation into order, and can be alienating and potentially meaningless (1976, p. 97). Yates (2012, p. 269) notes that Bernstein 'was one of the few sociological theorists who took seriously the dynamics of what is produced by different forms of curriculum, both in terms of identity building and in terms of building powerful and new knowledges', beyond the attention to the social messages or disciplining the curriculum delivers. His work shows the ways in which curriculum constitutes a site of knowledge construction, with different configurations enabling different possible futures, both for students and for knowledge traditions.

This discussion draws attention to the ways the question of what counts as knowledge in relation to the curriculum intersects with broader questions around the contexts in which curriculum is situated, the different emphases and logics come into play in relation to that, and their wider effects. Curriculum, as Yates (2005) writes, brings together questions about what knowledge is important, about educational institutions and their pedagogical and organisational practices, individual subjectivity and the individual and

social outcomes of education practices. Studies of curriculum are about intellectual questions, but also 'practical, political and pragmatic' ones (Yates, 2006, p. 10). And curriculum cannot be understood in isolation from the specific context within which it is situated. Curriculum inquiry, as Morgan and Lambert (2018) argue, needs to engage with and make links between both theoretical ideas and concepts, and the process of curriculum making. My research question is about the 'big' question of 'what counts as knowledge', but this question cannot be divorced from questions about what institutions are trying to do in relation to curriculum and teaching within particular contexts and at particular times.

With this in mind, the approach taken in this thesis was also strongly influenced by research within the field of critical education policy scholarship, sometimes called 'policy sociology' (Ozga, 1987) (e.g. Baachi, 2009, 2012; Ball, 1994, 2006; Gale, 1999, 2001; Rizvi & Lingard, 2010). Literature within this field draws attention to the importance of attending to both the wider discursive contexts within which institutions and policies are situated and the particular contexts in which those policies are developed and enacted. Policy, as Stephen Ball (1994, p. 48) writes, is about both what is intended and enacted. It is framed by broader discourses which concern, 'what can be said, and thought, but also about who can speak, when, where and with what authority' and which 'constrain but never determine all the possibilities for action'. Policy discourses are understood to inform both the production of texts and their interpretation, and within this process discourse informs how policies are 'written' and 'read', constraining and enabling particular meanings. Such discourses bind policy ensembles together and provide a semblance of coherence amongst the competing claims to meaning (Gale, 1999). Policies are always 'configured, contextually mediated and institutionally rendered' (Ball, Maguire & Braun, 2012, p. 3), with policies 'produced discursively within particular contexts whose parameters and particulars have been temporarily (and strategically) settled by discourse(s) in dominance' (Gale, 1999, p. 405). At the same time, policies are also understood as 'asymmetrical, temporary and context-dependent' (Gale, 1999, p. 401), with moving discursive frames that 'carry meanings representative of the struggle and conflict of their production' (Ball, 1994, p. 19). These discursive frames are understood as unsettled and contradictory, as 'one discourse does not necessarily produce and/or interpret text to the exclusion of all others' (Gale, 1999, p. 397). Additionally, within policy sociology, the policy problem

is understood as not given, but as discursively constructed to legitimise the proffered policy solution (see for example Baachi, 2009, 2012; Rizvi & Lingard, 2010).

This literature also points to the ways in which the effects of policies can be seen as non-linear, with particular policies understood as interpreted, contested and enacted differently across different sites of practice (Ball, 2006). Such an approach understands policy as a socio-cultural practice, whereby 'policy practice comes to refer to the diverse ways in which people in local settings come to produce, read, interpret, act upon, ignore, dismiss, adapt, co-opt, reject, disseminate and perform formal policy directives' (Gerrard & Farrell, 2014, p. 635). Policies are understood as always 'localized and customized' and 'set against existing commitments, values and forms of experience' (Ball, Hoskins, Maguire, & Braun 2011, p. 11). Ball (1997, p. 270) rejects that 'policy is something that is 'done' to people', but instead argues:

> Policies pose problems to their subjects, problems that must be solved in context. Solutions to the problems posed by policy texts will be localised and should be expected to display ad hocery and messiness. […] Policies do not normally tell you what to do, they create circumstances in which the range of options available in deciding what to do are narrowed or changed or particular goals or outcomes are set.

These emphases accord with other writing on anthropological approaches to policy, which likewise highlight the importance of close attention to particular sites, the ways in which policy is contested and resisted within them and the power relations and systems of governance that are part of this (see for example Shore, Wright, & Pero, 2011; Wright, 2016). Such work draws attention to the ways in which curriculum is always negotiated within particular policy and institutional contexts, with those responsible for curriculum development not simply implementing curriculum policy directives but acting (or not acting) upon those in a range of ways, informed by the structural and material constraints of the contexts in which they work.

In summary, in this research, curriculum is understood as not settled, but curriculum texts and decisions about what content is selected and how that is put together are seen to represent temporary settlements which define what is important within a particular course. Such settlements inevitably take up some things and neglect others, creating

different kinds of effects or conditions of possibility for what is then taken up in the teaching or by the students. A curriculum settlement is therefore inevitably infused with points of contestation about what matters within the disciplinary field and for the education of students in a broader sense, and it is these points of contestation and the competing values and tensions embedded within them that were of interest in the present study. Within this approach, attention to what knowledge is selected and how that is put together, and the rationales and purposes behind those selections, and the ways those remain in contention, is foregrounded. Drawing on Bernstein (1976) and Deng and Luke (2008), the interest is in the underlying principles and assumptions about educational knowledge which shape curriculum (and pedagogy and assessment) both at the level of policy and practice: what 'curriculum' is seen to be, including in terms of its relationship to the knowledge field, and what effects, challenges or conditions of possibility that creates. In relation to these questions, the research is concerned with both the wider values and purposes evident, and the issues that emerge within and in response to particular constructions and practices.

The concepts of curriculum discussed in this section represent the starting point for this research. The later sections of this review consider the ways in which these understandings are evident or absent in wider discussions of university teaching.

Knowledge, disciplines and the university context

The sites and cases selected for this thesis were designed to allow attention to curriculum practices in current contexts of change, and also in relation to different kinds of knowledge fields, particularly disciplinary ones compared with professionally or vocationally focused ones. In this section I give a brief overview of some relevant literature and debates about the changing form of academic and educational knowledge, and what is happening to disciplinary knowledge traditions in relation to this. The discussion of these wide and intersecting debates that follows is necessarily broad brush and selective but is intended to provide a wider context in which the later discussions on curriculum, teaching and online learning in higher education can be situated. It touches on arguments relating to new forms of knowledge, approaches to understanding disciplinary and professional knowledge traditions, and shifts associated with the rise of constructivist theories of knowledge.

New forms of knowledge

The last few decades have seen a proliferation of works concerned with changing forms of academic knowledge. There have been concerns that academic knowledge is becoming commercialised and commodified (Peters, 2007; Slaughter & Leslie, 1997; Slaughter & Rhoades, 2004), that universities are losing their distinctive purposes in relation to knowledge production and dissemination (Peters, 1999; Readings, 1997), and an upsurge of interest in the global 'knowledge economy' and 'knowledge society' and its implications for higher education (e.g. Blackmore, Brennan, & Zipin, 2010; Delanty, 2001; Elzinga, 1997; Innerarity, 2013; Gumport, 2002; Peters, 2007; King, Marginson, & Naidoo, 2013; Knorr Cetina, 2006; Wright, 2016), as well as in the changes potentially produced by new digital technologies (discussed further in a separate section below). These arguments highlight the increasing attention to 'relevance' and to the kinds of knowledge that are economically powerful and the increasing competition faced by universities against new sites of knowledge production.

Such work points to changes in how knowledge is valued and validated and to a changing role of universities in the production of knowledge. As Barnett (2000, p. 35) writes:

> The problem with knowledge for the modem university is not that knowledge has come to an end. Rather, it is that there are now many knowledges vying for a place within the university. It is not that the clerks have lost their monopoly over the production of high status knowledge; [...] it is that they have lost their monopoly over the definitions as to *what is to count as knowledge*.

These changes raise particular questions for the role and value of disciplinary knowledge structures in the twenty-first century, and the ways these are being reframed and undermined within the current university context. In the forward to Michael Peters' book *Knowledge Economy, Development and the Future of Higher Education*, Fazal Rizvi captures the range of elements that connect with these concerns when he writes:

> the long-established disciplinary forms of knowledge around which universities were organised no longer appear so self-evident, as the focus has shifted from acquiring inherited knowledge to problem solving and innovation useful to the knowledge economy […] with the realisation that knowledge is produced in a

> socially distributed manner, and depends fundamentally on collaborations and networks, universities now have to simultaneously compete with and cooperate and share resources with other centres of knowledge production […], requiring universities to engage with global processes, both by cooperating with education systems abroad and by competing with them. (Rizvi in Peters, 2007, pp. viii, x)

Central to these debates is an argument put forward in the early 1990s which coined a widely referenced and influential distinction between 'mode 1' and 'mode 2' forms of knowledge (Gibbons et al., 1994). This argument, first developed in a book entitled *The New Production of Knowledge*, proposed that research and knowledge production was moving away from traditional forms of academic hierarchical disciplinary activity ('mode 1') to 'mode 2' knowledge production, associated with interdisciplinary research, practical and problem-focused aims, and defined by contexts of application. Mode 2 is marked by an increase in the number of sites of knowledge production, including within think-tanks, government laboratories and industry. The argument associated mode 1 with disciplinarity, homogeneity and traditional quality control (i.e. peer review), and mode 2 with transdisciplinarity, heterogeneity and novel forms of quality control, subject to different criteria about what constitutes 'good' research (see Hessels & Van Lente, 2008). This argument was further developed by some of the original authors (e.g. Nowotny, Scott, & Gibbons, 2001, 2003). In a subsequent book titled *Rethinking Science*, Nowotny et al. (2001) argued that further shifts are also evident in a de-differentiation of particular social spheres (e.g. state, market, culture), with significant implications for university operations.

This argument has had wide resonance across higher education, and been highly influential within higher education policy debates, particularly within Australia (see Hessels & Van Lente, 2008; Woelert & Millar, 2013; Yates et al., 2017). The original model has been criticised for setting up too strong a dichotomy between the two modes of research (see for example Weingart & Padberg, 2014). However, despite this, as Hessels and Van Lente (2008) argue, the practices associated with mode 2 research and its concern with application and collaboration are increasingly evident within universities today. Although these practices are not yet replacing mode 1 forms of authority and knowledge production, they are occurring alongside and within them (see Yates et al., 2017). The original text is over twenty years old, however, the concerns it

raised about the extent to which disciplinary traditions are becoming subject to outward-facing mechanisms and evaluative criteria and the implications of diminishing academic control over 'what is to count as knowledge' (Barnett, 2000, p. 35) continue to be relevant (see Yates et al., 2017). Such arguments raise questions for this research about the current emphasis placed on disciplinary traditions and the value of dichotomies in understanding wider shifts.

Disciplines and disciplinarity

Alongside debates about new forms of knowledge and their implications for disciplinary traditions, other influential work in higher education studies and the sociology of knowledge has focused on the historical, epistemic, social and cultural features of academic knowledge fields, and with the differences between them. This literature has developed prior to and alongside the 'mode 2' debates and has included both ethnographic studies (e.g. Becher, 1989; Becher & Trowler, 2001; Knorr Cetina, 1999) and histories of the organisational and authority structures of universities (Abbott, 2001; Anderson & Valente, 2002; Kagan, 2009; Wellmon, 2015). It raises a number of concerns relevant for this study's interest in knowledge. In particular, it highlights the important differences evident between different forms of knowledge, and the different ways different forms of knowledge may be impacted within the current university context.

Becher's work (Becher, 1989; Becher & Trowler, 2001) has been particularly influential within the higher education literature. This research is concerned with the cultural development of academic knowledge fields and their practices of belief formation and boundary maintenance. It demonstrates the ways in which different knowledge fields hold norms, traditions and belief systems which constitute different logics of knowledge and knowledge production (Nerland, Jensen, & Bekele, 2010), and understands the behaviour and practices of academics to be strongly conditioned by these different structures and logics (Trowler, 2013a).

As part of this work, Becher popularised a distinction between 'pure' and 'applied' and 'hard' and 'soft' forms of knowledge (adapted from Biglan, 1973a, 1973b). This typology differentiates academic fields of knowledge in terms of their degree of concern with knowledge application (as pure or applied) and their degree of paradigmatic and theoretical consensus (as hard or soft) and shows how each has its own cognitive

territory, intellectual values and cultural domain. It categorises academic knowledge fields according to four broad types: hard-pure (scientific fields), soft-pure (humanities and social sciences), hard-applied (engineering, medicine) and soft-applied (education, business studies and the like). This work has been criticised for its essentialism and for the ways its typologies fall apart when academic knowledge practices are considered in detail (e.g. Trowler, 2013a; Nerland et al., 2010). However, such typologies are nevertheless useful for understanding 'the broad shape of the structure or form of work that is observed in them' (Yates et al., 2017, p. 37).

Much work following the Becher/Biglan tradition has focused on the differences between 'hard' and 'soft' fields (i.e. the sciences and the humanities/social sciences), and Muller (2009, p. 210) notes that although a distinction is made between 'pure' disciplines and 'applied' professional fields, this 'has not been given the same conceptual underpinning as the 'hard/soft' distinction'. Becher and Trowler (2001) suggest that professional fields are more amenable to outside intervention and lack the collectivity that convergence requires, but beyond that have little to say about the different constraints such fields might be subject to.

However, arguably such distinctions are becoming more important in the current university context. In the late 1990s, Bernstein (1996) developed a similar typology, this time focused on entirely on the distinction between disciplines and professional fields, which he termed called 'singulars' and 'regions'. Within this framework, disciplinary singulars were classified as 'oriented to their own development, protected by strong boundaries and hierarchies' and were seen to generate strong inner commitments towards knowing, centred in the perceived intrinsic value of the field (Bernstein, 1996, p. 52). Professional regions, in contrast, were seen to face outwards towards various fields of practice, and to draw together a number of singulars within an integrating framework. Explaining these distinctions, Muller (2009) drew further contrasts between traditional professional fields such as law and medicine, which have developed stable ways of determining and updating professional knowledge and which have robust professional identities, and new professional fields such as business studies, which are more diffuse, are underpinned by a less stable body of knowledge and cultivate relatively weak academic identities.

Drawing on the distinction between disciplinary singulars and professional regions, Bernstein (1996) suggested that knowledge within universities was becoming increasingly 'regionalised' and oriented to the needs of students, employers, and governments. As proposed by Young (2008), this argument has resonances with the mode 2 arguments, but draws further attention to the ways in which new emphases associated with mode 2 are potentially affecting disciplines or singulars in more significant ways than other programs of study. As part of the shifts identified within the mode 2 arguments, academic identities are becoming increasingly defined externally by market forces, and this is likely to have stronger implications for disciplines, where inwardness has been traditionally more important. The concerns raised by Bernstein, Young and Muller are theoretically driven, but similar issues have also been raised in empirical work, including in relation to the implications of research assessment exercises and measures of research productivity (Yates et al., 2017) and the implications of marketisation (Ek, Ideland, Jönsson, & Malmberg, 2013) on disciplines compared with professional fields.

The mode 2 arguments suggest significant shifts in knowledge practices of validation. In opposition to this, other work has highlighted the important and productive epistemological effects of disciplinary frameworks in validating knowledge. Histories of the disciplines and of disciplinarity (e.g. Abbott, 2001; Anderson & Valente, 2002; Wellmon, 2015) highlight the ways in which disciplines, while socially constructed, also provide important epistemological functions and form ways of managing and focusing inquiry that enable the development of powerful forms of knowledge. Such work acknowledges that disciplines have conservative and gatekeeping features, but they also provide sources of intellectual identity that prevent knowledge from becoming too abstract and unmanageable. Others locating within a 'social realist' framework (discussed further below) have similarly argued that the processes and organisation of disciplinary knowledge and the way in which such knowledge develops over time within disciplinary communities allows for more powerful forms of knowing than knowledge that is oriented towards concrete problems and generic processes (e.g. Moore, 2007; Muller, 2000; Young, 2008).

The politics of knowledge and the rise of constructivism

A further context for this thesis are the wider debates about the politics of 'what counts' as knowledge, and particularly, the rise of theories associated with a 'constructivist' tradition. Here, I touch on some of the major elements of these debates, and highlight the kinds of questions and concerns they raise for this study.

Over the last half century questions about what counts as knowledge have been subject to strong contestation. From Thomas Kuhn's (1962/2012) *The Structure of Scientific Revolutions* to Michel Foucault's (1969/1972) *Archaeology of Knowledge* to Karin Knorr Cetina's (1999) *Epistemic Cultures*, a range of works have critiqued the objectivity of academic (and particularly disciplinary) knowledge and argued that such knowledge develops in ways which are (at least in part) arbitrary, self-referential and concerned with power and control. These debates have resonated across a range of fields in the humanities and social sciences, from philosophy to sociology and education. Lines of argument variously labelled as postmodernist, poststructuralist and the like critiqued the idea that knowledge could be understood as universally true. This work sparked an interest in 'the processes, procedures and apparatuses wherein truth, knowledge and belief are produced' (Fraser, 1989, p. 19).

In feminist and postcolonial theory, writers pointed to the exclusionary nature of disciplinary knowledges, and the ways in which the voices of women and disadvantaged groups have been marginalised in the defining of what counts as knowledge (Connell, 2007; Fraser, 1989; Harding, 1996; Haraway, 1991; Smith, 1990). Such work explains knowledge formation in terms of historically located and gendered standpoints and as a product of relationships of power in relation to class, gender and race. It critiques 'unlocatable, and so irresponsible, knowledge claims' and argues instead for 'situated and embodied knowledges' (Haraway, 1991, p. 191).

In related research within the sociology of knowledge, others (e.g. Brew, 2001; Latour & Woolgar, 1979) have pointed to the ways in which the process of research is a messy business, only 'loosely linked to epistemological structures' (Trowler, 2013a, p. 23). New materialist approaches such as 'actor network theory' have become increasingly prominent, drawing attention to the ways in which complex knowledge work rests on collective accomplishments achieved through object-mediated practices, with knowledge constitutive activities conceptualised as organised by networks spread across

space and time (e.g. Fenwick & Edwards, 2010; Latour, 2005; Nespor, 1994). Such work highlights the ways in which the representation of knowledge is not separate to its enactment, with knowledge understood as not *about* but *part of* the real world (Fenwick & Edwards, 2010).

Within education, elements of these broad debates have at times been portrayed as a shift from 'traditional' positivist epistemologies towards 'constructivist' theories of knowledge and learning (and these have also been widely influential in understandings and approaches to university teaching – discussed further below). Collectively, theories associated with a constructivist tradition emphasise the ways in which understandings of knowledge cannot be separated from understandings of the ways in which knowledge is produced, engaged with and constructed by people within particular contexts and at particular times.

However, constructivism is a broad church, and encompasses a range of theoretical traditions. Strands of theory have been variously classified as 'individual and cognitive constructivism', 'social constructivism', 'contextual constructivism' and 'socio-cultural constructivism', and draw inspiration from the diverse work of Jean Piaget, Lev Vygotsky and John Dewey (see Sjøberg, 2010). A significant distinction is frequently drawn between individual and cognitive forms of constructivism and social constructivism. While individually oriented theories focus on how individuals make sense of the world, social constructivist theories conceptualise learning as 'diffuse, distributed and collective' with individuals not understood as the locus of learning but as a 'learning system within a learning system' (Davis & Sumara, 2010, p. 489). Learning as a result, is understood to require 'discussion, dialogue and interaction' (Shumar & Wright, 2016, p. 7).

According to Davis and Sumara (2010), social constructivism comprises a range of different theoretical frameworks including situated learning theory (e.g. Lave, 1996; Lave & Wenger, 1991; Wenger, 1998), cultural historical activity theory (Tuomi-Gröhn & Engeström, 2003), actor network theory (Latour, 2005; Fenwick & Edwards, 2010) and others. These approaches promote more holistic, situated and activity based approaches to knowledge and learning and have developed from across a range of fields including studies of professional learning, organisational studies and the sociology of scientific knowledge. In situated learning theory, Jean Lave and Etienne Wenger (1991)

conceptualise learning as a process of socialisation within expert communities and as a movement of individuals from the position of 'legitimate peripheral participant' to full membership of a professional community. This work has some resonances with cultural historical activity theory, where learning is conceptualised as mediated by objects and tools within a given 'activity system'. Shay (2008) suggests that social constructivism encapsulates two theoretical lines of argument, a 'socio-cultural strand' which emphasises the situatedness of practice, and a 'constructivist strand' which focuses on the constructedness of knowledge.

Within education, the broad tenets of constructivism also connect with many of the ideas underpinning work within critical pedagogy, and Paulo Freire's (1970, p. 58) classic critique of a 'banking concept of education', which frames education as an act of 'depositing' and knowledge as a 'gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing'. As with constructivist theories, work in this tradition emphasises the importance of attending to students' own conceptions, understandings and purposes.

Constructivist theories are both about learning and how people construct meaning and knowledge as individuals and collectively, and about the status, growth and development of scientific knowledge (see Sjøberg, 2010). Sjøberg (2010, p. 485) argues that what is understood as constructed within the different theories associated with constructivism encompasses different elements. These range from (1) 'our individual knowledge of the world'; (2) 'the shared and accepted scientific knowledge about the world as it exists in established science' and (3) 'the world itself'. Some constructivist learning theories affirm the constructed nature of the first of these claims (e.g. that students construct their own knowledge), but reject forms of constructivism which contradict scientific rationality. Others accept the first two, and more radical theories promote the third. Constructivist theories of knowledge and learning which intersect with the critiques of academic knowledge described above would tend to locate within either of these latter two positions. Sjøberg (2010, p. 486) argues 'much confusion and disagreements occur because one does not keep the fundamental differences of the nature of these constructivist claims in mind'. Theories of constructivism are sometimes categorised as weaker or stronger, depending on how well they align with realist ways of understanding knowledge.

In response to these developments, however, concerns have emerged with what Green (2010, p. 47) describes as 'a widespread and even systematic undervaluing of knowledge' in what can be seen as 'an excess of constructivism'. Many have argued that while socio-cultural and situated constructivist approaches have drawn attention to important elements of learning not well recognised in individualist theories, such work has also tended to focus too strongly on the social elements of learning, decentring attention to the epistemic and downplaying the role of formalised knowledge (see for example Becher & Parry, 2005; Lahn & Jensen, 2006; Nerland et al., 2010).

A body of scholarship has emerged within the sociology of education concerned with 'social realism' and 'bringing knowledge back in' (e.g. Barrett, Hoadley, & Morgan, 2018; Young, 2008, Muller 2000; Moore, 2007), which aims to move attention away from identities and standpoints towards the value of disciplinary knowledge. This work identifies some important elements that are missed by constructivist theories of knowledge and knowing, including the epistemic effects of particular ways of developing and structuring knowledge (discussed further in the next section). However, its critiques of constructivism (e.g. Muller, 2000; Young, 2008) tend towards caricatures of its more radical forms rather than engagement with the substance of its ideas (see for comment on this issue Balarin, 2008; Edwards, 2012; Gerwitz & Cribb, 2009; Michelson, 2004; Zipin et al., 2015). Muller (2000, p. 5), for example, defines constructivism as 'a broad anti-epistemological movement', which Michselson (2004, p. 10) rejects, writing, 'constructivism utilises postmodernism, not to deny the material foundations of knowledge, but to allow for a more careful account of the ways in which knowledge is created, legitimated and used'. Moreover, its theory of knowledge rests entirely on cognitive purposes, with two little regard for ethical concerns about what and whose knowledge matters (Zipin et al., 2015). And it tends to background the complex histories and politics of curriculum selections and the ways curriculum is made within educational institutions (Morgan & Lambert, 2018). Other approaches such as Trowler's (2013b) social practice theory, Clegg's (2012) integration of feminist standpoint theory and critical reason, and Gerwitz and Cribb's (2009) analysis of different curriculum traditions have tried to keep both sides of the debate in play, acknowledging that they each illuminate different kinds of concerns, all of which are relevant to thinking about knowledge in relation to education. This is important as, as

Scott (2014, p. 1) argues, neither social constructivism nor social realism 'amount to a complete theory of knowledge and therefore of learning'.

To summarise the research discussed in this section, there have been a range of different takes on knowledge and change in the 21st century, and much contestation about what knowledge is, how it develops and how it can be theorised. The work discussed has highlighted important differences between disciplines and professional fields and raised suggestions that current directions in universities may be impacting more significantly on the former. It has pointed to the rise of new ways of thinking about what matters for knowledge and education, and the potential implications of these shifts. More particularly, it has highlighted both the value and importance of constructivist theories of knowledge, as well as the diversity of concerns such theories embody and their potentially problematic effects in decentring attention to the role of formalised knowledge in education. These arguments underscore the importance of attending to the different assumptions and thinking about knowledge present within universities today. They also raise a number of important questions for this thesis in relation to the implications of new developments on disciplinary forms of knowledge and the effects of constructivist theories on university teaching practices which are explored in further detail in the following sections.

Curriculum in higher education

The chapter to this point has focused on the particular understandings of curriculum and policy which informed this thesis, and the wider context with which the thesis intersects. Here, I now turn to bodies of literature which have focused more particularly on the context of university teaching, beginning with literature which has taken curriculum as a primary frame.

Although the questions around what a university education should emphasise have been widely debated (as highlighted in Chapter 1), there has been very little work which has taken seriously the changing dynamics of curriculum making within universities. In the UK and Australian context in particular, explicit interest in 'curriculum' as a subject of scholarship and policy debate within the higher education field has been limited. In their book *Engaging the Curriculum in Higher Education*, Barnett and Coate (2005, p. 1) write that in relation to higher education 'there is very little talk about the curriculum'. In the book *Researching Higher Education*, Tight (2012, p. 66) likewise comments that

it is 'uncommon to find higher education researchers (or practitioners) directly discussing the curriculum'. Nerland et al. (2010, p. 7) conclude that as a result, 'the epistemic and trans-local dimensions of learning in higher education are not well understood'. More recently, in an introduction to a special issue on 'Knowledge, curriculum and student understanding in higher education', Ashwin (2014, p. 123) writes:

> When policy makers discuss higher education and ways of defining the quality of an undergraduate degree, there is remarkably little discussion of knowledge […] research into students' experiences of studying in higher education has been dominated by studies that focus on teaching and learning, the majority of which tend to separate teaching from learning […] This has meant that research has tended not to examine the relations between knowledge and curriculum in higher education.

While there is a substantial literature on the higher education curriculum in the USA, and much debate about what university teaching should look like and the ways in which students learn which engages with constructivist theories of knowledge (discussed in a later section below), there is limited engagement, both there and elsewhere with questions about the relations between knowledge and curriculum and the ways in which curriculum is being constructed. In this section, I discuss the emerging scholarship dealing with these questions, and the issues it raises for current teaching and university management practices explored in this thesis.

One prominent strand of this literature is concerned with the role of different disciplinary and professional knowledge traditions play in curriculum construction. Drawing on Becher's (1989) 'disciplinary cultures' perspective, Neumann, Parry and Becher (2002) have argued that the four broad types identified (hard-pure, soft-pure, hard-applied and soft-applied) produce significant differences in educational form, including in relation to curricular structure, educational purpose, teaching methods, and views on student learning and assessment (see also Neumann, 2001). In similar work, others have also highlighted the differences between fields and forms of knowledge in whether lecturers take a 'teacher-focused' or 'student-focused' approach (Lindlom-Ylanne, Trigwell, Nevgi, & Ashwin, 2006), in the ways they perceive the value of generic skills (Krause, 2014), and in relation to the possibilities for integrating research

within the university curriculum (Healy, 2005). Along with Becher's original formulation, these findings emphasise the ways in which curriculum constitutes part of the way disciplines and professional fields mark their boundaries and define what constitutes legitimate knowledge (see also Slaughter, 2002). Although such work has tended to focus on distinctions between the sciences and humanities/social sciences, it has also pointed to some distinctions between disciplines and professional knowledge fields, with Neumann et al. (2002, p. 408) suggesting that teaching in the professions is is less concerned with examining conflicting evidence and exploring alternatives and focuses less on precision and accuracy as criteria in the validation of knowledge.

However, work in this tradition has also been criticised for reducing knowledge to a type of frozen content where curricular knowledge is read off stable disciplinary forms (see Muller, 2009; Nerland et al., 2010), rather than as a site of knowledge construction, contestation and potential change. Neumann et al. (2002, p. 406), for example, comment that within this perspective the curriculum 'essentially comprises a selection from the body of mainstream research material', with little acknowledgement of the difficult work this requires in practice. In related work, Barnett and Coate (2005, p. 53) have argued that current thinking about and understandings of the curriculum in relation to disciplinary and professional knowledge cultures are inadequate when set out against 'the fluidity, indeterminability and contestability of the modern world' and its need for unpredictability and openness in how curriculum is formulated.

Trowler et al. (2013) have also questioned the extent to which the knowledge field conditions the curriculum and teaching practices of academics, arguing that such as a position is too strongly essentialist. These writers consider the scope and strength of influence of disciplinary power, including on curriculum, but conclude that it is impossible to make a general statement about this since the influence of the discipline will vary depending on the context of practice. This work raises questions about the ways in which research within Becher's disciplinary and professional cultures perspective is too strongly conditioned to approach questions of curriculum in relation to differences between forms and fields of knowledge, rather than in terms of alternative perspectives. This is an important point, and highlights the need to attend to the details of the practices occurring within particular contexts, rather than considering academic knowledge practices in ways that are abstracted from that.

Others have focused on the practices of curriculum and teaching in particular fields and the ways in which students are 'enrolled' into them, taking up different perspectives on knowledge and its development (Nerland et al., 2010; Nerland & Jensen, 2012; Nespor, 1994, 2003). Located within actor-network theory and situated practice theory, Nespor's classic (1994) study explores how students completing undergraduate majors within two disciplines (physics and management) became connected to the 'durable and extensive networks of power' of those two disciplinary fields. This approach suggests disciplinary practices are mobilised through representations (lecture contents, texts) that flow through the space-times of the programs along with the students. Nespor shows how the physics curriculum 'stabilized students' identities as 'physicists' by creating space-time barriers that cut them off from alternative networks' (1994, p. 38). He compares this with the management program which he argues defined and created points of passage between the academic and business worlds and was not seen as attached to a particular identity or ideology or to the mastery of a particular body of knowledge by either faculty or students. This work highlights the ways the course structures and requirements of an undergraduate physics major teach students to develop disciplinary identities as physics students, while the structures and requirements of a marketing degree orient students outwards towards the business community. Building upon this approach, Nerland and colleagues explore the ways in which different disciplines and professional fields differ in their ways of organising knowledge within curriculum and their ways of introducing newcomers to the field (Jensen, Lahn, & Nerland, 2012; Nerland et al., 2010; Nerland & Jensen, 2014). Such work highlights the important differences between professional fields, in ways which go beyond Becher's (1989) hard/pure distinction.

There is also work which has considered the affect of disciplinary traditions alongside other influences. James' (2014) 'learning cultures' perspective, for example, highlights the ways in which university assessment practices involve the interweaving of potentially conflicting understandings of knowledge, learning and development. Drawing on this perspective, James highlights the ways in which teachers' assessment practices reflect their position within multiple fields of practice, including their disciplinary/professional and institutional affiliations, as well as their own personal views about what matters. In the USA, Slaughter (2002) has also argued that disciplinary influence on curricula needs to be understood in the context of the powerful

organisations and social groups that provide support for them, such as the government and the military. She suggests that the lecturers constructing curricula do not have exclusive interests 'in revealing the inner logic and structure of the subject of their discipline' or profession but are also influenced by instrumental concerns and the wider contexts in which their work is situated (Slaughter, 2002, p. 279; see also Gumport, 2002). In this research, I do not draw on the Bourdieusian theoretical underpinnings to James' arguments but I likewise consider the practices of particular lecturers within the contexts of their knowledge field and institutional locations. Additionally, while I do not consider the work of external organisations and groups in the construction of curricula, in line with Slaughter I do understand curriculum as contested and subject to competing interests, rather than simply as a disciplinary boundary-making practice.

Beyond these debates, there is also strong contestation over the question of what knowledge should be included in the curriculum. There have been questions raised about the extent to which curriculum should derive from disciplines compared with interdisciplinary traditions; about different kinds of knowledges and the relative emphases given to them (e.g. knowing how compared with knowing that, competencies and generic skills compared with disciplines); and about the implications of reframing curriculum in terms of outcomes and skills agendas (e.g. Ensor, 2004; Karseth, 2006, 2008; Muller & Young, 2014; Millar, 2016; Naidoo, 2005; Stavrou, 2009; Yates et al., 2017). In relation to these different arguments, Barnett (2000, 35) has argued that the university has become 'swamped with rival claimants for worthwhile knowing', including in relation to contemplative knowledge, knowing-in-action and generic skills. These competing perspectives present challenges for higher education institutions and governments, who are today struggling with questions about 'the extent to which the content of the learning should be derived from what matters in the world now (big problems, 'grand challenges', workplace competencies and the like) or, conversely, whether moves in this direction tend to hollow out the learning' (Yates et al., 2017, p. 5).

In relation to these debates and alongside the work considering the role disciplinary and professional knowledge traditions play in curriculum development, a body of work has emerged which explores the rise of these new agendas in curriculum and the implications they raise for disciplinary and professional knowledge traditions.

Ensor (2004, 2006) and Karseth (2006, 2008) have analysed changing curricular discourses in South Africa and Europe respectively, documenting shifts from a traditional 'inward-facing' disciplinary discourse centred around sequential learning paths, cognitive coherence and the apprenticeship of students within disciplinary traditions, towards a new 'outward-facing' credit exchange/modularisation discourse which advocates greater flexibility, relevance to the workplace, interdisciplinarity and portability. Ensor (2006) and Karseth (2006) also identify a separate vocational discourse, which they suggest is driven by social legitimation and the need for trained employees. The vocational discourse orients outwardly towards practice in line with the credit exchange/modularisation discourse but its focus in comparison is on particular rather than generalised requirements (Karseth, 2006).

Karseth and Ensor argue that the credit exchange/modularisation discourse both aligns with and advocates for the 'mode 2' approaches to knowledge discussed above (Gibbons et al., 1994) and orients towards the requirements of a globalised, labour market. According to Karseth (2006), this discourse is undermining the particular requirements of both professions and disciplines, particularly in the hard sciences, where sequential requirements are important. However, in Ensor's (2004) policy analysis of shifts to the higher education curriculum in South Africa in the late 1990s, she found that both discourses were present in policy formulation, but that the disciplinary discourse remained primary within curriculum restructuring in practice, despite some reorganisation of how that was packaged.

In related work, Stavrou (2009) has also analysed the 'regionalisation' of curricular knowledge within French universities in response to the Bologna process, drawing on Bernstein's concepts of classification, framing and recontextualisation. She argues that within regionalised curricula where subjects and courses are formulated around integrating ideas that bring together multiple disciplines such as urban studies, disciplinary knowledge is decontextualised and the boundaries defining what counts as knowledge are weakened. Brady (2014) and Millar (2016) have also drawn on Bernstein (1996) to develop similar arguments in relation to business studies teaching and interdisciplinary teaching respectively. In relation to business studies, Brady argues that subjects in business studies are being increasing designed within a generic mode in response to the discursive and material forces of marketisation, with knowledge and

pedagogy becoming fragmented and amorphous as a result. These arguments draw attention to the curricular implications of the changes to knowledge highlighted in the previous section.

Others in the social realist tradition identified above have also critiqued the emphasis on skills and instrumental concerns dominating higher education, and the ways this potentially undermines disciplinary knowledge structures (e.g. Muller & Young, 2014; Muller, 2009). Muller's (2009, p. 216) work points to the importance of 'conceptual coherence' within disciplinary curricula, and the ways in which the different knowledge structures of different disciplines 'impose constraints on appropriate curriculum form', in terms of sequencing, pacing and the like, particularly in hard scientific disciplines where knowledge develops vertically and sequence is of particular importance (Muller, 2009, p. 216). Muller (2009) shows how different knowledge structures in the curriculum produce different principles of curriculum coherence. He argues that disciplinary curriculum emphasises a form of conceptual coherence which is internal to the discipline, while the curriculum of professional fields oriented towards 'contextual coherence' in relation to work practices and the like. He suggests that for conceptually coherent curricula there is a presumption of 'high levels of abstraction and conceptual difficulty', while curricula oriented to contextual coherence is categorised as 'segmentally connected, where each segment is adequate to a context' (2009, p. 216). The former is validated internally (within the discipline), the latter externally (such as by a profession or professional body). This work sees the shifts towards agendas outside the discipline (vocational agendas, skills, attributes and the like for example) as problematic for disciplinary knowledge traditions. As we argue in *Knowledge at the Crossroads*, the concerns of Muller and Young are at times 'overstated or not proven' but 'the overall concern they identify about the conditions for traditional disciplines is relevant and under-recognised in the rhetoric and many of the practices that frame the management of curriculum today' (Yates et al., 2017, p. 214).

In summary, the higher education curriculum has been underexplored as a critical site of struggle over what counts as knowledge. However, although limited, there is an emerging field of curriculum scholarship focused on higher education in relation to questions around what counts as knowledge. This work has highlighted some important distinctions evident in how the curriculum is formulated within different disciplines and

professional fields, and the importance of considering lecturers practices of curriculum development in the context of their wider disciplinary and professional affiliations as well as their institutional location. It has also raised two particular questions which are pertinent for this thesis. One is about the role of different fields of knowledge play in the formulation of curriculum today, and whether other agendas are becoming more prominent (e.g. Ensor, 2004; Karseth, 2006; Trowler et al., 2013). The second is about the implications of policy directives which discount differences between different disciplines and professional fields (e.g. Muller, 2009; Muller & Young, 2014). These questions will be explored further in the later chapters of this thesis.

University teaching and 'best practice'

When I first started this research, I was adamant that the focus of the research would be on 'curriculum' and 'knowledge', against the dominant focus on 'teaching and learning' and students. As I worked on the thesis, I began to see that other conceptions of knowledge were in play, and that the initial idea to focus on 'curriculum' and as much as possible to bracket out 'pedagogy' and 'learning' were an inadequate frame to convey what I was finding in the research. In this section, I discuss the dominant arguments evident in relation to teaching and learning in higher education, and the ways curriculum and knowledge are positioned within these debates.

Importantly, when I came to this literature, I was already thinking within the context of the research discussed above, and had already begun empirical research focused on curriculum construction, institutional policy and academic thinking and assumptions, deliberately choosing to keep students and their learning outside of the main frame (discussed further in the following chapter). The literature discussed in this section was therefore less important in the framing of the research question, but did inform the ways in which the study approached questions concerning the implications of particular approaches, and my understanding of the context in which my study was situated. Additionally, the literature on university teaching is substantial. My discussion of this is necessarily selective and focuses on some key texts which are indicative of some of the primary emphases evident in university practices.

Higher education is frequently held to be 'in crisis' and calls for changing teaching practices have been widespread for some time. Over 15 years ago, the Australian review

of higher education *Higher education at the crossroads* (Commonwealth Department of Education, Science and Training, 2002, p. 14) argued:

> We need a system that produces graduates who can think critically and have adaptable skill sets as well as technical expertise. In many ways, that will require significant transformation of approaches to curriculum and pedagogy to stimulate and stretch students and accommodate their varying needs.

In 2006, the USA national review of higher education, *A Test of Leadership: Charting the Future of U.S. Higher Education* similarly suggested that 'Too many of our colleges and universities have not embraced opportunities to be entrepreneurial, from testing new methods of teaching and content delivery to meeting the increased demand for lifelong learning' (Spellings, 2006, pp. 4-5) and that 'the results of scholarly research on teaching and learning are rarely translated into practice' (ibid., p. 15). Teaching practices in higher education are widely held to be backward-looking, with academics seen as resistant to change. Davidson and Goldberg (2010, pp. 2-3) take up a popular refrain when they suggest:

> Modes of learning have changed dramatically over the past two decades – our sources of information, the way we exchange and interact with information, how information informs and shapes us. But our schools – how we teach, where we teach, whom we teach, who teaches, who administers, and who services – have changed mostly around the edges. The fundamental aspects of learning institutions remain remarkably familiar and have been for around two hundred years or more.

In other words, although there is a prominent argument that engaging with digital technologies is the only way forward for universities, this is frequently tied to complaints that universities are not doing this enough, and debates in the literature are seen to be disconnected from classroom practice (Dearn, 2010, p. 450).

The literature on university teaching is however widespread and over the last few decades books and papers on how to teach in higher education have proliferated (e.g. Barr & Tagg, 1995; Biggs & Tann, 2011; Chickering & Gamson, 1987; Ramsden, 2003). These works emphasise the importance of creating 'learning experiences' that

engage students and focus on their own constructions of knowledge, and on building coherent programs that build towards and 'align' with predefined outcomes.

One element of these debates is the focus on 'doing' and 'active learning'. Dearn (2010, p. 450) writes, 'perhaps the most significant idea that has influenced innovation in teaching and curriculum design has emerged from the realisation that teaching as an activity does not always lead to learning'. This 'realisation' has led to a shift characterised as a move from 'teaching' to 'learning', and is characterised by an emphasis on student activity and 'active learning' (Chickering & Gamson 1987). In 1995, Robert Barr and John Tagg wrote an influential publication titled *From Teaching to Learning - a New Paradigm for Undergraduate Education*. In it they describe the shift from what they call an instruction paradigm, where knowledge is seen as being transferred from teachers to students and the focus is on covering content, to a learning paradigm, where the role of the teacher is to facilitate students in constructing their own knowledge and the focus is on student learning and understanding. Similar arguments are also put forward by Biggs and Tang (2011) and their emphasis on 'active' rather than 'passive' learning activities as part of their model of 'constructive alignment'. Such arguments are used to draw a distinction between 'instructivist' pedagogies, understood as premised on direct instruction or didactic methods and focused on the transmission of content, and constructivist pedagogies, which encourage active engagements (see Porcaro, 2011). These arguments draw on constructivist theories, but in ways which present constructivism as an agreed pedagogy rather than a diverse collection of theoretical approaches.

The emphasis on 'active learning' and 'doing' is frequently tied to a concern with predefined learning outcomes and 'aligning' learning activities to build towards those predefined outcomes. Barr and Tagg (1995, p. 10) write that under a 'learning paradigm', the choice of 'means' (activities, lectures etc.) is not fixed but the 'ends' (outcomes) are, 'allowing the means to vary in its constant search for the most effective and efficient paths to student learning'. Biggs and Tang (2011) emphasise the importance of 'constructive alignment', which comprises alignment of (1) learning outcomes, (2) activities designed to develop those outcomes, and (3) the assessment of the learning. This, Biggs and Tang note, is a form of outcomes based teaching and learning. They note that the intention is about making the intended outcomes as explicit

as possible, whilst 'always allowing for unintended but desirable outcomes' (2011, p. 11). They emphasise the importance of using outcomes to encourage a 'deep' rather than 'surface' approach to learning and to 'activate' learning activities which require high cognitive level (such as reflecting, theorising and applying) rather than only those which require lower cognitive levels (such as memorising and recalling).

Within these arguments, there is a tendency to downplay or set aside the role of formal knowledge within education. Curriculum, in terms of what is taught, is typically taken for granted, and seen as unproblematically able to be transferred into a new form, with the transformative effect of incorporating 'active learning' approaches or reconfiguring courses around learning outcomes about *clarifying* or *refining* what was truly important within a given course, rather than potentially changing that.

