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The contextual nature of university-wide curriculum change

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The contextual nature of university-wide curriculum change

We explored the relationships between social contexts and factors that promoted and inhibited curriculum change at two universities. Thirty interviews were analysed using a general inductive approach to identify factors and forces in three social contexts (lecturer, departmental, and institutional). Curriculum change was characterised by six forces: ownership, resources, identity, leadership, students, and quality assurance, each composed of factors that differed in their direction (enabling or inhibiting) and/or intensity (strong or weak). Academic developers should find the approach and lessons learned useful for planning interventions and identifying where they may encounter resistance or enablers in the process of change.

Keywords: context, curriculum change, organisational development, university

In higher education, curriculum change has been characterised as a complex process involving interactions that occur within and between different social contexts within an institution (Barnett, 2000). We refer to curriculum as ‘a set of educational experiences organised more or less deliberately’ (Barnett & Coate, 2005, p. 5) and curriculum change as the adoption of a particular teaching practice to enhance the learning environment and outcomes for students. We acknowledge though, that ‘curriculum’ may be understood differently (Barnett & Coate, 2005; Roberts, 2015), and a ‘lack of a shared understanding has the potential to impact on the implementation of curriculum change and development’ (Fraser & Bosanquet 2006, p. 270).

Consequently, an individual’s definition of curriculum may only be implicitly understood; yet, how it is enacted will have implications for how and where change happens. For example, if an individual believes curriculum exists in course content and programme outlines, then curriculum change may be perceived to occur when policies and procedures are revised officially and systematically. This rule-oriented conception of curriculum may lead to ‘top-down’ or institutionally-imposed models of curriculum

change. If, however, an individual believes curriculum involves the co-construction of knowledge with students through face-to-face interactions, then curriculum change may be perceived to occur at the classroom-level when understanding of course content is negotiated and co-created between teachers and students. This participative or student-oriented conception of curriculum may lead to 'bottom-up' or lecturer-driven models of curriculum change. In both examples, the willingness to engage with curriculum change can be theorised as a personal act initiated by an individual that develops outwards from that context (Clegg, 2008; Cowan, 2006). It is important to acknowledge that the roots of this perspective come from ideas about how people participate in sociocultural practices (Wenger, 1998).

At the institutional and lecturer levels of social organisation, practical approaches to facilitate curriculum change initiatives have accrued in the literature for over a decade (e.g., Biggs, 1999; Kezar, 2014; O'Neill, 2010; Roberts 2015; Toohey, 1999). Curriculum change at a university-wide scale, however, has become a focus for inquiry more recently. By university-wide, we refer to change that goes beyond an individual lecturer's practice to include the department and the institution. Some researchers have explored the nature of university-wide curriculum change to identify key enablers. For example, de la Harpe & Thomas (2009) emphasised the importance of getting a critical mass of people to 'lead, champion and implement change, develop a vision and a clear plan for where and why; and ensure that there are sufficient resources and staff development opportunities available to achieve the vision' (p. 83). Although perhaps implicit, the social context for change in their study was not well teased out. In a study of strategic change at Southampton Solent University, UK, Baker and colleagues propose a conceptual framework with 12 factors that support lecturer-level innovation and university-wide change (Baker, Jackson, & Longmore, 2014). The

framework contains six leadership factors (shared and distributed leadership, strategic and inspirational vision, a strategy for planned and emergent change, change agents that cross boundaries, consideration of the sociocultural environment, and effective and flexible resource management) and six cultural environment factors (effective, honest, and meaningful communication; resolving contentions; encouraging new relationships and collaborations; offering emotional support and celebrating achievements; valuing shared learning, supporting risk-taking and creativity). Together, these factors emphasise the importance of how institutional-level factors can work to nurture and sustain innovation at the lecturer-level.

Missing from the examples discussed, thus far, is the departmental-level perspective. Yet, we know that the department can play a crucial role in university-wide change (e.g., Healey, Bradford, Roberts & Knight, 2013; Trowler, Saunders, & Knight, 2003). In a study that took a university-wide approach, department-level factors contributed to the framework of enablers for curriculum change focused on achieving graduate outcomes (Bond, et al., 2017). Five enablers (external drivers, structure and processes, development, student achievement, and context) operated differentially at the levels of students, lecturers, programmes, and institution. It was found that curriculum change needed to be considered at each level of social organisation and factors included individual histories, traditions, cultures, and purposes.

