Chapter 4
Disciplinary Knowledge and Constructivism: Key Curriculum Debates

4.1 Introduction

Unbundled online learning is examined in this book in relation to its effects on curriculum and knowledge. This is explored in relation to two particular issues: differences in the formulation of curriculum between disciplines and fields and the extent these are recognized in university strategy, and the push for constructivist pedagogies and its effects on curriculum construction. This chapter outlines relevant theoretical debates about disciplinary knowledge and constructivism that are important for understanding these issues. It particularly considers long-held distinctions between disciplines and professional fields in their epistemic orientations and purposes and shows 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 destabilizing those traditional divisions and orientations. The chapter also examines the rise of constructivist theories of knowledge within education and debates about their effects on disciplinary knowledges and the university curriculum.

4.2 Disciplinary and Professional Forms of Knowledge

There has been a longstanding interest the historical, epistemic, social, and cultural features of academic knowledge fields, and with the differences between them (e.g. Abbott, 2001; Anderson & Valente, 2002; Becher, 1989; Becher & Trowler, 2001; Kagan, 2009; Knorr Cetina, 2006; Wellmon, 2015). This work has established important differences evident between particular forms of knowledge, and the different ways they are being impacted within the current university context, including in relation to curriculum.

Becher's work (1989; Becher & Trowler, 2001) has been particularly influential in these debates. This body of work 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 et al., 2010). It also understands the behavior and practices of academics to be strongly conditioned by these different structures and logics (Trowler, 2013).

As part of this work, Becher popularized 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), showing how each has its own cognitive territory, intellectual values, and cultural domain. It categorizes 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 criticized for its essentialism and for the ways its typologies fall apart when academic knowledge practices are considered in detail (e.g. Nerland et al., 2010; Trowler, 2013). 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).

One element of this debate has been concerned with the role different disciplinary (pure) and professional (applied) knowledge traditions play in curriculum construction. Neumann et al. (2002) have argued that the four broad types of disciplines identified 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 (Lindblom-Ylänne et al., 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). 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 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 criticized 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 acknowledgment 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 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.

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.

Bernstein's (1996) sociology of knowledge makes some related distinctions between forms and fields of knowledge. This work firstly distinguishes 'specialized' and 'systematically principled' forms of knowledge such as academic disciplinary knowledge from 'context-specific', 'everyday', or 'common-sense' knowledge (termed vertical and horizontal discourses). In relation to the former, a distinction is made between forms of knowledge with hierarchical knowledge structures (such as the hard sciences, e.g. physics) and horizontal knowledge structures (such as the social sciences, e.g. sociology). Hierarchical knowledge structures are 'pyramidical in shape and new knowledge is integrated into propositions that are as inclusive or general and as few in number as possible' (Muller, 2000, p. 84). Horizontal knowledge structures 'take the form of an expanding series of non-translatable *specialized languages* with non-comparable principles of description', some of which are (such as sociology) 'are learnt by acquiring a "gaze", a particular mode or style of recognizing and realizing what counts as reality' (ibid.).

A second important distinction is made between disciplines and professional fields, which Bernstein calls 'singulars' and 'regions'. Within this framework, disciplinary singulars (including both those with hierarchical and horizontal knowledge structures) are classified as 'oriented to their own development, protected by strong boundaries and hierarchies', and are seen to generate strong inner commitments toward knowing, centered in the perceived intrinsic value of the field (Bernstein, 1996, p. 52). Professional regions, in contrast, face outward toward various fields of practice, and draw together a number of singulars within an integrating framework.

Explaining these distinctions, Muller (2009) draws 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. Both singulars and regions are also distinguished from 'generic modes' which Bernstein (1996) defined as constructed with no connection to disciplinary sources or the cultural practices of specific professions.

Drawing on Bernstein, 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 and fields 'impose constraints on appropriate curriculum form'. In this work Muller shows how different knowledge structures in the curriculum produce different principles of curriculum coherence in terms of sequencing, pacing, and the like, particularly in hard scientific disciplines where knowledge develops vertically and sequence is of particular importance. He argues that disciplinary curricula orient toward a form of conceptual coherence which is internal to the discipline, while the curricula of professional fields orient toward '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 categorized 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 toward agendas outside the discipline (vocational agendas, skills, attributes, and the like, for example) as problematic for disciplinary knowledge traditions.