The emphasis on alignment, outcomes and activity within higher education debates has become almost 'common sense'. Clegg (2009, pp. 407-408), for example, has analysed the dominant discourse within the field of academic development, and suggests that the discourse surrounding this field has emphasised student voice, polarised understandings of instructivist teaching compared with constructivist approaches, and 'common-sense views about the orientations of academics and poor teaching'.

In response to these dominant ways of approaching learning and teaching in higher education, concerns have been raised with the ways in which these issues are framed. As part of these critiques, a number of scholars have pointed to issues with the ways in which the concept of constructivist learning has been taken up in higher education. Gert Biesta, in particular, criticises 'the rise of new theories of learning that have put emphasis on the active role of students in the construction of knowledge and understanding and the more facilitating role of teachers in this' as part of what he terms the 'learnification' of education. Biesta (2014) is critical of the ways in which the learning theory of constructivism has been taken up as a pedagogy within university classrooms, arguing that such a shift has transformed educational practice and radically changed common perceptions of what teaching comprises, discrediting didactic (or 'instructivist') teaching approaches in ways which are problematic. His concern is that in the focus on student activity, constructivism appears 'to have given up on the idea that teachers have something to teach and that students have something to learn from their teachers' (2014, p. 46). Biesta (2010, p. 3) discusses the example of constructivist

pedagogies premised on collaborative learning where the role of the teacher is as facilitator and classrooms are activity and discussion centred. He comments that although this form of teaching can be positive in some situations (where the aim is to have students explain their views to others to demonstrate understanding for example), in others it may be detrimental (for example in situations where the aim is the mastery of a complex skill). Biesta (2010, p. 4) argues:

> Whether collaborative forms of student activity are to be preferred therefore entirely depends on the purpose of the activity, that is on the outcomes that are considered to be educationally desirable. It is only when we are able to say something about the latter question than we can begin to make decisions about how we might want to achieve what is aimed for.

While the work discussed above (e.g. Barr & Tagg, 1995; Biggs & Tann, 2011) emphasises the importance of the role of the teacher in determining the most appropriate method for teaching particular content and ensuring pedagogical approaches are 'fit for purpose', Biesta's concern is that the uptake of these arguments within universities (and schools) tends to discount this. In line with Bernstein's (1976) emphasis on the complex relations between curriculum, pedagogy and assessment as 'message systems' of education, Biesta (2010, p. 36) argues that 'the means [i.e. pedagogy] we use in education are not neutral with regard to the ends we wish to achieve [but] contribute qualitatively to the very character … of the goals which they produce'.

Sjøberg (2010, p. 485) similarly points to the issues of precision in relation to what 'constructivist' teaching looks like and the ways the term is used. He writes:

> Many critics say that the label constructivist teaching is used by many authors as more or less synonymous to any teaching that is somewhat child-centered, caring, inclusive, or based on enquiry, discovery, or any kind of active involvement from the learners. The literature abounds with lists of aspects that characterize constructivist classrooms, teachers, curricula and assessment. Most of these articles and books have a low precision on the definition of the term but they all seem to associate the term with something unquestionably positive.

Sjøberg suggests that although the term constructivism captures a diversity of traditions, there are some points of commonality. He defines these common tenets as:

1. Knowledge is actively constructed by the learner, not passively received from the outside. Learning is something done by the learner, not something that is imposed on him.
2. Learners come to the learning situation (in science, etc.) with existing ideas about many phenomena. Some of these ideas are ad hoc and unstable; others are more deeply rooted and well developed.
3. Learners have their own individual ideas about the world, but there are also many similarities and common patterns in their ideas. Some of these ideas are socially and culturally accepted and shared and are often part of the language, supported by metaphors, etc. They also often function well as tools to understand many phenomena.
4. These ideas are often at odds with accepted scientific ideas and some of them may be persistent and hard to change.
5. Knowledge is represented in the brain as conceptual structures and it is possible to model and describe these in some detail.
6. Teachers have to take the learner's existing ideas seriously if they want to change or challenge these.
7. Although knowledge in one sense is personal and individual, the learners construct their knowledge through their interaction with the physical world, collaboratively in social settings and in a cultural and linguistic environment.

(Sjøberg, 2010, p. 486)

Here, Sjøberg highlights that constructivist theories commonly emphasise the importance of ensuring teaching engages with students' own pre-conceptions and understandings. However, he also suggests that constructivist theories of knowledge and learning provide little clarity regarding what teaching should look like in practice. As a collection of diverse theories of knowledge, constructivism raises questions about whether teaching should begin by working directly from a particular problem rather than pre-defined underpinnings, and about the relative emphasis to be placed on what the learner does. However, while some associate constructivism with problem-based learning and a greater attention to student activity, there is little clarity on what constructivist teaching should look like in practice. As Sjøberg (2010, p. 489) argues, constructivism as 'a set of principles for learning does not directly translate into a set of

recommendations for good teaching' as 'one cannot locally deduce a scientifically based pedagogy from a theory of learning'.

Additionally, as Gerwitz and Cribb (2009, pp. 129-130) point out, within the realisation of constructivist approaches, 'educators have to find a way of drawing a line between supporting students' perspectives and identities and challenging students' identities where these seem to be based on and reinforce misconceptions about reality'. Labelling particularly pedagogies as 'constructivist' does not resolve the critical teaching issue of striking the balance between supporting students to develop their own understandings and aligning those understandings with the knowledge base of the course.

Others further raise issues with the outcomes-orientation of learning and teaching in higher education, and its tendency to position curriculum in ways which align with technical-rationalist approaches and their emphasis on rational curriculum development via the formulation of explicit educational objectives (e.g. Tyler, 1949). In heralding a prescriptive approach to curriculum, such work is seen to produce a sense of what Barnett and Coate term 'curriculum-as-product' (Barnett & Coate, 2005; Coate, 2009) in that it positions curriculum – and therefore knowledge – as something settled and predetermined prior to teaching. According to Goodson (2008, p. 125), this framing of curriculum 'develops from a belief we can dispassionately define the main ingredients of the course of study, and then proceed to teach the various segments and sequences in systematic turn'. Goodson suggests that a prescriptive, outcomes-oriented approach to curriculum presents core curriculum knowledge as settled and unproblematic, obscuring the complex and ongoing contestations that make up curriculum development. Rational, outcomes-based approaches to curriculum development have also been criticised for neglecting the ways curriculum is developed and negotiated within teaching spaces and for failing to account for the complex and unpredictable outcomes of learning (Brady & Kennedy, 2007; Connelly, He, & Phillion, 2008; Harris-Hart, 2009; Stenhouse, 1975). According to Coate (2009, p. 85), 'the language of learning outcomes, which has become highly specialised in some curriculum frameworks, could be seen to be reductionist and overly goal oriented'.

Others have also criticised the ways in which such approaches define learning and achievement in limited ways that impede the development of different forms of knowledge, and privilege measurable over non measureable outcomes (e.g. Biesta,

2009; Coate, 2009; González Arnal & Burwood, 2003; Karseth, 2008; Muller & Young, 2014; O'Donovan, Price, & Rust 2004; Shahjahan, 2013; Sweetman, Hovdhaugen, & Karlsen, 2014). González Arnal and Burwood (2003), for example, argue that such developments lead to an emphasis on codifiable, explicit and publishable forms of knowledge (valued in the 'knowledge society'), potentially at the expense of more tacit ways of knowing developed through prolonged study within the disciplines.

Collectively, this work points to the ways in which different curriculum constructions cannot be assessed or 'good' or 'bad' or even 'better' or 'worse' irrespective of purpose and content of the educational context in which they are situated, as well as the ways in which different configurations can give rise to both positive and negative effects. The attention to students and what they are doing, for example, can have positive effects on student engagement, but it can also obscure the other important considerations that are the subject of this research.

In summary, discussions of university teaching have been dominated by arguments for both constructivist and active learning pedagogies on the one hand, and outcomes-based approaches to curriculum development on the other. The dominance of these perspectives raise some particular issues for curriculum in higher education. In particular, they have meant the what of curriculum and the unintended effects of new approaches to curriculum and pedagogy have tended to be unexamined. This research aims to counter these issues, and in doing so bring new perspectives to understanding university teaching.

Digital technologies and their implications for knowledge

The literature review to this point has focused on the question of 'what counts as knowledge?' and the ways this question has been formulated in relation to curriculum and teaching in higher education and the kinds of literature and debates it emerges from and intersects with. Here, I turn to the 'new forms of online learning' portion of my research question, and the ways in which the questions raised to this point in the review have been considered in relation to digital technologies and their implications for education. The review focuses on arguments which have salience for how knowledge is understood or curriculum constructed, rather than wider questions concerning how students learn online or how they engage with new technologies.

Democratisation, constructivism and potential

As flagged earlier, debates about the implications of new digital technologies for knowledge and education are widespread and many of these arguments connect with the concerns noted in relation to the knowledge society and new ways of working discussed above. Many argue that digital technologies are driving new ways of producing and disseminating knowledge. These arguments are evident within popular popular texts (e.g. Anderson, 2007; Weinberger; 2011) as well as a range of academic fields including new media and internet studies (Benkler, 2006, 2008; Poster, 2006), educational technology (Cope & Kalantzis, 2009; Davidson & Goldberg, 2010; Brown, 2002; Weller, 2011), educational philosophy (Kelly, Luke, & Green, 2008; Lankshear, 2003; Lankshear, Peters, & Knobel, 2000; Peters, 2007; Peters & Britez, 2008; Peters & Roberts, 2012; Peters 2016) and higher education (Land, 2011; Lanham, 2002). These works differ in terms of their purposes and intended audiences, but broadly they share a common contention that digital technologies have significant and destabilising implications for academic practices, for the traditional organisation of knowledge, and for how students learn and should be taught. Collectively, they suggest that digital technologies are democratising knowledge production and destabilising hierarchical authority relations and that because digital technologies promote 'openness' and lack defined hierarchies, they enable and promote participatory forms of knowledge development and exchange. Such arguments draw on a view that the 'networked information environment' (Benkler, 2006) of the internet has enabled a radical decentralisation of the physical capital necessary for the production and distribution of knowledge. These new capacities are seen to undermine 'the university's position as *the* gatekeeper to the world of knowledge' (Cornford & Pollock, 2003, p. 2).

Writers such as Cope and Kalantzis (2009), Lanham (2002), Land (2011), Lankshear, Peters and Knobel (2000) and Peters (2007) also point to the transformative implications of online environments for fundamental notions of textual stability, academic authority, literacy and approaches to academic writing. They suggest the radical openness of the online environment is directly confronting the stability assumed by scientific knowledge work. Land (2011, p. 61) for example writes:

> The nature of academic knowledge is inevitably being transformed in the digital university […] As the media through which learning activity is conducted move

> increasingly from the printed text to the digital forms enabled by internet-based technologies, learners and their tutors are implicitly asked to confront some quite fundamental notions concerning textual stability and the nature of academic knowledge. By destabilising and seemingly 'disordering' the academic text, digital media enable new forms of academic discourse, literacy and knowing to emerge.

These arguments have been linked to the debates about disciplines and forms of knowledge discussed above. Michael Peters, in particular, has considered the potential of digital technologies, new forms of open scholarship and open education for knowledge practices across numerous texts (e.g. Lankshear et al., 2000; Peters, 2007; Peters & Britez, 2008; Peters & Roberts, 2012; Peters, 2016). In the book *Knowledge economy, development and the future of higher education*, Peters (2007, pp. 179-180) writes:

> The new communications environment has the power to reshape the university as a networked environment, allowing the emergence of radically decentred forms of social nonproprietarian and nonmarket models of academic production and exchange, alongside market and property forms, that will transform cultural production in general and the concepts of readership, scholarship and authorship that have ruled the academic economy. In the process these changes will also alter the concept of the disciplines, disciplinarity and its cognate concepts of inter- and multdisciplinarity. The university after the disciplines and before the new world economy is caught in an epic struggle between a neoliberal construction of knowledge capitalism […] and peer production of information, knowledge and culture exemplified in the convergence of open source, open access and free science movements.

Like Land (2011) and others, Peters emphasises the 'radical decentralisation' of digital forms of production and exchange. He sees these as offering an alternative to current trends to commercialise knowledge production and as enabling more permeable boundaries that work against the organisation of knowledge along disciplinary lines. These arguments suggest digital technologies are destabilising academic practices, and connect with the popular view that higher education is being 'disrupted' by new technologies and by the abilities of new players to compete online within a global

higher education marketplace (e.g. Barber et al., 2013; Christensen & Eyring, 2011; Christensen et al., 2011).

Related to these arguments, others have claimed that as knowledge becomes more ubiquitous and collectively produced via digital technologies, education should focus less on 'what' is learnt than on 'how' learning occurs (e.g. Brown, 2002; Brown & Adler, 2008; Conole, 2013; Davidson & Goldberg, 2010). Over the past half century, the volume and quantity of knowledge has proliferated and the pace of knowledge production accelerated, and this is seen to have significant implications for curriculum and teaching. In their book *The Future of Thinking Institutions in a Digital Age*, technology scholars Davidson and Goldberg (2010, p. 27) argue:

> Institutional education has tended to be authoritative, top-down, standardised, and predicated on individuated assessment measured on standard tests. Increasingly today, work regimes involve collaboration with colleagues in teams. Multitasking and overlapping but not discrete strengths and skills reinforce capacities to work around problems, work out solutions, and work together to complete projects. Given the range and volume of information available and the ubiquity of access to information sources and resources, learning strategy shifts from a focus on information as such to judgment concerning reliable information, from memorizing information to how to find reliable sources. In short, from learning *that* to learning *how*, from content to process. [emphasis added]

Davidson and Goldberg advocate for a decentred pedagogy based on collective checking, inquisitive scepticism and group assessment, which validates knowledge sources such as Wikipedia which are developed collectively and collaboratively. In contrast to 'individualized learning' and its emphasis on competition and hierarchy, they argue for 'networked learning' and a focus on cooperation, partnering, and mediation.

John Seely Brown (2002) likewise suggests that the ubiquitous use of digital technologies by students is leading to a range of shifts in learning including from forms which are authority based – 'being told' – to learning which is discovery based and experiential and a shift in reasoning from linear deduction to lateral judgement. He

points to a shift from learning by receiving information to 'learning *in situ* with and from each other' (Brown, 2002, p. 72). He argues:

> Learning becomes situated in action; it becomes as much social as cognitive. It's concrete rather than abstract, and it becomes intertwined with judgement and exploration. (Brown, 2002, p. 72)

These arguments, which are positioned within situated learning theory, also connect with debates about 'connectivism' which inspired the original iterations of MOOCs termed cMOOCs (e.g. Bates, 2015; Siemens, 2005), and understandings of knowledge as produced via networks and flows and within interactions (e.g. Castells, 1996). Drawing on these perspectives, Conole (2013, p. 2) argues that learning today 'is no longer about knowing facts and procedures, but more about being able to locate and use information on a needs basis' and 'the literacies needed to communicate with others and make sense of information'.

Within the broader educational technology literature, similar arguments are also tied to a promotion of constructivist pedagogies, and a framework which positions digital technologies as aligned with student-centred and constructivist forms of teaching. Constructivist theories of knowledge and learning have had a considerable impact on the framing of online programs and have dominated the field of educational technology since the 1980s (Chen, Maton, & Bennett, 2011; Czerniwicz, 2010; Selwyn, 2011). Digital technologies and online learning environments are often associated with constructivist forms of learning in their ability to situate learning within collaborative and supportive social contexts (e.g. Luke, 2003). Selwyn (2011, p. 26) writes 'digital technologies such as the internet fit neatly with the constructivist view that learning often best takes place as a social process of collective knowledge construction'. Seymour Papert's (1980) work on 'constructionism' and the importance of providing spaces for students to build and create within digital environments has been particularly influential. Beyond this, interest in constructivism has also inspired a focus on 'doing' and 'active learning' within online and technologically-enabled teaching environments. As with the literature on university teaching, in these arguments constructivism is predominantly positioned as an agreed pedagogical approach which emphasises collaboration and interaction. There is little sense of the diversity or contestations evident within constructivist debates discussed earlier in this review.

In summary, four main arguments about the implications of digital technologies for the question of 'what counts as knowledge' tend to dominate the literature. These are (1) that digital technologies enable new participatory forms of knowledge development, (2) that the ways in which these destabilise hierarchical authority relations and defined boundaries move knowledge production away from disciplinary forms, (3) that as knowledge becomes more ubiquitous education should focus less on 'what' is taught than 'how' students engage with that knowledge, and (4) that digital technologies enable and promote more 'constructivist' forms of teaching and learning.

The problem with these arguments is that they focus on the *potential* of new technologies for destabilising academic practices, with very limited engagement with current practices beyond the selective discussion of particular online initiatives (such as Wikipedia, or open source practices, or open educational resources). The work discussed in this section tends to focus predominantly on the possibilities enabled by new technologies and see those as potentially facilitating new forms of authority. But in general, writing of this kind tends to discount or see as irrelevant the embeddedness of dominant authority structures. Moreover, considerations about the *substance* of that knowledge and what open and collaborative processes might mean for that tend to be little considered beyond broad pronouncements of interdisciplinarity.

The focus on potential in relation to the use of digital technologies in education has been criticised by a number of scholars. Selwyn (2011, p. 474) argues that popular and academic discussions of technology use in education are 'accompanied by a range of exaggerated expectations and promises of substantial improvement and transformation' which 'contrast sharply with what is known about the many social complexities and compromises of school technology use *in situ*' (see also Gilbert, 2007). As Laurillard (2008, p. 1) writes in a critique of claims about the transformative educational potential of new technologies, 'education is on the brink of being transformed through learning technologies; however, it has been on that brink for some decades now'.

In relation to arguments about an alignment between constructivist pedagogies and online learning, Selwyn (2011, p. 80) further writes that 'while these theories may provide powerful explanations of how technologies *could* be designed and used to support, enhance and even improve learning, they do not always provide realistic accounts of how technologies are actually being used to support learning'. Chen (2010,

p. 11) similarly writes, 'the literature on online flexible learning has been dominated by conceptual articles discussing what online learning *should* be, how it *should* be practiced, and its *potential* educational benefits', with much of the literature linking online learning to student-centred or constructivist instructional approaches. She argues that advocates of incorporating digital technologies in teaching tend to position online flexible learning and constructivist-inspired pedagogies as aligned by their common attention to student-centredness without considering the complexities of these relations. Larreamendy-Joerns and Leinhardt (2006) further point out that social interaction does not inevitably result in reflective learning and co-construction of knowledge and that, although online learning environments that allow for social interaction constitute a remarkable advance, they should not be construed as inevitably conducive to learning nor obviously consistent with a vision of knowledge as practice. They argue that the design of online environments should be primarily dictated by an understanding of the epistemic and discursive practices that constitute disciplinary communities, and not by pedagogical considerations and technologies that short-circuit the engagement of students.

An additional problem with much of broader literature on educational technology and online learning is that it tends to engage too little with broader issues, and focus too little on the contexts in which educational technology use is situated. Nespor (2006) argues much of the research into online learning in higher education foregrounds the imagined potentials of machines and there has been a neglect of social milieu and history. This, he suggests, encourages a style of inquiry which treats teaching as the work of an individuated actor and a local and segmentable process 'involving this bounded actor delivering stable bodies of decontextualised content that supposedly means the same thing across situations and uses' (Nespor, 2006, p. 4). According to Nespor (2006, p. 4), as a result work of this kind 'ends up being about the sectioned-out experiences of students or professors – tasks or courses abstracted from everyday activities and the constellations of tasks and courses taught or taken before, after or simultaneously'. Findings are therefore either generic or specific to unusual use of technologies which slices out the political contexts that drive (or inhibit) particular pedagogical agendas and the assumptions about knowledge and teaching that shape course materials.

As a result, the kinds of considerations raised in previous sections around knowledge and the ways curriculum is constructed tend to be neglected. A number of scholars have argued that research into educational technology needs to engage more with questions of purpose and of curriculum (e.g. Facer & Sandford, 2010). Lanham (2002, p. 176) suggests that, while there is significant appreciation that the *how* of academic teaching and inquiry has indeed changed as a result of digital technologies, 'the *what* of teaching and inquiry has changed far more fundamentally has scarcely risen above the horizon of our awareness'.

Managerialism, academic labor and technological constraints

Alongside the dominant arguments about the implications of digital technologies for knowledge and its teaching, there is also a strand of literature which has critiqued the use of technology by university management and raised concerns with the ways in which knowledge is framed as part of these developments (Clegg, Hudson, & Steel, 2003; Nespor, 2006; Peters, 2016; Selwyn, 2011; Shumar & Wright, 2016).

This work has criticised the limited ways in which technology is used in higher education, and the tendency for it to be deployed in ways which focus on more efficient ways to transmit content, rather than in terms of its ability to enhance and facilitate student engagement. Selwyn (2007), for example, argues that digital technologies are primarily used in higher education for 'information-giving functions'. Critiques of institutionalised xMOOCs have also drawn attention to their 'neoliberal 'learning as information' model' (Shuman & Wright, 2016, p. 3), including in terms of differences between these institutionalised MOOCs and other connectivist inspired forms (e.g. Bates, 2015). Rhoads, Berdan and Toven-Lindsey (2014) argue that institutionalised MOOCs reify and commodify knowledge and align with wider educational reforms driven by neoliberal ideology. Knox (2013) has similarly argued that the wider open educational reform movement rejects the university's pedagogical role and the place of the teacher in education.

In opposition to the argument that the 'open' nature of virtual learning environments and management information systems works to democratise and decentralise the organisation of schools, Selwyn (2011) points to the importance of focusing on the ways such technologies are taken up within educational settings and the ways in which established hierarchies are mediated through rather than stabilised by them. He argues

that the use of educational technology 'usually appears to be a case of 'more of the same' rather than distinct change or improvement' and is frequently associated with 'the continuation and perpetuation of many existing and deeply entrenched patterns' (Selwyn, 2011, p. 174). Bayne, Knox and Ross (2015, p. 248) have also argued that assumptions about openness in online learning have 'too often assumed that institutional structures, financial constraints and distance are the online issues preventing the instinctive and effortless uptake of self-directed learning' and that the uncritical championing of openness has failed to adequately analyse educational closures and hierarchies.

Related arguments also point to the ways in which managerial attention to online learning in higher education is frequently connected with economic rather than educational concerns. Shumar and Wright (2016, p. 3) argue that while digital technologies might potentially be used to enhance opportunities for interaction and communication, they are also frequently framed in neoliberal terms, 'as a form of capital that can be efficiently transferred, measured and validated' and where the possibilities for new technologies are positioned in relation to the ability to deliver course content at low cost. They suggest that the language used in online learning more frequently pertains to the latter, emphasising learning outcomes and data rather than student interactions and co-constructions. Within the USA, David Noble (2001) has also critiqued the rise of 'digital diploma mills' and the use of online technologies to reduce labor costs in teaching. In relation to MOOCs in particular, Peters (2016) has argued that MOOCs are part of a growing digital political economy and raise questions about automation and deskilling in academic labor.

Such concerns have also been linked to issues of 'unbundling'. This term refers to separation of delivery activities from the instructional role and a redistribution of educational responsibilities to staff with different kinds of expertise (such as learning designers, technologists and academic advisors) (Neely & Tucker, 2010). This process is premised on the idea that specialisation improves both the quality and cost effectiveness of learning and that educational functions are more effectively developed and delivered separately by specialist staff, rather than subsumed under the one (academic) role. These forms of unbundling are evident both in relation to MOOCs and other forms of online learning (e.g. Australian Trade Commission, 2013; Barber et al.,

2013; Yuan & Powell, 2013) as well as to a lesser extent in the increased employment of sessional academic staff with responsibilities for tutoring but not curriculum development (Kezar, Gehrke, & Maxey, 2014).

In opposition to the arguments about constructivism and the like discussed in the previous section, a number of scholars have pointed to the ways in which the ways in which technology is used in university settings also has the potential to constrain students and teachers' knowledge practices. In her study of online design teaching, Nottingham (2014, p. 100) writes 'when online assignments are written instead of spoken, they become more 'fixed' (Fenwick & Landri, p. 2012) assemblages, affording less opportunity for negotiation and change'. Land and Bayne (2002) and Ross (2011) similarly argue that the fixity and retrievability of online spaces binds students to their past actions and discourages them from risk-taking, experimentation and the expression of uncertainty. Others have also highlighted the ways in which managerialist pressures on academic staff to incorporate new technologies also constrain pedagogic practices (Clegg, Hudson, & Steel, 2003).

As Selwyn (2011) argues, 'technology' comprises both social and technical aspects, including the ways technologies are designed, the ways they are taken up within practices, and the social arrangements and organisational forms that surround their use. The use of technology in education is therefore not 'neutral' but should be considered in terms of 'the limits and structures that it imposes as well as the opportunities that it may offer for individual action and agency' (Selwyn, 2011, p. 9). Selwyn (2011, p. 9) writes, 'even what may appear to be the most 'transformatory' technology can end up limiting the choices and opportunities that some individuals possess' and that 'it is important therefore to recognise that educational technologies do not *always* change things for the better'. As a result, he argues there is a growing need for critical social research that explores the realities of institutional technology use within educational settings and the practices and attached meanings that surround them. This research is designed to engage with these questions.

In summary, research considering questions of knowledge and curriculum in relation to digital technologies and online learning has been overly focused on interpretations of the potential for new technologies to transform practice, and research interested in the reality of technology use in education has focused too little on issues of curriculum,

knowledge and the wider context in which that use is situated. Research considering technology in relation to managerial practices offers some important insights for considering these questions, and the ways in which such technologies are primarily less transformative than they are being co-opted to serve managerial purposes.

Conclusion

In this chapter I have introduced literature and concerns which intersect with the question of 'what counts as knowledge in new forms of online learning?', and the ways in which these discussions have informed and been taken up within my research.

The chapter has identified curriculum as both a key site of struggle over the question of what counts as knowledge and an area which has been under-examined in relation to higher education. It has outlined the understandings of curriculum and curriculum policy which informed this thesis, drawing on concepts and theories from the fields of curriculum inquiry and policy sociology. In doing so, it has highlighted the contested nature of curriculum, and identified the project's interest in both the underlying principles and assumptions about educational knowledge which shape curriculum within policy and practice, and the effects and implications of particular ways of constructing curriculum.

The chapter has reviewed prominent debates and ways of thinking about knowledge today, including in terms of long held distinctions between disciplines and professional fields in their orientations and purposes. It has shown that the role disciplines and professional fields play in the formulation of curriculum today is subject to debate, with signs that new agendas are potentially destabilising those traditional divisions and orientations. In the case studies, these interests in disciplinary and professional forms of knowledge will be brought to bear to explore the extent to which curriculum development in different kinds of institutional contexts is oriented towards these different traditions.

The chapter has also considered the rise of constructivist theories of knowledge within education and more broadly. It has highlighted the diversity of concerns such theories embody as well as their potentially problematic effects in decentring attention to the role of formalised knowledge in education.

Building on these claims, the chapter has shown that discussions of university teaching have been dominated by arguments for both constructivist and active learning pedagogies on the one hand, and outcomes-based approaches to curriculum development on the other. It has suggested that these perspectives raise some particular issues for curriculum in higher education and have meant that questions around what is taught and the unintended effects of new approaches to curriculum and pedagogy have been neglected.

In relation to online learning in particular, the chapter has highlighted concerns with the ways in which new technologies are assumed to encourage and enhance more constructivist teaching practices, and underscored the need to focus on the reality of how technologies are taken up within universities rather than the potential ways in which they might be used. It has criticised the ways in which arguments about the implications of digital technologies have focused too strongly on the latter, and overlooked questions about the effects of new technologies on the 'what' of curriculum.

These bodies of literature suggest questions for this thesis about what is being constructed as knowledge in higher education today, and the implications of the repeated rhetorical attention to constructivism as a key driver of teaching reforms. One set of questions the thesis will pursue then are empirical ones about whether and how far the policies and changes are taking the forms the literature alludes to. A second set of questions are conceptual ones, about whether the directions being taken do have the kinds of implications and problems touched on in the critical literature.

Overall, this discussion has highlighted the level of contestation and debate around the question of what counts as knowledge, both in relation to both online learning and more broadly. It has also drawn attention to the silences and assumptions evident within particular arguments and bodies of literature. In doing so, this chapter has underscored the importance of the project research question, both at a conceptual level and in relation to the current practices and directions of universities.

Chapter 3: Methodology and research design

In the previous chapter, I discussed the location of the research question 'what counts as knowledge in new forms of online learning' in relation to a range of different bodies of literature located within curriculum inquiry, policy sociology, studies of higher education, the sociology of knowledge, and educational technology and online learning. In this chapter, I discuss my research design and the way I approached this question via an interview and documentary-analysis based study of new online initiatives at two institutional sites and the subjects being developed within them. This chapter outlines the rationale behind this study design and the details of the cases selected and the research process. It discusses the broad methodological underpinnings of the approach, but focuses predominantly on the particular design of the research, following Yates' (2003) and Kemmis' (1980) characterisations of validity in interpretive research.

Overarching design and rationale

Methodologically, the research is informed by research in the fields of curriculum inquiry (Bernstein, 1976; Deng & Luke, 2008; Karseth, 2006; Yates, 2005; Yates et al., 2017) and policy sociology (Ball, 2006; Gale, 1999, 2001; Rizvi & Kemmis, 1980; Rizvi & Lingard, 2010). In both these fields, research questions are understood as including both empirical and conceptual issues, and as requiring a design and approach to evidence that is specific to the questions and context of the inquiry, rather than one driven by a particular methodological model (Yates, 2003; Kemmis, 1980; Rizvi & Lingard, 2010). Both are fields which Yates et al. (2017, p. 241) write 'must be assembled, addressed and defended discursively rather than through a template methodology'. As discussed in the previous chapter, I drew from these two bodies of literature an understanding of curriculum as contested and concerned with both big picture thinking and everyday pragmatics (Karseth, 2006; Yates, 2005), and an understanding of policy as concerned with the 'interpretations of interpretations' (Rizvi & Kemmis, 1980) and the enactments of different policy actors (Ball, 2006). Both literatures highlight the importance of focusing on the emphases and assumptions

underlying policy and curriculum-based decisions and constructions, both explicit and tacit, and these arguments critically informed the methodological approach discussed in this chapter.

The initial selection of sites and methods for the fieldwork derived from questions about 'what counts as knowledge' discussed in the previous chapter. I wanted to see the understandings and conceptions of those working in curriculum redevelopment at the policy level and at the subject level. I was interested in the borrowings, emphases, tensions and coherence evident in this thinking, and in the explicit and implicit purposes and values of the people involved. As a result I designed a project that used semi-structured open-ended interviews and document analysis, methods which allow for some insight into participants thinking and opportunities to probe further where required. (By contrast, an approach that was framed from an actor-network theory perspective, and interested in practices rather than conceptions would have used a different kind of observational methodology.) I was also interested in arguments about the pressures today on different kinds of knowledge fields, disciplinary and vocational, and hence used case-studies of different kinds of subjects to allow comparative attention to similarities and differences in emphases and concerns. And I was interested in the interactions of insitutional level policy or strategy and the work taking place on the ground, and accordingly drew on interviews and documents at both levels. In terms of analysis of my material, from the curriculum literature I aimed to see what kind of thinking was taking place about knowledge as compared with pedagogy and assessment – and how these were or were not brought together.

In this research, I focus on elements which have tended to be neglected within studies of university teaching and online learning, specifically the institutional policies and decisions to engage with the new online initiatives, the development of new curriculum materials for the new online subjects, and the thinking, assumptions and practices of the policy leaders and lecturers informing that work. In contrast to the majority of research on university teaching and educational technology, the research takes 'curriculum' rather than 'pedagogy' as a starting point (Yates, 2009), focusing primarily on what substantively is being developed as knowledge within an educational program and the assumptions and contradictions that are part of that, rather than concerns about how effectively student learn. In relation to the new online initiatives, the interests of this

project are in the practices and understandings that surround the use of the new platforms, rather than the technological affordances of the platforms themselves (Selwyn, 2011). The approach is not designed to capture every element of what might be considered relevant to online learning in higher education, but to take up some particular angles on this which tend to be sidelined in prominent ways of thinking about university education and where it is heading. It is intended to engage with both the assumptions about knowledge evident and the implications of the directions of universities today in respect of teaching and curriculum.

Methodological framing: interview and document-based case study research

The research methodology comprised a qualitative and interpretive study of the online initiatives being developed at two institutional sites, which focused on the institutional policies informing those initiatives and case studies of selected subjects being developed as part of them. It included interviews with policy leaders and lecturers and analysis of policy and subject materials and was designed to capture the thinking and assumptions at work within the new initiatives and selected subjects. The focus was on the ways in which curriculum and knowledge are thought about, structured and practiced, and the constraints and possibilities that are part of that, both at the level of policy development and at the level of academic practice.

The research was sociological and interpretive in its design. It was not driven by a particular 'top-down' theoretical or theory-testing approach nor by a 'bottom-up' grounded theory approach but by the kinds of particular questions raised in the previous chapter about knowledge and curriculum and the changing contexts and assumptions that are part of what universities are now doing. An interpretive approach is appropriate for such hermeneutical work because it captures the dynamic nature of priorities and assumptions and allows for attention to the particularities of what was happening with respect to curriculum and knowledge within the selected contexts.

Case studies and institutional sites

My decision to conduct small numbers of detailed case studies was intended to allow for comparison between disciplines and professional fields, between policies and practices, between online initiatives and between different institutional contexts. In this

thesis, the 'case-studies' are different sites where lecturers in different kinds of subjects are engaged in developing their online curriculum. They are understood as 'unique products of their contextual and historical circumstances' (Kemmis, 1980, p. 117), and requiring forms of comparison that is interpretive and theoretically driven. Each case-study is a limited rather than a comprehensive one, focused on the planning and thinking about the subject and modifications in this as each interacts with the constraints of the platform. In this research, my selection of the cases study subjects was designed to allow for consideration of institutional contextual differences and the possibilities and constraints of different online learning configurations as well as to capture the differences between disciplines and professional fields discussed in the previous chapter (e.g. Becher, 1989; Bernstein, 1996).

However, this choice of subjects was not tightly set up in relation to the different binaries and ways of categorising subjects (cf. Becher, 1989; Barnett & Coate, 2005) but designed to enable generative comparison across them. This was also a practical consideration. My focus on 'new' and 'novel' initiatives placed significant restrictions on what was available at the time of my study in terms of what was being developed and who was willing to be part of my study. As a result, I tried to select a broad range of subjects, but also had to make compromises in relation to that in terms of what was available and with who was willing to talk to me, in accordance with what Stake (2005) has referred to as the 'opportunity to learn' principle.

The interest in studying these different kinds of institutions, initiatives and subjects was in how 'what counts as knowledge' was being differentially or commonly represented and enacted across them. As Stake (2010) has written, within case study research, understandings are always tentative in each specific case but general insights can emerge across collections of diverse but related settings. Comparison between the cases was intended to form part of the process of moving back and forth between interpreting texts and meanings individually, as part of the whole study, and between different extracted parts of it (Yates, 2003).

The selection of the case study subjects was also informed by the principles of purposeful sampling (Patton, 2002) which involves selecting a small number of information rich subjects (in this case those developing the subjects and leading the initiatives) able to shed light on particular questions and provide thick and detailed data.

The different subjects selected were seen to allow for generative comparison but also for enough detailed and sustained attention into the particularities of each case (Stake, 2005).

Case study research is frequently categorised as more similar than dissimilar to ethnography (although there are significant differences in their genesis) as both as allow for thick data and holistic and emergent analysis (see Freebody, 2003; Kemmis, 1980; White, Drew, & Hay, 2009; Willis, 2007). This research was not an ethnography in that its remit was selective and limited, but it did employ ethnographic methods with the aim of building understanding via analysis within and across the range of different materials and perspectives gathered, and with a focus on the particular institutional contexts in which the online initiatives were being developed. The research was also oriented towards what McLeod and Thomson (2009, pp. 82-83) refer to as the 'ethnographic stance', meaning exhaustive documentation and producing thickness through 'richness, texture and detail'. This attention to detail aligns with the aims of this project and its focus on understandings and practices in a particular context.

Interviews and documentary analysis

At each institutional site, I focused on the institutional policies, the lecturers' practices of curriculum development, and the assumptions about knowledge evident across them. The design comprised interviews with the academic policy leaders responsible for the new online initiatives at each institution, analysis of policy and strategy documents and websites and detailed consideration of the development of four selected subjects, drawing on multiple interviews with the responsible lecturers and documentary analysis of the developing subject materials. The selection of this combination of interviews and documentary analysis was intended to allow for multiple points of engagement with questions about academic understandings, assumptions and intentions, and to get at the subtle and implied rationales behind particular approaches that would be difficult to examine through either singular interviews or a study focusing solely on curriculum materials or classroom interactions.

The use of both interviews and documentary sources was designed to focus on both the 'what' (form, content, structure) of the curriculum being put together and the rationale and assumptions behind the curricular and policy decisions. The approach was intended to enable both direct access to practitioner perspectives and constructions via the

interviews and indirect access to the practices and policies informing those understandings via the documentary analysis, to get at both what the participants were thinking about their decisions, and also the affordances and constraints of the context in which they were conducting their policy and curriculum development work.

Interviews are a highly popular method of higher education research (see Clegg & Stevenson, 2012) and were the primary data source for a number of prominent higher education research projects which informed this study (e.g. Becher, 1989; Barnett & Coate, 2005). In selecting interviews as a primary method, I wanted to engage with participants' agency and meaning making (Ball, 2006) in a way which allowed for enough detailed and sustained attention to the particularities of their selections and thinking. I chose to interview the lecturers on multiple occasions to allow for the issues raised in initial interviews to be explored over time and to counteract traditional academic staff reluctance to engage with curriculum issues (see Barnett & Coate, 2005).

The interviews were designed as semi-structured to include common points of departure for discussion. The purpose of interviewing is to enter into another's perspective (Patton, 2002), and the described semi-structured in-depth interview approach was intended to provide rich, detailed data (through multiple, transcribed interviews), and allow for follow-up, clarification and flexibility (Marshall & Rossman, 2006). The interviews with the policy leaders focused on the intentions behind different policies and the engagement with new initiatives, the story of how these developed and the main priorities, as well as the leader's broader perspectives on curriculum and change. The interviews with the lecturers aimed to explore four main issues: the participants' experiences re/developing the particular subject, their disciplinary orientation and face-to-face curricular practices, differences in their experiences between developing face-to-face subjects and the new online subject, and the effects of the redevelopment process on disciplinary knowledge. A sample of the questions asked for the different types of interview is provided within the Appendix. The interview approach used open questions with the aim, like Yates et al. (2017, p. 241), 'of understanding what the interviewees themselves think about and prioritise and to understand the terms in which they are thinking' rather than by direct questioning. The research was designed to capture thinking at a point of transition, acknowledging that those being interviewed come with preconceived ideas about what matters.

Semi-structured in-depth interviews have methodological limitations; participants may misrepresent their actions or shape what they say for particular purposes and their recall of experiences will be imperfect. The accounts people produce in interviews are not neutral or literal descriptions of independent social realities but are 'means by which participants make available to us and to one another versions of the state of their belief as it is appropriate to the specific interpretive occasions in which they find themselves' (Freebody, 2003, 136). Interviews can nevertheless 'provide insight into individuals' constructed social worlds and into the ways in which they convey those constructions in the particular interactional setting of the interview' (Freebody, 2003, p. 137).

In these interviews, I was interested in the ways in which policy leaders and lecturers thought about their work and what they were trying to achieve in relation to that. Although the policy leaders may have been concerned to give a sanctioned account of this, this did not present a problem for the research since my interest was in the assumptions underpinning this kind of talk, rather than relying solely on what the policy leaders said about their motivations. For the lecturers, it is less likely that the interview situation significantly altered how they would talk about their purposes and approaches, since the research focus on their teaching and my positioning as a student-researcher is likely to have been non-threatening. My use of repeat interviews also enhanced the reliability of what I was able to take away from the interviews, in seeing the commonality of what was emphasised by the lecturers at different times.

Validity/trustworthiness

Some textbooks on qualitative research seem to derive from a positivist assumption that validity is guaranteed by correspondence, or by the quantity or use of particular software. However, in this form of interpretive research, the question of whether the arguments and interpretations of this study are convincing are 'not pre-given or resolvable by methodological formulae' (Yates, 2003, p. 225). Instead, 'validity' is grounded in its relationship to the empirical evidence and the literature and its development and thinking through of different kinds of arguments in relation to that (see also Kemmis, 1980; Rizvi & Lingard, 2010). In other words, validity is not just about what is said or observed, but also what meanings and interpretations are made of this by the researcher. These meanings and interpretations are tested by the adequacy of

the evidence provided in relation to what is claimed, and also by the adequacy o the arguments within which overall claims are set.

As Ball (2006, p. 4) writes, in work of this kind 'data does not speak for itself, analysis is not simply a matter of 'revealing' structures and patterns'. Instead, meaningfulness and contribution are developed through 'multiple acts of design, comparison, reflexive interpretation and dialogue with the broader field' (Yates, 2003, p. 223). The empirical is here understood as evidence, but the question of what that is evidence *for* is understood as always under investigation (Kemmis, 1980; Yates, 2003). Case study, as Kemmis (1980, p. 136) writes, 'cannot claim its authority; it must demonstrate it'. The understandings arising from case study research are always 'provisional truths' and historically and contextually-located, but as Kemmis (1980) argues, this does not make them fabrications, nor does it make them less valuable than general theoretical knowledge (see also Flyvberg, 2011).

Empirical decisions and details: sites, cases, people

After approaching a number of different Australian universities[3], I arranged to study the new online initiatives at two different institutions[4]. The two universities were chosen to represent different kinds of Australian universities. One was a longstanding research university with considerable prestige but until recently little involvement with online learning or previous forms of distance learning. The other was a former technical college which achieved university status in the 1990s and which has continued to offer vocational education programs alongside undergraduate and postgraduate offerings. These universities are referred to by pseudonym in this thesis as SandstoneU and TechU. These pseudonyms denote the types of Australian universities identified by Marginson and Considine (2000). These writers categorise Australian universities based on when they were founded, referring to universities founded before World War One as

[3] The research was approved by the University of Melbourne Human Research Ethics Committee (approval number 1239117.1) prior to contacting these institutions. All participants were provided with Plain Language Statements approved by this Committee, copies of which are provided in the Appendix.

[4] I originally included a third university, but was not able to find a suitable subject to study at that university as the engagements with new online initiatives were only limited. I ended up setting analysis of that institution aside after a single interview with a policy leader and several interviews with one business studies academic whose engagements with the online initiative ended before his subject development had begun. Neither these interviews nor the institution is referred to in this thesis.

'Sandstones' and those former technical colleges given university status after the abolition of the binary system in 1998 as 'Unitechs'. The classification of these different university types is widely used in Australia and in the research literature, and is often associated with differences in student cohort, in university resources, and in perceived 'mission'.

Both universities selected were pursuing new policy directions in relation to online learning and were engaging with two new kinds of online initiatives, comprising MOOCs and other online initiatives which like MOOCs were offered on platforms and via entities external to the university but which unlike MOOCs were offered as part of formal university degrees. In this thesis, the four initiatives are referred to as either MOOC initiatives or as formal online initiatives, and named according to the institution at which they were located: as SandstoneU MOOC, SandstoneU Online, TechU MOOC and TechU Online. As will be highlighted in the summaries below, these initiatives all had different pedagogical affordances and were designed with different audiences in mind. The SandstoneU MOOCs platform was aligned with the 'xMOOC' categorisation and its focus on automation and content delivery, while the TechU MOOC platform had broader functionality and was used in a way that attempted to encourage more significant student interaction.