It is important to note that factors influencing curriculum change go beyond the lecturer, departmental, and institutional levels within an organisation. These additional forces may be external (e.g., professional bodies, economic pressures, demands from industry, government policies) and/or internal (e.g., student preferences, goals and priorities of individuals) (Jenkins, 2008). One way these multiple forces can be studied is by focusing on the social context for university-wide curriculum change (Blackmore

& Kandiko, 2012). In Blackmore and Kandiko's study, approaches and enablers to curriculum change were illustrated by case studies from universities in the US, Australia, Hong Kong, and South Africa. By emphasising the importance of social context, Blackmore and Kandiko advocated for a networked approach to curriculum change to enhance social engagement among students, academics, and administrators. They were wary of an institutionally-driven or 'top-down' approach that might lose impetus. Instead, they proposed guiding change from the departmental level. They suggested that, as a network, the department could have a strong influence across the organisation. The importance of departmental-level networks supporting curriculum change may be as important as thoughtful discussions with individuals or incentives that may be external to the organisation (Kezar, 2014).

Given that curriculum change can be theorised as participation in sociocultural practices (Wenger, 1998), multiple levels of analysis become necessary to study the diverse range and functions of curriculum change factors at the different levels of social organisation in which they appear (Barnett, 2000; Becher & Kogan, 1980; Bond et al., 2017). However, empirical studies exploring the relationship among curriculum change factors, specifically their function (enabling or inhibiting) and intensity (strong or weak), and at different levels of social organisation, have been scant in the higher education literature.

In this study, we were interested in university-wide curriculum renewal to embed inquiry-based learning. Although inquiry-based learning has been successfully embedded in papers or courses (Healey & Jenkins, 2009), the process of instigating such change at a university-wide scale has not been well reported. Notably, a group of researchers from McMaster University, Canada, have written about expanding inquiry-based learning across their institution (e.g., Cuneo, Harnish, Roy & Vajoczki, 2012).

Moreover, at the time of initiating this research, the University of Gloucestershire, UK, was in the process of embedding active learning across the institution and learning through inquiry was a key tenet of their approach (Healey, O'Connor & Broadfoot, 2010; Healey and Roberts, 2004). Given the efforts to scale-up curriculum change in these two universities, the main aim of this study was to examine the contextual nature of curriculum change in each institution. We were particularly interested how the function and intensity of curriculum change forces varied across the lecturer, departmental, and institutional levels of social organisation in each university.

Methods

To achieve our aims, we used a comparative embedded case study approach (Yin, 2003), purposefully selecting two universities where university-wide curriculum change was implemented: McMaster University, Canada, and University of Gloucestershire, UK. McMaster is a research-intensive university with an international reputation for an innovative problem- and inquiry-based undergraduate curriculum. Problem-based learning was implemented in 1969, and in the 1980s inquiry-based learning began in an elite arts and sciences program, sparked by a generous fund to enhance teaching at the university. Since then, inquiry has been implemented across many undergraduate programs. Gloucestershire is one of the relatively 'new' universities in the UK that evolved from its origin as a teacher training institution and thus is far more of a teaching-focused institution than McMaster. At the time of our data collection (2009), staff at Gloucestershire were adopting active learning (with particular emphasis on inquiry approaches) as a core curricular experience across the institution. This approach was embedded in the University of Gloucestershire Strategy (Healey, O'Connor & Broadfoot, 2010) and promoted by the Centre for Active Learning, a nationally funded

centre of teaching excellence.

In each institution, data were collected from two sources: institutional documents and interviews with faculty knowledgeable about the curriculum initiative. We examined curriculum change factors at three levels of social organisation within each university: lecturer, department, and institution. From institutional policies and publications, we identified the nature of the teaching innovation and the history of the curriculum change process. Semi-structured interviews were conducted by the second author with 30 participants who were nominated by their peers as the key initiators (i.e. those who were implementing the innovative teaching practice at the lecturer level), and proponents (i.e. past and present middle- and senior-managers who had enabled the change at the departmental and institutional levels). In early 2009, 12 interviews were conducted at McMaster with five initiators at the lecturer level and seven proponents (three at the departmental level and four at the institutional level), and 18 interviews were conducted at Gloucestershire with six initiators at the lecturer level and 12 proponents (eight at the departmental level and four at the institutional level). The interviews probed: background information on the interviewees' roles, responsibilities, and interests; their understanding of the innovative teaching practice in their institution; and thoughts about factors that enabled or inhibited curriculum change at the lecturer, departmental, and institutional levels of social organisation. Because of the small sample size and that participants were at risk of being identified due to their roles in each university, participant checking was used to ensure continued ethical consent.