These different theories point to important distinctions in how academic knowledge develops in universities and the potential effects of new reforms and priorities on different forms and fields of knowledge.

4.3 Disciplines and New Forms of Knowledge: The 'Mode 2' Debate

Alongside these debates, there has been increasing concern with the changing form of academic knowledge, and the potential for disciplinary knowledge to be undermined and superseded by new agendas. There have been concerns that academic knowledge is becoming commercialized and commodified (Barnett & Peters, 2018; Naidoo, 2005; Peters, 2007; Slaughter & Cantwell, 2018; Slaughter & Rhoades, 2004), that universities are losing their distinctive purposes in relation to knowledge production and dissemination (Barnett, 2000; Barnett & Peters, 2018; 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 et al., 2010; Gumport, 2002; Innerarity, 2013; King et al., 2013; Knorr Cetina, 2006;

Maassen et al., 2018; Peters, 2007; Wright, 2016), as well as in the changes potentially produced by new digital technologies (Peters, 2007; Peters et al., 2012). 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 debates 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. (Rivzi 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 et al., 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 criticized 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 or disciplinary forms of authority and knowledge production, they are occurring alongside and within them (see Yates et al., 2017). The original text is over 25 years old however, the concerns it raises 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 about the current emphasis placed on disciplinary traditions and the value of dichotomies in understanding wider shifts.

In a related argument, Bernstein (1996) has suggested that knowledge within universities is becoming increasingly 'regionalized' away from the concerns of the disciplines 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 in more significant ways than professional fields. 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 traditionally been more important. These concerns 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 marketization (Ek et al., 2013) on disciplines compared with professional fields.

In relation to the curriculum, these debates have led to contestation about what is emphasized, including the extent to which curriculum should derive from disciplines compared with interdisciplinary traditions; the value of 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 the implications of reframing curriculum in terms of outcomes and skills agendas (e.g. Ensor, 2004; Karseth, 2006, 2008; Maassen et al., 2018; Millar, 2016; Muller & Young, 2014; Naidoo, 2005; Stavrou, 2009; Yates et al., 2017; Young & Muller, 2015). Barnett (2000) 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 the early 2000s, Ensor (2004, 2006), and Karseth (2006, 2008) analyzed changing curricular discourses in South Africa and Europe respectively, documenting shifts from a traditional 'inward-facing' disciplinary discourse centered around sequential learning paths, cognitive coherence and the apprenticeship of students within disciplinary traditions, toward a new 'outward-facing' credit exchange/modularization discourse which advocates greater flexibility, relevance to the workplace, interdisciplinarity and portability. Ensor (2006) and Karseth (2006) also identified a separate vocational discourse, which they suggested is driven by social legitimation and the need for trained employees. This vocational discourse was seen to orient outwardly toward practice in line with the credit exchange/modularization discourse but with a focus on particular rather than generalized requirements (Karseth, 2006).

Karseth and Ensor argue that the credit exchange/modularization discourse both aligns with and advocates for the 'mode 2' approaches to knowledge discussed above (Gibbons et al., 1994) and orients toward the requirements of a globalized, labor 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 reorganization of how that was packaged.

In related work, Stavrou (2009) has also analyzed the 'regionalization' of curricular knowledge within French universities in response to the Bologna process, drawing on Bernstein (1996). She argues that within regionalized curricula where subjects and courses are formulated around integrating ideas that bring together multiple disciplines such as urban studies, disciplinary knowledge is decontextualized 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 are being increasingly designed within a generic mode in response to the discursive and material forces of marketization, with knowledge and pedagogy becoming fragmented and amorphous as a result.

Collectively, this work raises concerns with the emphasis on skills and instrumental concerns dominating higher education, and the ways this potentially undermines disciplinary knowledge structures.

4.4 Constructivism and the Knowledge Question

A second important debate concerning the changing context of disciplinary and academic knowledge relates to the rise of constructivist theories of knowledge and learning and worries that shifts in this direction have decentered epistemic concerns.

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. However, 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).

This summary highlights the common emphasis of constructivist theories on the importance of ensuring teaching engages with students' own pre-conceptions and understandings.