However, although the form these initiatives took was different, they all had in common a model whereby the subject content was developed by lecturers within universities but delivered via platforms external to the university, and in all but one (SandstoneU Online) the academic or lecturers were involved very little in the delivery of the subject, an approach which has been described as an 'unbundling' of the instructional (curriculum development) role from the delivery (teaching) activities (see Neely & Tucker, 2010). This model meant subject materials for all subjects were developed in full prior to being taught. It also meant that while the MOOCs initiatives differed from the others in their informal nature and 'massive' student body (Knox 2014), the lecturers involved in all but one were required to develop curriculum materials for students with whom they would have little to no contact regardless of the numbers enrolled.

The MOOCs initiatives also offered individual subjects not tied to broader programs, while the subjects offered within the formal online initiatives were expected to be taken

as part of standard undergraduate degrees. Despite these differences, the formal online initiatives were also guided by principles of flexibility and the desirability to maximise students' own subject selections, and in both there were little to no prerequisite requirements.

Overall, I arranged to study eight subjects from across these different initiatives at the two universities: four MOOCs and four formal online subjects. These included three MOOCs and one formal online subject at SandstoneU, and three formal online subjects and one MOOC at TechU. A table of the location of these subjects is provided at table 3.1.

Table 3.1: Institutions, online initiatives and subjects

Institution	**Online initiative**	**Subjects**	**Subject category**
SandstoneU	SandstoneU MOOC	Behavioural Ecology	Pure discipline (science)
		Interdisciplinary Logic	Pure discipline (interdisciplinary)
		Teacher Education (Assessment)	Applied field (education)
	SandstoneU Online	Classical Studies	Pure discipline (arts/humanities)
TechU	TechU MOOC	Online Learning Design	Applied field (education)
	TechU Online	Teacher Education (Literacy)	Applied field (education)
		Sports Management	Applied field (business studies)
		Supply Chain Management	Applied field (business studies)

I wanted to include subjects from both disciplines and professional fields at both sites but was not able to recruit any discipline-based subjects at the former technical university. This was unfortunate, but also indicative of the stronger focus on applied research at that university. Additionally, the numbers of subjects selected from each initiative were not even. This was also because of limited opportunities (only one subject was ever developed for SandstoneU Online for example) and as a result of the order in which I approached participants (beginning with the MOOCs at SandstoneU and the formal online subjects at TechU).

The participants involved in the study included two policy leaders and seven lecturers located at SandstoneU, two policy leaders and three lecturers located at TechU and three

additional learning advisors from TechU Online who were included in the study at the request of Lydia, the academic leader responsible for the online initiative. Pseudonyms are used for all participants, as well as for the selected subjects, which are named for how the lecturers developing the curriculum described their research field. A table of the 17 participants, their roles and their location in relation to the subjects included in this study is provided below. The academics I refer to as lecturers included senior, mid-career and junior academics, but I use the term lecturer in the thesis rather than academic to distinguish them from the academic policy leaders.

Table 3.2: Research participants

Pseudonym	**Institution**	**Subject**	**Position**	**Discipline / Field**
Olivia	SandstoneU	N/A – Policy leader	Senior University Management	Psychology
Kevin	SandstoneU	N/A – Policy leader	Senior University Management	Educational Technology
Ethan	SandstoneU	Behavioural Ecology	Senior Academic	Evolutionary Biology
Matt	SandstoneU	Behavioural Ecology	Senior Academic	Behavioural Ecology
Rod	SandstoneU	Interdisciplinary Logic	Senior Academic	Philosophy
Debra	SandstoneU	Interdisciplinary Logic	Mid-Career Academic	Applied Mathematics
Glenn	SandstoneU	Teacher Education (Assessment)	Senior Academic	Education/ Assessment
Miranda	SandstoneU	Teacher Education (Assessment)	Junior Academic	Education/ Assessment
Laurie	SandstoneU	Classical Studies	Senior Academic	Classical Studies/Ancient World Studies
Sarah	TechU	Online Learning Design	Senior University Management	Online Learning Design
Lydia	TechU Online	N/A – Policy leader	Senior University Management	Educational Technology
Grant	TechU	Sports Management	Mid-Career Academic	Public Relations
Tara	TechU	Teacher	Junior Academic	Education

		Education (Literacy)		
Leah	TechU	Supply Chain Management	Junior Academic	Supply Chain Management
Rachel	TechU Online	N/A – Policy leader	Professional Staff Manager	N/A
Zac	TechU Online	Sports Management and Supply Chain Management	Professional Staff	N/A
Anita	TechU Online	Teacher Education (Literacy)	Professional Staff	N/A

The empirical study was conducted between mid-2013 to mid-2014. I began by interviewing senior executives at each institution and analysing policy and strategy materials and websites, and wrote up some preliminary analysis (O'Connor, 2014) around how the new initiatives were being framed. I then recruited and interviewed the lecturers developing the selected online subjects (and where they were involved in the creation of the curriculum materials, the learning designers) at multiple points over the period of development and reviewed the subject materials where those were made accessible to me.

A total of 51 interviews were conducted with the 17 participants involved in the research. These interviews ranged from 15 minutes to over an hour in duration, with most around 40 minutes long. The interviews with the lecturers spanned only a couple of months in some cases, but nearly a year in others. For some, the participants were happy to speak on up to five occasions, for others I only managed two interviews with each of the subject developers. Some participants were happy to provide me with all their subject materials, including materials for previous on-campus related subjects; for others materials were shown to me during interviews but for copyright reasons I was unable to look at them in any depth on my own. The materials collected included all those relating to the subjects and to the online learning initiatives that were publically available (including initiative websites, promotional materials, annual reports, handbook descriptions, MOOC courseware), and those given to me as part of the research (including strategy documents, subject outlines, etc.). I approached the material available online (e.g. the institutional and initiative websites, institutional policies and

subject descriptions) in the first instance as context setting to inform my design of the interview questions, and then returned to those documents following the interviews to compare the different and similar emphases evident in what was said and what was written about that. A detailed summary of the documents collected and the interviews conducted at each site and for each subject is provided in the Appendix. All interviews were transcribed and I also conducted detailed notes following each about what was said and the kinds of questions that might raise for my research.

In my proposal, I had originally intended to focus just on curriculum development and to stop the interviews before the subjects began, as a means of enforcing the curricular rather than pedagogical lens I was proposing. However, in my first case study (a SandstoneU MOOC on Behavioural Ecology), the lecturers did not finish developing the final weeks of the subject until midway through its delivery and the conversations inevitably turned to how they were finding the subject as a teaching experience and thinking about the students taking it, the challenges emerging and how that was effecting the design of the subject. I found their reflections about how the subject was proceeding important for my research questions and decided to include a reflective interview following the delivery of the subjects where possible (although I was not able to do this with the formal online subjects from TechU as the lecturers and learning designers responsible for their development had no involvement in their actual teaching or monitoring).

In analysing these case studies, I started in the first instance with analysing the institutional policies (including both the documents and the interviews with the policy leaders), drawing (as discussed in Chapter 2) from work located within policy sociology (e.g. Ball, 2006; Rizvi & Lingard, 2010). The analysis of this context sharpened my focus and brought new emphases into the frame, including in relation to how online learning was being positioned in relation to broader teaching policies, and the ways lecturers were themselves positioned in relation to that.

As I progressed through the field work I began with analysing and examining each case individually, to do justice to what was coming out of each case without reference to how that related to what else was occurring. Following this, I started putting these summaries and analysis together in dialogue with my readings of the literature. Similarly to Ball (2006, p. 4), the approach to data analysis comprised 'worry[ing] away

at [the] materials, coding and re-coding them, arguing about them with colleagues, viewing them through various conceptual lenses, looking for links with other research, trying out interpretational possibilities for size'. Analysing the data was messy and difficult. I finished my last interview in mid-2014 and then 'worried away' at the material for the next three years (as a part-time student by that point, and allowing for a one year period of maternity leave).

In the remainder of this chapter, I turn to the details of the universities, initiatives, selected subjects and the research participants involved in this research. I introduce the two institutional sites, the case study subjects I focused on and the people I spoke with as part of the research.

SandstoneU

SandstoneU is an elite longstanding research university located in a major city in Australia. It offers a broad spectrum of degrees and subjects from across a range of discipline areas. The university is a member of the 'Group of Eight', a body comprising Australia's eight leading research universities. All Group of Eight universities are ranked in the top 150 institutions worldwide in the Shanghai Jiao Tong University (ARWU), the Times Higher Education World Rankings (THES) and the QS World University Rankings (QS) Academic Ranking of World Universities.

Teaching at SandstoneU has been primarily conducted face-to-face, with little to no engagement in earlier forms of distance learning. Most subjects use the University's Learning Management System, but this is primarily used as an administrative rather than teaching tool. More recently, however, the use of educational technologies has become more significant within the university's teaching and learning strategy and attempts have been made to encourage greater use of educational technologies amongst university staff. The university's first eLearning Strategy was developed for the period 2012-2014, following the publication of an eLearning Discussion Paper and the appointment of a new Director of eLearning in 2011.

The university was subsequently one of the first Australian universities to engage with MOOCs, partnering with a prominent USA-based MOOC platform (referred to in this thesis as SandstoneU MOOC) in late 2012. SandstoneU was one of a number of university partners and the MOOC platform arrangements were defined prior to the

partnership arrangements. The affordances of this platform are primarily restricted to video lectures, online quizzes and student directed discussion forums. For most subjects, content is delivered via video lectures over weekly time frames. Students are then tested on their knowledge of that content via weekly quizzes, and able to discuss the content amongst themselves via student-initiated discussion forums. At SandstoneU, the development of the MOOC videos tended to be highly scripted, although this was not uniformly the case for all institutional partners. The videos were primarily filmed within a studio, with the academic presenter reading from the text of their script against a backdrop of aligned PowerPoint slides.

Staff were handpicked to develop new MOOCs for the platform in the first instance, but later called to apply for funds via subsequent learning and teaching initiative grant rounds. Lecturers were provided with funds to develop these MOOCs ($30,000), but MOOCs did not tend to be incorporated as a formal component of their workload arrangements. A highly risk averse approach was also taken to copyright approvals for MOOC content which added additional workload and financial burdens.

In 2013, the university also partnered with another new online learning start-up which comprised a partnership-based consortium of universities primarily based in the USA. In response to the popularity of MOOCs at the time, this initiative (referred to in this thesis as SandstoneU Online) proposed to replicate an 'elite' teaching experience by combining asynchronous student-paced content with live synchronous online sessions in the style of a professor-led tutorial. The approach was intended to mirror a typical on-campus lecture/tutorial pedagogy and online subjects were expected to be comparable to their on-campus counterparts. The university arranged to offer one subject via this partnership in 2013 – Classical Studies, discussed further below – but the partnership was subsequently disbanded in 2014 after members of the consortium withdrew their support.

In addition to these partnership arrangements, the university has also continued to promote the use of educational technologies via learning and teaching initiatives grants, a framework of professional development activities designed to support staff in their use of educational technologies, and learning analytics research.

The policy leaders I spoke with in 2013 included Olivia and Kevin. Kevin was primarily responsible for the development of the eLearning strategy but both he and Olivia were heavily involved in the MOOC partnership arrangements. The four subjects selected for analysis at SandstoneU included three MOOCs in Behavioural Ecology, Interdisciplinary Logic and Teacher Education (Assessment) as well as the SandstoneU Online Classical Studies subject. These are discussed further below.

Behavioural Ecology

Behavioural Ecology was developed and offered as a MOOC in 2013. It was one of the first round of MOOCs offered by SandstoneU via its MOOC partnership arrangements. Two lecturers, Matt and Ethan, were responsible for developing the subject. Matt has won a number of university awards for innovation in teaching and was approached by Olivia and asked to develop a MOOC along with other recent awardees. Unlike in later rounds, the lecturers approached at this stage were not required to develop a business case for their subject but were able to select any subject they wished. Matt selected his third-year subject and asked Ethan as the subject's co-coordinator to work with him on the redevelopment. Matt and Ethan are both senior academics within the university's zoology department. Ethan was already professor and Matt was appointed professor following the development of the MOOC. While they identified their research fields somewhat differently – Matt as behavioural ecology (the title given to the MOOC) and Ethan as evolutionary biology – both agreed their research interests and understanding of their field were very much aligned.

The subject from which the MOOC derived is a third year subject taken as an elective component of the zoology major and the ecology and evolutionary biology major in the Bachelor of Science. The subject is a lecture only subject that is taken in tandem with a co-requisite practical subject where students undertake independent research in allocated groups. It has hard pre-requisites that ensure students are familiar with important concepts prior to study, including evolution, natural selection and the basics of experimental design. The subject comprises 30 lectures which are scheduled twice or thrice weekly across the semester and its assessment includes a two-hour theory exam and a one thousand word piece in the style of a news article which requires students to rewrite the findings of a scientific article in the form of an accessible popularised account. The exam questions require students to interpret data from a real research

article and answer questions about the implications of the study, why it might have been approached in that particular way and what other methods might have been available to the researchers. The second assessment is intended to develop scientific communication skills and includes a process of peer review whereby students receive feedback from each other on their drafts before being assessed by the subject coordinators. Since taking over the subject, Matt and Ethan substantially reframed the assessments to support the development of generic skills and to move away from an exam approach which they felt focused too strongly on rote testing of content knowledge.

The structure of the MOOC was taken directly from the on-campus subject, although some modification to the breadth of topics covered in the on-campus subject was made in the semester before the MOOC development began with the broader aims of the MOOC in mind. Matt and Ethan were concerned with providing a sense of their research field within the subject, including in relation to the kinds of research it does and what is valuable about that, and both emphasised their desires for the broader public to appreciate the research base behind popular documentaries as a driver behind their MOOC.

Matt and Ethan redeveloped all 30 lectures for the subject as MOOC videos, and incorporated additional introductory videos to help students understand the field and concepts such as evolutionary processes and natural selection. The videos followed the same format as the prior lectures but with less repetition and examples. The content was re-pitched at first year level, but still comprised third year level content. Matt and Ethan originally planned for a six-week long subject, but chose to expand the length to eight weeks while completing the video filming as they wanted to reduce the video load across the individual weeks. Students were assessed using weekly quizzes and a final peer review writing task. The quiz questions were able to be taken up to three times, but different questions were generated for multiple attempts. The second assessment was modelled on the written component of the on-campus assessment and required students to develop a popularised account of a scientific paper which would be assessed by their peers. The task was set at the same length as the on-campus task (1000 words), and the peer review was done by a rubric modelled on the on-campus rubric, but was less detailed and nuanced. The MOOC was also developed to include ‘researcher meets’ (via Google hangout) with different experts where students can ask questions and discuss the

subject material. The original plan was to offer one a week but Matt and Ethan decided this was too much, and ended up organising three in the final four weeks of the subject.

Matt and Ethan were happy overall with the outcome of their MOOC, but both were overwhelmed by the process and Ethan maintained a negative view of MOOCs as a teaching model overall. In total, over 45,000 students enrolled in the subject, more than 25,000 started the subject, and almost 1500 completed the assessments.

Interdisciplinary Logic

Interdisciplinary Logic was developed as part of a second group of MOOC offerings for the SandstoneU MOOC initiative, and was offered via two MOOCs in the first half of 2014. The lecturers responsible for the subject, Rod and Debra, applied for funding to develop a MOOC in late 2012, and on receiving funding proceeded with its development across 2013. Rod and Debra had originally planned to offer one MOOC, but were interested in running the MOOC in parallel with their on-campus teaching and, on advice from the learning design team managing the partnership, elected to split their subject into two MOOCs: one five-week subject on propositional logic and its applications, and one eight week subject on predicate logic and its applications.

Rod and Debra are longstanding friends and colleagues with interests in logic and its cross-disciplinary applications in their disciplines. Rod is a professor of philosophy in the Faculty of Arts whose first degree was in mathematics and statistics. Debra is a lecturer in the Faculty of Engineering with degrees in mathematics, philosophy and computer science. Both identify as ‘logicians’ but also in relation to their wider disciplinary associations.

Like Behavioural Ecology, the Interdisciplinary Logic MOOCs derived from an existing subject, in this case a first year subject available to any student completing an undergraduate degree. This subject was introduced in 2008 as part of a suite of interdisciplinary subjects (defined as comprising cross-faculty teaching involvement) which are completed by students to meet a requirement they take one semester worth of subjects outside their core degree. It differs from the other interdisciplinary subjects offered as part of this suite as its subject matter is not located around a new problem but constitutes a quasi-discipline itself, with agreed concepts and ideas that have been traditionally taught across the university within different disciplinary programs. The

subject is led by Rod and Debra but includes contributions from a number of other lecturers and incorporates perspectives from philosophy, mathematics, computer sciences, engineering and linguistics.

The subject provides an introduction to propositional and predicate logic and its use and application in the discipline areas. The subject is divided into 'core lectures' in propositional logic, following by associated application lectures in engineering (digital systems), philosophy (vagueness) and linguistics (meaning), and 'core lectures' in predicate logic, followed by associated application lectures in linguistics (quantifiers), computer science (prolog programming), philosophy (definite descriptions) and mathematics (quantifiers). The subject content develops progressively over the semester, with later concepts not able to be understood without comprehension of those preceeding them. The assessment for the subject includes homework assignments, workshop projects, a mid-semester test and an end of semester exam. The subject is primarily assessed through short answer or multiple-choice questions and the workshop projects are completed as groups. The subject's focus on the application of logic across disciplines is innovative, and different to many other logic subjects or components where logic is simply taught as skills for applying elsewhere.

After receiving the grant funds, Rod and Debra began by developing test videos on their iPads which they used in place of lectures in Semester 1, 2012, and once evaluating that experience proceeding with the development of the MOOC videos in Semester 2. The MOOCs followed the structure of the on-campus subjects as much as possible, with the primary difference being around the structure of the application areas content and the assessment. All lecturers were developed into videos and detailed supplementary subject notes were produced which covered the lecture content not able to be included. The MOOCs included all the disciplinary application areas, but allowed students to elect to complete different application areas and be rewarded for those they chose to complete. For each MOOC, they allocated 40 marks to the core area, 20 to a final assessment, 20 to the best two application areas and 10 to any additional application areas student chose to undertake. The core areas and most of the application areas were assessed via automated multiple choice questions. The final assessments and the philosophy and linguistics application areas for the first MOOC were assessed via peer review of short answer questions. For these assessments, Rod and Debra developed

detailed rubrics provided which explained what needed to be included in response to each question.

Rod declined to be interviewed following the delivery of the MOOCs but Debra was happy with the process and what the students had achieved. For the first MOOC, over 50,000 students enrolled, over 27,000 commenced the subject, and just over 1200 completed the assessments. For the second MOOC, over 25,000 enrolled, over 7500 commenced the subject, and over 400 students completed the assessments.

Teacher Education (Assessment)

Like Interdisciplinary Logic, the Teacher Education (Assessment) MOOC was developed as part of a second group of MOOC offerings and was offered as a five-week MOOC in mid-2014. The MOOC was developed by Glenn and Miranda, with support from other members of Glenn's research team. Glenn is a professor and at the time of research was the head of a large research centre at SandstoneU. His research is located within the field of assessment, which Glenn sees as located within psychometrics but also as a field in its own right. Miranda is a technology developer with a strong interest in MOOCs and their commercial potential. At the time of research Miranda was undertaking her PhD under Glenn's supervision on MOOCs. She has since completed her PhD and been appointed as head of the research centre. The MOOC development was overseen by Glenn, but heavily coordinated by Miranda, and included input from two administrative assistants and the deputy director of the centre.

Unlike the other SandstoneU subjects included in this study, the Teacher Education (Assessment) MOOC did not emerge out of a particular subject, but as a direct outcome of a large cross-country research project. This research project was led by Glenn and included input from around 50 people worldwide, nine of whom are located in Glenn's research centre. The project aimed to transform assessment and educational practice to respond to major economic and societal changes, particularly in relation to the changing nature of work and the ubiquity of ICTs. The content of the MOOC arose directly out of the research project and the MOOC was intended to meet a number of aligned objectives including raising awareness about the project.

Glenn and Miranda applied for funding from the central university to develop the MOOC as part of a round of learning and teaching initiative grants. The application was

successful, although concerns were raised with the emphasis the application placed on Glenn's research platform in place of teaching and learning objectives, and Glenn and Miranda were asked to supply further information before the funding was granted. The focus on the research project also shifted across the process of development, as Glenn and Miranda were advised that the subject needed to develop a stronger educational (rather than promotional) focus.

Prior to the MOOC, the subject material had been taught in various ways, both face-to-face and online. The project draws on an approach to assessment which the centre and Glenn have been teaching for years, and through the project five online professional development modules were developed, primarily to support teacher participants. This work informed the development of the MOOC, but new material was developed from scratch for the purpose of the MOOC, including all the assessments.

The MOOC comprised two initial weeks on the theory behind the project (in relation to the skills being taught, and the developmental approach to assessment), followed by two weeks on putting the theory into practice (on assessment techniques and developing assessment continua, and how assessment data can inform teaching), and finally a review week which includes interviews with teachers and principals on how they have used the research in their own practice. The content focused on one example of the kinds of skills assessed in the project. The video lectures were primarily scripted but also included some unscripted interviews with researchers and teachers.

The assessment included two peer assessed tasks, completed in weeks 3 and 5. In the first assessment, students were asked to write eight hundred words describing a collaborative problem-solving incident they've been involved in from their life, and then assess their own example and three other students' examples according to a developmental continuum and rubric. In the second task participants were asked to design a teaching task that would support a group of students to develop collaborative problem-solving skills, and assess their own task and the work of three others according to a rubric.

Miranda was particularly pleased with the outcome of the subject, and reported high levels of student engagement. Approximately 18,000 students enrolled in the MOOC, 10,000 of which commenced the subject and 1000 completed the assessment.

Classical Studies

Classical Studies was developed for delivery on the SandstoneU Online platform. The subject was developed by Laurie, a classicist with associate dean responsibilities for teaching and learning within his faculty. Laurie was asked by Olivia to find an appropriate humanities subject for redevelopment as humanities subjects were at the time most prominent on the platform catalogue. Finding no one willing to take on the workload, Laurie elected to redevelop his own subject. Originally, the subject was scheduled to commence in January 2014 but this was postponed when not enough students enrolled for the subject. Classical Studies was eventually offered in mid-2014 following the disbandment of the partnership consortium but will not continue into the future. The subject development occurred in late 2013 and involved collaboration between Laurie and the USA-based partnership production and support team. This was mostly conducted via Skype and email, although Laurie visited the USA at one point to film videos for the subject.

The on-campus subject from which Classical Studies derived is offered as a second-year subject with no hard prerequisites. The subject forms part of majors in Latin, Ancient Greek and Ancient World Studies, and is also taken as an elective by other Bachelor of Arts students, particularly English majors wanting to be able to recognise classical references within literary texts, and students from outside the Arts faculty with a general interest in the subject. The subject is structured thematically, comprising different weeks on themes related to the content. It is taught via a weekly 1.5-hour lecture, a weekly hour-long tutorial and set weekly readings. The assessment includes a 750-word document analysis, a research essay of 1750 words and a take home exam of 1500 words.

In accordance with the initiative design, the SandstoneU Online subject was designed to mirror as far as possible these arrangements, although some minor changes were made to the structure to fit with the 14-week semester length common in the USA where the initiative was based. (In Australia, a standard semester is 12 weeks long). Each week, students were provided with a range of online content which they were expected to review over the course of the week. This content was extensive and typically included an introductory lecture video (referred to as a monologue), followed by additional lecture videos (of between 5-20 minutes in length). These were set alongside ‘flipbooks’

of slides which included the detail needed to understand what is being said within those videos, such as the definition of key terms. Weekly readings were included within the platform and the weekly content concluded with a 'roundtable' video designed to act as a primer for the weekly live class. These 'roundtable' videos comprised a scripted discussion between the academic and two student actors leading towards core questions for which students were expected to prepare in advance of the class. In addition to the online materials, students were expected to attend synchronous online classes with their lecturer as well as interact with peers in online forums. The live classes were offered via video-link for which students would call in and be accepted into the class. They could then be allocated into 'break-out rooms' for small group discussion. There were also multiple-choice questions about the content every second week, and these were graded but the percentage allocated was minimal and the intention was more for students to be able to see if they were keeping up with the content. The remainder of the assessment mirrored the on-campus requirements.

Laurie was pleased with the development of the subject and with the quality of the materials he developed. There were issues with student numbers – in the end only eight students enrolled, one from the USA and the rest from Australia – but Laurie felt those students were given a comparable learning experience to on-campus students.

TechU

TechU is a multi-campus institution located within a major Australian city with an international campus in Asia. The university is a former technical college which achieved university status in the 1990s following the unification of the tertiary system. It continues to offer undergraduate, postgraduate and vocational education programs. The university has a strong reputation in art and design and has been ranked in the top 100 universities under 50 years old by the Times Higher Education World Rankings. Its focus has predominantly been on 'applied' rather than 'pure' research, and its disciplinary and professional offerings are less broad than SandstoneU.

TechU has been involved with online learning via Open Universities Australia (OUA), an online learning body it co-owns with six other Australian universities. In 2011, TechU also partnered with an external organisation to form TechU Online. TechU Online comprises a model of online subject development where subject content is developed by lecturers employed by TechU, and then delivered by externally employed

teaching assistants with relevant professional expertise. Subjects are offered online and students are enrolled as TechU students.

Under the partnership arrangement, each subject is developed through a collaboration between a lecturer located at TechU and a learning designer located at TechU Online. Subjects are accredited first by TechU according to normal Academic Board processes, and the preliminary information published in the subject guide relating to the subject aims, assessment, generic skills outcomes, content and reading materials is developed by the lecturer. The lecturer is also then required to confirm the subject content meets the information published in the accreditation documents in their final review of the subject. Generally, the same lecturer that writes the accreditation documents is responsible for developing the subject. The lecturer and the learning designer then work together on the development of the subject according to a set process which involves three day-long meetings – a 'blueprint session' developing the structure, an 'activity session' working out the detail of subject activities and a 'review session' finalising the materials. The development process is also supported by an educational technologist, an information specialist and a program director who is responsible for liaising with Technical University regarding the accreditation processes. Neither the lecturer nor the learning designer play any role in the teaching of the subject, but teaching responsibilities are instead allocated to externally employed online tutors. The online subjects are required to be 'equivalent', although not identical to on-campus subjects.

The initiative is informed by a particular approach to pedagogical design which aims to both engage students and acknowledge their own contributions and sense making practices. This approach is explicitly identified as socio-constructivist in the initiative's promotional materials. Subjects are developed according to a template which comprises a conventional online learning design with a standard subject menu and separate tabs for weekly pages. A single page of content summarising key ideas and expected learning outcomes is provided to students each week, which typically provides a summary of the major concepts that students would engage with that week and is embedded with weekly readings as well as pictures, videos and quizzes. The approach is explicitly against the use of talking heads in videos, lectures, powerpoints and long reading lists but is about allowing students to engage with less content material so that they meet defined learning objectives. Subjects are based around weekly learning objectives and

targeted activities which scaffold towards the assessment. All subjects are offered entirely asynchronously. Each week, students are expected to engage in discussion and interaction related to the content presented via message boards. These discussions are conducted over the week, supported by the online tutors who are required to guide the student interactions based upon the weekly activities and additional instructions from the lecturers.

Following the hype that arose around MOOCs in 2012, TechU also partnered with an Australian based MOOC platform in 2013. This platform followed a similar pedagogical structure to SandstoneU MOOC, comprising a mix of video lectures and automated quizzes. The university developed five MOOCs for this platform, but none were able to be studied as part of this research.

When Sarah, the policy leader in charge of the MOOC initiative, decided to develop her own MOOC (Online Learning Design – discussed further below) she elected to partner with a different European-based platform (referred to in this thesis as TechU MOOC). This platform was designed not just for MOOCs, but also for other kinds of subjects, and its functionality and affordances were significantly less rigid than the SandstoneU MOOC platform. The TechU MOOC platform offered a range of subject structures including 'lecture', 'guided discussion' and 'social learning'. It enabled the incorporation of creative commons content via YouTube, SlideShare and flickr, and had a range of functions including wikis (to 'promote active collaboration around subject content and group projects, as well as support social learning'), tests and quizzes, grading management tools, instant messaging, live classrooms featuring text chat, two-way audio, video, interactive whiteboard, application and desktop sharing and breakout rooms, and structured learning modules.

The policy leaders I spoke with at TechU included Sarah, the policy leader in charge of digital innovation in education and Lydia, the academic leader of TechU Online. I also spoke with Rachel, the learning design manager at TechU Online. Sarah was appointed to the university in 2012. Her responsibilities included the development of an online graduate certificate in learning and teaching and the broader use of educational technologies in teaching, as well as the administration of the TechU Online, MOOCs and OUA partnerships.

The four subjects I selected for analysis included three TechU Online subjects in Sports Management, Supply Chain Management and Teacher Education (Literacy), and Sarah's Online Learning Design MOOC. Relationships between TechU Online and academic staff at TechU have at times been fraught. The TechU subjects were those the policy leaders were happy for me to study and included those where the relationship had been previously tested and the development had been seen to go well. All were new subjects, rather than those being developed from existing on-campus subjects.

Sports Management

Sports Management is a second-year subject typically taken by students completing a Bachelor of Business specialising in Sports Management. Within this stream, students must take a suite of eight Sports Management subjects, including this subject, as well as eight core business subjects and eight elective subjects. The Sports Management units are only offered online and have been developed particularly for teaching via the partnership arrangement. No equivalent subject is offered on-campus and the subjects have been from scratch by allocated staff. This subject was developed in mid-2013 and first offered in the third trimester of that year.

The subject was developed by Grant, the TechU discipline leader for public relations and advertising, and Zac, a learning designer at TechU Online who also worked on the Supply Chain Management subject. Grant has taught across the undergraduate levels and has developed curriculum for fully online subjects taught through TechU Online, OUA and for blended delivery. He was responsible for the development of all four Sports Management subjects for TechU Online.

The subject was structured into 12 weeks. It included an introduction week which defined sports marketing followed by themed weeks on sports consumers and segmenting within the industry, sports objectives and communication (i.e. the marketing planning process), sports products, sports pricing and market research, promotional strategies, advertising, sponsorship and branding, public perception and reputation management, and new media and interactivity. The final week was primarily dedicated to revision but included some discussion of the future of sports marketing. The first 11 weeks all included at least one case study, each of which comprised content that is either based on a contemporary media report or interviews with industry contacts.

Grant's decisions about content were highly informed by advice he received from industry contacts and by the structure of key textbooks in the field.

Each week, the students were provided with weekly readings and a selection of case study resources. The readings were typically 1-2 chapters taken from a single textbook, while the case studies were typically non-academic texts but included examples of marketing plans, advertisements or similar documentation from particular businesses, as well as newspaper or magazine articles or videos about particular issues. They were also required to complete a weekly activity which required students to share their thoughts about a particular situation with the group. The assessment for the subject comprised a case study response (worth 25 per cent), a marketing plan (worth 25 per cent), 10 journal questions requiring a 100-word answer (worth 20 per cent), and two thirty-minute multiple choice online tests (worth 30 per cent). The case study required students to consider the branding of the Paralympics by reviewing a promotional video and then considering the kinds of market segmentation and market research that might have informed that particular campaign.

Supply Chain Management

Supply Chain Management is a third-year subject typically taken by students completing a Bachelor of Business specialising in logistics and supply chain management. As with the Sports Management Stream, students in this stream must take a suite of eight logistics subjects, including this subject, as well as eight core business subjects and eight elective subjects. All subjects within this stream are only offered online and have been from scratch by allocated staff. The subject was developed in late 2013 and offered for the first time in Semester 1, 2014.

Supply Chain Management was developed by Leah, a lecturer and subject convenor employed sessionally by TechU, and Zac, the learning designer who also supported the Sports Management subject development. At the time of interview, Leah had been a sessional lecturer at TechU for over 10 years and had worked previously on a number of online subjects.

The subject followed a 12-week structure that was guided by the kinds of information students need to make a procurement decision, as well as key concepts. Following the first introduction week, the weekly topics included sourcing, solicitation of bids,

supplier selection, contracts and legal aspects, risk management, sustainability, contract management, quality, managing internal and external relationships and innovation. This structure was designed by Leah but referenced the subject approval documentation which had been developed by another academic. The readings and resources for the subject included chapters from a set textbook along with a range of articles and short videos. The readings were always provided at the end of the week's page, after the videos and summary. The articles were primarily sourced from industry journals rather than academic journals, which Leah advised was because she wanted the subject to speak to the real world rather than to research.

The subject assessment included two components (both worth 50 per cent). The first was more theoretically or conceptually oriented and included two options (Part A and B). Part A required students to draw on the theory and literature to describe and reflect on how requests for procurement are prepared and Part B asked students to describe and reflect on how proposals are evaluated. Students were assigned one of those options and were then paired with a student who completed the alternative option for the more practically-oriented final assignment. In the second assessment, the students worked in pairs to develop a procurement plan. They were given a case study – in this case they were advised that TechU had requested a sustainability business case for the use of solar panels which will require a proposal and an Expression of Interest process. However, the direction given was limited and the students were encouraged and expected to draw on their own backgrounds and the other areas they have studied in developing their plans. Together the assessments were intended to allow students to develop both conceptual knowledge through the first assessment and real-world experience through the second.

Teacher Education (Literacy)

Teacher Education (Literacy) is a second-year subject taken as a compulsory component of two fully online Bachelor of Education degrees (in Early Childhood and Primary Education). The subject is second in a sequence of three literacy subjects, but so long as that sequence is taken in order there is no requirement for the subject to be taken in second year. This means students could undertake the subject anytime between their second semester of first year and the first semester of third year.

The degree programs are offered by TechU Online entirely online and include no face-to-face component, although students do meet pre-service teacher education placement requirements at nominated schools. The program is accredited by the state government authority, and is the only teacher training program offered fully online within that state, as others tend to incorporate at least a small component of face-to-face teaching (such as a weekend intensive session). TechU has not previously offered degrees in education, but saw a market in online pre-service teacher education and hired staff to develop the online subject materials in mid-2012. Staff for this unit were originally located under the leadership of the Pro Vice-Chancellor with responsibility for learning and teaching innovations, but were later moved to a new department within the Arts faculty under a university-wide restructure. Staff were originally hired under professional staff contracts as content developers and were not required to have graduate qualifications in education, but after challenges with the original appointments and high staff turnover, the appointments were re-classed as academic and new staff with graduate qualifications were hired. The staff have no on-campus teaching responsibilities, but currently work almost entirely on the subject design and accreditation arrangements for the online degrees.

Teacher Education (Literacy) was developed in late 2013 and offered for the first time in Semester 1, 2014. It was developed by Tara, a lecturer in education at TechU, and Anita, a learning designer located at TechU Online. Tara has been employed at TechU Online since mid-2013, and is currently completing her PhD at a different institution. She has previously taught at other tertiary institutions and within schools.

The subject structure was designed to encourage students to think about some of the controversial aspects of literacy teaching. The subject begins with weeks introducing concepts of literacy and multi-literacy, emergent literacy (i.e. more contemporary thinking), pedagogy and assessment. It then goes on to cover topics in speaking and listening, writing and reading, alternating between a focus on early childhood and primary. The last two weeks cover digital literacies and personal literacy development, the last of which was included to meet the requirements of the new Australian Curriculum.

The subject assessment comprised an essay and a portfolio task assessed in two components. The essay required students to think about whether critical literacy skills

should be understood as more than reading and writing in the context of Australia's national literacy assessment program (due in week 5). The portfolio task required students to collect and critically analyse a selection of resources related to each week's discussion and activities.

The subject content for each week was structured on the platform site into three tabs which Anita labelled 'Approach', 'Appreciate' and 'Apply' (Anita, Interview 1). Under the approach tab, students were provided with an introduction to the week and the key points to be explored and an animated video introducing a weekly 'controversy'. Each video started with a quote relating to literacy then included an animated scenario that introduced a controversial issue and ended with a question. This question was intended to then guide the rest of the discussion activities for the week as well as the resources produced for the second part of the assessment requirements. The quotes for the animations were taken from academic sources or from government and policy documentation while the scripts for the animations were developed by Anita on advice from Tara. All of the videos included interactions between a new principal and a teacher trying something controversial in their classroom.

The appreciate tab then provided all the materials and readings students were expected to engage with for the week (roughly two to three core readings were selected per week, along with a selection of extra resources that might assist students with their assessment tasks). This page also included some reflections on those texts developed by Tara to encourage critical engagement. Finally, the apply tab explained the task for that week, which generally asked students to think about the issue contained in the animated video in the context of the readings and develop an item for their portfolio assessment which they were then required to share in the discussion forums and discuss how it related to the week's topic and controversy.

Online Learning Design

Online Learning Design was delivered as a MOOC in the first half of 2014 under the initiative and direction of Sarah, a professor and a member of the senior executive at TechU who was also interviewed about her responsibilities for other online initiatives and the wider use of educational technologies at that university.

Sarah's background was in management and business studies, but she has worked in online learning design since the late 1990s and has held a number of senior academic roles across a range of universities, both in Australia and internationally. In contrast to many of the other participants in this study, the MOOC is not Sarah's first foray into online teaching or the use of digital technologies to promote or develop a line of work. Sarah maintains a number of personal websites, which actively promote her scholarship and which provide a space for communities of online teachers and subject designers who follow and implement her recommended processes. She has her own regularly updated Wikipedia webpage and more than 1800 followers on Twitter. Sarah makes much of her own work available through creative commons licencing and has her own company which run subjects on her approach to online learning. In our interviews she also commented on plans to establish another company to self-publish some of her work. The Online Learning Design MOOC was heavily promoted through Sarah's online social networks.

The MOOC is based on materials that have been previously taught primarily through a two-day workshop where lecturers, librarians and technologists come together with learning designers/facilitators with prior training and knowledge of Sarah's models to redevelop a subject for online or blended delivery. The workshop comprises team-based development of an upcoming online subject according to a six-step process which includes: (1) determining subject aims, look and feel, learning outcomes and assessment practices; (2) visually drawing out the process of learning, teaching and assessment as a storyboard; (3) developing and testing online activities; (4) seeking feedback from students or colleagues not participating in the workshop; (5) reviewing and refining the plan; and (6) finalising an action plan setting out the next steps.

The subject was designed to capture the 6-stage workshop process and was based around set weekly activities across six weeks. The approximately 1500 participants were allocated to groups of approximately 25 prior to commencing the subject and were expected to work within those groups on the activities throughout the subject. The first week comprised an introduction to the model and required participants to introduce themselves to each other in their groups and select a topic for developing a subject (in groups or as individuals). In the following two weeks, participants were asked to work together or separately to agree on learning outcomes and descriptors regarding the look

and feel of their subject (week 2) and on developing a storyboard for the design of the subject (week 3). In week 4, participants were asked to develop an online activity for the subject according to a template, and then in week 5 they were required to review another participant's activity and provided feedback according to a second template. In the final week, the participants and groups were asked to develop an action plan and reflect on their development in the subject. Participants were asked to post their responses and respond to others within the forum, or take their discussion and development to a different medium (such as google docs).

Participation in the subject was assessed through a 'badging' approach. At the end of weeks 2-6, participants were required to submit five words describing their subject (week 2), reflect on the storyboard development (week 3), submit a completed activity template (week 4), submit a completed feedback template (week 5) and submit an action plan (week 6). Weeks 4 and 5 were manually assessed and graded by moderators, the other badges were automatically assessed. The participation in the forums did not form part of the badging requirements. Participants who successfully completed all badges received a completion certificate.

As the subject was primarily activity based, very little structure or content was provided beyond the directions for each activity (and this is typical for the approach Sarah advocates in her models). Ten short (2-7 minute) videos were recorded introducing the principles of the model and its various requirements. The resources provided also included three publications by Sarah about the advocated process and model.

Sarah's original intention for the MOOC was for it to be radically different to other developments in the space and to bring together insights from both the xMOOC and the cMOOC (Bates 2014) models. However, Sarah had mixed feelings about the outcome of the MOOC. Around 1400 people enrolled, slightly under 1000 accessed the subject materials, and of those around 17 per cent completed the badges. However, very few people participated in the forums and were actively working together as intended. But Sarah felt that in terms of widening the conversation about her research the MOOC had been successful.

In summary

This chapter has discussed the design of the research study, including its methodological and analytical approach and the details of the empirical study. In this chapter, I have defined the parameters of the ways in which I approached the question of 'what counts as knowledge in new forms of online learning?', highlighting that this was a question explored sociologically rather than philosophically, and with a focus on institutional polices and curriculum development and the interpretations and assumptions at work within them. I have emphasised the interpretive nature of the research, and its starting point as the questions raised in Chapter 2 about knowledge and curriculum and the changing assumptions that are part of that in current times and contexts. The design of the research in terms of the selection of sites and methods (interviews and documents) was explained in terms of the project's interest in understandings and assumptions about knowledge in the curriculum work of lecturers and institutional leaders; and in terms of its intention to enable comparison between different kinds of sites and knowledge fields. The case-studies that were undertaken were not full ethnographic studies, but were selected to enable insights and comparisons pertinent to the overarching questions of the project and the literature in which it is set.

The chapter has also provided brief summaries of the institutions and subjects which were the subject of this research. These summaries have highlighted the differences evident between the two institutions and between the eight subjects being developed within them. Even from these brief overviews, it is clear that the subjects are not at all alike in many ways. The lecturers developing them are at different levels of seniority, and with different levels of authority over the design parameters of their subjects. The subjects are located in different fields and are oriented towards different purposes. This was an intentional design decision intended to enable comparisons between the different subjects and institutions. Given this diversity, it is of interest in this study whether the ways in which different contexts and types of subjects are carried through in these new forms, and also whether common issues are evident across such diverse cases. These points of commonality and the ways in which the particularities of this differed across the subjects are discussed in the following three data chapters.

Chapter 4 takes up evidence from the institutional level interviews and documents. It focuses on the institutional policies and the policy leaders' interpretations and

understandings of the purposes and possibilities of the new online initiatives and the assumptions about knowledge evident within them. Chapter 5 then discusses evidence from the eight case studies in relation to the picture of 'what counts as knowledge' that can be drawn from the lecturers' explicit aims for their subjects and their justifications for their content selections. Finally, Chapter 6 examines the lecturers' curriculum development practices in relation to their engagements with and interpretations of the new online platforms. It allows a further perspective in practice and over time of 'what counts as knowledge' in this curriculum development for online programs. While Chapter 5 focuses on the lecturers' overarching values and purposes, Chapter 6 is concerned with their interactions with the new online forms, and the issues these raised for them. In these chapters, I aim to bring out both the 'story' of the case studies – the motivations, intentions and experiences of those involved, the challenges they faced and the like – and the ways those 'stories' relate to the analytical concerns that framed the project question.

Chapter 4: The policy problem

As discussed in Chapter 2, policy sociology emphasises the importance of analysing new policy directions in relation to underlying discursive emphases and assumptions and the ways in which policy problems and contexts are constructed to legitimise policy solutions (e.g. Baachi, 2009, 2012; Ball, 1994, 2006; Gale, 1999, 2001; Rizvi & Lingard, 2010). In this chapter, I draw on my interviews with institutional policy leaders and related documentary material to consider the wider intentions behind the institutional decisions to engage with new online initiatives and the assumptions about knowledge evident within these. The documentary material discussed comprised a range of sources including initiative websites, press releases, eLearning strategies and learning and teaching plans. My approach to deciding 'what counts' as policy was deliberately broad, and I sought to access all sources which contained statements of intent and purpose relevant to the context of online learning, including policies and websites related to learning and teaching.