The data analysis drew on a general inductive approach (Thomas, 2006) to identify key forces and factors that enabled and inhibited curriculum change in each institution. The interviews were transcribed verbatim and data were coded, resulting in 296 passages of text in the 12 McMaster (M) transcripts and 470 passages of text in the

18 Gloucestershire (G) transcripts. Passages with the same university and level of social organisation codes were examined and passages with similar qualities were grouped and labelled factors. Factors were analysed thematically and contextually. First, factors with similar qualities were grouped. Second the factors were re-grouped according to their levels of social organisation and were organised according to whether they were identified at one level of social organisation only or if they were identified in two or three levels simultaneously. Third, we identified the function and intensity of curriculum change factors (from strongly-promoting, weakly-promoting, weakly-inhibiting, and strongly-inhibiting), and the overall force for change within each institution. The function of a curriculum change force was readily interpreted from a passage of text, while the intensity was determined from analysis of transcript extracts to identify the adverbs and adjectives used to describe curriculum change. The intensity assigned to the descriptions was triangulated using a combination of: frequencies of similar descriptions within a transcript, frequencies of similar descriptions across other transcripts, and the description's relationship to the prompting question from the interviewer.

Findings

The analysis of curriculum change across the two institutions identified six forces: ownership, resources, academic identity, leadership, students, and quality assurance (Table 1). There were four university-wide forces identified at McMaster: two forces were strongly-enabling (resources and leadership) and two forces were either strongly-inhibiting (identity) or weakly-inhibiting (ownership). In contrast to McMaster, there were six university-wide forces identified at Gloucestershire. Two forces were strongly-enabling (ownership and student), two forces were enabling (leadership and quality assurance), one force was counterbalanced (identity), and one force was inhibiting

(resources). Each force is described briefly below, together with the factors that contributed to it. Empirical evidence is provided for the factors, but for brevity, only select examples are provided.

[Insert Table 1 here.]

Ownership

Ownership was identified as a key force in each institution. At McMaster ownership was inhibiting, while at Gloucestershire, it strongly-enabled curriculum change (Table 1). Three factors contributed to ownership: shared responsibility, motivation and scholarship.

Shared responsibility was seen as a factor in enabling change and involved emotional and social support for the change, as well as social structures to share the teaching innovation. For example, at McMaster, the team involved with a first-year inquiry course had regular meetings where ‘they continue to struggle with exactly the same issues they struggle with every year but they have the discussion. And they go away happy, that they’ve had the discussion’ (M9). For this proponent, having regular discussions and sharing practice was critical to developing shared responsibility for inquiry-based learning. However, shared responsibility for inquiry-based learning was also problematic at the departmental-level at McMaster because of ‘the sustainability of the instructors that are involved in it...they hit a level of burnout and lack of interest in continuing with it’ (M2). Thus, keeping lecturers involved with inquiry-based learning was a serious concern, and strongly-inhibited shared responsibility for curriculum change at McMaster.

Motivation to learn about the curriculum innovation was another factor contributing to ownership. At Gloucestershire, motivation to learn about active learning

was generated by participating in sessions at the Centre for Active Learning where ‘all the tutors were sort of really impressed and saying, ‘Wow, well I hadn’t thought of it this way. This is opening up new horizons to me’’ (G13). For this initiator, experiencing enthusiasm from colleagues who were new to the active learning approach stimulated her to develop her own practice.

Scholarship also contributed to ownership and was promoted by ‘the opportunities that staff have to engage externally with their subject centre and go to a conference’ (G8). Opportunities for scholarship were much greater at Gloucestershire, because lecturers were supported with practical sessions so they could share their experiences of the curriculum innovation. In contrast, at McMaster, there were no such opportunities, so staff reported a lack of understanding by colleagues of inquiry-based learning.

Resources

As shown in Table 1, teaching and learning resources strongly-enabled change at McMaster, while at Gloucestershire, a lack of resources inhibited change. Resources included factors such as control, distribution, and professional development.

Control over resources strongly-enabled at the departmental-level at McMaster by balancing teaching and research demands. A proponent at McMaster described how curriculum change was focused in ‘the departmental or programme level and that includes teaching as well as research. It’s the advising of students, recruiting graduate students, the core mission of the institution happens at the level of the departments and programmes’ (M11). For this proponent, deploying appropriate resources was essential to sustaining inquiry-based learning. In contrast, at Gloucestershire, control was inhibited at the institutional-level and was described in practical terms: ‘if you want to

timetable things that are outside of a module you'll get last pick of the rooms...trying to do academic things outside of a module isn't a good idea' (G9). This proponent expressed that she had no control over the modular timetable system. Time was also an important aspect of control that was manifested at the lecturer-level where one proponent said '[time is] the biggest resource limit.... They [lecturers] perceive they have a lack of that and that's always used as an excuse for not doing anything' (G17).

Distribution of resources was another factor influencing curriculum change at both universities. At McMaster, distribution involved using funding as an incentive for sustaining inquiry-based learning. One proponent stated that 'money raised the profile and made everybody think that maybe [McMaster] is serious about this. It sent a signal because money is the currency for doing that here' (M12). In contrast, at Gloucestershire, there was a sense of insufficient funding and inadequate resources to support the curriculum innovation.