In response to the popularity of constructivist theories, 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 recognized in individualist theories, such work has also tended to focus too strongly on the social elements of learning, decentering attention to the epistemic and downplaying the role

of formalized knowledge (see for example Becher & Parry, 2005; Lahn & Jensen, 2006; Nerland et al., 2010).

As part of these debates, a body of scholarship has emerged within the sociology of education concerned with 'social realism' and 'bringing knowledge back in' (e.g. Barrett et al., 2018; Moore, 2007; Muller, 2000; Wheelahan & Moodie, 2021; Young, 2008; Young & Muller, 2015), which puts forward a critique of constructivism as relativist and aims to move attention away from identities and standpoints toward the value of disciplinary knowledge. Drawing particularly on Bernstein and his distinctions between everyday and specialized knowledges discussed above, this work argues that the processes and organization 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 toward concrete problems and generic processes (e.g. Moore, 2007; Morgan et al., 2018; Muller, 2000; Young, 2008; Young & Muller, 2013). The 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.

However, it has also attracted significant and powerful critique. This has drawn attention to its focus on cognitive purposes and limited regard for ethical concerns about what and whose knowledge matters (Zipin et al., 2015), and its tendency to background the complex histories and politics of curriculum selections and the ways curriculum and knowledge is made within educational institutions (Morgan & Lambert, 2018). As Rudolph et al. (2018, p. 27) acknowledge, disciplinarity has a 'shine' in the ways it offers up new perspectives and frameworks, but also a 'shadow' in that it is biased and can work to uphold particular ways of understanding the world that are exclusory and perpetuate inequalities, and these issues are not acknowledged within the social realist framework.

These arguments are undoubtedly important but the shifts the social realists point to regarding the undermining of disciplinary knowledge still warrant close attention. 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. It also highlights the importance of differences between disciplines and professional fields in how curriculum is formulated and structured over time, and the ways in which the knowledge structures of different disciplines and fields impose constraints on the form of curriculum.

Alongside the social realist work, related critiques have pointed to issues with the ways in which the concept of constructivist learning has been taken up in the university context, drawing attention to the tendency to discount differences between disciplines and fields, the importance of what is taught, and the professionalism of the teacher. Gert Biesta (2010, 2014, 2017) in particular has decried '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 his prominent critique on the 'learnification' of education (2014). Biesta 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-centered. 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 in Chap. 2 (e.g. Barr & Tagg, 1995; Biggs & Tang, 2011); emphasizes 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.

Another element of the debate about constructivist teaching concerns issues of precision in relation to what 'constructivist' teaching looks like and the ways the term is used (Sjøberg, 2010; Van Bergen & Parsell, 2019). As Sjøberg (2010, p. 485) writes:

> 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.

He 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 predefined underpinnings, and about the relative emphasis to be placed on what the learner does. However, 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 Gewitz and Cribb (2009, pp. 129–130) point out, within the realization 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'. Labeling particularly pedagogies as 'constructivist' does not resolve the critical teaching issue of striking the balance between supporting students in developing their own understandings and aligning those understandings with the knowledge base of the course.

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 other important considerations, including the importance of disciplinary perspectives.

4.5 Conclusion

This book takes up two particular issues to understand the implications of unbundled online learning on curriculum issues. These are, first, differences between disciplines and fields in the formulation of curriculum and the extent these are recognized in university strategy, and second, the push for constructivist pedagogies and its effects on curriculum construction. These issues need to be understood in the context of longstanding theoretical debates about disciplinary and professional knowledge and constructivism. In particular, there are concerns that disciplinary knowledge is being replaced or sidelined by new collaborative and interdisciplinary forms of knowledge development and undermined by a context in which there is an increasing tendency to privilege generic vocationally oriented agendas. As discussed in Chap. 3, the higher education curriculum has been underexplored as a critical site of struggle over what counts as knowledge. However, emerging scholarship has highlighted some important distinctions evident in how the curriculum is formulated within different disciplines and professional fields. This work raises a number of important questions in relation to the implications of new developments on disciplinary forms of knowledge and the effects of constructivist theories on university teaching practices. These issues are taken up in the rest of the book to explore the curriculum implications of unbundled online learning.

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