The title of this chapter refers to its focus on both the policy leader's construction of the policy problem and the problems evident in the ways this has been framed. I begin with an analysis of the ways in which the policy problem and policy context were constructed within the two institutions in relation to online learning, and how online learning initiatives were positioned in relation to that. I then examine the understandings of knowledge, curriculum and 'good teaching', embedded within the policy constructions, drawing attention to some of the tensions evident. The chapter focuses on policy *intents* rather than policy effects, understanding the two as both significant but not inevitably aligned (following Gale & Molla, 2015).

Problem construction and the online learning 'solution'

In this section, I consider the ways in which the policy problem and policy context were constructed at the two institutions, and the ways in which the rationale for online learning and the decisions to engage with the new online initiatives were framed. I argue that online learning was constructed as a response to increasing competition between universities and the 'problem' of poor teaching practices and was positioned as a mechanism for changing pedagogical practices and curriculum development.

As discussed in Chapter 1, this research was conducted at a time of uncertainty for Australian higher education institutions, made more pronounced by increasing cuts to public funding and the removal of government-imposed limits on student places with the introduction of demand driven funding in 2010. Within this context, the two institutions framed the 'policy problem' and the rationale for the engaging with new online initiatives in broadly similar ways despite their different contexts (outlined in Chapter 3). This common rationale was about the changing nature of student's expectations and needs and the importance of addressing these in the face of heightened competition.

The SandstoneU eLearning Strategy, for example, located its proposals within the context that 'students' expectations about, and relationship with, the university have changed in the last two decades'. It commented that 'these changes have placed an onus on universities to provide students with more flexible and convenient access to higher education'. (SandstoneU, eLearning strategy, 2011, p. 1). The paired 'eLearning discussion paper', further noted:

> The context for the paper is the extraordinarily rapid international growth and increasing maturity in the development and delivery of online learning. […] it appears almost certain […] higher education itself will become more diverse in its forms, including in the nature of its providers and in the prospective student base. This increased diversity is likely to mean *increased competition as well as new opportunities and risks* in all parts of the higher education sector. No institution can afford to ignore these opportunities and challenges. (SandstoneU, eLearning discussion paper, 2011, pp. 1, 2 [emphasis added])

Likewise at TechU, a press release promoting TechU Online notes:

> This joint venture will build on the university's online capability and reputation and *seize a space* that is becoming increasingly important in the 21st century. It will *extend our reach* in delivering education to students in a time and place that suits them, giving them access to a greater range of study options and unprecedented flexibility. (TechU, press release, 2011 [emphasis added])

In these documents, the policy context was at both institutions framed in relation to global and national competition for students, and the policy problem was defined as

teaching approaches that are too little aligned to students' needs and expectations. Across the two institutions, there was a strong sense that dominant teaching practices were insufficient to meet the needs of a changing student body – in attracting students and in providing them with the flexible forms of study they were looking for. As highlighted in Chapter 1, this is in line with wider policy discourses evident within Australia.

At TechU in particular, the policy leaders held strong views about the pedagogical inadequacies of most lecturers, and TechU Online was established in ways which positioned the learning advisors as primarily responsible for the pedagogical form of the subject, with the lecturers primarily responsible for its disciplinary content. In introducing me to the model in our interview, policy leader Lydia described how her former Vice Chancellor had advocated the approach to her, saying:

> He actually said to me 'I don't believe that it's possible for every academic within the university to suddenly develop a passion or capacity to teach online, I don't believe it, it can't happen, it doesn't work I don't think they are the right people to be doing that' […] He didn't think it was the best use of academic time. So […] he said to me 'I have this vision of this academic with their yellowed and wrinkled lecture notes giving them to somebody who can go and put it online and they can go back into their office and write another grant proposal'. (Lydia, Interview 1)

This description embodies some of the widely held perceptions about academic teaching – that lecturers teach the same thing year in and year out following their same 'yellowed and wrinkled lecture notes', that academic teaching is solely about the 'content' and the lecture in ways that are disembodied from a classroom interaction – meaning that what the lecturer does in a lecture is solely about 'knowledge transfer' or content 'delivery', and that research and not teaching or pedagogical practice is the primary concern of lecturers.

Beyond TechU Online, policy leaders at both institutions were critical of a perceived tendency for lecturers to overload their subjects with 'content', at the expense of allowing for student activities and interaction, and in ways which undermined the coherency of the subject in targeting content towards a predetermined outcome. Much

of the critique of current approaches focused on the 'too much' issue, seeing a role for management in assisting lecturers to 'curtail content' and reframe the emphasis towards assessment, student activities and the like. Kevin (SandstoneU) for example commented on 'the persistent and the never-ending problem of asking lecturers to curtail content into a new curriculum structure' (Kevin, Interview 1), and both Olivia (SandstoneU) and Lydia (TechU) suggested that thinking about the outcome of a subject was 'actually a new experience' (Olivia, Interview 1) for lecturers who had 'never thought about this stuff before' (Lydia, Interview 1). The policy problem constructed here then was not just the need to attract students in a competitive market, but also the inadequacy of current teaching practices and their failure to adequately engage and meet the needs of the student body.

A number of the new online initiatives were MOOCs, and were therefore offered freely. It may seem strange that the introduction of these initiatives was therefore positioned within worries about the competitive education marketplace and the need to attract and retain students. However, MOOCs were seen as important for university reputation at the time. There was significant prestige with being associated with MOOCs alongside institutions such as Harvard, and lecturers at both institutions saw MOOCs as being about the recruitment of students. At SandstoneU, Olivia commented, 'There's a little bit about putting [our] profile out there' (Olivia, Interview 1), and at TechU Sarah noted that she hoped to use MOOCs to recruit students into paid programs of study.

Higher education is here constructed in economic terms with a primary purpose of attracting students and meeting their needs as consumers, in line with arguments about a growing instrumentalism within higher education (Muller & Young, 2014). Poor teaching is defined in reference to the kinds of teaching students themselves want, rather than in relation to the content or purpose of the subject. In their promotional materials, all of the new online initiatives emphasised flexibility and allowed for less stringent prerequisite requirements than other university subjects. This framing of the policy problem suggests a very utilitarian and customer-oriented sense of what higher education is about and what teaching is expected to produce and respond to. The kinds of rhetoric which underpinned the onslaught of MOOCs in 2012 and 2013 – about openness, about equity and embracing new kinds of students within the university system and about free and more affordable forms of education – are here neglected (see

also O'Connor, 2014). At the same time, the sense of purpose – what the education might be for – beyond attracting students and meeting their needs, is limited.

At both universities, online learning was not positioned as a fringe activity but was embedded within broader goals for transforming teaching and learning practices. The engagement with the new online initiatives was instigated within the context of broader drives to change and reframe university teaching practices, and both universities had strategy plans concerning the use of educational technologies that comprised both new initiatives and more general goals to change technology use and teaching practices across the university. Olivia, for example, commented that at SandstoneU:

> a key really to the strategy was that we wanted to be active both at the high-end development front but also bring the whole university around to making better use of technology in teaching irrespective of the kinds of teaching that they were doing. And there is clear evidence from students that they are looking for more of that. (Olivia, Interview 1)

At TechU, Sarah similarly noted that at the strategic level her responsibilities were not just about the oversight of new initiatives, but about driving changes in teaching practices across the university. These responsibilities included staff professional development, the management of educational technologies within mainstream programs, oversight of new online initiatives, as well as work driving 'an evidence based approach to change in terms of learning, teaching and assessment and the adoption of technology' and moving novel approaches 'into the mainstream' (Sarah, Interview 1).

Across the documents and interviews, the use of educational technologies (and online initiatives as part of this) was positioned as an opportunity to rethink current approaches and the means through which new forms of 'relevant' and 'productive' teaching could be achieved. In various documentation, discussion of the online initiatives at SandstoneU emphasised 'the potential of eLearning tools to enrich and extend what can be achieved through on-campus interactions' (SandstoneU, eLearning discussion paper, 2011, p. 3) and the ways online opportunities 'challenge traditional ways of delivering education' (SandstoneU, media release, 2012) and 'provide previously unimaginable

learning experiences' (SandstoneU, learning and teaching website, 2012). SandstoneU's eLearning Strategy argued:

> online information and communication technologies have become essential in providing students with efficient, flexible and convenient access to University-based teaching, learning and assessment. […] However, there are distinct advantages to using 'eLearning' or 'educational technology' over and above its more functional efficiencies and affordances. *When information and communication technologies are combined with carefully designed educational activities, they can provide students with deeply engaging and highly effective learning experiences that would otherwise be difficult to create. Educational technologies do not simply improve students' access to information and learning interactions, they can expose students to information, ideas and knowledge* in new ways *that make learning more effective, engaging and individually relevant*. (SandstoneU, eLearning strategy, 2011, p. 1)

Here, the strategy emphasises the potential for 'new ways' of exposing students to 'information, ideas and knowledge' – new pedagogies – that provide greater potential for engagement and individualised/personalised learning.

Engagement with online learning was frequently seen to offer the potential for new and better ways of teaching. At the same time, good online (and on-campus) education was frequently defined in relation to the levels of interaction it enabled students to participate in. The strategy paper positioned using technology 'for highly engaging and interactive teaching and learning experiences' (SandstoneU, eLearning strategy, 2011, 2) as its focus, and the first strategic priority area was identified as 'provide greater emphasis on student interaction and engagement by reorienting how information and communication technologies are used in teaching, learning and assessment' (ibid., p. 6). In imagining a vision for the university for the future, SandstoneU's eLearning discussion paper suggested a move away from large group lecturing towards inquiry learning. It promoted the use of technology 'to allow staff and students to easily and dynamically present their ideas and understandings' and 'provide simple mechanisms for interaction, discussion and feedback' (ibid., p. 5). The SandstoneU Online initiative was also originally framed within the context of developing 'enhanced student interaction and engagement' as part of the broader eLearning strategy (SandstoneU,

internal report, 2013), and the initiative website highlighted an emphasis on 'interactivity', 'real world learning' and 'social engagement' in its marketing materials (SandstoneU Online website, 2013).

At SandstoneU, there was also a strong attention to 'flipped classroom' approaches, which focus on using class time for interactive activity. The university's eLearning Discussion paper argued:

> It is imperative […] we ensure that interactions among academic staff and students are effective in promoting engagement, learning and broader student development. This means that we must take full advantage of all opportunities we have to prepare students for interactions that are effective for learning and to allow precious class and on-campus time to be more productive.' (Sandstone University, eLearning discussion paper, 2011, pp. 1-2).

Here, the emphasis was on creating space for interactive pedagogies by separating the preparation of students for interactions (the delivery of content) from the interactions themselves. Additionally, policy leaders framed a primary rationale for experimenting with the MOOCs initiative as the learning that would occur across the process, and the changed academic teaching practices and different approaches to on-campus teaching that could be instigated through that, including in relation to 'flipped classroom' approaches. Olivia (SandstoneU, Interview 1), commented one of the main benefits of MOOCs was that the resources (curriculum materials) would then be available for on-campus teaching in ways which 'encourage people to rethink what they're doing in their own courses'. Since the content for MOOCs could be finalised prior to the subject or developed elsewhere, MOOCs were seen to allow for targeted attention on learning activities at the university, with students exposed to new material though watching the lecture videos in their own time, and class time used for activities or discussion. Kevin similarly commented that the focus on interactive teaching was about flipped classroom learning, and that the decision to engage with MOOCs was part of this 'thinking in a strategic sense' and related to other decisions to encourage the use of educational technologies such as clickers (classroom response systems that allow teachers to pose multiple choice questions to their students) (Kevin, Interview 1).

Similar views about good pedagogy and the impetus for the new online learning initiatives were promoted at TechU. The management unit responsible for online teaching described its intention as 'transforming traditional learning using new and more effective technologies and pedagogies' (TechU website, 2013) and the university's flagship online partnership TechU Online was specifically designed with a 'socio-constructivist' pedagogical approach in mind, with the intent to encourage 'active learning' and address students' needs. On the initiative website, the approach was defined as 'designing activities that foster collaboration amongst students using a social constructivist learning model' and students were advised that:

> You will be engaged in an active learning environment, undertaking regular online activities, guided through the learning process by expert teaching staff who provide regular feedback on learning activities and assessments. (TechU Online website, 2013)

The 'about' pages of the website emphasised that the approach draws on 'best practice in online learning', and stated that 'our students will find themselves members of a collaborative, supported and connected community of learners'. The website further suggested:

> The delivery model is designed to ensure you feel part of a vibrant and engaging learning community through interesting online activities, discussions and podcasts; peer review and ongoing quality feedback from our dedicated teaching staff. You will be presented with many opportunities to work collaboratively with your peers and teaching staff. (TechU Online website, 2013)

Here, best practice is defined in relation to enhancing the student experience through enhanced interaction, collaboration with peers and regular feedback.

At both institutions, the online initiatives were also positioned as an opportunity to learn about how students learn and what kinds of pedagogies are most effective. Online learning and MOOCs in particular were seen to provide significant benefits in enhancing the 'visibility of the student learning process' (Olivia, Interview 1) and the policy leaders commented on their intentions to use the data derived from student actions within the subjects – the learning analytics – and the experience of MOOC teaching to derive understandings about learning and student motivations that might

then inform other kinds of interventions. At SandstoneU, Olivia commented in relation to MOOCs 'there is a much broader agenda around what we learn […] and how to build course designs, assessment regimes, learning analytics frameworks from a course that will have much broader value to the university (Olivia, Interview 1). At TechU, Sarah similarly commented that in her view the biggest impact of MOOCs was likely to be the ways big data will change how subjects are designed 'because people are doing things very differently so they think differently' (Sarah, Interview 1). Here, MOOCs were seen to generate valuable data which might then be used to improve learning beyond the MOOCs context – to understand in general terms what is useful in engaging students and in keeping them on task.

The policy emphasis on pedagogical change was also tied to a concurrent concern with using new initiatives to drive ways of redeveloping curriculum that 'start with the end in mind': what has been termed an 'outcomes-based approach' or 'alignment-based' approach to curriculum (see Biggs & Tang, 2011). Within the two institutions, there was an emphasis on outcomes-driven approaches as best practice, and an assumption that the typical lecturer required additional support in reframing their approach to curriculum and to course design.

At TechU, Sarah, a policy leader with responsibilities for both online initiatives and broader teaching and learning practices, argued that curriculum design should 'start with the end in mind' in terms of thinking about outcomes and assessment. She commented that moving subjects online required an emphasis on outcomes to ensure coherence:

> We should be driving from learning outcomes, start with the end in mind and work back because […] what a lot of people do is put a bit of digital stuff in and everything else stays the same. So you get this misalignment. Whereas if you start with assessment and feedback and opportunities for that, they see it as part of the learning and then work back on your learning design, then you get a coherent course. (Sarah, Interview 1)

Sarah saw the process of moving a curriculum online as an opportunity for designing a 'coherent course' and saw this as less about enforcing a particular curriculum approach than a particular approach to curriculum design:

> I suppose I think the curriculum should dramatically change but I would not be able to say it would have to change from this to this, I am just saying *the process of development needs to be changed*. (Sarah, Interview 1 [emphasis added])

This attention to process was about attention to alignment and outcomes, and was seen as a necessary shift within broader curriculum development practices. In combination with the attention to interactive pedagogies and active learning, online learning initiatives were seen as a key mechanism for reforming how staff approached their teaching. Sarah commented:

> I do not believe in doing workshops to try and change what academic staff do because it is a huge waste of time. It doesn't matter if they like it or they don't like it, they do not change their practice. Whereas if you help them to redesign their courses then they have got a different product and they work with that essentially. (Sarah, Interview 1)

Here, the necessity of reworking a subject to align with the pedagogical and design imperatives of a new platform arrangement was seen as a mechanism for changing curriculum and teaching practices.

As discussed above, thinking through outcomes was not seen as something the typical academic was likely to consider. Lydia, a policy leader with responsibilities for TechU Online similarly saw academic curricular practices as out of step with the outcomes-oriented approach required for online subject development. She commented:

> So when we come in and go 'okay what are your learning outcomes?' They go 'this is the book I use'. 'No, we are not actually interested in your content, we will come to that, what are your learning outcomes, what are your assessments'. And […] a lot of the academics have […] actually said 'oh I have never thought about this stuff before, no one has ever sat down and helped me think this through or supported me to think this through'. (Lydia, Interview 1)

The TechU Online model was explicitly designed to counteract this issue. In line with the inititive's stated pedagogical approach, learning activities were expected to scaffold towards assessments as well as the overall learning outcomes established for the subject to 'map a coherent consistent program' (Lydia, Interview 1).

At SandstoneU, the policy leaders similarly saw new online initiatives as providing an opportunity to move towards an outcomes-based approach to subject design. In relation to the SandstoneU MOOCs, Olivia commented:

> when we originally made contact with [the MOOC platform], they had found that a lot of the academics that they were already working with had vastly underestimated the amount of time that needed to be put into the development of automated assessment regimes and that really is a very different kind of thing to what we would normally do on campus. *Assessment sometimes is a little bit of an afterthought whereas here it is absolutely central to the kind of design of the course*. […] So they [the learning design team] have kind of talked them through what the steps are and…thinking about where they want the students to get to, and work back and what needs to happen when if they are going to be able to achieve that outcome. All excellent educational practice but it is actually amazing in some cases that is actually a new experience for people because they might have inherited a course or there is just sort of a general understanding that certain topics have to be in a first-year course on this kind of subject. (Olivia, Interview 1 [emphasis added])

This comment illustrates the ways in which the new form was seen to encourage the kind of approach to assessment and subject design seen as desirable – as central to the subject and as what the subject was built towards, rather than as an afterthought.

At both universities, therefore, attention to outcomes was seen as important, but there was a view that this was too little attended to by lecturers in their subject development. In response, the new online initiatives were seen as one mechanism which might assist academic thinking and practices in this regard.

These attempts to use online learning to promote the kind of education seen as desirable were not simply about encouraging uptake of different pedagogies but also about changing the academic role in relation to teaching. The online learning initiatives were here positioned as 'policy technologies' in Ball's (2003, p. 217) sense, meaning both 'vehicles for the technical and structural change of organisations' and mechanisms for reforming the kinds of responsibilities assumed as appropriate for lecturers in relation to teaching.

Within the online initiatives, the partnership arrangements and platform structures tended to position the lecturers as primarily responsible for content, with the delivery and associated concerns defined separately to that and in reference to the affordances of the platform. As discussed in Chapter 3, in all but one of the initiatives (SandstoneU Online), the interaction afforded between the lecturers and the students was either very limited or non-existent, with the responsibilities for curriculum development 'unbundled' (Neely & Tucker, 2010) from the teaching delivery. In the majority of cases (with the exception of SandstoneU Online), lecturers were expected to develop all their subject materials, and then either leave the subject in the hands of externally employed tutors (TechU Online) or in the hands of the students who were then expected to work through the material themselves, discuss their questions with other students via forums, and assess other students' work using rubrics (in the case of the MOOCs). For the MOOCs, lecturers were able to monitor the subjects and make comments where they thought student discussion in the forums was getting 'off track' but the opportunities to do this were limited due to the size of the cohorts and the large numbers of discussion threads started on the forum pages. For TechU Online, the initiative was designed such that lecturers played no role in the teaching of the subjects, which were instead taught by externally employed teaching assistants.

This separation of responsibilities for curriculum development and teaching was further compounded by the rigid pedagogies enforced by the platform structures. Although there were options for some flexibility, the affordances of the various platforms defined to a large extent the kinds of pedagogical possibilities open within the initiatives. Within the SandstoneU MOOCs, for example, the pedagogical form was primarily restricted to video lectures, online quizzes and student directed discussion forums. Opportunities for deviating from a broad video lecture/quiz/discussion forum format were as a result limited. The policy leaders did talk of some 'innovations' in how the platform was used, but these tended to be limited to the platforms own affordances, such as in the use of peer review assessments and gamification 'leader boards' for motivating students. For the TechU MOOC, the platform arrangements (an open source learning platform) offered broader functionality, but the opportunities to engage with those functions were limited by the massive cohorts sought within the MOOCs form. The pedagogies for TechU Online and SandstoneU Online differed significantly from the MOOCs in their emphasis on small class teaching and support, but as with the

MOOCs the platform structures defined what was possible in ways which shaped the forms of pedagogy and teaching able to occur. Across the initiatives, despite their differences of approach, the initiative platforms and partnership arrangements tended to set the pedagogical approach, rather than leaving this open for lecturers to negotiate in relation to their own particular purposes.

Policy leaders at the two institutions did differ in how they saw the implications of the new initiatives as technologies which 'unbundled' teaching responsibilities from curriculum development, and in how willing they were to direct and prescribe a particular pedagogical approach. For TechU Online, the initiative was explicitly seen as an opportunity to impose particular ideas about best pedagogy in ways which would be challenged by lecturers teaching on campus. Lydia, the academic leader of the TechU Online initiative commented on her previous attempts to push for particular pedagogies within her faculty and the challenges faced in relation to that:

> to actually get everybody in a university to sign up to the same pedagogical model would be a huge thing to do and I was not capable of doing that. […] So even though, and I do love academics and I love academic freedom and I love the notion that people are able to have a certain level of self-expression, but […] there are people within universities that see it as their role to pushback against anything that looks like standardisation – 'I'm here to question you'. […] I actually said a public meeting 'I would like us to buy into social constructivism as underpinning how we believe learning happens best'. And I got tremendous pushback. 'Oh, I don't like that, it's not the way I teach'. (Lydia, Interview 1)

Here Lydia's comments suggest that she sees the use of different forms of teaching as about simple 'self-expression' or individual preference, rather than something which connects with teaching purposes. Lydia later commented in relation to issues with enforcing the alignment-driven approach of the initiative and ensuring all activities scaffold towards assessment requirements and learning initiatives:

> From our point of view, the more they can pull it back, the more they can centralise control—that sounds terrible but the more there is centralised control and less opportunity for an individual academic to go off somewhere, the better

> it is for our students and better it is for us because we are actually trying to map a coherent consistent program (Lydia, Interview 1)

Here, online learning is seen as an opportunity for pushing for a particular kind of teaching as it provides an environment where it is possible to push past and around notions of academic freedom and autonomy in teaching. Lydia's comments also express an underpinning corporate focus in emphasising consistency and sameness across different subjects.

At TechU, the policy leaders explicitly rejected the importance of keeping curriculum and pedagogy decision-making together, arguing instead for a strong delineation and 'unbundling' of responsibilities. Rachel, the Learning Design Manager of TechU Online, described the approach of that initiative as:

> …a collaboration between the discipline expert, the pedagogical expert, expert's probably not quite the right word, the promoter of the pedagogy, in a way and the educational technologist who has sort of the technical skills. So it really is a collaboration and we cannot do it without them [the lecturers]. (Rachel, Interview 1)

This comment in some sense seems bizarre in that of course university level subjects require academic input. But it speaks to some of the power of the initiative itself in defining the ways in which the subjects are constructed, and the limitations of the academic role in relation to that.

Comparatively, at SandstoneU, the policy leaders made a point of advocating for the importance of academic expertise in teaching in their discipline area and rejected overt approaches to 'unbundle' curriculum content from its teaching:

> I am immediately uncomfortable when people separate content from delivery […] I think there is a role for blended learning [...] but I do not think you want to do that all of the time […] So I am just terribly nervous that when we break down some of those connections […] that the quality of the experience as a learning experience may go down. […] you will often find no interaction between the student and the developer in many online models. And I think that

> is a little bit problematic and I would think that—I would be concerned about the quality of that course. (Olivia, Interview 1)
>
> [Regarding the use of other's materials] you have to think carefully about what is happening in that model, particularly with the idea of discipline based academics having a role in teaching and learning in universities where it is not just about content delivery, it is about discipline based academics having an intimate understanding of the discipline and having an understanding of pedagogy and teaching and the combination of those things is incredibly important. […] I think that that starts to raise alarm bells for me. (Kevin, Interview 1)

In these comments, both Olivia and Kevin express concerns about the 'quality' implications of unbundling responsibilities for curriculum development from teaching. This focus on quality and academic expertise is part of the way elite institutions such as SandstoneU position themselves against other universities to enhance their competitive advantage. Where Rachel talked about lecturers as 'the discipline expert' at TechU, Kevin referred to 'the academic experts in teaching and learning in the content area', drawing a very different kind of emphasis and understanding of the academic role in teaching. For the SandstoneU policy leaders, although lecturers might be too settled in their ways and too 'content-focused' in their delivery, they saw some necessary connection between good pedagogy and the curriculum it was attached to as part of ensuring a quality education. Here, the benefits of the new forms were seen in the ways they changed the thinking and practices of particular lecturers who worked with the new form, rather than in the ways the new form might act as an overt governance mechanism.

However, despite this, as discussed, the platform and partnership arrangements of the new initiatives still worked to transform the kinds of responsibilities open to lecturers in respect of the teaching within the particular platform arrangements – changing in Ball's (2003, p. 217) terms 'what it means to be a teacher' or lecturer within those particular configurations. In other words, although at SandstoneU the policy leaders did not explicitly advocate for reframing academic responsibilities in respect of pedagogy, the form of the new initiatives still limited what was possible in relation to that.

Policy is fundamentally about change. Drawing on Luke and Hogan (2006), Rizvi and Lingard (2010, p. 7) write, 'policy tries to change the behaviours and practices of others so as to steer change in a particular direction'. At both institutions, the wider intent to transform teaching and attract students underpinned the decisions to engage with new initiatives. Additionally, within the broader institutional policy directions, the online learning initiatives were understood as key mechanisms for driving change in teaching and curriculum practices. As discussed in this section, online learning was seen as a means of attracting students within a competitive environment; a means of changing pedagogical and curriculum design practices; and a means of reframing academic responsibilities in relation to teaching.

The policy positioning discussed in this section accords in many ways with the literature on teaching in higher education discussed in Chapter 2 (e.g. Biggs & Tang, 2011; Chickering & Gamson, 1987; Barr & Tagg, 1995). As with that literature, there is a concern with interaction and active learning, a concern with outcomes and alignment, worries about poor teaching and about backward-looking and didactic instructivist teaching practices. Where the policy approach differs is in the orientation towards transforming the academic role and in the attempts to impose rather than suggest particular forms of teaching. The framing of these issues by the policy leaders is also presented in more binary terms compared with the literature. Biggs and Tang (2011), for example, acknowledge that didactic forms of teaching can work well for very able students, but are less likely to work well for less able students. In contrast, the comments of the policy leaders and the texts of the policy documents discussed above appears to suggest a more definite view of 'good pedagogy' as always oriented towards activity and interaction.

The common framing of the policy problem and solution evident across the two institutions is in one sense unsurprising. Both are located within the same wider discursive policy context and subject to the same policy challenges and financial constraints (discussed in Chapter 1). Policy leaders within universities are very aware of what others are doing and this is also likely to influence institutional decision-making towards similar outcomes. However, this sameness is also important. As discussed in Chapter 3, the two institutions are differently located within the same policy context, and they have traditionally emphasised different forms of knowledge, with SandstoneU

supporting a broad range of disciplines and professional fields, and TechU focusing predominantly on applied knowledge. It is therefore significant that both kinds of institutions are embracing similar approaches given the issues raised in Chapter 2 about the effects of these on different forms of knowledge (Biesta, 2010; Muller & Young, 2014).

Assumptions and understandings about knowledge

As with any policy oriented towards educational change, the policy approaches analysed in the previous section are underpinned by particular understandings and assumptions about knowledge (Deng & Luke, 2008). In this section, I examine these underlying understandings and assumptions, looking in more detail at the ways in which knowledge is framed in the interview and documentary material. As part of this, I consider here the explicit and implicit assumptions about what 'good' curriculum and pedagogy look like as message systems of education that provide a sense of 'what counts as knowledge' (Bernstein, 1976), and the ways they are seen to relate to each other. I identify (1) an emphasis on constructivism and active learning and the framing of knowledge as a process; (2) an emphasis on predefinition and outcomes and the framing of knowledge as fixed and settled; and (3) an inattention to the relations between curriculum and pedagogy in defining what counts as knowledge. Finally, I consider the tensions evident within and across these constructions.

Knowledge as the process of learning

The emphasis on constructivist pedagogies and active learning evident at both institutions was underpinned by a process-oriented sense of knowledge. The policy leaders emphasised the 'how' as more important than the 'what' in relation to teaching, in similar ways to the literature discussed in Chapter 2 (e.g. Barr & Tagg, 1995; Brown, 2002). In commenting on the pedagogical underpinnings of the TechU Online initiative, Lydia for example noted:

> to me social constructivism is really—I guess it starts for me with schema theory and how I believe understanding is manifested. So I very much bought into this idea of conceptual and procedural understanding because I come from a discipline [statistics] where I can teach any number of students to carry out a hypothesis test but they will walk out into the street and they will say something

> really statistically naïve. I know people who have got quite significant studies in statistics who have said to me 'but how can you know that you did not ask everybody'. So they don't believe in sampling. So those notions of that disjuncture between being able to do the procedure and actually understanding the concepts in stats, is really, really, really easy to see, it is clear. So that is what I was interested in and it was actually about developing conceptual understanding and how you might do that. But so to me that sort of internal conceptual structure about nodes and connections so that you kind of got information that sits in nodes but if you can't move between them then you have not got conceptual understanding. […] So to me the social constructivist pedagogical model is all about having conversations and developing those links, I suppose, and challenging that. (Lydia, Interview 1)

Here, Lydia emphasises the importance of students understanding the wider picture and the underpinning concepts, but getting at that through discussions about the material and with other students. She sees learning and the development of broader understanding as not adequately served by transmission or telling, but as requiring work by the students to get inside or think about implications, and sees collaborative, activity-based pedagogies as necessary for effectively encouraging that within teaching.

Additionally, in the TechU Online policy materials, social constructivism and active learning were used interchangeably and to denote the same form of teaching approach. In the teaching information pack provided to new tutors for example, it was noted that:

> The fundamental premise underpinning the learning design and delivery of [TechU Online] programs is the theory of social constructivism, with individuals constructing knowledge through social processes (conversation, dialogue, sharing of ideas). Students in all units of study will be engaged in an active learning environment, participating regularly in communication and collaboration with staff and peers. This is quite different from, and should not be confused with, traditional models of distance education. (TechU Online teaching information pack, 2013)

These concerns were less explicitly engaged with at SandstoneU, where the term 'constructivism' was not used either in the policy documents or in the interviews. But

as at TechU, the focus was similarly on collaborative, activity-based pedagogies. As discussed above, the SandstoneU eLearning strategy (2011) identified reorienting the use of technologies to enhance student interaction and engagement, and within further explanations of this, the document advocated using 'contemporary instructional approaches, including inquiry-based, authentic, collaborative peer-based, and role play-based learning designs' (2011, p. 8), all of which correlate with an 'active-learning' approach.

At both institutions, there was either an implicit or explicit dichotomising of constructivist and/or activity-based forms of teaching (seen as best practice), compared with instructivist and lecture-centred forms of teaching (seen as poor practice). As discussed in Chapters 1 and 2, this standpoint is widely evident in critiques of current university practices and in calls for universities to improve their teaching practices through stronger use of educational technologies (e.g. Barr & Tagg, 1995; Davidson & Goldberg, 2010).

Within the interviews, these sentiments were most prominently seen in the critiques of MOOCs as 'poor pedagogy', which were primarily based on the 'lecture-based' form of MOOCs pedagogy via the video content. Sarah, for example, expressed concerns with the instructivist or 'transmission model' pedagogy embedded within one of the MOOC platforms TechU had engaged with. She commented:

> They're lectures, you know. […] they're all fine, they are nice little tasters, we are happy with them […] But they're not really a showcase in the way that you would want a MOOC to be a showcase. They are showcasing ideas and knowledge that we have but they are not really... […] it is so much at the opposite end of the spectrum of the very high touch collaborative, engaging process that [TechU Online] take. These are, well transmission model. […] So the knowledge is there and I am happy with it as a showcase. All that my criticism of it is the pedagogical approach. And it could be a showcase for what the kind of knowledge you might get if you came on campus. It's just not a showcase for the way we teach, the highly personalised high touch educational process. […] I'm not saying they have not done what they have done well but their pedagogy stinks, there is nothing in there (Sarah, Interview 1)

Here, Sarah suggests that there is nothing of value in a didactic 'transmission model' pedagogy and that in the absence of collaborative, 'engaging' pedagogies, there is nothing left of teachable value. The value of the knowledge here is in the process and not in the content or the substance of what is being taught.

Similarly, at SandstoneU, Olivia commented:

> in terms in of the current composition and functionality of the [MOOC] platform, it's actually not that innovative […] No, we're interested in lots of different kinds of innovation […] We're very interested in ways of enhancing the quality and effectiveness of feedback that goes to students […] also lots of very interesting questions, much of it under researched at the moment about *the role of collaboration tools in learning in online environments*. So what is the right way of enabling peer interaction for affective learning, what kinds of interactions are productive for learning and so on. So that is the sort of social end of things. (Olivia, Interview 1 [emphasis added])

In these comments, although Olivia is not as wholly dismissive of 'transmission model' pedagogies as Sarah, she similarly emphasises collaborative and interactive pedagogies as where pedagogy is heading, and the lecture-derived pedagogies of the MOOC as staid and backward-looking.

The broad dismissal of 'instructivist' approaches was also seen in the negative views the policy leaders took towards subjects 'overloaded' with content. Kevin commented on the 'difficulty in reducing the amount of content' as a key challenge (Kevin, Interview 1). Similarly, in relation to TechU Online, Rachel, the learning design manager described one of her current emphases as 'cognitive loads', meaning:

> are we giving students too many different ways of having material or information presented at them/to them. Is it sort of all too much, do we need to contain that and rethink the way we do that? (Rachel, Interview 1).

Within the online platforms, the concern with content overload tended to be translated into a numerical issue: in terms of the numbers of readings the students were given each week, the length and number of videos each week, the duration of the subject and the like. Although none of the platforms enforced a standardised approach to subject length or weekly content loads from a technological perspective, the need to reduce content

was strongly emphasised by management and the platform staff in the directions they gave about curriculum development and the appropriate use of the platform. Within TechU Online, for example, strong directions were given by staff about the number of readings they felt students could cope with (nominally no more than two). Lecturers developing subjects for the SandstoneU MOOC platform were also advised to keep their weekly videos to under an hour in length and of around ten minutes duration each.

In summary, the policy leaders and policy materials tended to focus on process at the expense of content in their assumptions about what counts as knowledge. They were concerned with encouraging or ensuring content was reduced across the new online subjects, and positioned so-called 'instructivist' approaches in negative terms, instead promoting approaches centred on 'constructivism', interaction or 'active learning'.

Knowledge as fixed and stable

At the same time, however, the approach to curriculum tended to focus on pre-defined content, in ways which positioned curriculum knowledge as fixed and stable. Across the different platforms, all subject materials, including pre-recorded video lectures, activities, discussion questions, additional explanatory material and assessment tasks, were expected to be developed in full prior to the teaching period. This predefinition was framed as a key benefit by the policy leaders in encouraging an alignment-driven, outcomes-based approach to curriculum design. Across the two institutions, subject design was seen to ideally start with learning outcomes and assessment tied to those outcomes, with the rest of the subject mapped back to build towards that.

As discussed in Chapter 2, this attention to alignment, predefinition and fixity accords with a technical rationalist 'curriculum-as-product' (Barnett & Coate, 2005; Coate, 2009) or 'curriculum as prescription' (Goodson, 2008) approach and positions core curriculum knowledge as stable and unproblematic. Within the interviews, there was little acknowledgement of the difficulties involved in curriculum development or curriculum construction, and the comments by the policy leaders promoting learning outcomes tend to suggest those outcomes are settled and easily defined. The problem was identified as supporting lecturers to start with the outcomes first, with little sense of the complexity which might be involved in that or the challenges of defining clear learning outcomes where those outcomes might be multiple or contradictory or open. There was little sense of these determinations as contentious or difficult – the flow from

learning outcomes to assessment to learning activities to content was seen as fluid and easily defined.

These issues were further compounded within the new initiatives due to the difficulties the form presented for changing the curriculum, both at the end of the subject and in response to the students during the teaching. For both the MOOCs and the formal online initiatives, the challenges of amending curriculum produced a sense of fixity and finality to the subjects, particularly where the subjects used high quality video materials as lecture substitutes (evident in both the SandstoneU initiatives). These videos were expensive to produce, both in terms of the materials and expertise required from non-academic staff, and in terms of the time taken to produce them for academic staff, and together these factors placed significant limits on the potential for the materials to be changed. For the SandstoneU MOOCs for example, a rough estimate was that an hour of video material took ten hours of academic time and ten hours of production time to complete.

The platform arrangements themselves further enhanced these challenges, restricting the kinds of changes the lecturers were able to make once materials were uploaded. For most of the subjects (excluding the TechU MOOC), the work of uploading the materials was undertaken by learning designers, and the expertise in finessing the materials tended to sit with staff located outside the university. For the formal online initiatives in particular, learning designers employed by the external platforms tended to be the ones responsible for uploading and then editing the materials, and this meant if the lecturers wanted changes they had to write these down and send these individually to the learning designers to correct rather than being able to manage this process themselves.

Policy leaders also gave the impression they saw curriculum content as fixed and stable in the ways in which they assumed the substance of curriculum required little change between different iterations and cohorts of students. At SandstoneU, the emphasis on using MOOC materials to flip the classroom and the minimal attention to workload constraints in reconfiguring current subjects as MOOCs collectively suggest a view that the curriculum was not intended to be substantially reworked. This appeared to be the case for both the development of a MOOC from a current on-campus offering, as well as the use of MOOC materials within on-campus teaching. The MOOCs model, particularly in the form it took at SandstoneU, was also driven by the idea that subjects

would continue to 'run themselves' after the first period of development with little need for change.

For TechU Online, curriculum was likewise expected to change little between cohorts, with lecturers expected to work with the initiative's staff at the first point of development but be only minimally involved in the monitoring of the subject. Additionally, the staff working at TechU Online were resistant to change and tended to view it as a matter of academic preference with no direct bearing on the subject itself. Lydia, the policy leader responsible for the initiative commented that she was very against lecturers changing parts of their content if this did not affect the stated learning outcomes of the subject:

> one of our problems is academics change things all the time. They think 'oh I am not going to do that assessment anymore it did not work, I am going to do this one', because what they do not necessarily get is changing an assessment from an essay in week six back to a test in week four completely changes how we have designed the unit because we have scaffolded the students through a whole lot of activities to develop what they need to be able to do to write that essay into week six and now it is not there anymore. […] 'Do you realise what that means to us, we have to go back to the drawing board for that whole unit and you have not changed the learning outcomes?' […] *And to be honest if the learning outcomes have not changed, we should not have to change*. And so that is the kind of conversation we are having more and more. (Lydia, Interview 1 [emphasis added])

Here, the idea that curriculum might be iterative or constantly in flux was a source of frustration for management, adding to workloads and wasting time rather than resulting in any meaningful improvement. For Lydia, the consistency and coherence of the subject and its scaffolding towards the predetermined outcome was seen as more important than the kinds of changes to content or assessment which might impinge on that regardless of the improvements to the subject they might provide.

Across the two institutions then, there was a strong sense at the institutional policy level that what constitutes curriculum is a fixed and stable construction, captured within curriculum materials in a static and defined way, rather than constituted and changed

within the moment of teaching or underpinned by a difficult and contentious process of decision making and potential compromise (cf. Karseth, 2006).

Curricular and pedagogic relations

In addition to being fixed and stable long term, the content and purpose of curriculum was also assumed to be unchallenged by the new forms, neither in terms of the new pedagogies they brought, the new attention to 'curriculum alignment' they encouraged, nor in terms of the modularised subject structure in which they were embedded. The curriculum itself was generally not understood as reconfigured by this process but was presented as relatively stable, in opposition to Bernstein (1976) and Biesta's (2010) arguments about the complex relations between curriculum and pedagogy and between the 'means' used in education and the 'ends' produced as a result.

In one interview with Kevin, for example, he talked about the challenge of asking lecturers to reduce their content for online learning in ways which suggested content concerns were unconnected from the wider intent of the subject:

> It [the challenge of reducing content] is partly that thing of lecturers finding it difficult to break up what is, for them, a coherent course, a coherent sort of way of thinking about a particular discipline area, for a particular piece of the puzzle in their discipline area and working out the narrative and the story associated with that and then finding it *difficult to disrupt that narrative and story*. So that is a classic curriculum design issue. And you see it often when people move from fairly traditional curriculum structures to inquiry based curriculum structures where people have to kill off their babies, *they have got to lose parts of the curriculum content that they hold very dear, that suddenly they can only have one asthma case in the problem of the weeks and they usually have fourteen*. (Kevin, Interview 1 [emphasis added]).

In this description, rearticulating the curriculum into the new form is about 'curtailing content' but this is not seen as transformative for the content itself or the intent of the subject, but in breaking up a seemingly superfluous 'narrative', and losing superfluous examples. The issue of avoiding too much content is seen as straightforward, with the core of a subject as something easily distilled, and with over-wordy explanations easily refined and clarified and additional examples edited out.

At SandstoneU, prior to the introduction of the new online learning initiatives, the university had embarked on a major transformation of its curricular programs, including through streamlining its undergraduate offerings and defining new program requirements. In the documents and interviews there was an emphasis on the completion of this prior reform as providing an opportune moment for experimenting with new technologies and online forms, in offering a solid basis upon which to build pedagogical experimentation. Kevin commented, 'having the curriculum reform in place, meant that you were able to have a conversation about where online fits into it because you are so confident about the curriculum reform that you had' (Kevin, Interview 1). The eLearning Strategy (primarily developed by Kevin) similarly states, 'the foundation provided by the new [SandstoneU] curriculum ensures [SandstoneU] is well positioned to develop and employ effective, curriculum-embedded learning technologies' (SandstoneU, eLearning strategy, 2011, p. 1). In these comments, curriculum is positioned as a separate concern, one determined previously and not in relation to the current changes.

Similarly, in relation to TechU Online, Rachel, the learning design manager, commented on the need to rethink subject design in relation to the amount of content, but, like Kevin, she did not see rethinking of this kind as transforming what matters or counts within a subject. Rachel clarified that looking at the subjects from this perspective was part of a broader process of continuous feedback employed by the learning design team but that this did not change the content of a subject:

> We would change the unit based on the feedback so different ways of using the online and the educational technologies to engage students. And we would also be looking at different ways or using technologies to help the learner, so to really encourage the learning. It might be the creation of new videos or little audios or whatever, so the changes we are making, *it is still exactly the same content, it's still exactly the same assessments* but it is continuous improvement and responding to the feedback […]. And if feedback from students says something like—well regular feedback we get is 'way too much reading', we would go in and just go, let us delete all of those and just keep two readings, we would actually consult with the academic and say well the feedback is that there are way too many readings, which ones are the seminal ones that we can keep,

> which ones can we set aside or delete or maybe put somewhere else as additional readings. *It's not changing the content*, so the content will still be the same and the things that we would change though are that the model is sort of weekly activities. So we develop those activities, if they are not working or the discussion has not happened, the students are not interacting as much as we thought, we would re-jig that activity but *it would still have the same purpose that sort of met with the scaffolding towards an assessment. So we would not just sort of take things off track. Yeah it's still the same intent of the unit*. (Rachel, Interview 1 [emphasis added])

Here, reworking the content in ways which change how it is presented or in ways which reduce the overall amount of content is not seen to change 'the intent of the unit', so long as the outcome of the subject and the progression towards that outcome remains stable.

As indicated above, there were differences in how the relations between curriculum and pedagogy were seen at the two institutions. At SandstoneU, policy leaders purported to appreciate the importance of lecturers' pedagogical role and their 'understanding of pedagogy and teaching' in combination with their intimate understanding of their discipline' (Kevin, Interview 1). However, this understanding of the relations between curriculum and pedagogy as important within an individual teachers' practice does not appear to have translated into an understanding of the new initiatives and their different pedagogical forms as potentially transforming the substance of a curriculum. In other words, although the relations between curriculum and pedagogy were acknowledged as important at the level of individual practice, they were not seen as significant at a systematic or structural level.

Similarly, the attention to outcomes and alignment was not seen to comprise rethinking the purpose of a program (expect insofar as that purpose should be about building towards a particular outcome), but was about rethinking how that program can be better presented in ways which would appeal to students and encourage deeper engagement in their learning. The introduction of learning outcomes was not seen by those driving the policy initiatives as about introducing new purposes, but about pinpointing what was already embedded in less explicit ways within a particular subject. In other words, the

online form was not seen by them to change the kinds of emphasis in place or not in place in relation to purpose but to strengthen and bring out what was already present.

At both universities, the potential for a new approach to transform the core substance of a curriculum program, beyond the loss of expendable content, was not raised as a possibility in any of the interviews or policy materials. The changes the policy leaders expected to occur in moving subjects online were significant (in encouraging alignment and active learning approaches), but they did not see these as transforming the actual make-up and purposes of the subjects in any meaningful way. The new approaches here were seen to refine or pin point what matters, rather than transform that in ways which that might reconfigure the knowledge field and what is represented as important within the curriculum. The reduction of content was only seen in relation to concerns about student motivation, engagement and the like, and was not seen by the policy leaders to affect the broader purpose or outcome of the subject.

Knowledge contradictions and tensions

Two primary tensions are evident within the concepts of knowledge just discussed. Firstly, the concurrent attention to both process and predefinition/fixity is in tension within the context of the new initiatives. Secondly, the ways in which the policy leaders and new policies and initiatives framed constructivist and active learning pedagogies as best practice regardless of purpose, content or context suggests an 'emptying out' of the learning and a focus on 'busyness' rather than active engagement with substance or with learning *something*, as well as a disregard for important differences between different fields and forms of knowledge.

The two concepts of knowledge identified as at work in the policy framing suggest different kinds of priorities and forms of education. On the one hand, there is a focus on a process oriented approach to knowledge and on providing space for students own constructions of knowledge in relation to that. The emphasis here is on providing space for students to actively engage with and work through concepts in ways which develop their own understandings. On the other hand, however, a fixed and stable sense of knowledge is reinforced through the attention to predefinition, outcomes and alignment. The content of subjects is intended to be developed and finalised prior to engagements with the students, leading for little space for that content to reference their own understandings. The understandings of knowledge underpinning the policy framing are

here potentially contradictory, on the one hand emphasising students' own activities, interactions and concepts, and on the other framing knowledge as fixed and predefined rather than negotiated within classroom spaces.

An attention to outcomes – or in other words thinking through where students are expected to get to at the completion of the subject – is not in itself contrary to a constructivist approach. Biggs and Tang's (2011) 'constructive alignment' approach is both a form of outcomes based teaching and learning and premised on a constructivist approach to understanding teaching. Additionally, as indicated in Chapter 2, the broad concept of 'constructivism' embodies a range of different theoretical approaches and tenets, some of which may contradict an outcomes-based approach, but others which do not.

However, within the two institutions, the ways in which the new initiatives tended to 'unbundle' teaching from curriculum development suggest a number of issues for how these concepts might be brought together. The kinds of tenets writers such as Sjøberg (2010) identify as common across constructivist theories (described in more detail in Chapter 2) tend to be premised on strong relations between teachers and students and understandings of learning and knowing as necessarily connected to students' own histories and experiences. As Davis and Sumara (2010, p. 490) write, 'constructivist theories, while diverse, commonly challenge the separation of what is taught from how one is taught and run against the suggestion that content or tasks are able to be selected independently of learners, understanding curriculum as arising in the moment of engagement rather than as 'any sort of deliberate constructive practice'. Within a constructivist framework, therefore, curriculum content is not understood as solely defined in reference to students, but teachers are expected to take students' existing ideas seriously, and there is a presumption of accounting for difference across and between cohorts of students. Biggs and Tang's (2011) work is similarly written as advice for lecturers and presumes that lecturers formulate their outcomes and their pedagogies together in line with their own particular purposes, contents and contexts. The approach imagines a lecturer present within a classroom engaging with embodied students, and advocates for teaching approaches which allow for the emergence of 'unintended but desirable outcomes' (2011, p. 11) as well as those that are predefined. The issue with the ways in which the dual emphasis on constructivist pedagogies and

outcomes is constructed at the institutional policy level at SandstoneU and TechU therefore concerns the rigidity and extent of the ways content is predefined and fixed between and within cohorts of students.

Secondly, within the policy framing, there is a lack of attention to content or purpose in relation to the ways in which 'best practice' pedagogy is framed and understood. As discussed, active learning and constructivist approaches were framed by the policy leaders as good pedagogy regardless of the purpose of the educational situation or the content being taught. The policy assumptions here align with Biesta's arguments about the insufficiency of the current 'learnification' approach to education to adequately address questions of educational desirability and purpose. Biesta argues 'the point of education is 'never just that students learn, but that they learn *something* and that they learn this for particular *reasons*' (2014, p. 63). He contends that the 'language of learning' constructs education as a 'process' in ways which are 'open – if not empty with regard to content and direction' or purpose (2009, p. 39).

The institutional policy approach to constructivist and active learning pedagogies embodies these issues. Here, the attention to process was oriented more towards making sure students are active and 'doing things', rather than as a way of understanding how students know and learn particular things 'for particular purposes' (Biesta, 2012, p. 12). The policy leaders promoted a mainstreamed, common approach to teaching, informed by generalised ideas about what interests and engages students (doing things, interacting with each other) and what students are capable of. In dislocating the understandings of active learning as good pedagogy from any attention to purpose or content, the interpretation of what constructivist pedagogy or active learning looks like tended to be empty of meaning. As the 'activity' was not understood as necessarily connected with particular content or purpose, all forms of activity were given the same sense of value. As a result, no distinction appeared to be made between, for example, finding and sharing an article, with providing some form of constructive comment or argument about the ideas embedded within that. The attention to 'process' was about being seen to be visibly active or doing things – being busy – but disconnected from what is being done or constructed.

This was particularly evident in relation to the MOOCs and the attention to learning analytics. As a field, learning analytics is underpinned by a range of assumptions about

learning and education: that it is individualised (or at least captured collectively by the minute actions of individuals); that its 'effectiveness' can be captured independently of purpose or values, and that related to this data on the minutia of student actions can have something to say about what matters educationally outside of that specific context – i.e. that context – including who students are and where they are coming from and what they are building towards – does not matter. For learning analytics pertaining to MOOCs, for example, there is an assumption that the number of unique downloads on a given video lecture has something to say about student motivations that can be abstracted from the broader context of the teaching (including in terms of the content of that teaching) and that might be applied to university teaching in a broader sense. Here, the interest in what motivates or engages students is simply framed as about whether students are active or not – i.e. busy – as indicated by the number of videos they watched or the number of forum comments they posted. The policy attention to being student-centred was then not about an attention to who students are but to a generic sense of what motivates and engages students and what keeps students on task.

The inattention to content and purpose also gives rise to a lack of acknowledgement of the differences between different forms and fields of knowledge, and the ways these may be differentially affected by new ways of constructing curriculum and education. The policy intent was to enforce or encourage a particular approach to pedagogy as beneficial across the range of subjects included within an initiative (as well as beyond that), including subjects deriving from different kinds of fields from both the sciences and the arts as well as professional fields, which, as discussed in Chapter 2, are traditionally understood as distinct in terms of their purposes and orientations, and in the ways in which knowledge is built (Becher & Trowler, 2001; Bernstein, 1996; Muller, 2009). The policy leaders I spoke to had responsibilities for the management of learning and teaching across the universities, and in one sense it is therefore not surprising that they were focused more on process and outcomes than on the substance of the knowledge being taught. However the ways in which these agendas were promoted raised issues for those located within different disciplinary fields, and these will be taken up in the following chapters.

The instrumental and economic sense of what higher education is about identified above is important here. Within the policy framing, because the purpose of the education is

seen as oriented towards attracting students and meeting their needs, other kinds of purposes are not seen to matter, and concerns of student engagement and motivation are not seen as oriented towards the particular but as general and applicable across different contexts. Keeping students engaged becomes a general concern about keeping them not bored and on task rather than about engagement with particular content or concepts. Here, and in line with the work of policy sociologists on discursive effects (e.g. Ball, 2006; Gale, 1999; Rizvi & Lingard, 2010), the broader economic framing of education can be seen to define how good pedagogy and educational purpose are understood. The emphasis becomes more on engagement as an end in itself, rather than as a means for achieving a broader educational purpose.

Conclusion

This chapter has analysed the institutional policy framings of online learning and new online initiatives within the two institutions. It has considered the ways in which the policy problem and online learning solution have been constructed at senior levels of the university, the meanings and assumptions about curriculum and knowledge evident in relation to this, as well as the tensions and contradictions manifest within these.

The chapter has shown that at both institutions, the policy problem was constructed as a problem of poor teaching and attracting students in the competitive higher education marketplace. As a response to this problem, online learning was viewed as a means of driving pedagogical and curricular practices towards the forms of active learning and outcomes-based education seen as the markers of good teaching practices. Building on the insights of policy sociology, the chapter demonstrated the ways in which online learning platforms can be understood as policy technologies which change how teaching roles are understood as well as how education is seen and practiced.

The chapter showed that there was a more dismissive orientation to academic expertise at the non-Sandstone and more vocationally-oriented university (TechU) that at the Sandstone institution. Yet it also showed that despite their diversity, the leaders at both institutions held similar views about what good teaching looked like. In line with some of the wider emphases evident in the literature on university teaching, all the policy leaders underlined the importance of constructivist and active learning pedagogies on the one hand, and outcomes-based approaches to curriculum development on the other. Within this framing, there was an implicit sense that the purpose of a university

education was consumer-oriented and instrumentally-driven and student engagement was constructed as an abstract – context-free – concern.

In considering the underlying assumptions about curriculum and knowledge, I showed that there is a strong emphasis at both institutions on active learning and knowledge construction (i.e. the work done by the learners) as being more important than content (i.e. the knowledge base the lecturers bring to the curriculum). The policy leaders' rhetoric here is concerned with students' own knowledge constructions and the process of their knowledge development. At the same time, in setting up mechanisms which require the curriculum content to be set up in advance and essentially left unchanged during the program as well as in later iterations, the policy leaders' practices imply a view of this knowledge as able to be fixed and pre-defined. The two concepts are inherently in some tension, and this will be shown further in the following chapters.

In relation to questions about the separation and interrelation of curriculum and pedagogy, I showed that that policy leaders assumed that the content and purpose of curriculum was stable and unchallenged by the new forms. I argued that in divorcing questions of pedagogy from questions of content and purpose, the attention to constructivist pedagogies and active learning has been reduced to a concern with busyness – with doing things irrespective of what those things entail or what they progress toward. I also suggested that the conception of 'constructivism' in evidence at the institutional policy level is a very thin and inadequate one.

In the following chapters the tensions and contradictions shown in this chapter at the institutional level will be explored further in relation to the ways in which the lecturers negotiated their curriculum development and teaching practice, both in terms of their own thinking and assumptions about knowledge and the challenges they faced in working within this policy context. As Ball (1994, p. 10) writes 'policies are always incomplete insofar as they relate to or map on to the "wild profusion" of local practice'. The issue then is not so much with the ways in which policy fails to capture the complexity of what is discussed in the later chapters, but with the ways policies shape and are taken up or reframed within that.

Chapter 5: The case studies: knowledge and purposes

Biesta (2010) argues that there is at the current time too little explicit attention to questions of purpose and content in education. This chapter considers how the twelve lecturers in this study explained their purposes and justified their curriculum content selections for the eight case study subjects, and the assumptions about knowledge and learning evident in relation to that. As detailed in Chapter 3 and in the Appendix, in the interviews with these lecturers, I asked them about their aims for the particular subject they were developing and about their wider experiences of teaching and what they hoped students would take away from their subjects more broadly. I also asked how they saw the purposes of their disciplinary or professional knowledge field and its teaching, and the rationales behind their particular content selections. In this chapter, I consider how the lecturers responded to these questions, and the differences that emerged between them.

The chapter focuses on the overarching values and purposes of the lecturers, understanding these as an important part of how 'what counts as knowledge' is defined within curriculum. These values and purposes are also important for understanding the questions pursued in the next chapter about the the lecturers' engagements with the new online forms and the ways these potentially challenged and changed the lecturers' purposes and emphases.

The chapter is structured in three sections, based on the commonalities which emerged across the different case studies in relation to the concerns of this chapter. The three groupings are: (1) the subjects developed by lecturers located within disciplinary fields at SandstoneU (Behavioural Ecology, Interdisciplinary Logic and Classical Studies); (2) the subjects developed for TechU Online (Sports Management, Supply Chain Management and Teacher Education [Literacy]); and (3) the two remaining MOOCs (Teacher Education [Assessment] and Online Learning Design).

The discussion of the lecturers' purposes and content selections engages with a number of the debates covered earlier in Chapter 2, including questions about the significance of

the disciplinary or professional field in teaching (e.g. Becher & Trowler, 2001; Neumann et al., 2002; Trowler et al., 2013); differences between fields and forms of knowledge (Bernstein, 1996; Ensor, 2004; Karseth, 2006; Muller, 2009); and constructions of best practice teaching and constructivist approaches (e.g. Sjøberg, 2010). My interest was in the ways in which strands of those debates were evident or absent in relation to the thinking of the lecturers I spoke with, and the ways the findings evident in this study of lecturers' own struggles in developing curriculum today might contribute back to those debates. I show in this chapter the ways in which the knowledge field continues to matter in curriculum development in relation to both issues of structure and substance and in terms of the traditional distinction between disciplines and professions.

The disciplines: orienting to the structure and form of the discipline itself

Behavioural Ecology, Classical Studies and Interdisciplinary Logic were all subjects developed by lecturers at SandstoneU. They were located in different forms of knowledge, including a scientific discipline (ecology/biology), a humanities discipline (classical studies) and an interdisciplinary field (logic), but common across them was an 'inward' facing orientation towards the internal development of the knowledge field and its own norms of validation in line with the characteristics ascribed to 'pure' disciplinary fields (Becher, 1989; Bernstein, 1996). Both explicitly and implicitly, the lecturers developing these subjects indicated their belief in the importance of the discipline and its form as something that they were trying to convey to students, something that extended beyond the particulars that they might select. They also valued student engagement, but within a strong sense of what they were trying to draw students into.

For the Behavioural Ecology MOOC, Matt and Ethan's primary aims were to help students to develop an understanding of their field and how it operates, and 'the nature of the science' that sits behind the findings (Ethan, Interview 3). In contrast to some critiques of MOOCs (e.g. Rhoads et al., 2014), they were not simply concerned with providing students with abstracted content or with asking them to rote learn key concepts, but instead wanted students to understand the broader picture and the agreed boundaries, rules and ways of practicing within their research field. Ethan commented

that the MOOC was about 'not just knowledge but […] also how that knowledge is acquired' (i.e. the structure of knowledge and the norms of the field) (Ethan, Interview 1).

In their subject development, Matt and Ethan devoted significant space and time to explaining the rules and norms of their field, including a video lecture dedicated to the kinds of questions seen as answerable from a biological research perspective. According to Ethan, this lecture is 'technically important for the discipline' as it covers the differences between evolutionary explanations, causative explanations and learning explanations. Matt similarly noted that in the later lectures, 'almost all the studies that we will then be talking about do one or other of those things [described in this lecture], they use observational information to test an idea, they'll do an experiment to test an idea or they will use comparative data to try and test an idea' (Matt, Interview 1). The lecture covers the kinds of questions which can be asked by the discipline (i.e. those that can be tested experimentally), and those that cannot (i.e. those which cannot be answered scientifically through experimental studies). In this video, Ethan argued that some questions about animals can be answered by biological research, and some cannot, and that within the context of research the only kinds of questions which should be asked are those which can be tested scientifically through experimentation. By insisting on the importance of the asking questions lecture, Matt and Ethan were evidently concerned with engaging students within the disciplinary frame, and inviting them to participate in disciplinary conversations.

The subject also included 'researcher meets' which enabled students to engage with and ask questions (via online conferencing technologies) of prominent researchers within the field. In their lecture videos, Matt and Ethan attempted as much as possible to not just tell students the outcomes of research findings but to give students a sense of the science behind the research and the ways particular claims had been reasoned and proven. They included references to real research projects and the findings of those projects in those videos. In Ethan's words, the approach was about showing students 'there's some science behind it', rather than 'simply telling a story' (Ethan, Interview 3).

On the subject website, the Behavioural Ecology MOOC objectives were identified as:

> understand how researchers use scientific logic to approach answering questions, and begin to ask your own questions about animal behaviour; explain the difference between ultimate and proximate; explain the processes of natural and sexual selection and how they shape animal behaviour; understand theoretical concepts such as competition for resources, altruism, kin selection, parental care, and sexual and family conflict in light of Darwin's theory of evolution; and critically assess competing theories and alternative hypotheses and suggest how they might be tested experimentally.

These objectives are about providing students with a sense of what the field is about and how knowledge is applied within it. The MOOC was here not positioned as 'packaged' or 'reified' (Rhoads et al., 2014) knowledge but instead as a subject aiming to engage students within a disciplinary framework and provide them with opportunities to participate in disciplinary conversations.

When I asked why they wanted to develop their particular MOOC, both Matt and Ethan emphasised their desires for the broader public to appreciate the research base behind popular natural history documentaries. In our first interview, Matt commented that he chose to develop his subject into a MOOC because he felt there was huge interest in the subject matter, but not enough understanding of the science that supports those understandings, with people walking away from natural history documentaries 'assuming that the BBC discovers all of these things, when in fact of course all of these programs are summarising and relating stories that have come out of individual research projects'. He commented that he 'wanted to give people a chance to learn a bit more about the *research* behind those discoveries and to just understand a little bit more about how animal behaviour research is conducted' (Matt, Evolutionary Biology, Interview 1 [emphasis added]).

A similar orientation was evident in the Interdisciplinary Logic MOOCs. For these MOOCs, Rod and Debra wanted students to understand logic as more than 'a bunch of tools' or 'skills that will be used elsewhere' (Rod, Interview 2). Instead, they wanted them to get a sense of the conceptual structures and methods associated with the study of logic, the different fields that use and apply logic knowledge, and the kinds of research approaches and practices that sit behind that. According to Debra, the MOOCs were oriented towards an understanding of logic and its use and application across

related disciplines. In our first interview, she commented, 'The whole point of the subject is to try and demonstrate that the same core knowledge of formal logic – first propositional logic and then predicate logic – is used in five different disciplines, and forms an integral foundation to five different disciplines' (Debra, Interview 1). This emphasis is about understanding how logic knowledge 'works', the rules which govern its use, and its application across different knowledge fields.

In our first interview, Rod, one of the two subject coordinators, described logic as a quasi-discipline in its own right with its own core content, distinct from the kinds of interdisciplinary fields which locate around particular problems or issues. This core content is applied in a range of different disciplines, but it has its own knowledge structure, which is hierarchical (Muller, 2009), and aligned with Becher's (1989) conceptualisation of a 'hard' field.

Although the promotional materials for this MOOC talked of the relevance of logic to the modern world (including in relation to digital systems and the like), the focus of the subject was not on what logic offers for understanding the world as such (i.e. logic as a tool) but on conveying a broader sense of its orientation as a quasi-discipline that informs other disciplines. There was an emphasis on understanding the conceptual structures and methods associated with the study of logic. Debra commented, 'The whole point of the subject is to try and demonstrate that the same core knowledge of formal logic – first propositional logic and then predicate logic – is used in five different disciplines, and forms an integral foundation to five different disciplines' (Debra, Interview 1). Rod likewise confirmed that this interdisciplinarity was critical to the purposes of the subject. He commented:

> So there is still going to be that kind of interdisciplinarity in the [MOOC]. That is a crucial thing for us… *That is a crucial thing in people's, what it is to learn this at a university level*. Because—it's like the difference between learning arithmetic and learning mathematics. You could learn this as just a bunch of different little skills, which is like often how mathematics is taught in school, we just need you to learn your times and plus tables and everything. And sure there's a space for that. But we want to motivate this by saying, here are lots of different ways of how that's applied. And then we want to evaluate its success on that basis of those things as well. We want to say right […] if this tool gives

> us this answer, how is this actually an answer to the original question and what was motivating the question. […] We want the students to be able to not only notice that this tool does this well and does this well and does this well, but why it might be and where the limitations of the use of that thing might be and *that Is a crucial thing which makes something really a university level thing because it allows you to not only get some tools to use but to have the critical expertise to be able to know when a particular tool might be appropriate*. And that kind of interdisciplinarity, or at least multidisciplinarity is a crucial thing in the motivation of the subject (Rod, Interview 1).

Here, as in the previous case-study of Matt and Ethan, Rod and Debra wanted to give students an understanding of the ways in which knowledge is developed and the kinds of understandings that sit behind that, rather than just giving them access to content abstracted from the ways of knowing that underpin it. The emphasis is on understanding the disciplinary ways of knowing that draw on logic, not just logic as an abstracted technique able to be taken up by the students in any way they please.

In developing their videos, Rod and Debra sought to illustrate the differences between the disciplines which use logic. In the first linguistics lecture in MOOC 1, for example, Rod includes a slide which quotes the philosopher David Kaplan as saying:

> Linguists are like vacuum cleaners! Philosophers are like black holes. Philosophers react to every theory by constructing arguments against it. Linguists react to every theory by taking it in and using it to explain some of their millions of examples (MOOC 1, Lecture 5.1).

In explaining this quote, Rod notes the reflection provides insight into 'how the discipline of linguistics works' and he encourages students to read another essay by a linguist covering similar ground. Rod commented that the coverage of the different disciplines and fields means 'it's like everybody's learning different languages' and that within the subjects they 'make that kind of discomfort a topic for attention' (Rod, Interview 1).

The third case-study in this group was the formal online subject Classical Studies. Here, the lecturer, Laurie, also described his intention not just in terms of what content would be studied, but in terms that referred to concerns about introducing students to

disciplinarity in the sense of structures and ways of knowing. He said his aims were to 'give them an accurate impression of the ancient world, *how you go about understanding* a complex series of cultures and societies within a distant period like that and how that can then reflect on what we do and who we are' (Laurie, Interview 2 [emphasis added]). He commented that this subject was about approaching ancient material from a 'historical cultural context' and understanding how you 'approach the material that comes down to us and what skills do you need to apply to the material that comes down to us in order to understand what its importance was in that very different cultural context' (Laurie, Interview 4).

According to Laurie, the discipline of classical studies incorporates multiple methodological and analytical approaches designed to understand the different kinds of material evidence from the ancient world, including literary, artistic and archaeological artefacts. Laurie commented, 'we focus very much on a defined region and period and then anything goes within it in terms of the material that you can bring to bear to understand the culture and society of the times' (Laurie, Interview 2).

However, although he felt 'anything goes' to an extent, Laurie was clear that the discipline of classical studies comprised a particular approach and way of knowing that was different from history and literary studies. He strongly objected when the online platform staff labelled his subject as history and insisted on it being labelled as Classical Studies. Laurie saw no distinction between his purposes for his online subject as for his on-campus subject, given neither have hard prerequisites and both can be taken by students from both within and outside majors concerned with Classical Studies. He commented that students take his subjects for a range of different reasons (for example, English majors want to know classical stories so that they can then recognise them in early modern literature, history majors want to understand how mythic and folk law material can be used as historical evidence). But he emphasised that, regardless of background or major, what he wants to engage students with is an approach particular to classical studies:

> What I really want to engage them with, is understanding things in their very, very complex cultural and changing cultural and social context and most students will understand that and if they don't understand that then I'm doing something wrong. […] hopefully all the students are going on the same sort of

> journey and *they're kind of approaching the material in a similar way* even if after the course is over they're getting different things out of it (Laurie, Interview 2 [emphasis added]).

As with the lecturers developing Behavioural Ecology and Interdisciplinary Logic, Laurie acknowledged and talked about the different backgrounds, trajectories and interests of students, but did not see these as guiding the design of the subject. Like Matt and Ethan, and Rod and Debra, he wanted his students to develop a sense of the 'how' of his discipline, not just the 'what' of its knowledge discoveries (although that too is important). For these lecturers, understanding the content of the subjects was seen as important, but the primary value and purpose of the subjects was seen in developing an understanding and broader 'way of knowing' (Bernstein, 1976) in which that was situated.

Unlike the rest of the case study subjects examined in this research, all three of these subjects were redeveloped from existing on-campus subjects. In approaching the redevelopment, none of the lecturers reworked the three subjects in major ways, although they did see benefits in the way the redevelopment encouraged them to rethink some of the detail (discussed further in the following chapter). In some ways, this is not surprising given the lecturers' workload constraints and their lack of familiarity with the new online platforms. However, it does point again to the emphasis on conceptual coherence required within disciplinary teaching (Muller, 2009), and to the ways in which the subjects were seen as having the same purposes as the subjects taken by students within wider academic programs, despite the MOOCs in particular (Behavioural Ecology and Interdisciplinary Logic) being open to students of any background.

One aspect often associated with scientific forms of disciplinarity is hierarchical knowledge structure, and for Behavioural Ecology Matt and Ethan spoke about the different trajectories of students as a challenge, given the importance of sequence within their field. Matt commented in relation to the differences between the MOOC and the on-campus subject, 'we know that we've got a completely different audience; for our third year students, those students have done prerequisites at second year, at the university, we know their level of preparation, we know their level of understanding of concepts like ecology, that's not true for our [MOOC]' (Ethan, Interview 3). In

response, Matt and Ethan decided to align the content with the third year subject, but in a way which made that content accessible to the students. Matt noted, 'we try and introduce them to topics gently but we're not afraid to sort of discuss some trickier complex concepts. So it's almost like it's taking them from first to third year in some lectures, very quickly' (Ethan, Interview 3). In redeveloping the material for the modularised MOOC form, Matt and Ethan elected not to downplay the disciplinary approach, but instead to reinforce this and make it more explicit. In our first interview, Matt commented:

> We've added some introductory lectures into the structure of the [MOOC] where we just reiterate some of the bits of basic knowledge that we think students should be aware of and they're mainly around evolutionary processes, natural selection and so forth. And we try and take the opportunity within lectures to just add a little bit of background or refer students to additional resources where they can learn more if they need to. (Ethan, Interview 1).

Here, the approach maintained conceptual coherence, by accounting for the hierarchical structure of the knowledge field.

Similarly, for Classical Studies, in response to the different kinds of students he might get through TechU Online, Laurie kept the requirements the same as his on-campus teaching but added additional instructions around the subject clarifying what was expected and how students should engage with the materials to get the students up to speed. His emphasis was on maintaining the way the subject has been taught through controlling more strongly for different student trajectories and in bedding down and articulating exactly what needs to be understood about the discipline at that level.

For Interdisciplinary Logic, the on-campus subject was first year, so the issues with different student trajectories were less apparent. However, in line with Muller's (2009) emphasis on conceptual coherence, Rod and Debra were particularly concerned with the order in which content was provided to students, particularly in terms of the importance of students understanding the concepts underpinning propositional logic before starting predicate logic. Interestingly, although they did comment on the value of MOOCs in reaching broader audiences, Rod and Debra primarily framed the benefits and purposes of their own MOOC in terms of attracting students who would continue with study in

one of the logic application area disciplines. Rod also emphasised the value of the MOOC in allowing current students to catch up on content that had been missed, describing it as 'less effective but more easily distributed' than actually taking the class – so 'like an enhanced textbook' (Rod, Interview 1). Here, the ideal imagined student taking the MOOC was clearly positioned within a disciplinary trajectory and the resources were seen as valuable because of what they offer for someone developing within a disciplinary framework.

In line with Muller (2009), my research revealed differences here between the subjects located within 'hard' disciplines and with hierarchical knowledge structures (Behavioural Ecology) compared with those located in 'soft' disciplines (Classical Studies) in terms of the importance attached to sequencing and the like. It also showed that regardless of these distinctions all the subjects located within the disciplines were oriented to the 'way of knowing' guiding the field, not just to conveying the fruits of previous disciplinary work.

However, this strong attention to internal considerations and conceptual coherence did not mean the lecturers were not at the same time concerned with students, their own concepts and meaning-making and their engagement in the subject matter. In contrast to the approaches which dichotomise 'instructivist' and 'constructivist' approaches discussed in Chapter 2 and in relation to the institutional policies in Chapter 4, these five lecturers were highly concerned with both looking for ways to engage students and with students' own ways of meaning-making, rather than simply with teaching predefined content.

In our interviews, Matt and Ethan spoke about their broader teaching practices and discussed the ways in which they have previously reconfigured assessments to better reflect their own views about what good learning looks like. These changes – which involved incorporating student peer review of essay drafts and reframing exam questions towards interpreting raw data – were about acknowledging the importance of students' own meaning-making practices in their learning. Both saw real value in engaging with students' own understandings to ensure students actively engaged with the substance of what was being taught, rather than simply regurgitating lecture content. Ethan, for example, commented that he was interested in experimenting later with a

flipped classroom model as it 'doesn't give the students the option of just sitting at the back of the class and passively absorbing stuff' (Ethan, Interview 4).

Matt and Ethan also wanted students to understand and appreciate that the knowledge being taught was not fixed but evolving and subject to debate. In Ethan's 'Asking Questions' lecture, he pointed to the complexities of what constitutes research and that one of the issues raised within the field is the ways different kinds of questions generate different kinds of answers. Ethan argued that four kinds of questions are evident in the field which focus on (1) development, (2), causation, (3) evolutionary history, and (4) survival value, and that an important aspect of research in the field is about distinguishing between these different forms of explanations. Based on the four questions, Ethan explained that the question of 'why do bowerbirds pay so much more attention to building, renovating and decorating their bowers in springtime?' might be answered according to those alternate frames as (1) that the hours of daylight increase trigger changes in hormones; (2) to attract females for breeding; (3) that complex bowers may have evolved from more simple constructions built by ancestors; and (4) that males have learned the behaviour from parents or neighbours. Within this video, Ethan both set up parameters for the kinds of questions which should be engaged with, as well as drew attention to areas of potential contestation within the field.

Matt commented in relation to this lecture that he and Ethan have a good sense of what questions can and cannot be answered, but that he felt 'in the dialogue with students there's an opportunity for broader conversation about that' in sharing their own understandings (Matt Behavioural Ecology, Interview 2). He also noted that what set the MOOC apart from BBC natural history documentaries was the focus on the research studies themselves, which meant the approach was not about taking content at face value but 'saying, 'okay, what are the arguments, what are the alternative possibilities, how did they arrive at this particularly conclusion rather than another conclusion' (Matt, Interview 1). He stated that within the MOOC:

> We try and take a critical approach to looking at studies that we are analysing. So if there's a flaw in the study or there's a problem with it then we try and discuss that. So I think we do want to sort of encourage critical thinking and a sceptical view about whether or not things represent good evidence or bad evidence. (Matt, Interview 1)

However, Ethan did also note that in aiming to 'make the concepts as accessible as possible' within the MOOC, he and Matt did limit 'the level of ambiguity or uncertainty that is what makes third year teaching much more interesting than first year teaching' (Ethan, Interview 3), an issue discussed further in the next chapter.

For Interdisciplinary Logic, Rod and Debra were also interested in experimenting with new teaching practices, and had recently experimented with 'flipping' parts of their lectures by developing low-cost videos on their iPads for students to watch outside of class and using their class time to test students on their knowledge of that material via student response systems such as clickers. Their approach was very much in line with the understandings of 'good teaching' and 'active learning' emphasised within the policy framing (discussed in Chapter 4) and in the higher education literature (discussed in Chapter 2).

Like Matt and Ethan, Rod also strongly emphasised the importance of presenting logic knowledge as not settled but as an evolving field. He commented:

> there is the sense that often the way that logic is taught in service courses is as a tool or skill, completed science and you go away and use it. And that's not wrong but that's not all there is. So we do want to get people a sense that these are kinds of things that were discovered and invented and this result that we'll be talking about was formulated and understood in the 1950s and before that people did not know this. And so having a sense that these kinds of things are things that we are figuring out, learning. (Rod, Interview 2)

This emphasis on the field as open and evolving points to the ways in which study *within* disciplinary frames can offer openness, rather than simply a rigid predefined frame. Such teaching enables students to see the bigger picture about how knowledge is acquired and the shifts and developments that are part of that, rather than simply absorbing predefined content.

While they were open to pedagogical experimentation in ways desired by the policy leaders, a number of these lecturers also commented on the significance of their curriculum content and the problems raised by trying to reduce the amount of content taught. They were concerned about the potential for this imperative to undermine what was valuable about their subjects, rather than simply highlight what was most

important. This was particularly evident for the Interdisciplinary Logic MOOC, where, as discussed above, Rod and Debra insisted upon the importance of maintaining all five application areas rather than focusing solely on the core logic content. The number of disciplines included within the frame was seen as important and Rod and Debra argued 'trimming [the discipline offerings] down will diminish it quite substantially' (Debra, Interview 1), because it would give students a more limited sense of how logic is applied and the different forms that takes. Rod and Debra were open to amending their curriculum content in some areas: to accord with what students were able to handle, and since introducing the on-campus subject had reduced the mathematics load to enable students to come to grips with the more difficult concepts. However, in comparison to the policy framing (Chapter 4), they did not see content reduction as simply a matter of reducing the examples but as something that would change the aim of the subject. In relation to their decision to offer two MOOCs rather than one, Rod noted:

> we could have either made the content of our subject not very interesting and more sort of traditional and fitted it all within roughly eight weeks or keeping the content that we think makes it exciting, it sort of naturally splits into a first half and a second half. (Rod, Interview 3)

In Classical Studies, Laurie saw the issue of content reduction as not just about covering the range of topic areas and approaches but also about what the students were able to get at in their discussions. Laurie commented at one point that many of his students found it difficult to 'keep track of all the details of the narratives because […] there's lots of different narratives'. However, he saw this volume of material as not contingent but critical to the purpose of the subject and the field. He commented:

> The typical discussion when we get to the point of okay what evidence can we use to support that argument, is a student will go 'oh it's that myth with that guy, oh what's his name, he kills the minotaur, what's his name' and they will struggle to keep all of this because there's just so many names. And unless they've got the text directly in front of them, they've got the notation directly in front of them, there's still a challenge to remember it. So the flipbooks worked excellently as a reference tool and I saw they were all accessing it, they were all using it. But it's still there's quite a volume of material, kind of reading. *There's a volume of information that they need to manage in order to actually bring to*

> *bear the various skills and to apply the evidence to do the learning and to do the work*. (Laurie, Interview 4, italics added).

In contrast to the arguments of the policy leaders (discussed in Chapter 4), these comments highlight the ways in which the lecturers saw content as important and not necessarily able to be reduced without transforming what students are able to get out of their study.

All of the five lecturers wanted students to be actively engaged in their subjects, to be active learners. However, unlike the policy leaders' interpretations of student engagement as about 'being active' and 'doing things', these lecturers were most concerned that students were interested in the content itself. One of the things that Matt, Ethan, Rod and Debra all said they appreciated about MOOCs was the fact that students selected into them of their own accord, and were thus more likely to be interested in the subject matter for its own sake, rather than for instrumental reasons (to meet a degree requirement for example). Matt commented:

> If people are passionate about a subject and they're interacting with someone who's passionate about a subject, hopefully they'll enjoy it. And people do enjoy animal behaviour and marvel at things that animals do and share the same sort of enjoyment of seeing an animal do something just absolutely bizarre and wondering why. (Matt, Interview 1)

Ethan likewise noted that while in his typical first year teaching he would not spend a lot of time talking about experiments, he felt he could do this in the MOOC as the students were more likely to be interested. He commented, 'it's slightly more challenging to entertain students who are absolutely not interested in what you are doing, wherein at least in [the MOOC] the students are all interested in it, if they're not interested they won't do it' (Ethan, Interview 3).

Additionally, none of the lecturers saw issues of student engagement or interest as driving their content selections, which were instead driven primarily by the internal logic and norms of their field. Ethan, for example, commented that students 'might get bored' by the 'Asking Questions' lecture, but saw its 'technical importance' as justifying its inclusion over and above that (Ethan, Interview 1).

Overall, the lecturers developing Behavioural Ecology, Interdisciplinary Logic and Classical Studies maintained a strong orientation to the internal logic and rules of their disciplinary field. All five lecturers took seriously the disciplinary frame as the definitive boundary in deciding what was appropriate as the subject content and the content of the subjects were not driven by a segmented logic but strongly linked to the overarching frame of what study within the particular discipline comprises. The subjects were strongly 'classified' in Bernstein's terms, governed by their 'own specialised rules of internal relations' (Bernstein, 1996, p. 7), and these rules were identified within the subject materials. In line with Muller's (2009) arguments about the importance of attending to the internal rules and structure of the knowledge field within curriculum and the wider social realist arguments about the value of disciplinary knowledge (Young, 2008), the lecturers felt that disciplinary coherence remained of critical importance despite the new online forms. They felt that the value of understanding the rules and norms of the disciplinary approach was significantly greater than an approach which offered content knowledge abstracted from that even for subjects developed outside wider disciplinary programs.

These lecturers had defined disciplinary identities and interests. In this sense, it is no surprise that in their teaching they emphasise a disciplinary approach. However, what is of interest here is the ways in which that disciplinary approach was made explicit rather than implicit within the subject design, and the ways in which students were invited into disciplinary conversations to critique and potentially question that knowledge base. In all the cases too the sense of the discipline being conveyed was not only about structure and ways of knowing and appropriate questions, but was about seeing knowledge as evolving.

For the most part, these lecturers had been selected to develop subjects for the new online initiatives because they were known by their university to be particularly good teachers or particularly interested in teaching. All of them as a result highly valued teaching and their understandings of student learning accorded with some of the tenets of constructivist teaching outlined by Sjøberg (2010), including in relation to their emphasis on students' active engagements and the importance of taking seriously students' pre-existing ideas. At the same time, however, they also all considered their disciplinary field to be valuable and wanted to convey what they see as important in

that, which is not just its 'facts' but the way in which its knowledge has been arrived at. They saw the particulars and details within their content as important, and viewed content reduction as not something that can always be achieved without changing the wider purposes of the given subject. This dual attention to both student learning/engagement and the content, structure and purposes of their field is at odds with the ways in which these concerns tend to be positioned by the policy leaders and by some writing on university teaching (e.g. Biggs & Tang, 1995), where content tends to be framed as oppositional to student learning and engagement.

For these lecturers, what counts as knowledge is determined by their disciplinary field. However, this did not mean that their teaching purposes were solely concerned with disciplinary content. Instead, these lecturers were concerned with what is valuable for students in relation to their disciplines. They valued student engagement, but within a strong sense of what they were trying to draw students into.

TechU Online: particular purposes, generalised reference points

The three subjects discussed in this section, Sports Management, Supply Chain Management and Teacher Education (Literacy) were all subjects developed for the TechU Online initiative. As discussed in Chapters 3 and 4, this initiative involved strong managerial oversight and was informed by a pedagogical approach nominally identified as socio-constructivist. Compared to the lecturers at SandstoneU, the lecturers developing the TechU Online subjects tended to be junior in status – Leah (Supply Chain Management) was casually employed, and Tara had previously taught at other universities but had only recently been appointed to TechU within a role solely responsible for the development of TechU Online subjects. All three subjects were located within 'soft-applied' knowledge fields in Becher's (1989) typology of academic work: two in business studies (Sports Management and Supply Chain Management), a field Muller (2009) categorises as a newer 'fourth generation' profession, and one in education (Teacher Education - Literacy). Both fields, according to Muller (2009, p. 220) are oriented more towards 'contextual' than 'conceptual' coherence in their curriculum development, with less formal entry requirements, a greater importance attached to on-the-job practice, less sequential curricular requirements and a more easily 'modularisable' curriculum. Within such fields, according to Becher and Trowler (2001,

p. 36) knowledge tends to be more utilitarian and oriented towards enhancing professional practice.

In this section, I discuss the way in which the lecturers developing these subjects were oriented to the particular requirements of their professional fields, but also had a strong orientation to generic 'engagement' purposes in terms of keeping students on task. Comparing this discussion with the previous section, I consider the implications of these distinctions for understandings about forms of knowledge, and the importance of focusing on issues of purpose and content in relation to questions about the influence of the knowledge field on curriculum and teaching.

The Teacher Education (Literacy) subject was one of three literacy subjects offered within the TechU Online Bachelor of Education degrees in Early Childhood and Primary Education. When I asked Tara about the aim of her subject, she commented:

> I think what we're trying to do with this unit is to show that literacy is really, really diverse and it's not just your traditional form or traditional view of literacy. So we're trying to tackle some of the controversies with regards to digital literacy and we're also trying to tackle how a contemporary twenty first century teacher will do that with children in the classroom. […] we're also starting to tackle some of the controversies around what literacy actually is, multiple literacy, digital literacy (Tara, Interview 1).

This emphasis on the complexity and the diversity of perspectives, according to Tara, was about ensuring students appreciate the wider contexts in which they work, and are able to speak back rather than passively absorb policy directions within the field of teacher education. She explained:

> [Within teacher education] you are given things you're told to swallow, to basically take the policy, digest the policy, implement the policy. […] [But] you have to be able to talk back and […] be given the skills to actually argue back and talk to things because […] [otherwise] we're not empowering teachers to actually digest and unpick the reasoning behind that framework. […] I see my role as a teacher educator is giving some controversies, throwing things out there and really considering them […] there's still a place for teaching students through the curriculum and teaching students through the framework but also

> you want to get them to challenge because if you've got your children in that classroom you'd rather those children being taught by a teacher who is able to think creatively rather than just swallow the latest government document. (Tara, Interview 2)

Tara emphasised that it was important 'for us, as education lecturers' to 'make sure that we're actually publishing and trying to change things and talking back to policy and giving our students those skills to talk back to things' (Tara, Interview 2). Here, Tara emphasises the importance of developing in her subjects teacher professionalism, identity and agency: teachers active in constructing and critiquing the contexts in which they work. She wanted students taking her subject to critically engage with the contexts and purposes of their professional work, and to debate and consider controversial issues as part of that.

At the same time, in her subject development, Tara was also oriented to ensuring the students produced work relevant to their professional practice. The primary assessment comprised a portfolio task which required students to source and analyse examples relevant to their practice in relation to the weekly topics and the majority of the learning outcomes identified for the subject concerned the development of professional skills. This, Tara commented, was about ensuring 'the students go away with some resources which they have built together, shared together which will then help them with their profession and their professional growth' (Tara, Interview 1). So for Tara, her knowledge purposes for her subject were both to produce certain kinds of critical creative professionals with an underpinning knowledge of controversies; and also to build some professional resources that will be useful to those students in their work.

In relation to the second case-study in this group, Supply Chain Management, Leah saw her purposes as about developing student understanding of the kinds of issues and problems likely to be encountered within professional practice. She commented that as the subject was introductory it was primarily oriented to a consideration of 'if you've found yourself working in this area, here are some of the things that you might need to consider' (Leah, Interview 2). Leah explained that the subject was about getting students:

> progressively to think in that multi-dimensional sort of a way and considering the complexity, the fact that these [supply chain and procurement] decisions are not black and white, there are repercussions of something that may have a great short-term benefit may actually be quite detrimental to the business in the long run. Those sorts of issues and sort of building a bit of a story about that. (Leah, Interview 2)

Leah emphasised the importance of appreciating 'the complexity of today's business environment and the fact that there are system like relationships, everything connects to everything else' and the importance of ensuring students understand that you cannot 'think linearly in today's world' (Leah, Interview 1). She noted that subjects within the field were predominantly taken by students with prior practical experience working within supply chain management but who had reached a ceiling in terms of their progression without further study. Because of this, she saw the subject as aiming to encourage those students:

> to think critically, especially when they're so used to going 'here's a problem, here's how I solve it' and not necessarily being in a habit of rationalising or justifying 'why do I think this is a good solution for this problem […] how do we know, is there some research that suggests that that's a good idea or have we tried it before, is there empirical evidence' or what not. (Leah, Interview 1)

Leah commented that the subject was 'concept and practice-based' rather than 'competency based' (Leah, Interview 1), and emphasised the specificity of 'supply chain management' as an area of study and practice, compared with students whose backgrounds were in marketing or another 'business studies' area. She noted that the subject drew on empirical evidence and was primarily oriented to 'how does this work in the real world' (Leah, Interview 2), with the readings selected from industry rather than academic journals as a result. The subject was structured to engage with the different elements required in making different kinds of supply chain management decisions, including in relation to working out business requirements and comparing potential vendors. Leah saw the knowledge purposes of her subject as about providing professionals with the tools to solve practical problems in context.

In relation to the third subject, Sports Management, Grant was also oriented to the particular requirements of professional practice within the field, and with developing students' skills for working specifically within a sports management industry in terms of 'actually managing clubs and facilities as businesses' (Grant, Interview 1). According to Grant, the unit aimed to both develop practical skills and understanding of the theory useful for professional practice. He commented:

> because it's part of a bachelor of business, there's a very practical element to the four units that have been developed. Underpinning that practicality is that you want to give them very good grounding in any sort of theories and past principles that have been utilised commonly through practices in the industry, make them aware of the different options and solutions that are available or that have previously been used in the industry and just build on their business skills to be able to apply that in sports specific situations. (Grant, Interview 3)

In designing the subject, Grant contacted practitioners in the field to confirm the kinds of topics they would see as most relevant for inclusion and selected twelve topics for the twelve weeks of the subject based on that advice and the contents of textbooks on the subject topic. He selected the content on 'more of a principles and theory basis', but with parts of the assessment aimed towards the development of practical skills in requiring students to develop a marketing plan and analyse a particular marketing campaign situation. The weekly content was designed around relevant case studies, and Grant commented that the knowledge of the field was always in constant change because 'something that was a great case study two months ago is now obsolete or something has usurped it' (Grant, Interview 1).

For these three subjects, Tara, Leah and Grant all emphasised the primary importance of 'on-the-job training' and took the professional field as a primary point of reference. They saw the value of theoretical knowledge as supporting and enhancing the kinds of decisions students might make as practitioners and the ways in which they might approach and understand their work and its wider context. All three lecturers also emphasised the complexity of work within their fields and wanted students to appreciate that complexity, rather than see what they are learning at university as settled or complete knowledge. As with the disciplinary lecturers, they were concerned with encouraging students to think critically and to actively engage with complex problems.

However, in comparison to the disciplinary lecturers, they felt that complexity was not particularly well captured within the theoretical knowledge of their fields. Leah, for example, emphasised the importance of focusing on 'how does this work in the real world rather than how does work in a theoretical research bubble' (Leah, Interview 2). And Grant also commented, 'I think that most of your knowledge in a particular field or discipline is gained on the job' (Grant, Interview 3). Despite this, however, both Tara and Leah saw higher educational study as adding something different to practical knowledge gained on the job, while Grant comparatively commented that business degrees were based 'on common sense and on just life skills and life experience', and saw the theory and education as simply providing greater 'confidence in your decision making process' rather than a different kind of way of seeing things.

In line with Muller's (2009) argument that professional subjects with a focus on 'contextual coherence' and on-the-job practice tend to have less sequential curricular requirements and a more easily 'modularisable' curriculum, all three lecturers saw the subjects as easily segmentable, with the different weeks adding in new topics rather than building towards an explanation of a particular concept. When I asked Grant about the sequence of his Sports Management unit, he simply replied that the sequence tended to be directed by the textbooks he selected. For Teacher Education (Literacy), Tara noted that she does try to create 'some purpose and some meaning rather than just a list of themes for the week linked to the assessment', but this was 'because you want to grab the attention of the students and you want to make it more engaging'. Tara's subject was oriented to provide students with a certain understanding of literacy, but this understanding was developed in a horizontal way rather than built consecutively over the period of study.

For all three lecturers, the boundaries of the subject were primarily defined by the professional field and the relevance of the content to students' practice. All three lecturers were strongly oriented towards the particular professional contexts and identities students were expected to develop towards and they wanted to develop particular kinds of ways of thinking or approaching a problem in their students. Such purposes are in line with Karseth (2006) and Ensor's (2004, 2006) concept of the vocational discourse and its focus on the particular requirements of a professional field. Despite the TechU Online emphasis on flexibility and students' needs, the subjects

remained oriented to the particular professional contexts and identities students were expected to develop towards, rather than more generalised requirements.

Compared with the lecturers located within the disciplines, the TechU Online lecturers were also far less inclined to make the ways of thinking underpinning their field a particular focus of the subject. None of the TechU Online subjects included explicit identification of the 'way of knowing' informing the subject or a shared way of understanding what knowledge matters in the field, but this was rather assumed and implicitly embedded within the subject design. This is an important distinction between the disciplinary and professional case studies analysed in this research, and one that has not been previously identified in discussions of their different teaching approaches (e.g. Neumann et al. 2001).

Yet while Tara, Leah and Glenn framed their subject purposes and aims in relation to the particular vocational skills and thinking they wanted students to develop, their subject development was also strongly informed by an attention to generalised understandings of what was required to keep students engaged and on-task. They wanted to encourage students' active engagements with the content taught in ways which accord with some of what Sjøberg (2010) writes about constructivist teaching. However, in speaking about their students, these lecturers all tended to emphasise similar kinds of generalised needs around flexibility and reduced content evident within the policy framing. They saw their students as requiring additional scaffolding, support and streamlined material. Tara, for example commented:

> if you're a student who is working full time or have got family commitments, you need to get through the course in, human nature, the quickest way possible […] it might be really nice for us to give them an x number of readings, and x number of videos but you want the simplest way because you just want to pass this unit. It's just a bachelor's degree and that's lots of conversations we keep having, it's just a bachelor's degree, it will be built on and we just need to make sure that by the end of the degree they've demonstrated everything as opposed to in a second-year literacy unit. (Tara, Interview 1)

Similarly, in relation to her subjects in Supply Chain Management, Leah commented:

> we used to do a lot of concepts, we would say okay here is the topic for the week, then here is a little paragraph that summarises what this topic is all about and here are five key concepts in this and then we might have for each of the concepts there would be either a reading or a little YouTube video or something or another for them to do and then an activity to do with something else. And one of the things that I found is that it was just overwhelming, they would look at this page and there would be so much and they'd go 'oh my god I have to get through all of this in one week, I don't know where to start'. So as we went along we started to simplify it and break it down. Where now it's literally, here is the little summary and the summaries are much shorter as well, whereas it used to be like a five sentence summary, now it's a two sentence thing […] [Because] in reality if I give them three peer reviewed articles to read every week, they're just going to drop out by week three. It's just completely impractical because they'll be bored. […] this scares me to say it, but some people don't have enough literacy to be able to navigate through an academic article. That's really the bottom line of it and you have to account for it. (Leah, Supply Chain Management, Interview 1)

These comments show the ways in which the TechU Online subjects were designed with a generalised sense of students and their perceived needs and abilities as a key reference point. While the lecturers located within pure disciplines at SandstoneU had emphasised the importance of including significant amounts of content within their subjects and saw changing this as changing their subjects' potential outcome, the lecturers developing subjects for TechU Online were happy to conform to the TechU Online requirements of limited weekly content descriptions and saw these requirements as important for keeping students engaged. They were concerned that providing students with too much un-curated or difficult content would put the students at risk of disengaging and dropping out. The rationales they gave for reducing content tended to focus on a generalised idea of what a student might be able to cope with to stay actively engaged rather than connecting this with the particular purposes of their subject. These approaches to content are discussed further in the next chapter.

Overall, the lecturers developing the TechU Online subjects were oriented towards particular vocational purposes, rather than the development of generic skills or

attributes. However, while their aims were oriented to the particular, their key reference points of thinking about their content selections were strongly informed by generalised understandings about what matters and what students' need and can cope with. Differences between different kinds of fields were visible in how the lecturers approached their teaching, including a stronger emphasis on the disciplinary way of knowing (its key questions, methodologies and the like) across the subjects located within the disciplines. These differences point to the continuing significance of the knowledge field in how curriculum development is approached within universities and the ways in which institutional aims to reduce curriculum content across the board impact less significantly on those located in some disciplines compared with others.

Within these cases, there are also clear institutional differences in the ways in which the lecturers at the different sites aligned with the institutional understandings of what was seen as important. The TechU Online lecturers were subject to far more oversight than the SandstoneU lecturers, and were more inclined to align with the generalised understandings of how student engagement is best met and how curriculum should be constructed evident at the institutional policy level. These differences point to some of the distinctions between 'sandstone' and 'technical' universities and the different ways lecturers are able to work within them (Marginson & Considine, 2000), as well as distinctions in the ways senior lecturers are able to exert academic autonomy in respect of their teaching compared with more junior lecturers.

The applied MOOCs: promotional concerns and 'mode 2' teaching

The final two subjects examined in this research were the two MOOCs developed by lecturers located in applied fields: Teacher Education (Assessment), a MOOC offered at SandstoneU led by Glenn, a Professor of Education, and Online Learning Design, a MOOC offered by Sarah, a Professor at TechU whose interests were in learning and teaching with technology and change management. In contrast to the other lecturers interviewed for this research, both Glenn and Sarah were highly supported in their curriculum development. Glenn was supported by his PhD student Miranda as well as by two administrative assistants and Sarah was supported by a team of learning designers. What these two MOOCs had in common was a focus on the research of the lead professor and the promotion of that as a primary motivation, and an intent to

change educational practice rather than encourage wider contextual understandings. In this section, I discuss the ways in which this emphasis on promotion shifted the focus of these MOOCs away from the concerns of the other professsional case study subjects and the consequences of this for the educational possibilities offered within them. I also highlight the significant differences evident between Sarah's MOOC and the other subjects examined in this research.

Teacher Education (Assessment) concerned the promotion of work developing from a major research project led by Glenn, the subject coordinator. The goal of this project, according to Glenn, was to 'change teaching … change the curriculum and … change the way in which employers recruit people on the skills that they've got' (Glenn, Interview 1). Glenn's main motivations for the MOOC were about the promotion of his research, both in relation to enhancing the centre's ability to continue its research program and in continuing the aim to change assessment and educational practice. Glenn commented that both his research and teaching were focused on having an 'impact on practice globally through research, publication, development and dissemination', with the primary aim to 'get teachers to use evidence to make decisions […] for working with kids' (Glenn, Interview 2). Glenn identified the MOOC as 'another dissemination strategy' that would allow them to 'get the message across to as many people as possible … because if you get the enrolments in a MOOC and a hundred thousand take it up, twenty thousand see it through, five thousand implement what we're doing, that's enormous' (Glenn, Interview 2). He saw the MOOC as not having on its own 'the capacity or the power to change practice' but the potential to 'get people talking' (Glenn, Interview 2).

Glenn's interest in developing a MOOC also concerned his desire to commercialise research emerging from a large cross-country research project. The MOOC was originally designed to meet a number of goals connected to that project which Glenn defined as (1) a business goal about disseminating the research material; (2) a teaching goal in terms of 'teaching them methods of assessment and the paradigm shift of thinking that we've introduced'; and (3) a research goal in terms of using the data analytics from the MOOC for research (Glenn, Interview 1). However, in assessing Glenn's application for MOOC funding, SandstoneU policy leaders objected to the

focus on Glenn's research and approved his request on the condition that the MOOC incorporate learning and teaching objectives beyond that.

In early plans, the intention was to structure the MOOC into modules that would cover (1) the story of the project, (2) the theoretical background of the project, (3) the nature of the skills being assessed, (4) instructions on how to use the research project system and its reports, and (5) how data and progressions can be used as a stimulus for teaching and intervention. As the subject developed this structure was amended to include two initial weeks on the theory behind the project (in relation to the skills being taught, and the developmental approach to assessment), followed by two weeks on putting the theory into practice (on assessment techniques and developing assessment continua, and how assessment data can inform teaching), and finally a review week which included interviews with teachers and principals on how they have used the research in their own practice. Glenn saw both approaches as underpinned by the same emphasis, as 'the theory is underpinning the project anyway and we're really now using the MOOC as a way of promulgating thinking in that area about this theoretical approach and how it's manifested in research and in assessment' (Glenn, Interview 3).

Glenn's primary motivation for the MOOC was about promoting the research project, but this was also underpinned by a broader aim to promote the philosophy of education and assessment that underpins his and the centre's broader research. In our third interview, Glenn commented:

> There's quite a strong movement around the world in terms of the assessment of non-cognitive skills, attitudes, feelings, aspirations, that sort of thing, so I think what we've done is open up a possibility of that sort of work being done. […] there's a lot of standard messages that we wanted to get across too, some take-homes after almost every session in terms of the idea of changing teaching and assessment from what we call a deficit model, trying to do remedial work with people rather than development and scaffolding them. That's a different form of theoretical base to what we're doing to what is normally done in assessment. So that's linking assessment directly to teaching in that course. Being able to explain and show what we mean by development and growth, being able to steer them into another form of reading […] talking to them about the future of assessment, of curriculum, of education. Moving away from the recitation type

> forms of assessment where they learn a body of knowledge. So we're moving more into skills and competencies as the outcomes rather than knowledge and facts. So a lot of that is, I think, generic about education and not necessarily restricted to this course but there's certainly showing them the task that we've developed and illustrating how that yields data about social and cognitive skill development, I think is quite important. Outside of the MOOC the interest in it around the world now is enormous. (Glenn, Interview 3).

Here, Glenn, like the other lecturers I spoke with at SandstoneU, emphasised the importance of developing student understandings that went beyond his own particular platform. Glenn saw the 'rigour and research' base of his subjects as critically important. He commented that teaching tended to be based on 'folk law', and drew a sharp distinction between the 'school-based' and 'research-based' worlds of assessment. He commented that his aim for his own work was to develop a theoretical framework for assessment and to 'marry the judgement based assessments of classrooms to the scientific paradigms of psychometric models' (Glenn, Interview 2). The emphasis here on 'rigour and research' aligned more with the emphases of the other lecturers located at SandstoneU, and was distinct from the predominant focus on students and their learning evident at TechU.

However, compared to the other subjects examined at SandstoneU, Glenn's teaching was oriented to encouraging teachers to take up his way of thinking in their practice rather than understanding the context of the broader educational field in which that approach is located. He commented that he saw all teaching as a 'dissemination strategy' and noted that in his centre 'we don't teach other people's material, it's what we research, develop and publish that we teach' (Glenn, Interview 2). Glenn commented negatively on 'transmission' teaching and emphasised the importance of instead 'facilitating' learning, but his teaching of content was oriented towards a singular understanding, rather than emphasising the complexity or diversity of views in relation to that.

For the TechU MOOC Online Learning Design, Sarah was equally concerned with promoting her own work on designing online subjects. Sarah's research is centred around models for online teaching she developed in the 1990s and subsequent models for online activities and online subject design which build on that approach. The MOOC

was structured around her six stage model for online learning design. Its design comprised allocating participants to groups of 25 'to encourage networking and knowledge construction' and a six week structure which took students through the practical steps of Sarah's model.

Like Glenn, Sarah's intentions for the MOOC were to change practice. The MOOC was based on materials previously taught through two-day workshops which aim to support lecturers 'to transform their teaching and put it online' (Sarah, Interview 1). Sarah commented that the workshops were not about encouraging lecturers to change their practice, but comprised practical work where lecturers developed new materials for online with the support of learning advisors and learning technologists since this enabled 'staff attitude change' and practical support.

The approach was 'driven by the idea of collaboration networks and knowledge construction rather than […] content development' (Sarah, Interview 1), and was designed to encourage participants to engage substantially with each other. It was as a result more aligned with the kinds of thinking associated with cMOOCs or connectivist MOOCs (Bates, 2014). Very little content was provided beyond very short videos, which Sarah described as 'very short little snippets' and 'a spark to start the dialogue' (Sarah, Interview 1). The weekly content was instead designed around practical requirements, which called for students to select a topic and introduce themselves (week 1), develop learning outcomes and descriptors regarding the look and feel of their subject (week 2), develop a storyboard for the design of the subject (week 3), develop an online activity for the subject according to a template (week 4), review another participant's activity and provide feedback according to a second template (week 5), and develop an action plan and reflect on their development in the subject (week 6). Participants were encouraged to draw widely on their own experiences, their own disciplines and their own workplace contexts in participating in the broader discussion, and the subject was framed initially as primarily about bringing that diversity of experience together.

However, the presentation of the video content focused very much on Sarah's particular approach. Within the subject, students were expected to use Sarah's processes and practices in relation to topics of their own choosing, but they were not invited to engage with or critique the substance of her work.

Sarah's focus was also not primarily on students and what they might take away from her subjects, but on institutional and promotional concerns. In our initial interviews, Sarah commented that her 'main motivation is to experiment for ourselves to learn [about MOOCs]' but that she was also interested in 'reputation building' and 'awareness raising' and 'placing us in the world to show that we are highly innovative in our teaching' (Sarah, Interview 2). When I asked more directly what she wanted students to take away from the subject, Sarah advised the subject would have clear learning outcomes, as well as leave the open the possibility for 'emergent outcomes that we hadn't thought of' (Sarah, Interview 2). When I pressed her for what those might be broadly thinking, she agreed they would want participants to understand how to teach online better, and to 'understand how to design for online, understand that the digital environment is a social environment, those sorts of things' (Sarah, Interview 2).

Similarly to Glenn's Teacher Education (Assessment) MOOC, the approach to the videos was based on brief and explicit explanations of Sarah's online learning model rather than open questions in relation to what that model was trying to achieve, despite her nominated intention that the videos act as a 'spark' that would initiate broader discussions rather than a self-contained summary of the content to be learnt that week. In one of these videos, for example, Sarah explained her approach to 'blueprinting' (creating a visual sequence for an online subject) in step by step terms and finished with the comment 'I'm sure that if you have a go at this, you'll see that it's such an easy, quick and productive way to work on your unit' rather than attempting to open up questions or potential issues for discussion.

Overall, what distinguished these MOOCs from the other subjects discussed above was their focus on promotion and on their own particular approach to educational practice. In both, while the two lecturers strongly wanted students actively engaging and contributing, they did not want that to comprise a critical engagement with the research and practical work being promoted, but instead wanted students to take up and use their work to change practice. In terms of their similarities with the other professional subjects located at TechU, these two MOOCs were concerned with practical application, but unlike the TechU Online subjects were not concerned with developing or engaging with students' own sense of themselves as practitioners. They were both

intended for students who are already educational practitioners and this is likely part of the reasoning behind this.

Although Sarah's background was in business studies, both her own and Glenn's research locates within the broad field of education. Both, as a result, were very aware of debates about instructivist compared with constructivist teaching approaches, and both commented on the problems with the former and saw their own teaching as aligned with the latter. However, in their concern with promotion, Glenn and Sarah's approach to teaching shifted in some ways into a more instructivist or transmission-style of teaching, with students expected to use but not engage with the research being taught at a conceptual level.

These MOOCs as a result offer a very different type of teaching to the other cases, and these differences again point to the importance of attending to issues of purpose and substance in understanding what is being developed and offered within a particular subject. In a sense, the professional MOOCs were more in keeping with Rhoads et al.'s (2014) critiques of MOOCs as reifying knowledge, particularly compared with the more open purposes evident within the disciplinary MOOCs.

Sarah's subject additionally was also quite different to Glenn's and stands out from the other subjects analysed in this research. Her strong focus on students' own practical work and their engagements with each other is part of this, but another defining feature is also the lack of engagement with context within the subject. In comparison to Glenn and to the rest of the case studies, Sarah's model is presented as defined and stand-alone, rather than as a part of a broader field of online learning design, and the subject content does not engage with the complexity of design practice but leaves such considerations up to the students in their uptake of the material.

The subject as a result is in line with more 'mode 2' (Gibbons et al., 1994) ways of thinking about knowledge in terms of its lack of boundaries in the knowledges expected to be incorporated and its focus on the contexts of application. This subject is more disconnected from formal university offerings than other case studies and the materials were previously taught as part of workshops and training sessions rather than formal university subjects. It illustrates an approach distinct from traditional university teaching and one not widely evident within universities today. Yet it is also a subject

developed by an academic with significant managerial responsibilties and could therefore be an approach that might become more significant in future.

Conclusion

The purpose of this chapter was to look at the case studies in terms of how the lecturers saw the overarching purposes of their subjects and fields and the kinds of concepts of knowledge involved in relation to this. It was intended to provide a sense of some of the big picture thinking informing the lecturers' curriculum development, which is important for understanding both the concepts of knowledge at work within their teaching, and the ways these might be challenged and changed by engagements with different ways of configuring curriculum.

In this chapter, I drew on the interview material and documents from the eight case-studies to give specific attention to their conceptions of what was important at the level of purposes and content selection for each subject. I showed that some of the subjects were oriented towards disciplinary purposes, some towards vocational purposes and engagement concerns, and some towards the promotion of their own work. The discussion highlighted both the different ways in which the lecturers understood the purposes of their fields in relation to teaching, and the different ways in which they framed issues of student engagement.

In focusing on these concerns, the chapter has highlighted particular differences between the subjects developed by lecturers located within disciplines and those located within professional fields, as well as between those located at 'Sandstone' and 'Technical' universities. In keeping with the literature on 'disciplinarity' discussed in Chapter 2, this chapter showed that the disciplinary SandstoneU lecturers maintained a strong orientation to the internal logic and rules of the disciplinary field and emphasised the importance of attending to the internal rules and structure of the knowledge field within curriculum. They explicitly identified what study within the research field looked like and the processes, concepts and methodologies associated with that. They intended to convey a sense of how the disciplinary knowledge had been developed, and of this knowledge as continuing to emerge rather than being settled. And they spoke about issues of students' learning and engagement predominantly in relation to the specific concerns of their fields, and what students needed to come to grips with particular concepts and approaches. For these lecturers, the amount of content included was seen

as significant since the detail and particulars remain important and content cannot easily be reduced to broader themes.

Comparatively, the lecturers developing the TechU Online subjects were oriented towards the specific requirements of their respective professional fields, and the development of particular understandings and practices. Their strongest reference point was about what is known to be useful in the workplace, creating more flexibility about content and structure in the curriculum. Their selections were informed by a particular sense of what matters within their fields, but this was not made explicit in the curriculum materials. In their discussions of their purposes and content selections, these lecturers were also more attuned to policy agendas and saw these as easily incorporated within their subjects. Although they wanted their students to think critically about complex problems and actively engage with the content taught, they also framed the issue of student engagement in more generic ways, related to what they felt students were capable of dealing with.

The professional MOOCs were similarly oriented to the field of practice, but were also more strongly concerned with issues of self-promotion. These subjects focused predominantly on the lecturers' own research platforms and agendas, rather than on the wider contexts in which that was situated. The lecturers developing them sought to have students use the concepts and processes taught rather than engage with them at a conceptual level. However, there were also differences evident between them in relation to this, with the lecturers developing the Teacher Education (Assessment) MOOC at SandstoneU more strongly locating their work in relation to the broader field. These lecturers also held strong views about the value of constructivist teaching, but their focus on the use and take-up of their own proposals for practice potentially limited the ways in which students might engage with the substantive content provided.

In highlighting these differences, the chapter draws attention to the significance of the disciplinary field in academic curriculum development and the differences between different forms and fields of knowledge. The differences shown are indicative of some of the broad generalisations about teaching in disciplines compared with professional fields and show the ways in which the knowledge field remained a key reference point guiding the lecturers' content selections. Trowler et al. (2013) argue that disciplinary norms are becoming less important in the conversations occurring around the

development of new programs and the like as marketing and other 'outward-facing' considerations take precedence. Yet, while this may be true in many respects, the cases discussed in this chapter have shown the ways in which the substance of what is taught within a program continues to be guided by the particular discipline or professional field in which it is located. For the TechU Online cases in particular, while generalised concerns are more prominent in the formulation of these subjects, the purposes continue to orient to the particular elements of useful knowledge that are valued in the professional context. These distinctions illustrate the importance of attending to questions of content and purpose (Biesta, 2010) in considering the shifting contexts of knowledge and disciplinarity, rather than focusing too strongly on the wider issues with which curriculum intersects.

The chapter has also pointed to the role that different orientations play in the substantive possibilities provided by individual subjects. It has drawn attention to the potentially more limited engagements produced by an orientation to the promotion of a particular agenda (as in the professional MOOCs), compared with the greater richness enabled by an approach which draws students into wider understandings and ways of knowing (as in the disciplinary subjects at SandstoneU).

In the next chapter, I return to the case-studies but this time in terms of what happened as they engaged more concretely with the tasks of curriculum development in the online forms. I consider how they approached issues of content delivery, curriculum structure, assessment and student discussion, and discuss ways in which the initial aims and concepts of different groups discussed in this current chapter remain evident but begin to be modified and challenged in the face of the actual conditions and tasks of enactment.

Chapter 6: From constructivism to clarity and control

In the previous two chapters, I considered the policy leaders' and lecturers' aims for the new online initiatives and the subjects offered within them. In Chapter 4, I argued that the online initiatives were designed to encourage both constructivist or active learning pedagogies and an attention to outcomes, with some tensions evident in how these aims were put together and the assumptions about knowledge underpinning them. In Chapter 5, I then highlighted how strongly the lecturers' disciplinary and professional affiliation influenced the ways they framed their purposes and also discussed the influence of constructivist ideas on how many of them saw good teaching. I discussed the different kinds of purposes and orientations evident across the subjects, particularly between disciplinary subjects and professional or vocationally oriented ones.

In the previous chapter I focused specifically on how the lecturers discussed their aims for their subject, drawing on their explicit comments but also on examples of choices they made that spoke to these purposes. In this chapter I focus on their thinking and activity in developing their subject within the new platforms and the kinds of issues that emerged for them as they addressed issues such as content delivery, curriculum structure, assessment and student activity. Following Bernstein (1976), in this thesis the form pedagogy and assessment take across these elements is understood to interrelate with curriculum content in defining what counts as knowledge within the education.

My aim in this chapter is to understand the effects of the new initiatives on the lecturers' thinking and practices and what framings of knowledge and teaching were brought out in their engagements and struggles with the new platforms. I focus here on the lecturers' interpretations and take up of the affordances of the new technologies following Selwyn (2011) and Rizvi and Kemmis (1987), understanding the new initiatives as policies which in Ball's (1994, p. 19) terms have not enforced a particular approach but created 'circumstances in which the range of options available in deciding what to do [have been] narrowed or changed'.

The chapter examines both the curriculum materials produced by the lecturers and the ways those lecturers spoke about their decision making and their understandings of the constraints and possibilities of the new form. I focus in particular on the assumptions about knowledge evident within the lecturers' thinking and practices, and the ways in which this compares with the findings of the previous two chapters.

The chapter is structured in three sections. In the first, I consider the lecturers' approaches to content delivery and curriculum structure, identifying a common concern with clarity and explicitness and with defining and making clear and unambiguous the key content to be learnt. In the second, I consider the lecturers' approaches to assessment and the design of interactive activity, highlighting their shared emphasis on issues of control and prescription. The third section then considers the approaches taken to student discussion within the MOOCs and the ways in which the lecturers interpreted and grappled with the student-led discussion forums.

Enhancing clarity, reducing ambiguity

In this section, I discuss the ways in which the lecturers' approaches to content delivery and curriculum structure were guided by a similar focus on defining and structuring the content to make clear to students what exactly needs to be understood and reducing any ambiguities which might complicate that. I argue that this attention to clarity and explicitness was guided by an intention to help students, but produced a sense of curriculum knowledge as a predefined body of content to be learnt, reducing the more open sense of what counts evident within the lecturers' articulations of their wider purposes and content selections (discussed in Chapter 5).

Content for the new online initiatives was primarily delivered by video lectures (in the case of the MOOCs and SandstoneU Online) or by weekly summaries (in the case of TechU Online). The lecturers at the two institutions differed with how they approached the issue of clarifying content for students, with those at SandstoneU focused on enhancing the structure and adding extra explanatory material to their subjects, and those at TechU predominantly focusing on reducing content to maintain student engagement and using activities to scaffold towards assessments. Across the case studies, however, content was positioned as predominantly self-contained, capturing the entirety of what students were expected to engage with and comprehend, and there was

a focus on the explicit identification of the key messages and concepts to be understood each week.

At SandstoneU, where the initiatives were video-based, the lecturers all commented on the need to keep the individual videos at short lengths. Ethan, for example, described 'smaller units' as 'useful' for students who are 'time poor' (Ethan, Interview 1) and Laurie commented that one eighty-minute video was 'not going to be effective with the students' (Laurie, Interview 1). The lecturers designed each video to capture an individual point in a more streamlined and refined way than a typical lecture discussion. For the Behavioural Ecology MOOC, for example, Matt and Ethan made a point of designing each video around one or two key points, splitting or refining videos where it was found that they were trying to include too much. These key points were then summarised on the final slide and emphasised as the key 'message' students were expected to take away. In developing these short single concept videos, the SandstoneU lecturers were also highly focused on the order of their content, and the ways in which segments of content could be better sequenced to enhance the clarity of the material. In the interviews, they reported focusing more on structure in developing their online subjects than they would for on-campus subjects, and saw this as a result of the more detailed process required to select and prepare content for short videos compared with hour-long lectures. These lecturers also spent considerable time scripting the content for their videos, and felt this was necessary to avoid 'rambling' (Matt, Interview 1) and to 'tighten' and make 'efficient' (Rod, Interview 2) the delivery of content. Here, the emphasis was on refining the content, and in making sure it captured everything the students needed to understand within the tight parameters of the short video format.

Rather than focusing on the reduction of content in line with the policy leaders' intentions, the lecturers developing the Interdisciplinary Logic and Classical Studies subjects also added substantial amounts of further explanatory material in addition to their subjects, and Matt and Ethan (Behavioural Ecology) also included the important content from every lecture of their on-campus subject within their MOOC. For Interdisciplinary Logic, Debra developed detailed subject handbooks containing all the additional explanations not able to be worked into the short videos, and for Classical Studies Laurie added additional 'flipbooks' of slides containing the information necessary to understand the videos, including references to particular myths and

translations of key terms. Laurie commented that these flipbooks were designed 'to provide extra background' but in using them he found himself 'putting in a lot more […] to provide basic information about Greek and Latin Terms, about characters, about background of the period', in other words 'material that can fill in some of the gaps' (Laurie, Interview 1). This focus on capturing the detail was about ensuring students understood the wider context, but it was also about making the subjects self-contained with all the necessary content captured within the subject materials. Here, the imperative to be produce short videos and be more focused effectively led these lecturers to develop a more didactic approach to content, fitting with the outcomes imperative at the policy level but less well with the constructivist active learning agendas of that policy.

The TechU lecturers were also highly concerned with issues of clarity but here, as touched on in Chapter 5, this led them to reduce their content and focus only on the most important messages and concepts. Grant, for example, emphasised the importance of making sure the content he brings to the first meeting with learning designers is only at the 'skeleton stage', and commented that only after that would he 'be thinking about particular content that needs to put some meat on the skeleton content' (Grant, Interview 1). Tara also noted, 'we don't like to bombard the students with a large amount of text on screen' (Tara, Interview 1). Leah likewise commented that this reduction of content was about focusing on what was core rather than peripheral to a subject. She stated, 'I do try to take it back to basics, not dumbing it down as such but just going really back to the basics of that particular topic, what do they have to know' (Leah, Interview 1). As with the SandstoneU subjects, the focus here was on defining the most important content and concepts for students, and in making that as clear and explicit as possible, rather than embedded within long swathes of text. However, here there was more sense that the overall content and concepts to be covered was more malleable, and could take a lead from the learning designers.

At TechU, the lecturers' curriculum development was also strongly informed by an attention to scaffolding and alignment, and the lecturers designed their content (and their weekly activities – discussed in the next section) to build towards the required assessment tasks. Within the design of Leah's Supply Chain Management subject, for example, each week dealt with a particular concept the students need to understand to

produce their assignments (which comprised assessing and developing a procurement plan). Leah commented in relation to the principles underpinning her design, 'I think of it's as a gestalt therapy, you know, it's like a string of pearls and if you follow them along you're going to get to the end' (Leah, Interview 1). This outcomes-based approach to curriculum design (Biggs & Tann, 2011) is about ensuring that the content of a given subject maps towards predefined outcomes, and again points to a focus on identifying the important content to be learnt, and in ensuring those are adequately covered and developed within the subject content.

In comparing their experiences developing curriculum for on-campus compared with online, the lecturers at both institutions pointed to the importance of reducing ambiguity and making content more explicit for the online context. At SandstoneU, Debra commented on the importance of 'being more focused and sharper' in her video lectures, as without that there is the challenge that 'the students can lose the point of what's the most importance thing' (Debra, Interview 2). At TechU, Grant likewise noted that as he is not involved in the teaching of content, the text he develops 'has to be put into context and the use of text has to be very careful that there's not ambiguities in the information that's presented' since there are not the same opportunities to explain those face to face within the TechU Online platform (Grant, Interview 1). In comparing her experience developing subjects for TechU Online to her on-campus teaching, Leah similarly stated that she felt for on-campus teaching 'there's not such a need to be so explicit' compared with developing online materials (Leah, Interview 1). In these comments, the lecturers highlight their emphasis on making content explicit and reducing ambiguity and the ways these emphases were different to their on-campus teaching.

A number of lecturers also spoke about the ways in which the concern with clarity led them to focus on singular explanations of key messages and concepts, rather than coming at a concept via multiple explanations. Talking about the differences between how he saw the MOOC and his on-campus teaching, Ethan for example commented:

> there's a lot of freedom if you like the way you might present those lectures [in face-to-face on-campus teaching] and in particular given that you will probably explain a concept in three or four different ways during the course of a lecture

> […] You simply can't do that in these lectures [the videos]. The students scrutinise everything. (Ethan, Interview 3)

Leah similarly noted:

> I think designing for [TechU Online] is probably a little bit different to designing for an on-campus course because you've got […] the limitations of the fact that students are remote, so you need to give them information in really bite size chunks. Whereas in a classroom environment you can make it a little bit broader and also introduce multiple perspectives. I think students struggle with that a little bit in an online environment. (Leah, Interview 2)

She clarified that she prepares for on-campus teaching with PowerPoint slides, but that her actual explanations of those slides go far beyond what is stated in ways that are more receptive to where students are coming from. In the same vein, Rod also commented on the differences between his on-campus style of lecturing, 'which is much more interactive and prone to interruption and much more loose' than the approach he took to the video lectures which was 'to write the script, to practice it, cut things out until you're happy with it' (Rod, Interview 4). He noted that his focus for the videos was more strongly oriented to 'how tight the content can get', in ways that were different to his on-campus approach to lecturing (Rod, Interview 3). These comments show the ways in which these lecturers saw single and precise explanations as important in making their subject messages clear and comprehensible to students in the online environment, who they see as more likely to be confused by multiple explanations.

For all four online initiatives studied in this research, content was required to be developed in full prior to its teaching and, following that, there were limited opportunities for lecturers to engage with and respond to students within the teaching of the subjects (with the exception of SandstoneU Online which included a tutorial component). This requirement for content to be predefined and self-contained contributed significantly to the emphasis on clearly defined content as it meant the lecturers were required to develop their subject materials in ways that were communicable to students in and of themselves, since, for the majority of initiatives, the ability to add additional clarifications or explanations or engage with student questions and interpretations was limited.

In talking about the effects of the form, the lecturers tended to be highly positive about the ways in which the form encouraged them to make the content explicit and well defined. At SandstoneU, many of the lecturers developing short videos commented that in comparison to their typical hour-long lectures, the shorter video format helped them to focus more critically on 'what are the kind of bits that somebody is going to need' (Rod, Interview 1), and to sharpen the content and clarify what matters for students as a result. Rod commented that he saw real benefits in the way the videos made the practices of logic, which 'are kind of tacit' and 'hard to articulate' explicit and enabled students to see logic as something practiced rather than as abstract rules. Laurie also stated, 'I'm learning a huge amount, not just about how to do things online but how think through what's really, really essential in teaching' (Laurie, Interview 1).

Here, in many ways these lecturers confirmed the views of the policy leaders (discussed in Chapter 4) in seeing part of the process of developing the new videos as about distilling what was most important from their material and reducing unnecessary repetition. This was different from some of the initial concept of knowledge these lecturers conveyed in Chapter 5 when talking more generally about their aims, which had seemed to value coming at a concept in different ways, and where repetition was not simply redundancy.

The SandstoneU lecturers also highly valued the ways in which the new form encouraged them to think deeply about the sequence and order of their materials and about the best way particular points could be explained, saying this led them to rethink what they may have taken for granted in the past. In relation to Behavioural Ecology, Ethan, for example, noted 'as we're developing this curriculum, it's quite clear that parts of our third-year subject curriculum, sequence of lectures and everything, is quite wrong and we emphasise one area too much than the other'. He explained that as a result the process was 'two-way' resulting in the improvement of the related on-campus subject as well as the MOOC (Ethan, Interview 1). In relation to Interdisciplinary Logic, Rod likewise commented that the development of the videos was 'an immensely productive activity for us' as 'we realised 'goodness, we have just been doing this because that's the way we've been doing it for the last couple of years' and we discovered that we didn't really need to do that' He elaborated:

> And when things were divided up into little bits it was you know, oh my goodness, this kind of thing really occurs over there. If we actually spelled this out a little bit more earlier on, then this would actually make things easier here and here and here. And something about dividing things up into individual concept sized pieces rather than lectures made that kind of clearer to us which we wouldn't have noticed otherwise. (Rod, Interview 1)

This comment is about the ways in which the process of revisiting provided new insights about constructing curriculum from a body of knowledge that he valued. Rod's focus here is on the body of knowledge being taught and its structure.

Comparatively, at Tech U, there is also a concern about providing clarity and non-ambiguity for students, but in a way that was more self-contained within the outcomes based focus of the curriculum agenda. Here the lecturers said that they felt the focus on scaffolding and alignment strengthened the subjects by providing enhanced clarity for students. Tara for example commented that she felt the approach was more 'transparent and accountable' than face-to-face teaching as it meant 'you're able to say "alright this is what we'd like the end result to be" but look at what they can do in the meantime, how they can get there' (Tara, Interview 1) and as a result encouraged more 'detailed' thinking about 'how does this build' (Tara, Interview 2). What the lecturers liked about the new form here was the ways it made them 'sharper' and 'more focused', and the ways this then presented a clearer and more explicit summary of the material and what was expected for students.

In these examples, the lecturers at both institutions see value in the way in which the form encourages them to focus on the content itself, and make that clearer and more defined for students. There is an emphasis here on refining what is taught to focus on exactly what is needed and the best way that can be communicated to students. However, their focus is different, with Rod emphasising the structure of a body of knowledge, and Tara locating her comments within an outcomes-based approach.

While the lecturers generally valued the sharpness of content the move to online encouraged in considering focus, non-ambiguity and the like, in relation to pedagogical approach Ethan in particular voiced concerns that the moves led the teaching in a more didactic (less constructivist) direction. He saw the focus on clarity and explicitness as

changing what he was trying to do in his teaching and bringing in emphases that were not present in his on-campus teaching. He noted that while during a lecture he is continually 'looking at the audience as much as I possibly can to try and gauge whether they're understanding what I'm talking about', within the predefined form of the MOOCs 'you have no way of gauging whether people are understanding what you're talking about or not' (Ethan, Interview 1). Later, Ethan also noted that he felt he was able to 'directly challeng[e] ideas' in a stand-up lecture but felt unable to do so within his video lectures where 'you have no idea how the audience is travelling' (Ethan, Interview 4). These concerns point to the struggles the lecturers faced in working with the new form in moving their teaching away from the kinds of interactions they valued. They also highlight the ways in which the delivery or pedagogical form of a subject can change the substance of what is able to be communicated within that, from something which engages with challenges and ambiguity, to something which is presented as more settled and defined.

Ethan also voiced some concerns with the ways in which the video lecturers packaged up content into bite sized chunks and identified for students the key messages of a subject, rather than allowing them to come to their own understanding about that. He commented that 'packaging [lectures] up as smaller units' is useful for time poor students but 'the question you have to ask then is, is this really engaging in the subject as richly and deeply as you might expect or are we actually simply providing a fairly superficial account' (Ethan, Interview 1). Ethan tended to espouse an idealised view of the forms of teaching occurring during his own education and was critical of current university practices, but his comments capture one of the challenges he sensed in condensing curriculum material into key messages, and the potential costs that might have in addition to the clarifying benefits. At one stage Ethan noted that he remembered from his own education that following each lecture he would try and summarise for himself the main points coming out from that and that this was valuable for his own learning. His comment points to a potential drawback in taking away some of the work of students in themselves making judgements about what might critical within a lecture or text and developing their own views on that and their own sense of the material. This also, of course, points to the tension I noted in Chapter 4 where policy actors wanted both an outcomes focus and a constructivist focus but endorsed platforms that set up some constraints for both.

In summary, in discussing their decisions about content delivery and curriculum structure, the lecturers in this study were strongly concerned with issues of clarity and explicit content. They saw clarity as particularly important online, where there is less chance to correct where content is misconstrued and felt that working with the new platforms improved the clarity of their teaching, including in relation to issues of structure and sequence. The differences between the case studies discussed in the previous chapter were evident here. The disciplinary lecturers at SandstoneU saw this predominantly in terms of the body of knowledge being taught and its structure, while the TechU lecturers were more concerned with issues of outcomes and alignment.

However, the discussion also shows the ways the lecturers' engagements with the new form also shifted their practices away from their different purposes. Although the lecturers at both institutions appreciated the attention to clarity, they also saw the online form as producing a requirement for more explicit teaching and content summarisation by limiting the opportunities for other kinds of teaching approaches which might come at the concepts in a less directive or more complex way. As a result, the lecturers' approaches to content delivery and curriculum structure focused predominantly on defining the content to be learnt and making that clear for students and in reducing any ambiguities around that. While there are obvious benefits for students in making content clear and explicit, this emphasis positions knowledge as a predefined and uncontested body of content to be learnt, rather than an open or evolving construct. The emphasis is on a defined sense of what is important for students to understand and be able to do, determined at the outset rather than developed in negotiation with the students. Such a positioning connects in some ways with Freire's (1970, p. 77) critique of banking education, where students are positioned as passive 'receiving objects' into which teachers or lecturers 'bank' predefined knowledge.

This sense of knowledge is at odds with the ways in many of the lecturers developing understood the nature of knowledge in their fields and the ways in which they wanted students to engage with that. In their articulations of the wider subject purposes and content selections discussed earlier, these lecturers had emphasised the importance of students understanding the complexity of the fields and, for the disciplinary lecturers in particular, of seeing the knowledge developed within them as evolving rather than static. Lecturers developing both the disciplinary and the professional subjects had also

emphasised the importance of students own interactions and constructions as important in guiding their teaching. However, as they came to work on the actual constraints of the platform, these elements became far less present in their thinking and decisions about content delivery and curriculum structure. This was the case not just for those lecturers focused on promotion of particular ideas, but also those focused on developing wider understandings of the disciplinary approach or the professional context.

Focusing curriculum development on 'what students need to know' is not in itself a bad thing. Teaching, as Biesta (2010) argues, does need to be about something, and there is an emptiness in focusing only on what students are expected to be doing, rather than what they are being taught. However, the degree of emphasis on defining that content and on removing ambiguities in relation to that is potentially problematic, and does point to the ways in which the approach to teaching can change what counts as knowledge within a subject (Bernstein, 1976). This is not to say that the emphases of the lecturers discussed in Chapter 5 are completely undermined by their engagements with the new platforms. As argued in that chapter, there were real differences in the ways in which the subjects were put together as a result of the lecturers' wider purposes. Within the Behavioural Ecology subject in particular, there was a strong intention to encourage students to critique the content taught and Matt and Ethan posed questions within their videos rather than simply presenting the content as given. However, as indicated in their comments above, the ways in which the lecturers worked with the online form did change the ways in which the lecturers thought about these questions, and in developing their subject videos Matt and Ethan were led to reduce some of the ambiguities and complexities that would otherwise have been present within their teaching.

The focus on the content to be learnt is also contrary in some ways to what the policy leaders wanted the online initiatives to achieve, and aligns more with their critiques of 'instructivist' approaches to education, than with their aims to promote constructivist teaching. There is a focus on defining the content in a self-contained way, without acknowledgement of students' own understandings and constructs. The issues raised here align with the critiques of institutionalised MOOCs and their focus on transmission at the expense of students' own engagements and constructions (Knox 2013a; Shuman & Wright, 2016). However, what we have seen here is that these directions were

apparent not only in the MOOCs online initiatives, but also in the two formal online initiatives being developed in the two quite different university settings. This highlights some of the problems with critiques of MOOCs that position them as too strongly disconnected from wider university practices, and focus too much on the technological affordances of different initiatives, rather than on the ways these are taken up and used.

Bernstein (1976) also draws attention to the ways in which the form in which content is delivered is about control, arguing that subjects can be analysed in relation to the degree of control teachers/lecturers and students possess over the selection, organisation, pacing and timing of the knowledge taught. Within the predefined form of these subjects, almost all the control over what is taught and the sequence in which that is taught lies with the lecturer or the constraints of the new platforms, with the student expected to work within those predefined parameters. This emphasis on control is discussed further in the next section.

Prescription, rigid templating and risk reduction

In this section, I consider the lecturers' approaches to assessment and student activity across the two institutions. I show that in addition to their focus on explicit content and the reduction of ambiguities, the lecturers were also highly concerned with creating assessments with clearly defined expectations and instructions and with prescribing and directing student activities and discussion. Building on the previous section, I argue that at both institutions, this focus on prescription was about reducing the space for student interpretation. As a result, it reinforced a sense of knowledge as about what is defined at the outset and limited the ways in which students were asked to engage. In relation to student activity and discussion, I focus here on the three initiatives where that activity was led by the lecturers rather than the students (TechU Online, SandstoneU Online and the TechU MOOC), discussing the issues raised by the student-led approach in the SandstoneU MOOCs in the next section.

At TechU, the lecturers were highly concerned with prescribing and directing student activities and with providing detailed and templated instructions regarding assessment requirements. Within TechU Online, student activities were designed by the lecturers and interactions were then moderated on student discussion boards by online tutors. In working with a forum which afforded them no interaction with students beyond the development of subject materials, the lecturers tended to provide comprehensive

directions to the online tutors to ensure the activities and discussions proceeded as intended. Each of the lecturers drafted additional notes for those tutors which directed them regarding where the discussion generated by the designed activities should go and what kinds of issues should be emphasised.

For her Teacher Education (Literacy) subject, Tara emphasised the importance of these instructions to tutors, and developed notes that were around 25 pages long. These notes provided rationales around why all the content is put together in the way it has been and included approximately five extra weekly resources for the tutors to post themselves in the discussion boards. Tara commented that this level of detail was because she was concerned that the advisors would not 'understand the bigger picture of the degree' and might try and extend the students' learning into areas covered in other subjects. She noted that in doing this she was 'being a little bit of a control freak with my unit' but that there was a risk if the tutors sourced their own resources they might take the 'tone of the unit in a different way' (Tara, Interview 2). Tara worried that if her supporting notes were not completely explicit there was a risk students might 'go into a negative deficit view of literacy or [think standardised testing] is essential and we must just do reading and writing as opposed to thinking about digital literacies and contemporary technologies' (Tara, Interview 2).

Grant also likewise commented that in developing online activities he includes 'leading questions developed to try and draw out the key facts and principles from the case studies in the discussion'. He elaborated, 'My development has included quite comprehensive discussion questions that are leading the students *to hopefully coming up with a particular solution or a particular answer*' (Grant, Interview 1 [emphasis added]). Both Grant and Tara here emphasise the importance of students' discussing the right things in the right ways, and worry about the possibility that might go off track without their oversight.

Leah, who developed the Supply Chain Management subject but had also acted as an online tutor for other subjects for TechU Online similarly commented that her approach to online discussion tends to be more 'standardised' and strongly directed than in on-campus (Leah, Interview 1). She saw this as particularly necessary due to the asynchronous nature of the discussions, and the ways this made it harder for students to see what was relevant. Leah commented that in comparison her on-campus teaching is

far more receptive to students and to the discussion in the classroom, but felt there was less openness to achieve this kind of work without confusing the students within the online discussion space.

Across the subjects, the approach taken to the discussion boards and activities tended to be more template driven and directed towards the predetermined outcomes and the assessments, rather than oriented to students' developing their own constructions of knowledge. In developing curriculum for students with whom they would not interact, the lecturers worried about students misinterpreting activities which were too open, and focused more on prescribing defined tasks for students that linked explicitly with their assessment tasks than on opening up broader discussion spaces.

Similarly, the TechU Online lecturers' approaches to assessments were also focused on providing students with clear rubrics and templated instructions. In Teacher Education (Literacy), for example, the assessments were closely tied to the defined subject outcomes. In designing the course, Tara drew up tables which showed where the outcomes were developed across the different weeks and different assessment tasks. The primary assessment comprised a portfolio task which required students to complete a template about a collection of resources. This template asked students to provide a brief description of each resource, evidence of it (such as a link or screenshot), a description of how it could be used and why it is relevant to the weekly topic and a critical analysis of its merits and limitations. In relation to this task, Anita, the learning advisor responsible for the course commented:

> They've got quite a lot of guidance. So, for instance, in the week on writing and primary, they need to find two creative and contemporary strategies to develop children's writing skills in primary classes. So there's guidance on the number of things they have to find on the broad sort of category, so here it's strategies for developing writing skills. They're told that it needs to be creative and contemporary but then within that they can go as far afield as they like as long as they're still doing that analysis of explaining what it is, how it's used, the advantages, limitations and finding the academic resources to support its usage. (Anita, Interview 2)

Here, what students were expected to do in respect of the assessment was highly prescribed. Within this assessment, what was left up to students – where they can go 'as far afield as they like' – was the selection of the resource, but what they were asked to do with that conformed to rigid template expectations, with set lengths allocated to defining use, advantages, limitations and the like. Students were provided with a detailed rubric with marks allocated for each element and the expected content was clearly defined. The assessment task was very self-contained and there was little that asked students to go beyond what they were given in formulating their thinking. Students were required to source their own resources but their engagement with theoretical and conceptual concepts was very much defined to the content they were provided.

Across all three TechU Online subjects, the use of the discussion boards and the design of the assessments was far less open than the policy rhetoric about student discussion and social constructivism (discussed in Chapter 4) might suggest. The approaches taken by the lecturers tended to restrict activities and assessments to what could be most easily directed, rather than what might be the most important substantive issues to discuss or engage with.

Similarly, for the TechU MOOC, while the stated objective was to encourage 'knowledge construction' (Sarah, Interview 1), the activities were highly prescribed and templated and Sarah's approach to encouraging discussion was based around asking students to respond to particular activities. Students were allocated to smaller discussion groups and were given clear instructions about the contribution to be made for each activity, including the time at which that contribution was expected to take place and the kinds of detail the student was expected to contribute. For example, in week 1, activity 1.2 required students to share experiences that could assist in developing a course for learning and reply to at least two other participants. Students were asked to complete this task by a set day and were provided with recommended time allocations (for this task approximately 30 minutes) for spending on the activity. The assessments were also designed in ways which focused on checking off limited requirements rather than encouraging meaningful engagements. They were designed according to a 'badging' approach where students earned 'badges' for each assessment completed. The assessments were either automatically assessed or reviewed by a course moderator (staff

working in Sarah's team) and the approach required very little from the students (primarily less than a paragraph of text per assessment) for the requirements to be met. Although Sarah's stated intent was to allow students to engage in broad and open ways, she found that the students were more focused on the videos and many were not prepared to contribute to the discussions. Here, it is possible that the prescriptive approach to learning activities, which tended to prescribe limited kinds of contributions may have discouraged students from making more meaningful contributions to the discussion in the ways Sarah hoped.

At SandstoneU, issues of templating were also evident, although there the lecturers' use of the assessment within the MOOCs also focused predominantly on issues of validity and clearly defined answers. As with the lecturers at TechU, the SandstoneU lecturers were also concerned with ensuring their assessments set out defined expectations for students, and with controlling the parameters around which students could respond. Those developing the MOOCs in particular were required to work with very limited assessment options with only two options for marking assessment were available: automated marking of responses to multiple choice tests, or peer assessment of responses to short or long form responses. Almost all the lecturers commented on their struggles with working with these new forms of assessment, and that they were required to change the assessment approaches they would typically take within their on-campus teaching. Rod, for example, noted that for the elements of his Interdisciplinary Logic MOOCs that could not be assessed by multiple choice but required peer assessment, the assessments would 'be much more highly constrained' than the assessments used within his on-campus teaching as 'it will be more difficult to have the more creative aspects of what the students might be doing evaluated' (Rod, Interview 1). Matt similarly noted that the multiple-choice format meant changes for the ways in which he usually approached examination questions, which comprised questions which asked students to really consider and critique real research and required 'quite open-ended answers' (Matt, Interview 2). These comments point to the difficulties the form presented for these lecturers, and the ways in which their engagements with it altered their teaching approaches.

In taking up these new forms of assessment, the lecturers developing the SandstoneU MOOCs focused on explicitly identifying for students the markers for success and with

controlling the parameters within which students could respond in similar ways to the TechU online academics.

Two of the MOOCs used multiple choice questions as part of their assessment (Behavioural Ecology and Interdisciplinary Logic). The lecturers for these subjectssaw significant value in the ways this form of assessment enhanced revision practices and reinforced understandings. In taking up the option of multiple choice assessments, these lecturers elected to allow students to check their understanding and receive feedback on their responses before proceeding to the final tests, providing students with multiple attempts to complete each test and detailed automated feedback about where they had gone wrong. They wrote multiple versions of questions around the same concept so that students were not able to simply memorise the correct answers. Matt commented that this was:

> about that deeper learning that comes from being able to get the question right regardless of how it's served up. And so, we've put a lot of effort into writing feedback on the quiz questions so that when you get it wrong there's actually quite a lot of information there that helps you understand why you got it wrong. So it hopefully helps you to do better the next time. (Matt, Interview 3).

Rod likewise said in relation to the Interdisciplinary Logic MOOC:

> a student can practice with ten of these problems and figure out that okay I've got it all right and they know they've got ten out of ten, and [for] other students still struggling […] [we can] give them feedback on 'no, you made a mistake here, revise this bit' (Rod, Interview 1).

In these comments, the lecturers demonstrate a focus on providing students with clear and explicit direction about what has been misunderstood, and what the students need to work on to correct the attempt. Within multiple choice forms of assessment, right and wrong answers are clearly defined and the lecturers tended to see the benefits of the multiple-choice approach as about providing students with opportunities to identify the areas they were struggling with based on their right and wrong answers.

Interestingly, this concern with explicitly defined criteria and right/wrong answers was also strongly evident in relation to the peer review assessments where greater fluidity and space for interpretation might have been expected. Although the academics saw

multiple choice as not capturing the kinds of thinking they wanted students to engage in, they also tended to frame the peer review task not in terms of student interpretation or in terms of the learning that occurred from the process (traditionally how such assessment is justified – see Boud, Cohen, & Sampson, 1999) but in terms of their potential for reliability and validity.

In relation to the Interdisciplinary Logic MOOC, Debra took another MOOC as a student to learn more about peer assessment before starting on the task of designing their own peer review assessments, and was critical of way students were not given clear direction about how to assess their peers' work. Based on this experience, Debra and Rod decided they would develop two rubrics per assessment – one which would explain at a high level how the student's work should be assessed which would be released at the time of the question, and a second more detailed rubric that would clarify what the key concepts were which needed to be defined and what an acceptable definition would include at various levels from excellent to poor. This second rubric included an explanation of the key concepts to be included in response to each question and clarified the elements that were part of an excellent definition, compared with an adequate definition, compared with a poor definition. In talking about why explicit rubrics were necessary for peer review teaching, Debra commented:

> Unless you actually tell students what the right answer is or what a right answer is or the parameters under which this counts as a correct answer, I think you'll inevitably get that sort of wild discrepancy. […] for the final marking, you really need the nitty gritty what's right and what's wrong because *those judgements cannot be left for students, they don't actually have enough knowledge or too many of them don't* (Debra, Interview 3) [emphasis added].

Peer assessment was here not about students' interpretations but about students acting as substitutes for experts, with the knowledge and expertise of those experts reconfigured in written and codified form for students to use. The authority to decide 'what counts' as a correct answer was not assigned to or invested in the students themselves but contained within the detailed criteria sheets.

For the Behavioural Ecology MOOC, the peer assessment task was broader and required students to rewrite an academic article in the form of a popular article similar

to those published on *The Conversation* website (a media platform that uses content developed by the academic community). However, Matt and Ethan's development of a rubric for this assessment focused on what was easily able to be codified, rather than what was most substantively important, raising similar issues to the assessments developed at TechU. This rubric included ten criteria, including the following examples:

> *Did the article have a short and informative title?*
> 0- No. The title had more than 12 words, and the title was also not clearly informative about the article.
> 1- The title was too long (more than 12 words), or it was not clearly informative about the article.
> 2- Yes. The title had fewer than 12 words and was informative about the contents of the article.
>
> *Did the article clearly explain the purpose of the study, i.e. the question the researchers were trying to answer?*
> 0- The purpose of the study was not explained.
> 1- The purpose of the study was explained, but this explanation revealed some misunderstanding of the source paper.
> 2- The purpose of the study was clearly and accurately described.
>
> *Did the author clearly and concisely explain what approach (methods) the researchers used to answer their research question, and describe the key findings of the study?*
> 0- Neither the methods, nor the findings were described.
> 1- The article described the methods, but didn't describe the key findings (or vice-versa).
> 2- A clear, accurate and concise description of the relevant methods and findings was given.

These criteria are detailed, explicit and leave only a small about of room for student judgement. It is left up to students to determine what counts as an 'informative' title or an 'accurate' description of the study purpose, methods and findings, but the rest of what they are asked to assess is clearly defined. This leaves out how well students capture the substantive parts of they are being asked to do, rather than simply elements

of that. These attempts to codify criteria for the purposes of peer assessment raise the question of whether this leads to measuring what can be measured, rather than what is educationally desirable or valued (Biesta, 2010). The emphasis is on a set definition of what counts, rather than taking seriously how students might interpret that and what they might bring to the task. More importantly, in defining the assessment task by criteria which can be easily and consistently graded by students, the task itself is changed from one which might have allowed for a range of possibilities in terms of student responses to one which is templated and potentially superficial.

When the lecturers talked about benefits of peer assessment, they did emphasise the learning that could occur from the process of marking another's work. However again, in relation to the online initiatives this learning was seen to be 'about' predefined content rather than interpretation or knowledge construction. Rod, for example, commented, 'You learn the content better by being able to tell whether this is a good answer or that's a good answer'. (Rod, Interview 3). Matt and Ethan also used peer assessment in their on-campus teaching and Matt noted that one of the reasons he was interested in this was because 'it's broader, it takes into account difference of opinion, it's symbolically not investing me as a teacher with all the power and all the authority and all the wisdom […] [and it provides] the benefit of arriving at a mark that is potentially a truer reflection than the opinion of a single individual' (Matt, Interview 2). These comments are significantly different from the approach he and Ethan took within the MOOC, where concerns about validity were evidently seen as more important.

Here, the assessment reinforced the sense of knowledge as defined content to be learnt. While this is not completely against the lecturers' purposes for their subjects, particularly for Interdisciplinary Logic, since both disciplines require understanding of agreed concepts, it does shift the emphasis of the subject away from the lecturers' aims to have students understand the knowledge of their discipline as evolving and contested. The emphasis is on students learning the content as taught rather than on questioning or engaging with that content in comprehensive ways.

Outside the MOOCs, SandstoneU Online represented a different kind of initiative, offering a live class tutorial component and substantial engagements between lecturers and students. Like the TechU Online lecturers, Laurie approached these live classes in a more prescriptive way than his previous on-campus teaching. For each week, he

developed ‘roundtable’ videos which consisted of recorded discussions between himself and two student actors, in which questions and topics were raised which were designed to lead into and prompt student preparations for the live class. In our last interview, which took place after the subject teaching had completed, Laurie spoke about focusing more on the ‘detail’ of how those live classes would occur in comparison to his on-campus teaching, in terms of ‘thinking about how (a) in the seminar leads to (b) leads to (c) to get to the final points that I want the students to take away from the session’ (Laurie, Interview 4).

However, Laurie’s approach to the prescription for this class was different to the others given that the space allowed for him to engage with students in the moment of teaching. While he commented that he was considering limiting the material or being ‘even more specific with the questions’ (Laurie, Interview 2) prior to starting the teaching, once teaching began he was able to use those classes in an open way, responding to how the students were going each week and the kinds of questions they themselves raised from the material. In comparison to the ways the lecturers saw the other online initiatives’ discussion spaces, Laurie did not see the live class as different from an on-campus tutorial, since the discussion was synchronous and able to be monitored in the moment. He commented that the live class was ‘just like any other live class’ and was based around a key focus determined as part of the subject development (Laurie, Interview 2). His emphasis was on making the classes a space to ‘discuss things in detail, to get their feedback, to get them working on a particular version’ without dissipating the depth of discussion. In his approach to designing questions for the live classes, Laurie commented, ‘I designed them very carefully to also be escalating, to kind of warm the student into the topic, to get them engaged, to make them start thinking interpretively and then I went up to the big open question at the end that they can respond to’ (Laurie, Interview 1). Here, Laurie’s approach is quite different to the lecturers developing for TechU Online, where there is a far stronger assumption that the students need strong direction to engage and the possibilities for interpretation are less open. Additionally, the number of students enrolled in Laurie’s subject was in the end very small – only eight students – and Laurie was able to work with them in the tutorials in collaborative ways which engaged with the substance of their ideas and questions. Laurie’s assessments were also left fairly open and the tasks were described as ‘identical to what we do on-campus down to the questions asked’ (Laurie, Interview 2).

Beyond SandstoneU Online, however, the lecturers' approaches to student activity and assessment were predominantly highly prescribed and were oriented towards pre-defined and rigid rather than open endpoints. For the assessments in particular, the lecturers tended to either focus on criteria which could most easily be codified or criteria which was objectively quantifiable and definably right or wrong rather than allowing for some fluidity and complexity in relation to that. These approaches tended to limit the space for student interpretation and restrict the possibilities for students to engage with the content taught in complex ways.

The assessments and activities for TechU Online and the peer assessments in the MOOCs were all developed to be assessed and moderated by other people: tutors in the case of the TechU initiatives and other students in the case of the SandstoneU MOOCs. In developing these assessments and activities, and as with their approaches to content discussed earlier, the lecturers were all concerned with making the expectations clear and communicable to both students and tutors and were concerned with ensuring that those marking the assessments and moderating the student discussions did so in the way that the lecturers intended. The lecturers wanted to ensure that the assessments and activities were conducted in accordance with their own design, and therefore acted in ways focused on risk reduction and control.

This emphasis on risk reduction and control was limiting however, and restricted the ways in which students were invited to engage. As Biesta (2014, p. 1) argues, education is necessarily about risk 'because students are not to be seen as objects to be moulded and disciplined, but as subjects of action and responsibility'. Biesta contends that attempts to secure or control the educational process limit the possibilities for students to think otherwise and develop independence. In line with Biesta's critique, the lecturers' approaches to student activity and assessment discussed in this section did restrict what was possible, and potentially tied students to the predefined requirements, rather than enabling them to take their learning in new directions.

As with the focus on clarity and reducing ambiguity, the lecturers' emphasis on control and prescription was also different to the ways in which they had talked about the broader subject aims, as discussed in Chapter 5. While many of the lecturers articulated a desire to engage with students own contributions and concepts in ways which positioned knowledge as something negotiated within the curriculum with students and

wanted students to understand knowledge in their field as open and evolving, these understandings of knowledge were significantly diminished in the lecturers' discussions of assessment and student activity.

For the TechU Online initiative in particular, these findings further highlight the issue raised in Chapter 4 about the problem of defining active learning and constructivist teaching in relation to activity without attention to substance. Within the TechU Online subjects, the lecturers did include activities but their focus was on developing activities which built towards the assessments and were least likely to go outside their own intentions and this undermined to an extent the initiative's emphasis on students' own concepts and thinking. Within this initiative, the policy leaders were concerned with both alignment and constructivist teaching, and wanted to bring the two together in constructive ways. However, the lecturers in developing their curriculum were far more concerned with issues of alignment and tended to focus predominantly on ensuring activities built towards predefined outcomes and assessments, rather than on more open engagements. In line with Muller and Young (2014), these practices point to the ways in which an attention to alignment and outcomes can undermine other agendas. They also further highlight some of the challenges raised by 'unbundling' curriculum development and delivery. As seen in this chapter, an unbundled approach changes not just students' relations with the expert developing the content, but also the ways in which curriculum, pedagogy and assessment are designed, and therefore what is produced as knowledge within the education (Bernstein, 1976). This is particularly evident in the differences between the approaches taken by Laurie and the TechU Online lecturers which show the stronger possibilities for engaging with students' own concepts in classes where the teacher has also developed and designed the curriculum.

MOOCs, boundaries and the challenge of openness

In this section, I discuss the ways in which the SandstoneU lecturers developing the three MOOC subjects interpreted and responded to student interactions within the platform's online discussion forums. These forums were the dominant ways in which students could interact with each other within the MOOC platform (although some did engage via Facebook sites and the like). They were student led, with the students initiating their own discussion threads and responding to each other with only minimal input from lecturers and tutors, and were therefore not an element which the lecturers

could plan for, or monitor and direct in any detail. I argue in this section that the lecturers perceived the discussion as most valuable where it was used in ways which corrected misconceptions through reference to the video lectures and subject content, struggled with instances where students took the discussion in different directions, and wanted discussions to respect the parameters of their knowledge fields.

For the most part, the lecturers developing the SandstoneU MOOCs saw the discussion forums in positive terms and appreciated the learning opportunities they provided beyond the video lectures and assessments. Matt (Behavioural Ecology), for example, emphasised the value of the forums and the high level of engagement shown by students, noting 'it's humbling to see the high level, the intellectual level of debate that goes on among' them (Matt, Interview 3). He saw this as particularly impressive given that discussion boards offered via the university learning management system tend to be ignored by on-campus students and emphasised the importance of the MOOC forums in encouraging learning by allowing students to express their own interpretations. In our third interview, which occurred about halfway through the MOOC teaching, Matt commented:

> I think as the instructor you've got to resist the temptation to step in and provide the definitive answer because I think you're going to discourage learning that way. […] I'm wary of posting something that will kill off the discussion because people go 'oh the instructor posted this and so therefore my view must be wrong or invalid'. (Matt, Interview 3)

Similarly, Glenn (Teacher Education [Assessment]) stated in our final interview that he felt that because the forums allowed the students to communicate with each other, 'we facilitated learning, we put the material out there, recommended readings, exercises and let them go' (Glenn, Interview 4). He saw this as allowing the subject to go beyond a 'knowledge transfer' (Glenn, Interview 4) or transmission approach to really offer the kind of teaching he sees as valuable. Here, these lecturers emphasised the importance of the forums in allowing students to engage in constructive ways with the subject material.

However, although they wanted the forums to provide a space which offered something additional to the video lectures, the lecturers primarily talked about their value in terms

of the opportunities provided for correcting student misconceptions around the concepts covered in the videos. In relation to his comment above, Glenn stated that what he liked about the forums was that 'when misconceptions or queries came up we just stood back and let the class take care of it themselves' (Glenn, Interview 4). Matt likewise noted that he really liked the 'generally cooperative way in which people did things and the way that someone would pose a question and other people would take the time to answer it and often give a really good answer' (Matt, Interview 3). His colleague Ethan also noted that 'you do find that people say "I didn't really understand this" and then they will get a string of responses and typically those responses will be on the mark' (Ethan, Interview 3).

In relation to this, the lecturers saw particular students as important in keeping the discussion on track and correcting for misconceptions. For Interdisciplinary Logic, which was offered over two MOOCs, Rod and Debra recruited star students from the first MOOC to act as community teaching assistants in the second MOOC, and Debra commented in relation to these students, 'they were actually really good and would answer straight forward pointed type questions, you know, go look in the course notes' (Debra, Interview 4). These students were seen by Rod and Debra as pseudo-tutors, with sufficient knowledge and understandings to adequately explain core concepts to students who were struggling and to direct them to further explanations contained in the subject materials. In relation to Teacher Education (Assessment), Miranda likewise noted 'the power of the MOOC came from these forty or fifty, I would say, really switched on generous people who actually took on the teaching load in the forums'. Matt also commented in relation to Behavioural Ecology that while there were 'plenty of posts where people are a little bit off the mark or a bit left of field, he also 'saw a lot of people there where I thought these people could be great potential community TAs [teaching assistants], they really understand the material well, lots of insightful posts' (Matt, Interview 4). Matt and Ethan also employed teaching assistants to monitor student discussion as much as possible, and although they did not engage with every post, they did ensure their teaching assistant either responded to 'genuine posts that are saying there's something unclear' (Ethan, Interview 3), or alerted the lecturers to the need to do so. They relied on the students to respond to queries in the first place, but then had the teaching assistants explain further where those responses were incorrect. These responses show that, while the lecturers valued the ways in which the forums

provided space for going beyond the video lectures, they also tended to primarily position them as an additional space for students to clarify what was said in those videos, rather than a space where new issues might be raised.

The lecturers' comments also highlight their emphasis on the importance of keeping discussions within the boundaries and parameters of their disciplines and fields, rather than bringing in concerns that are outside that. While the lecturers did want students actively constructing and engaging with the concepts taught, they saw boundaries as important in terms of what is valuable and had defined ideas about what discussion looks like that is 'on-track' or 'off the mark' in relation to that.

A clear example of this occurred in one incident where a forum discussion did reach outside disciplinary boundaries. Matt and Ethan indicated some concerns about the ways students had responded to Ethan's introductory lecture on 'asking the right questions' as they had intended that unit to specifically draw attention to disciplinary boundaries in defining what discussions are appropriate and worthwhile. In the 'asking the right questions' lecture, Ethan had explicitly made the point that asking whether animals experience happiness is not a question that can be answered within ecological or biological research and expresses anthropomorphism. When he went to develop the quiz questions for this lecture Ethan wanted to deal with the issue of anthropomorphism in an interesting way so he referred to a recent book by Australian author Tim Winton where the central character pondered about what fish think and asked why this issue was never resolved. The correct answer within the quiz was that, from the perspective of the discipline, fish do not think as human characteristics cannot be ascribed to animals and whether fish think is not empirically testable. However, the question led to heavy debate within the forums about whether animals think or not, much of which focused on students' relationships with their pets and whether their pet loved them back. This issue was easily one of the most dominant discussions in the forums and developed across numerous threads. Ethan in particular found this response extremely challenging, and posted on multiple times in the discussion forums to try and direct the students back to discussions he felt were relevant to the subject. However, he found that students would simply start the discussion again within another forum thread and that his comments tended to not be effective in refocusing the students on approaching the content within rather than outside the disciplinary frame, where the question of whether fish think is

not seen as one which can be answered within an ecological or biological frame. Matt and Ethan's struggles here highlight their emphasis on the discipline as the defining boundary as to what is appropriate in the forum discussions.

The issues raised here also point to the challenges of not being able to respond appropriately and correct for inappropriate student responses in a platform which is subject to very little lecturer control. In relation to the issue, Ethan commented:

> it's very frustrating to be in an environment in which we're trying to teach something about the science of animal behaviour and yet the most dominant issue that the students are struggling with—and of course they are struggling because it's impossible to answer—is essentially non-scientific. It's a sense of frustration. You think well, hang on, I'm not cutting through here at all. What can I do to cut through? (Ethan, Interview 3)

Here, the multiplying nature of the forum threads and the ways problematic discussions emerged in various places presented significant constraints to Ethan's ability to guide and direct the student discussions. These issues may derive from problems with the ways Ethan framed the question, and potentially his and Matt's inexperience with online teaching in general. However, they also point to the ways the uncontrolled space of the forums could be problematic and potentially limiting, at least in relation to the curriculum intents of the subject. The openness of these forums allowed students to debate and take up the content delivered in any way they please and to draw on their prior experiences and knowledge in relation to that, but it also did not provide any surety that these discussions would proceed in ways which connect students' own contributions productively with the content being taught.

Interestingly, only Matt and Ethan struggled with this issue, while the discussions in the other two MOOCs remained predominantly related to the subject matter and were discussed within the frame of the discipline. These differences may be due to chance, but they are also potentially concerned with what the lecturers were trying to do with their teaching, and the ways in which their use of the online platforms worked with and against their broader intentions. Matt and Ethan were explicitly concerned with engaging with students' ideas and challenges to disciplinary concepts, and invited students in their subject materials to question and challenge the content being taught. In

comparison, the lecturers developing the Interdisciplinary Logic MOOC were far more concerned with developing students' understandings of core logic rules and processes and focused in the video lectures and additional materials predominantly on clear rules about what logic knowledge looks like and how it can be practiced. These latter emphases potentially aligned better with the approaches taken to content delivery and assessment discussed in the previous sections, and may be why these students' discussion remained within the parameters of understanding the content being taught rather than questioning that. Here, the rigid sense of what counts captured within the videos and multiple-choice assessments was better suited to the agendas of lecturers in fields where there was a very strong degree of paradigmatic consensus, than in those where there was more divergence or openness in relation to that. Additionally, problems were also not evident in the Teacher Education (MOOC) but this could also be because that MOOC was only taken by teachers who already had a training within the field of education, and were therefore less likely to take the discussion outside that frame.

Overall, the lecturers developing the SandstoneU MOOCs appreciated the forums as spaces where students could engage in ways that went beyond simply learning the content captured within the video lectures. However, they also saw students' engagements as most valuable where that discussion focused on the video lectures and on correcting student misconceptions which might arise from that and struggled with instances where students took the discussion in different directions. Despite wanting the students to engage in broad ways, they were predominantly concerned with ensuring the discussion adhered to their established purposes, and in their interpretations of the possibilities of the forums focused less on student interpretation and knowledge construction, than on the reduction of misconceptions and the further explanation of the defined content.

This concern with the disciplinary boundaries is about issues of power and control, as Bernstein's (1976) work makes clear, but it is also about what disciplinary education offers. The issues faced by Matt and Ethan in particular highlight some of the complexities of the relationship between openness and control, and between the lecturers' desires to set the parameters for learning within their subjects while still allowing students some freedom in how they engage with that. Matt and Ethan wanted their students to engage with and challenge what was taught, but they also wanted them

to respect disciplinary parameters and these aims were challenged by the form of the MOOCs, where there were too little opportunities for the lecturers to engage with students' own concepts and understandings in constructive ways. As these lecturers' experiences show, working within these constraints is a genuinely difficult task and not one which is easily resolved, particularly within online teaching where there are limited opportunities to engage with students in meaningful ways.

Conclusion

This chapter has discussed the lecturers' ways of engaging with the new online platforms in their curriculum development, and the issues that surfaced as part of this. It has pointed to the lecturers' struggles with the new online forms and the constraints they imposed upon the lecturers' teaching.

The chapter highlights the ways in which the lecturers' engagements with the new platforms changed and narrowed what was possible within their teaching. In their approaches to the delivery of content and the design of assessment, the lecturers were focused on clarifying concepts and expectations for students. Similarly, their thinking about student activities and discussion was predominantly oriented towards prescription and direction or with correcting student misconceptions of defined content. Across all the cases, the experience of the lecturers as they worked to enact or construct their curriculum in these online forms was to move in a direction that more strongly emphasised knowledge as a defined body of content to be taught.

Here, the emphases and concerns that emerged in the lecturers' engagements with the new platforms were different to those that were evident in their broad discussions of their subject aims, views of knowledge and content selections (discussed in Chapter 5). In particular, the lecturers' ways of working with the new platforms undermined their aims to engage constructively with students' own concepts and to illustrate the evolving and complex nature of knowledge development in their fields. Although many of the lecturers wanted students to engage in open and constructive ways and to understand the evolving and complex nature of knowledge within their fields, in working within the constraints of the new platforms, the lecturers tended to focus predominantly on issues of clarity and control. Students were primarily directed in ways that were more about fulfilling pre-set requirements than making connections with or building from their own concepts and understandings, particularly at TechU. This potentially limited the

opportunities for students to engage in potentially more meaningful ways. In relation to the SandstoneU MOOCs in particular, while the lecturers wanted students to engage in ways that went beyond learning the content as set, in working with the new platforms the lectuers became predominantly concerned with ensuring students' engagements adhered to their set purposes, including in terms of the boundaries of their knowledge fields.

This is not to say that the effects of the platforms on the lecturers' curriculum development was wholly negative however. While the lecturers did struggle with some of the rigidness of the new platforms and with not being able to relate to students and approach explanations in more tacit and less direct ways, they also liked the ways in which the new form focused their thinking on what students need and encouraged them to think deeply about content and sequence. The disciplinary lecturers at SandstoneU commented in relation to this predominantly in terms of the knowledge taught and its structure, while the TechU lecturers were primarily concerned with issues of outcomes and alignment.

The chapter has drawn attention to differences evident in the policy leaders' broader aims for the initiatives (discussed in Chapter 4) and the lecturers' approaches to engaging with the online platforms. While those policy leaders hoped the initiatives would encourage more constructivist teaching with more emphasis on student activities, the lecturers tended to see the move online as encouraging and necessitating a greater degree of explicitness and standardisation and focused on these issues in their subject development. This was the case for the MOOCs, where the lecturers could only engage with students in limited ways, the TechU Online subjects, where the lecturers had no opportunities to engage with students and where student engagement was devolved to subject tutors, and to a lesser extent, in the SandstoneU Online subject, where Laurie was able to interact with students via a weekly live class. Compared with on-campus face-to-face teaching, the lecturers saw teaching in the online forms as requiring greater direction from the outset since the space for incorporating that in the course of the subject was not available, and there was seen to be a need to prepare that direction in a standardised form since there is primarily no scope for the lecturers to negotiate individually with the students.

While this chapter has highlighted what was common in the lecturers' approaches to working with the new platforms, the substance of their different field-specific views of knowledge (discussed in Chapter 5) was also reflected in the ways they had structured and modified the curriculum and engaged with the demands of pedagogy and assessment. The issues discussed in this chapter can here be understood to potentially undermine but not entirely negate the lecturers' wider purposes and orientations.

This chapter has been the final of three chapters which have discursively analysed the documents collected and interviews undertaken as part of this study. The first of these chapters (Chapter 4) took up the research evidence at the institutional policy level and showed the problem-construction evident; the emphases on improving good teaching by encouraging greater attention to both constructivism and outcomes/alignment and the uneasy relation between these aims; and the relative inattention to the issue of curriculum and different fields of knowledge in that thinking. Chapter 5 took up evidence from the eight case-studies, with a focus on how lecturers in different fields saw their overarching curriculum purposes, and understood the forms of knowledge important in their field. It showed some important differences between the subjects that had a disciplinary origin and those derived from professional or vocational purposes; and also differences in the ways in which lecturers were given authority in the two different kinds of universities. In the current chapter the focus has been on what was constructed, engaged with and emphasised by these lecturers as they worked on the concrete or practical details of their respective subjects. The chapter showed that while forms of knowledge differences remained evident between different kinds of subjects, in practice all the lecturers developing the eight subjects moved in some similar directions in terms of what they emphasised and constructed. They all sought greater explicitness, clarity and alignment, and moved to more strongly control what students would take up from their subject. In terms of policy framing agendas, it is evident that alignment concerns overrode any other senses of process and constructivism.

In the following concluding chapter I consider the arguments of this chapter further to reflect on the contribution of this thesis as a whole.

Chapter 7: Conclusion

This thesis has examined curriculum making in relation to new online reforms in Australian universities at a time of deep contestation and debate about the purposes of university education and the knowledge it should seek to impart. There are questions today about the relevance of disciplinary knowledge compared with new kinds of cross-disciplinary collaborations or professionally-oriented knowledge; about the implications of new technologies and modes of communication, and the relevance of content in the age of the internet; and concerns about massification and how best to teach a widening and diversifying student body. In relation to teaching, universities have sought to grapple with these issues in a range of ways, but a strong shift towards the incorporation of online learning and educational technologies has been evident over the past decade. Within this context, new ways of thinking about knowledge have become increasingly prominent, notably in relation to agendas for constructivist and active-learning pedagogies and outcomes-based agendas. There have been calls to move away from 'instructivist' forms of teaching focused on teachers rather than on what students are doing, and to focus curriculum design on the desired end-point, rather than the content to be taught.

In this thesis, I took up the question 'what counts as knowledge in new forms of online learning?', approaching this via a qualitative and interpretive study of the online initiatives being developed at two Australian universities, and in terms of what was being emphasised and enacted in relation to knowledge by particular policy leaders and lecturers within these selected contexts. Informed by research in curriculum inquiry and policy sociology, I set out to explore the assumptions, emphases and tensions evident in how those responsible for the development of the new online initiatives and subjects grapple with questions of knowledge and its teaching in their aims and practices. My empirical study focused on both the institutional policy framings informing those initiatives and case studies of the curriculum development of particular subjects offered within them, drawing on interviews with policy leaders and lecturers, and analysis of policy documentation and curriculum materials.

My aim was to show what policy leaders and lecturers perceive as important for curriculum and teaching at the present time, the differences and conflicts that are part of that, and what these suggest about the directions being taken within universities today. In keeping with the curriculum and sociology literature, I understood my question 'what counts as knowledge?' and my empirical interest 'what they perceive as important?' to require attention both to explicit and self-conscious statements about these matters made by those I interviewed, and also to tacit constructions evident in what was said and set up in interviews and documents as they engaged with the curriculum re-development. Curriculum is both about abstract values and purposes and about concrete enactments that bring a range of constructions into play.

In the light of arguments about the forms of different fields of knowledge, I sought to examine the similarities and differences evident in what matters for lecturers located in disciplinary compared with professional fields, and the implications of the new online forms for those different fields. And in the context of some concerns about current directions in university teaching, I sought to identify the assumptions about curriculum development and 'good' teaching evident within university policies and in the thinking and practices of university lecturers, and the coherence of the conceptions of knowledge at work in relation to this.

In Chapter 4, I began by considering the ways in which the policy leaders at the two research sites constructed the policy problem and policy context in relation to online learning. I showed that in two very different types of university in the Australian context, the policy leaders all understood the policy problem as concerned with succeeding in a competitive environment and a need to promote better student engagement and satisfaction as an important part of that agenda. I argued that at both institutions the online reforms were positioned as a salve to poor teaching, and a means of encouraging constructivist and active learning pedagogies as well as outcomes-based approaches to education. I showed in this chapter that the policy leaders' strong commitment to active learning and knowledge construction was underpinned by a process-oriented sense of knowledge. At the same time, I suggested, the ways in which they positioned curriculum itself as outside the frame and to be filled in by others, suggested that curriculum content could be treated as settled, predefined and unchallenged by new forms. I argued that this implied a different, more 'fixed' concept

of knowledge than the constructivist or process view that was part of the policy rhetoric as well as an inattention to the difficult work involved in curriculum making and the different ways in which new reforms might impact upon lecturers located within different fields.

In Chapter 5, I focused on the lecturers' intentions and purposes for their subjects, and the rationales they gave for their content selections. I discussed the ways in which the lecturers' purposes were not uniform, with some of the subjects were oriented towards disciplinary purposes, some towards vocational purposes and engagement concerns, and some towards the promotion of their own work. The chapter highlighted both the different ways in which the lecturers understood the purposes of their fields in relation to teaching, and the different ways in which they framed issues of student engagement. I argued that these differences indicate different orientations between those located in disciplinary and professional fields and between those located within traditional research universities and newer institutions. One evident difference was that those working in subjects associated with disciplines placed considerable emphasis on the need for their curriculum to not only convey particulars (findings, facts etc.) to students but to show them knowledge not as fixed but as evolving (having a history, challenges, new questions); and to convey the ways of knowing and distinctive questions associated with their fields. In the professional or vocational fields, what is known to be useful in the workplace was the strongest reference point, with more flexibility about content and structure in the curriculum. This reference point was combined with a strong attention to issues of student engagement and concerns with reducing the burden on students' learning.

In Chapter 6, I examined the ways in which the lecturers grappled with developing curriculum for the new platforms, and how they approached issues of content delivery, curriculum structure, assessment and student discussion. I pointed to a divergence between the concepts of knowledge underpinning the lecturers' broad aims for their subjects discussed in Chapter 5, and those that emerged in their decisions and practices in working with the new online forms. I showed that while the differences in the lecturer's aims and purposes remained evident, in working with the new forms all the lecturers became more concerned with issues of clarity and control than with openness and engaging with students' own concepts and understandings. In other words,

'instructivist' approaches became stronger as lecturers worked with the new forms. For the subjects associated with disciplines some aspects of these changes were welcomed, in that they potentially encouraged the lecturers to revisit and become clearer about the structure of their disiplinary knowledge in the course of seeking to translate that into curriculum. At the same time, these lecturers disliked the pedagogical imperative to more aligned and outcome-driven forms where these removed the opportunity to deal with knowledge as contested and evolving and to engage with students' own misconceptions. In the professional fields, comparatively, the more open activity discussion components of the curriculum became translated into more outcomes-based agendas.

Across these chapters, I have shown that what count as knowledge for the policy leaders and lecturers in their management and curriculum work is not uniform or singular, but underpinned by multiple and different emphases and concepts of knowledge, associated with a range of issues including disciplinary and professional knowledge traditions, online affordances and student engagement. The thesis has highlighted the tensions and conflicts raised by the policy leaders' and lecturers' struggles to keep these different emphases in play. It has also pointed to the implications these raise for both the directions being taken within universities today in relation to curriculum and teaching, and the ways in which these are being framed and understood in the research literature. In the remainder of this final chapter, I further discuss these implications and the study's contribution to current debates in more detail, focusing on three core issues: the significance of different forms of knowledge in curriculum development; the framing of constructivist teaching within universities; and questions about curriculum and its relation to knowledge.

Recognising the significance of different forms of knowledge

This research drew on interviews with lecturers located in different kinds of fields, including disciplines such as ecology and classics and professional fields such as business studies and education. In the interviews, these lecturers demonstrated strong orientations towards the particular purposes of their fields and broad differences were evident in how those located in disciplines and professional fields saw their teaching purposes.

The lecturers located within disciplines repeatedly showed their concern to convey the nature of their discipline, not just content from it. They emphasised the importance of understanding the rules and norms of the disciplinary approach rather than an approach which offered content knowledge abstracted from that, and were concerned in their teaching with making those rules and norms explicit. And in working with the new platforms, they demonstrated a strong concern with disciplinary boundaries and were concerned where those boundaries were challenged.

In comparison, those working in professional areas indicated their concern about professional practice as a benchmark driving their curriculum construction. They wanted to develop particular ways of thinking or approaching problems in their students, but in comparison to the disciplinary lecturers were far less inclined to make the underpinnings of those an explicit focus of their teaching.

These differences highlight the continuing importance of earlier arguments about the different orientations and authority relations of disciplines compared with professional fields (e.g. Becher, 1989; Bernstein, 1996; Karseth, 2006), and show the particular ways in which these emerge within curriculum development. Many argue today that distinctions between different forms of knowledge no longer hold as disciplinary boundaries break down (e.g. Trowler et al., 2013), but in aims and purposes the kinds of distinctions seen between disciplinary and professional subjects continue to be broadly evident. These distinctions are particularly apparent in the ways in which curriculum purposes are framed and are about the substance of what is being taught and developed.

The research also makes evident the ways the differences between fields and forms of knowledge are being discounted by institutional leaders in their oversight of new online reforms. At the level of institutional policy (Chapter 4) there was clear a lack of acknowledgement of the importance of distinctive purposes and teaching practices of different fields and a lack of attention to how these may have different implications for what kinds of pedagogy, curriculum structure and assessment are appropriate. The policy leaders I interviewed saw content-related concerns as best left up to the individual lecturers, but at the same time also sought to impose particular requirements and to encourage the same forms of teaching across different areas. They framed best practice in terms of generic concerns related to content reduction and active or constructivist pedagogies, rather than in terms of specificity and context, without

considering the ways in which their aims and agendas might work differently for lecturers teaching in different kinds of fields. Trowler et al. (2013) argue that disciplinary norms are becoming less important in the conversations occurring around the development of new programs and the like as marketing and other 'outward-facing' considerations take precedence, and this was evident in the institutional policy level perspectives.

As illustrated in this thesis, these policy framings appear to have implications for the ways in which the lecturers developed their curriculum for the new initiatives. Comparing the material in Chapter 6 to that discussed in Chapter 5 highlights some of the drives towards uniformity that new initiatives here encourage – in particular the requirement to limit time, to break up content, to reduce ambiguity and complexity, and to focus on outcomes and alignment. At both institutions, while the lecturers' aims for their subjects were oriented to what was distinctive about their fields, their ways of working with the affordances and constraints of the new initiatives were oriented far more strongly to the same kinds of teaching approaches and to issues of clarity and control.

Yet these chapters also identify important challenges about how different bodies of knowledge can be adequately represented in curriculum, when the purpose is to have students enter a field that has a disciplined form extending over time and space. As discussed in Chapter 6, the platform arrangements presented different implications for those working in different fields. For the SandstoneU MOOCs in particular, the rigidity of the videos and multiple-choice assessments evidently aligned better with the purposes of the lecturers who were located in fields where there was a high degree of paradigmatic consensus, but presented more significant difficulties for those located in fields where there was more divergence or openness in relation to what was understood to count as knowledge.

One of the questions raised by those who worry about the future of disciplinary forms of knowledge, is whether the norms and values of professional fields (in terms of the use-value of curriculum content) are becoming more predominant (Bernstein, 1996; Muller, 2009). This thesis has shown that there are some signs of this at the institutional level, particularly in the policy leaders' emphasis on content reduction and on structuring curriculum in relation to predefined educational outcomes. The thesis has also

highlighted that this focus challenges those located in disciplines more than those in professional fields. While the lecturers located in professional fields at TechU saw no issues with a model that restricted content to overview summaries, those located in disciplines at SandstoneU tended to see content reduction as a far more difficult issue, and something that could undermine the complexity of what they were trying to get across, since disciplines are tied to a bigger field of investigation, rather than a more limited set of content or process concerns.

The different cultures, histories and power of the different institutions and the lecturers located within them also made some difference in how what counts as knowledge was constructed within the case study subjects. At SandstoneU, the lecturers located in the disciplines pushed back against the institutional emphasis on content reduction and developed their own subjects in ways which maintained the content depth and breadth they saw as important, including by incorporating new features and additional materials within their online subjects. In developing subjects for students lacking a background in their field they strengthened rather than downplayed an explicit teaching of disciplinary methods and ways of understanding disciplinary problems. In comparison, the TechU lecturers were predominantly happy to conform to management specifications, and to change their typical approaches to curriculum development in line with what the policy leaders wanted.

These differences highlight the unequal power afforded to lecturers at different levels and in different types of institutions. But they also point to potential signs of a relationship between the strength of a lecturer's disciplinary identity, and their willingness to fight for academic autonomy and push back against institutional agendas. All the lecturers at SandstoneU had more power to incorporate or reject management agendas in line with their own sense of what was important, as well as far stronger disciplinary or professional identities than the lecturers I spoke with at TechU. The SandstoneU lecturers were mostly professors, and all had longstanding associations within a bounded field and interests in maintaining its particular way of working and knowing, while the TechU lecturers were more junior, with half yet to complete a PhD and others with weaker disciplinary identities developing subjects outside their primary area of research or whose careers had been built on entrepreneurialism rather than traditional markers of academic success. The relationship between curriculum

development practices and the strength of a lecturers' identity with their knowledge field is underexplored in this research, but is potentially important in understanding shifts in how and by whom 'what counts as knowledge' is being defined within universities, and the differences evident between institutional contexts and who is allotted responsibility for teaching in relation to this. These issues are particularly important as all universities shift more and more to casualised sessional appointments in relation to teaching, where academic identities are more tenuously developed and defined.

I set out to consider what counts as knowledge, and in the literature there tends of be an over-binary discussion about this in debates about mode 2 knowledge, with disciplines understood as either supported or not supported within universities today, and as remaining important or being usurped by new ways of thinking and structuring knowledge. Yet as demonstrated in this research the reality is not so either/or. Many of those lecturing in universities are not uncritically implementing institutional agendas, and they remain oriented to their field's particular way of knowing. Different lecturers are however more or less likely to resist institutional agendas, depending on the strength of their disciplinary or professional identities, their seniority and employment security, and their institutional location. Inherent differences are evident between disciplinary and professional forms of knowledge, with those located within the former more oriented to a bigger and ongoing field of inquiry. However, these distinctions are also being undermined within a policy context that is oriented to sameness and singular ways of framing 'best practice' and 'good teaching', and in which teaching is becoming more and more the responsibility of marginalised sessionals.

Constructivist teaching in the university context

In recent times the question of what counts as knowledge within universities and university teaching has also been entangled within debates about constructivism. As I discussed in Chapter 2, constructivism is a term which encapsulates a collection of diverse theories, each of which has different orientations and concerns. These theories raise questions both about how knowledge is built today and whether it is possible to work directly from the problem rather than pre-defined underpinnings, and about the relative emphasis to be placed on what the learner does compared with what the teacher does. However common across these different theories is an emphasis on ensuring

teachers account for and engage with students' own pre-conceptions and understandings, in ways which suggest there is a need for some openness in terms of how curriculum is preformulated and how lecturers engage with students (Sjøberg, 2010; Davis & Sumara, 2010). In this thesis I have demonstrated both the limited ways in which constructivist teaching is being framed within university policies designed to encourage its uptake, and the ways in which some of the broad tenets of constructivist teaching are challenged within an online context where relations between lecturers and students are inhibited.

As illustrated in Chapter 4, at both the universities examined in this research, there was an emphasis on student activity and interaction as a central concern and criteria of 'good teaching' and a belief that reducing content loads is necessary for teaching large and diverse student populations. This sense of best practice was explicitly identified as 'constructivist' at TechU, and while the term was not used at SandstoneU in the same way, a similar emphasis on the process of knowledge development was likewise evident.

This emphasis on students' process of knowledge development was underpinned by a generalised sense of what engages students (doing things, interacting with each other) and the promotion of a mainstreamed, common approach to teaching regardless of the purpose of the educational situation or the content being taught. The interpretation of what a constructivist approach entailed tended to be empty of meaning beyond signalling student-focused and activity-based. There was little acknowledgement of the different potential of different kinds of activities compared with others and an emphasis on 'busyness' rather than substantive value.

In views at the institutional policy level, there was also little acknowledgement of how diverse student histories and understandings might be engaged with and little apparent concern with how such aims might be undermined within online initiatives that inhibit relations between lecturers and students. The intention was to combine outcomes with constructivist or active pedagogies, with little consideration of the ways the two orientations might conflict within a teaching context offering little lecturer-student interaction. While the policy leaders I spoke with were clearly influenced by key arguments in the literature on learning and teaching in higher education about what good teaching looks like, their understandings of what that requires were limited and

they tended to not focus on the kinds of conditions necessary for the forms of teaching and learning they wanted to occur.

In comparison, the thesis has also shown that while many of the lecturers held views broadly associated with Sjøberg's (2010) characterisation of constructivist teaching, these aims were challenged by the conditions in which they were required to work. In talking about their subject purposes, many of the lecturers expressed desires to engage with students' own interpretations and thinking about the concepts they were trying to teach, rather than require them to passively absorb predefined content. However, in their practices of curriculum construction for the new platforms, the lecturers became more concerned with refining and reworking their predefined content material, with rigid assessment expectations and parameters, and in many cases with over prescribing and directing student activities. The lecturers' emphasis on risk reduction and control here restricted the ways in which students were invited to engage within their subjects, tying them to rigid predefined requirements, rather than encouraging them to take their learning in new directions.

In the vast majority of cases, with limited opportunities for interacting with students, the lecturers were not able to develop their curriculum content in ways which referenced where students were coming from, and they were not able to teach that content in a way which allowed them to engage with students' own understandings and concepts in a meaningful way. This is the case both for those initiatives which employed casual teaching assistants to facilitate student interactions, and those which relied predominantly on students 'teaching' each other within open forums. In contrast to the policy rhetoric about online forms encouraging more constructivist and interactive pedagogies, the lecturers tended to see the move online as encouraging and necessitating a greater degree of explicitness and standardisation. At TechU, where constructivist teaching was identified as an explicit institutional aim, many of the lecturers framed this as secondary to the concurrent attention to alignment and outcomes concerns and tended to restrict activities and assessments to what could be most easily directed.

The research highlights the importance of considering university teaching in relation to the substance of what it produces and orients towards, rather than in terms of a simplistic reading of what constructivist teaching entails. As highlighted in Chapter 5,

the different subjects considered in this research were oriented towards different purposes, and these had the potential to limit what was offered to students within them regardless of the lecturers' concern with content overload or the problems of didactic teaching. Although the lecturers developing the professional MOOCs for example held strong views about the value of constructivist teaching, their concerns with promoting their own research meant their teaching focused (albeit to differing extents) on the take up and use of their own proposals for practice, limiting the ways in which students might engage with the substance of their ideas.

One concern raised in wider debates about constructivism has been about whether such work has focused too strongly on social aspects of learning, and as a result led to a devaluing of the epistemic (e.g. Green, 2010; Nerland et al., 2010). This research has shown that in the context of university teaching such concerns have some merit, with the interest in constructivism at the policy level leading to an emphasis on student interactions, but not on the ways in which they being asked to substantively engage with knowledge or the forms of knowledge which might be enabled or constrained by constructivist pedagogies.

The research findings also point to the ways in which constructivist teaching, as a form of education which engages with students' histories and understandings, is challenged within online environments within the current university context. In contrast to arguments that online learning offers more constructivist forms of teaching and greater potential for students to set the own parameters for their learning (e.g. Davidson & Goldberg, 2010; Brown, 2002), the thesis shows that within the particular initiatives studied, the limited opportunities for lecturers to engage with students on a personal level led to more highly structured and bounded subjects. There was a greater emphasis here on rigid and predefined lecturer set content and expectations, and limited opportunities for students to work with that in ways which were both open and supported. Arguments positioning online learning as aligned with constructivist teaching tend to focus too strongly on whether students are able to speak with and to each other in a general sense, but too little on how well they are able to interact with the lecturers responsible for the subjects and on the substance of what they are actually doing. Within the particular initiatives considered in this research, the space allocated for students to relate to each other tended to be either too rigidly or too openly defined.

The question of what counts as knowledge is not simply about who can speak, but also the parameters around that, the detail of what students are being asked to do, the ways they are able to meaningfully engage and what they actually develop as knowledge. At the institutional level, understandings about what constructivist or process-oriented teaching comprises and the kinds of supports it requires were limited, and this had implications for the ways in which new initiatives were constructed and therefore the possibilities open to lecturers in constructing curriculum within them.

The context in which universities are attempting to manage teaching is a difficult one. There are external pressures to improve student outcomes and employability and make teaching more 'relevant' to professional contexts; significantly more students are attending university, including students with different backgrounds and different needs; and funding for teaching is consistently being reduced, forcing universities to look at new ways to teach large numbers of students effectively. The impetus for engaging with new online initiatives and the interest in constructivist forms of teaching has emerged within this context. Both as a result are never simply about 'better' teaching, as the policy leaders wanted to claim, but are underpinned by economic considerations and a desire to do more with less. The interest in constructivist and process-oriented teaching is about effective teaching in a massified and diversified context and what students are seen to want in teaching, rather than student voice and personal engagement. These underlying agendas work against constructivist teaching, and its emphasis on strong lecturer-student relations. Of the initiatives looked at in this research, only one (SandstoneU Online) enabled strong lecturer-student relationships and small class teaching, and this initiative was expensive, unattractive to students compared with on-campus options and ultimately disbanded.

This thesis has taken a different approach to looking at the issue of constructivist teaching and online learning, not focusing on what students were doing within an educational situation but on what policy leaders and lecturers were thinking about and focusing on in their curriculum decisions and practices. These considerations tend to be neglected in studies of teaching and learning in higher education, and this thesis highlights their significance in drawing attention to the substance of what students are being asked to engage with and the problems of relying uncritically on superficial notions of what constructivism looks like in practice. This is not to say that students'

engagements and ways of working are not equally important in relation to questions of constructivist teaching and what counts as knowledge, and these elements would be usefully considered in future research alongside the perspectives revealed in this thesis.

Curriculum and knowledge: what is being missed?

In this thesis, I have approached curriculum development as a site of struggle over the question of what counts as knowledge, rather than as a given or a simple technical question. My interest here was less in the politics of knowledge in the sense which has had the most explicit attention in much of the literature and public debate (debates about racism, feminism, post-structuralism and the like). Rather the 'struggle' that is the focus of this thesis is about the work involved in selecting and framing any knowledge as curriculum, and the diverse pressures and assumptions that come to bear on that. I focused in the thesis on both 'what' is emphasised within the curriculum content and assessment requirements, and 'how' that is intended to be approached, understanding what counts as knowledge as defined by both the what and the how and the ways these interrelate with each other. I explored these concepts in relation to the lecturers' purposes, content selections and their engagements with the new platforms, and in the policy leaders' framings of curriculum content and good pedagogy, highlighting the different concepts of knowledge at work within the lecturers' and policy leaders' discussions of these different elements.

My findings point to the complex and contradictory ways in which what counts as knowledge is embedded within curriculum programs. Curriculum making is genuinely difficult work, and the people I spoke to are working in difficult times, where much of their own sense of what matters and is important rubs up against what is valued at the institutional level and within the wider public discourse. The lecturers I spoke with were not simplistically oriented towards singular aims, but were attempting to work with numerous complex values and the different emphases they raise. These multiple orientations are inevitable within curriculum since the ways we think about what matters in education and knowledge necessarily take up a range of different concerns, including issues related to cognition, to identity formation and to ethics and social values.

However, as illustrated in this thesis, there is a lack of recognition of this complexity and of the competing agendas underpinning curriculum development within the

institutional oversight of new online reforms. Within these reforms, lecturers are asked to work with new platforms and new contexts, but there is little acknowledgement of either the work this involves or the potential for conflict between different agendas at the policy level.

Yet, as this thesis shows, the particular pedagogies inscribed within the online initiatives and the ways these were taken up by the lecturers were not neutral in terms of the knowledge conveyed, but gave rise to different possibilities. In taking up the affordances of the new platforms, the lecturers became concerned with issues which worked against their broader aims, and their practices of curriculum development for the new platforms here affected their attempts to get across to students the complex nature of their fields and the sense of openness about what was possible in relation to that. These findings highlight the ways in which the pedagogical form of a subject can change the substance of what is communicated within it, from something which engages with complexity and ambiguity to something which is depicted as stable and defined. This argument aligns with the work of Bernstein (1976) and Biesta (2010), but while their (different) research has tended to focus on the broad sense of what is being emphasised – on what 'code' or wider discourse a curriculum program might align with for example – this study draws attention to the importance of attending to the *different* framings of knowledge evident within the thinking and work of an individual lecturer and the ways these potentially work against each other.

Additionally, while this study illustrates the importance and complexity of the relations between curriculum and pedagogy and the ways in which pedagogical form itself contributes to the question of what counts as knowledge, it also shows that these issues are being too little recognised within much of the policy formulation at the institutional level. Within the institutional policies, a particular sense of what constitutes best practices in relation to pedagogy and curriculum development was strongly evident, but there was little engagement with how the two intersect or might be productively put together. There was also an implicit assumption that lecturers can do what they want in respect of the knowledge to be conveyed regardless of other directions relating to curriculum design and pedagogy, when the reality is evidently more constrained. Outside the university, acknowledgement of the complex relationship between what is taught and how that is approached is becoming less and less recognised, with many

calling for approaches that 'unbundle' curriculum and teaching as part of cost saving exercises and in response to 'poor' academic teaching.

Curriculum captures what matters as a particular point in time, and in this research I consider particular instances of curriculum development at a moment when MOOCs were the flavour of the day. However, in its temporal frame, the boundaries of curriculum extend beyond the moment of teaching. What counts as knowledge is always historically located and in this research it was evident that what matters to institutions and their leaders and to lecturers (as well as their students) derives not just from the present, but also from the contexts of their own histories, trajectories and identities. At the same time, however, curriculum is also designed to look forward. It is not simply about the present, but also builds towards new futures and sets up different kinds of possibilities in relation to that. Within universities, curriculum is part of the ways in which disciplinary boundaries are constructed, but it is also a site of potential change that enables the building of new knowledge and the development of new trajectories towards an unknown future.

Yet despite this, within the design of the new initiatives and the form of the curriculum developed for that, there is little sense of curriculum as a site of knowledge making. What counts as knowledge is understood as predominantly preset, with the emphasis on students working within rather than contributing to that. Some have argued that curriculum in universities today has a stronger orientation to the future, than to the wisdom of the past or present (Yates, 2012). However, at least in these online initiatives, this future orientation tends to be about broad rhetoric and is less evident in relation to issues of knowledge and substance, or what particular generalisations about future needs might require of education to build towards that. Within universities, while there is concern with students' future employability, there is far less attention to what they might contribute to the fields in which they study, and the ways in which different curriculum constructions and programs might change that. As Bernstein (1976) shows, learning within a context which de-emphasises disciplinary norms provides a different kind of sense of what matters than learning within a form which reinforces that, and therefore different possibilities for what students might take from that and the ways they might build and develop beyond it. Shifts away from specific disciplinary concerns to generic agendas are therefore important not only in relation to what students take away

from current studies at the present time, but also in terms of what they might contribute to knowledge in future, and these issues are being little recognised or considered within the current university context. Universities are traditionally institutions of knowledge making in terms of both research and teaching, but the separation of curriculum development and teaching responsibilities shifts university education away from that and towards mere training.

What counts as knowledge in new forms of online learning

The question of what counts as knowledge in the higher education context is a difficult and complex one that encompasses a range of different facets. This thesis has considered this question and some of the varied debates that intersect with it in terms of what is being emphasised and enacted in relation to knowledge by selected policy leaders and lecturers. Unusually within the field of higher education research, I have explored new directions in teaching with a particular focus on curriculum development and institutional policies and the assumptions regarding knowledge which underpin those. In focusing on these particular elements, this thesis has offered only a partial answer to the question of 'what counts as knowledge in new forms of online learning?', but one which is significant and distinct from much of the current debate.

The thesis has illustrated that knowledge for the policy leaders directing the new online reforms is predominantly about process and student interactions, and also predefined educational outcomes, but that there is little consideration of how these different emphases might productively be put together – or conversely how such emphases may set up aims that are in practice in tension with each other for those developing the curriculum. For the lecturers, on the other hand, it has shown that their sense of what knowledge should be included within their curriculum is informed by both the wider purposes of their different research fields and their understandings of what will engage students and best assist their learning, and that these concerns are emphasised and put together differently by those located in different fields and at different institutional locations. It has demonstrated that the lecturers' engagements with the new online platforms undermined some of their initial wider purposes about interaction with students and to convey the dynamic nature of their field, and instead brought different knowledge-related concerns into play, associated with issues of clarity and control rather than openness and possibility.

At a conceptual level, the thesis has drawn particularly on work within the field of curriculum inquiry, a field which has predominantly focused on schooling rather than higher education. Drawing on conceptual resources from this field, it has highlighted the continuing importance of understanding current developments in university teaching in terms of their effects on different forms and fields of knowledge and the importance of both attending to questions of substance and understanding curriculum and its relation to knowledge as a struggle rather than a given. It has shown also that for curriculum both the framing aims and the practical constraints in which these are enacted matter. And it has underscored the importance of attending to curriculum as a focus of scholarly debate.

The research has been informed by a number of typologies, particularly in terms of work distinguishing between different types of fields and the thesis highlights the value of these for understanding the different ways disciplines and professions are being constrained within the current context. However, in looking at the detail of what particular people are doing in universities and the kinds of knowledge related concerns they are struggling with, I have also shown the messiness in how different concepts of knowledge are being put together and the ways these are not captured in neat binary ways of thinking. The thesis attends to both the continuing salience of the knowledge fields and the differences between them, and the complexities in how the concerns of those fields interact with and are potentially changed by other agendas.

Finally, at a more practical level, the thesis has also highlighted three particular problems with current directions in university teaching. First, it has shown the ways in which differences between disciplines and professions are being overlooked and undermined within new initiatives and in the thinking of university policy leaders. Secondly, the thesis has highlighted the limited acknowledgement in current strategies of the conditions required to enable constructivist teaching online and their inattention to issues of substance. Thirdly, the thesis has pointed to the problems of not only 'unbundling' curriculum development and teaching, but also in neglecting the complex relations between curriculum and pedagogical form in building what counts as knowledge.

These issues highlight the difficult nature of the current context in which universities and their decision makers are situated. However, as demonstrated within the thesis, they

also point to the limited ways in which university leaders are understanding that context, the breadth of issues they are neglecting in relation to that and the problematic ways reforms are being constructed as a result. Teaching reforms are necessarily about what is financially viable, but they also need to be considered in relation to broader issues concerning the knowledge/s being promoted and built, and the open question of what is desirable in relation to that.

Questions about knowledge and curriculum are of ongoing concern and are not easily resolved. Yet, as shown in this thesis, within universities today such questions are frequently taken for granted or ignored. The thesis has explored the effects of these policy blindspots on lecturers' practices of curriculum making and on the forms of education made possible as a result. It has shown the complex work required to develop curriculum, including in relation to the intersections between different agendas and the significance of the knowledge field. Through these contributions, the thesis has opened up some new ways for researchers and institutional leaders to engage with questions of knowledge and curriculum within higher education. Such questions require urgent attention if the university is to maintain its place as a core institution of knowledge making in the 21st century.

Appendices

1. Institutions, online initiatives and subjects

Institution	Online initiative	Subjects	Subject category
SandstoneU	SandstoneU MOOC	Behavioural Ecology	Discipline (science)
		Interdisciplinary Logic	Discipline (interdisciplinary)
		Teacher Education (Assessment)	Professional field (education)
	SandstoneU Online	Classical Studies	Discipline (arts/humanities)
TechU	TechU MOOC	Online Learning Design	Professional field (education)
	TechU Online	Teacher Education (Literacy)	Professional field (education)
		Sports Management	Professional field (business studies)
		Supply Chain Management	Professional field (business studies)

2. Participant and subject details

Pseudonym	Institution	Subject	Position	Discipline / Field
Olivia	SandstoneU	N/A – Policy leader	Deputy Vice Chancellor (Senior Academic)	Psychology
Kevin	SandstoneU	N/A – Policy leader	Director (Senior Academic)	Educational Technology
Ethan	SandstoneU	Behavioural Ecology	Senior Academic	Evolutionary Biology
Matt	SandstoneU	Behavioural Ecology	Senior Academic	Behavioural Ecology
Rod	SandstoneU	Interdisciplinary Logic	Senior Academic	Philosophy
Debra	SandstoneU	Interdisciplinary Logic	Mid-Career Academic	Applied Mathematics
Glenn	SandstoneU	Teacher Education (Assessment)	Senior Academic	Education/ Assessment
Miranda	SandstoneU	Teacher Education (Assessment)	PhD student, former technology developer	Education/ Assessment
Laurie	SandstoneU	Classical Studies	Senior	Classical

			Academic	Studies/Ancient World Studies
Sarah	TechU	Online Learning Design	Pro Vice-Chancellor (Senior Academic)	Online Learning Design
Lydia	TechU Online	N/A – Policy leader	Dean (Senior Academic)	Educational Technology
Grant	TechU	Sports Management	Mid-Career Academic	Public Relations
Tara	TechU	Teacher Education (Literacy)	Junior Academic	Education
Leah	TechU	Supply Chain Management	Junior Academic	Supply Chain Management
Rachel	TechU Online	N/A – Policy leader	Learning Design Manager	N/A
Zac	TechU Online	Marketing and Logistics	Online Learning Designer	N/A
Anita	TechU Online	Teacher Education (Literacy)	Online Learning Designer	N/A

3. List of interviews and documentary sources reviewed

SandstoneU

Institutional Policies

Policy Interviews

Participant	Position	Interview Number	Date of Interview	Duration of Interview
Olivia	Deputy Vice Chancellor	Interview 1	5/8/2013	41 minutes
Kevin	Director	Interview 1	21/8/2013	55 minutes

Policy documents

- University plan (dated May 2011)
- University eLearning strategy (dated August 2012)
- University plan green paper (dated March 2014)
- University website pages, including media releases (dated 19/09/12 and 11/11/12).
- MOOC Partner website pages, including overview and course list.

- Online Learning Partner website pages including overview, course list and FAQs.

Online Initiatives

SandstoneU MOOCs

Behavioural Ecology

Interviews

Participant	Position	Interview Number	Date of Interview	Duration of Interview
Matt	Senior Academic	Interview 1	14/6/2013	49 minutes
		Interview 2	30/07/2013	59 minutes
		Interview 3	5/09/2013	45 minutes
		Interview 4	29/10/2013	39 minutes
Ethan	Senior Academic	Interview 1	1/08/2013	43 minutes
		Interview 2	5/08/2013	37 minutes
		Interview 3	2/09/2013	46 minutes
		Interview 4	5/11/2013	47 minutes

Documents

- MOOC Courseware
    - Course introduction, overview and announcements
    - Study guides
    - Pre-recorded short videos
    - Recorded live question and answer sessions
    - Discussion Board threads
    - Assessment details and criteria
- On-campus subject materials
    - Handbook subject description
    - Subject overview and announcements
    - Recorded lectures
    - Assessment details and criteria

Interdisciplinary Logic

Interviews

Participant	Position	Interview Number	Date of Interview	Duration of Interview
Rod	Senior Academic	Interview 1	4/06/2013	56 minutes
		Interview 2	2/07/2013	38 minutes

		Interview 3	3/09/2013	33 minutes
		Interview 4	12/12/2013	36 minutes
Debra	Senior Academic	Interview 1	4/07/2012	48 minutes
		Interview 2	26/08/2013	66 minutes
		Interview 3	10/12/2013	62 minutes
		Interview 4	19/06/2014	57 minutes

Documents

- MOOC Courseware
    - Course introduction, overview and announcements
    - Study guides
    - Pre-recorded short videos
    - Recorded live question and answer sessions
    - Discussion Board threads
    - Assessment details and criteria
- On-campus subject materials
    - Handbook subject description
    - Subject overview and announcements
    - Recorded lectures
    - Assessment details and criteria

Classical Studies

Interviews

Participant	**Position**	**Interview Number**	**Date of Interview**	**Duration of Interview**
Laurie	Senior Academic	Interview 1	19/11/2013	51 minutes
		Interview 2	17/02/2014	55 minutes
		Interview 3	12/05/2014	20 minutes
		Interview 4	6/08/2014	45 minutes

Documents

- Online subject materials
    - Handbook subject description
    - Subject overview
    - Further course materials were not provided but the platform structure and materials from the course were presented to me during interviews
- On-campus subject materials
    - Handbook subject description
    - Subject overview

Teacher Education (Assessment)

Interviews

Participant	Position	Interview Number	Date of Interview	Duration of Interview
Glenn	Senior Academic	Interview 1	15/08/2013	28 minutes
		Interview 2	15/01/2014	36 minutes
		Interview 3	5/06/2014	19 minutes
		Interview 4	11/08/2014	30 minutes
Miranda	PhD student and former technology developer	Interview 1	4/09/2013	35 minutes
		Interview 2	20/11/2013	41 minutes
		Interview 3	2/03/2014	43 minutes
		Interview 4	19/05/2014	30 minutes
		Interview 5	27/08/2014	45 minutes

Documents

- MOOC Courseware
    - Course introduction, overview and announcements
    - Study guides
    - Pre-recorded short videos
    - Discussion Board threads
    - Assessment details and criteria
- MOOC promotional materials (brochure and letter to stakeholders)
- Prior online learning modules
- Research project website pages

TechU

Institutional Policies

Policy Interviews

Participant	Position	Interview Number	Date of Interview	Duration of Interview
Sarah	Pro Vice-Chancellor	Interview 1	24/10/2013*	50 minutes
Lydia	Dean	Interview 1	20/8/2013	52 minutes
Rachel	Manager	Interview 1	9/8/2013	58 minutes

Policy documents

- University plan (dated February 2013)
- University website pages, including media releases (dated 23/08/11, 16/11/11 and 05/08/13).

- Online Learning Partner website pages, including overview, description of the pedagogical approach, benefits to employers and employees, pathways and FAQs.
- MOOC Partner website pages, including overview, instructor and student guides and FAQs.

Online Initiatives

TechU Online

Teacher Education (Literacy)

Interviews

Participant	Position	Interview Number	Date of Interview	Duration of Interview
Tara	Early Career Academic	Interview 1	23/12/2013	52 minutes
		Interview 2	28/02/2014	41 minutes
Anita	Online Learning Designer	Interview 1	23/12/2013	37 minutes
		Interview 2	11/02/2014	40 minutes

Documents

- Handbook course and subject description
- Further course materials were not provided but the platform structure and materials from the course were presented to me during interviews

Sports Management

Interviews

Participant	Position	Interview Number	Date of Interview	Duration of Interview
Grant	Mid-Career Academic	Interview 1	29/07/2013	46 minutes
		Interview 2	29/08/2013	41 minutes
		Interview 3	31/10/2013	33 minutes
Zac	Online Learning Designer	Interview 1	29/07/2013	34 minutes
		Interview 2	29/08/2013	54 minutes
		Interview 3	24/10/2013	55 minutes

Documents

- Handbook course and subject description
- Further course materials were not provided but the platform structure and materials from the course were presented to me during interviews

Supply Chain Management

Interviews

Participant	Position	Interview Number	Date of Interview	Duration of Interview
Leah	Early Career Academic	Interview 1	25/11/2013	51 minutes
		Interview 2	18/03/2014	40 minutes
Zac	Online Learning Designer	Interview 4	25/11/2013	15 minutes
		Interview 5	27/02/2014	43 minutes

Documents

- Handbook course and subject description
- Further course materials were not provided but the platform structure and materials from the course were presented to me during interviews

TechU MOOC

Online Learning Design

Interviews

Participant	Position	Interview Number	Date of Interview	Duration of Interview
Sarah	Senior Academic	Interview 1	24/10/2013*	50 minutes
		Interview 2	16/12/2013	44 minutes
		Interview 3	5/03/2014	31 minutes
		Interview 4	13/05/2014	39 minutes

Documents

- MOOC Courseware
    - Course introduction, overview and announcements
    - Instructions for online activities
    - Pre-recorded short videos
    - Recorded live question and answer sessions
    - Discussion Board threads
- Related website pages
    - Recording of promotional interview (dated 4/3/2014)
    - Advertisement of the MOOC on university webpages (dated 17/2/2014)
    - Personal blog posts (dated 18/3/2014 and 5/3/2014)

*This is the same interview as I interviewed Sarah in relation to both her learning and teaching responsibilities and the development of her MOOC.

4. Plain Language Statement provided to policy leaders

PhD Research Project

New forms of online learning and the production of knowledge in changing times

PhD researcher: Kate O'Connor

Project Supervisors: Professor Lyn Yates and Professor Fazal Rizvi

The Project

In the 21st century universities are confronting major questions about forms of knowledge and the aims and purposes of curriculum and formal education in the context of rapid technological and social change. This project considers what is changing and not changing about how knowledge is being put together in this context. In particular, it will explore how the issue of knowledge is being taken up in new and innovative approaches to curriculum through case studies of six new courses that are being developed or redeveloped to embrace the possibilities of online learning in different ways. Each case will involve interviews with key staff as well as analysis of course materials and other relevant documents. The project will provide new insights about the emerging possibilities for the delivery of curriculum and the development of knowledge in changing times that will be of relevance to institutional interests as well as broader international research and thinking. The project has received ethics approval from the Human Research Ethics Committee of the University of Melbourne and is being undertaken as a PhD project by Kate O'Connor under the supervision of Professors Lyn Yates and Fazal Rizvi.

What we are asking of you and your institution

Universities are tackling the issue of online learning in different ways and we are interested in the distinctive approach being taken at your institution in response to the new opportunities. We would like your permission to study the development of 1–3 course(s) at your institution which take up this approach as case studies for the research. For each case, we would be seeking to involve academic staff who are developing these courses and asking them to participate in multiple interviews regarding their curricular approach and thinking about knowledge across the period of course development. To get a sense of the context the curricular changes are occurring in, we would also like to

interview you about the background of the direction being taken at your institution. The interviews will be semi-structured and open-ended, and the project is designed to investigate broad developments in train rather than particular individual positioning. Your interview is likely to take approximately 60 minutes and will be audio-taped and transcribed with your permission. We can also send you a copy of the research findings from the project on request.

Data confidentiality and retention

During the project we will protect your anonymity and the confidentiality of your responses to the fullest possible extent within the limits of the law. We will keep the raw research materials in a secure and confidential form and remove identifying elements in referring to the interview materials; however, you should note that with qualitative research of this kind using small numbers of interviewees, it is possible that someone may still be able to identify you. You are free to withdraw your participation in the project at any time, and to withdraw your consent for use of your interview material. Data collected during the research process will be stored, according to the University of Melbourne regulations, in a private and secure location at the Melbourne Graduate School of Education for a period of five years and will then be destroyed.

Further information

Please contact any of the following for further information on the project:

Ms Kate O'Connor (PhD researcher), koconnor@unimelb.edu.au, 8344 8668

Professor Lyn Yates (Project Supervisor), l.yates@unimelb.edu.au, 9035 8166

Professor Fazal Rizvi (Project Supervisor), frizvi@unimelb.edu.au, 9035 8095

If you have any concern about the conduct of this research project you can also contact the Executive Officer, Human Research Ethics, The University of Melbourne, ph 8344 2073, fax 9347 6739.

5. Plain Language Statement provided to lecturers

PhD Research Project

New forms of online learning and the production of knowledge in changing times

PhD researcher: Kate O'Connor

Project Supervisors: Professor Lyn Yates and Professor Fazal Rizvi

The Project

In the 21st century universities are confronting major questions about forms of knowledge and the aims and purposes of curriculum and formal education in the context of rapid technological and social change. This project considers what is changing and not changing about how knowledge is being put together in this context. In particular, it will explore how the issue of knowledge is being taken up in new and innovative approaches to curriculum through case studies of six new courses that are being developed or redeveloped to embrace the possibilities of online learning in different ways. Each case will involve interviews with key staff as well as analysis of course materials and other relevant documents. The project will provide new insights about the emerging possibilities for the delivery of curriculum and the development of knowledge in changing times that will be of relevance to institutional interests as well as broader international research and thinking. The project has received ethics approval from the Human Research Ethics Committee of the University of Melbourne and is being undertaken as a PhD project by Kate O'Connor under the supervision of Professors Lyn Yates and Fazal Rizvi.

What we are asking of you

We would like to study the development of your course [*name of course*] as one of these case studies. We have approached your institution and been given permission to seek involvement of academic staff in the study. We are interested in how you are selecting and putting together the materials of the course for online study and your thinking and practice in relation to that. If you agree to participate, you will be asked to take part in three interviews about your traditional curricular practices and your experiences and approach to developing the new courses. You will also be asked to provide copies of your course materials as they develop over time, and may be asked to

suggest if there are any meetings where the new course is being discussed where observation might be possible or participate in additional interviews where matters from the first three interviews require particular follow up. The interviews will be semi-structured and open-ended, and the project is designed to investigate broad developments in train rather than particular individual positioning. Each interview is likely to take approximately 60 minutes and will be audio-taped and transcribed with your permission. We can also send you a copy of the research findings from the project on request.

Data confidentiality and retention

During the project we will protect your anonymity and the confidentiality of your responses to the fullest possible extent within the limits of the law. We will keep the raw research materials in a secure and confidential form and remove identifying elements in referring to the interview materials; however, you should note that with qualitative research of this kind using small numbers of interviewees, it is possible that someone may still be able to identify you. You are free to withdraw your participation in the project at any time, and to withdraw your consent for use of your interview material. Data collected during the research process will be stored, according to the University of Melbourne regulations, in a private and secure location at the Melbourne Graduate School of Education for a period of five years and will then be destroyed.

Further information

Please contact any of the researchers for further information on the project:

Kate O'Connor (PhD researcher), koconnor@unimelb.edu.au, 8344 8668

Professor Lyn Yates (Project Supervisor), l.yates@unimelb.edu.au, 9035 8166

Professor Fazal Rizvi (Project Supervisor), frizvi@unimelb.edu.au, 9035 8095

If you have any concern about the conduct of this research project you can also contact the Executive Officer, Human Research Ethics, The University of Melbourne, ph 8344 2073, fax 9347 6739.

6. Interview schedule

Interviews with policy leaders

Policy leaders were asked about the intention behind different policies and the engagement with new initiatives, the story of how these developed and the main priorities, as well as the leader's broader perspectives on curriculum and change. Indicative questions include:

The intention behind the policy, the story of its development and its main priorities

- Can you tell me about the new online learning initiative taking place at your university?
- When did the thinking behind this policy first emerge and what do you think prompted it?
- What can you tell me about the decision to embark on this approach? [e.g. Why was this route chosen? Were any other options canvassed? What influenced the decision making?]
- Can you tell me about how courses are being (re)developed under the policy and the process that involves?
- Is the process for these courses any different to the development of traditional courses? In what ways?
- Are you able to describe any examples of courses that have been/are going through this process?

Their perspectives on curriculum and change more broadly

- What can you tell me about your role in relation to the university curriculum more broadly?
- What do you think the role of university management is in relation to the curriculum?
- How do you see the new policy direction as fitting in with the university's overall curricular approach?
- What else is changing about how curriculum is managed at your university and how do you feel about those changes?

- What aspects of the curriculum do you think should be changed, and what do you think needs to remain the same?
- Where do you personally think the direction of higher education curriculum is heading [including in relation to online learning]? What makes you think that?

Interviews with the lecturers

The interviews with the lecturers included:

- a preliminary interview discussing their experience redeveloping a particular subject (how they came to select that particular subject, their experiences of its redevelopment and the kinds of decisions they are making and what is different about that to their past curricular experiences, their selection of materials, how they see their role in the new subjects, what they are hoping to achieve and what they hope students will take away);
- a second interview discussing their disciplinary orientation and traditional curricular practices (the kinds of teaching and research they do, their experiences developing curriculum, and changes to their curriculum practice over time); and
- additional interview(s) covering:
    - their subject materials for the particular subject (their decisions to include certain aspects of the course, change the order of how the material is presented, or approach assessment differently conducted with reference to the materials)
    - differences between their experiences developing traditional subjects and the new subject (possibly conducted in reference to their answers in earlier interviews as detailed in transcripts)
    - the effects of the redevelopment process on disciplinary knowledge (how they see the subject in relation to the broader major, discipline or field, what they see is changing about their discipline and how it is taught and assessed and how they are responding to these changes).

Separate interview schedules were prepared for each interview focused on the particular details of the subject in question. The following questions are indicative of the kinds of questions asked:

Their decision and approach to redeveloping a particular subject (to be asked in the first interview)

- Tell me about the subject you are intending to develop?
- Tell me about how you came to select that particular subject to redevelop? Was this a decision you made quickly or over a long period of time? Were you asked to redevelop it and how did you feel about that?
- What has your experience been in redeveloping the subject so far?
- What is different about developing this subject to your earlier experiences of curriculum development?
- Has anything changed about how you select materials, put them together and determine what needs to be assessed?
- What sort of things have you had to consider that you didn't expect and how have you approached these issues?
- What do you hope students will take away from this subject?
- What do you think your role is in teaching the subject?
- Has your intention for the subject changed at all over the process of developing it? If so, in what ways?
- What are you hoping to achieve by being involved in this space?

Their disciplinary orientation and traditional curricular practices (to be asked in the second interview)

- Tell me a bit about your background, your current role and the kind of research and teaching you are doing now?
- What subjects, years and levels are you teaching, and which of these is taught on-campus or online?
- I'd like to ask about your experiences developing curriculum in your field:
    - Can you tell me about the first time you had a chance to develop your own subject? What was the subject about? How did you decide what you were going to include and how it should go together and what needed to be assessed? What did you think about in making these decisions?

- Can you tell me about a more recent experience developing curriculum for an on-campus subject? Do you approach curriculum development differently now compared to your earlier experiences?
- Have you had any other experiences developing curriculum that are different to those you've just described? Can you tell me a bit about that?
- What do you hope students will take away from your subjects?
- What guides the development, teaching and assessment of subjects in your field?
- Has the way you develop curriculum changed over time, and if so what do you think is driving these changes?

Their subject materials for the particular subject (to be asked in the third or later interview)

- Tell me about your decision to (for example):
  - Include certain aspects of the course and not others?
  - Change the order of certain aspects of the course?
  - Reframe the way certain aspects of the course are approached?
  - Assess different aspects of the course or approach assessment in a new way?

Differences between their experiences developing traditional subjects (topic 1) and the new subject (topic 2 and 3) (to be asked in the third or later interview)

- In your second interview, you spoke about how you approach curriculum for traditional subjects by doing x but in the first/other interviews you spoke about approaching the new subjects differently. Why do you think this is so?

The effects of the new requirements on disciplinary knowledge (to be asked in the third or later interview)

- How do you think about this subject in relation to the broader major/discipline/field? How does your work in this subject integrate with the work of others?
- What do you think is changing about your discipline and how it is taught and assessed? [Do you see online delivery as part of these changes?]

- What do you see as the implications of the changes and how do you think they should be interpreted and responded to?

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