Professional-development strongly-enabled change at both institutions, and tended to occur predominantly at the institutional-level of social organisation. One proponent at McMaster reported that 'you need somebody to help you design a course around it [inquiry-based learning]' (M5). Support for lecturers initiating inquiry-based learning was provided enthusiastically by a group of university-based experts working at the Centre for Leadership and Learning. Likewise, at Gloucestershire, support from the Active Learning Centre and professional development groups strongly-enabled curriculum innovation.

Identity

As shown in Table 1, identity was a key force that strongly-inhibited curriculum change at McMaster, whereas, at Gloucestershire, the function and intensity of factors

involving teacher identity, territory, and reputation resulted in a counterbalanced effect.

In terms of identity, a factor in enabling curriculum change was not only an awareness of the need for effective practice by senior leaders, but also a personal understanding of the innovation because they had engaged with it as a teacher. For example, at McMaster a proponent stated ‘I very strongly feel that there has to be awareness on the part of the dean about what inquiry is and what the benefits are. So different deans would come to that with different levels of understanding’ (M2). At McMaster, a dean without an understanding of inquiry-based learning was a barrier to sustaining curriculum change. Identity as a teacher was also manifest at the departmental level. For example, at Gloucestershire, it was apparent that entrenched disciplinary culture and its relationship to teaching and learning inhibited departmental support for active learning. At the lecturer level, awareness of the need for effective teaching practice (e.g., a student-centred approach) strongly-enabled curriculum change, while lecturers with a teacher-centred approach inhibited adoption of the curriculum innovation.

Territory referred to the nature of the roles and duties a staff member might perform as a lecturer. A territory force was identified at the departmental level in each university, mainly to inhibit curriculum change. At McMaster, one proponent suggested that ‘People have no idea what’s going on in other faculties’ (M1). While this senior manager knew that problem-based learning was happening in Health Science courses, he also knew that many of his colleagues just wanted to ‘go back to teach our courses.’ For this proponent, working in disciplinary or departmental groupings limited the flow and development of ideas about inquiry-based learning. Likewise, at Gloucestershire, a lack of interactions between departments inhibited the spread of active learning.

Reputation was an identity factor that strongly-enabled change at the institutional level in both universities. For example, a proponent commented:

When I got out to external, national meetings, people say, ‘Oh! Your colleagues at the University of Gloucestershire, they’re so interested in teaching and learning issues. They’re so enthusiastic.’ So I think there is a culture in the institution which is widely shared about wanting to be excellent and innovative in teaching and learning. (G1)

For this proponent, a reputation for active learning had spread beyond her institution. At Gloucestershire, the teaching culture was strongly-enabled by the reputation of the institution. Similarly, at McMaster, inquiry-based learning was strongly-enabled by the reputation of McMaster as a leader in the scholarship and practice of inquiry-based learning approaches (Healey & Jenkins, 2009).

Leadership

Leadership tended to enable change in both universities (Table 1) and was represented by forces that encompassed champions, recognition, and vision.

At McMaster, the role of champions in curriculum change was mentioned at departmental and lecturer levels. For example, an initiator described a departmental leader becoming a champion for the innovation:

When he started, he was on the sceptics’ side, but he decided to find out by becoming an instructor and in the process became transformed to be an advocate and was very open, respectful, and listened. Our dean was now sitting at this table with us every week. And that was tremendous in terms of people feeling comfortable, taking these risks. (M7)

For this initiator at McMaster, seeing her Dean become a champion of inquiry-based learning was important to her willingness to develop an inquiry-based teaching practice.

In contrast, at Gloucestershire, departmental leaders tended to be managers rather than academics and this was seen to inhibit curriculum innovation, since the leaders were not involved in teaching and had little practical understanding of the new approach.

Interviewees also thought it was important to give recognition to teachers engaged in the curriculum innovation. At Gloucestershire, recognition was important for ‘the people who have put their heads above the parapets’ (G18). For this initiator, recognising the leadership qualities of those who were teaching with innovative approaches helped to sustain active learning. This recognition included rewarding innovators with public acknowledgement that was of academic value. Likewise, at McMaster, leaders valuing inquiry-based learning promoted recognition at the institutional-level.

The other leadership factor was vision, and this tended to be at the institutional-level. Although vision from senior leaders had helped instigate the initial change at McMaster, in the late 2000s with a change of leadership, some interviewees felt that there was no longer the vision for inquiry-based learning:

It’s certainly not the buzz that was around 10 years ago. And I think that’s totally embedded in an institution that isn’t doing faculty renewal. Not providing the leadership to really allow for faculty to be able to develop these things. (M6)

For this initiator, supporting inquiry-based learning was not a central concern of the university’s leaders, so there was a lack of continuity in supporting the curriculum innovation. In contrast, at Gloucestershire, there was a very strong institutional vision, articulated in a university strategy that promoted and supported active learning.

Students

The force involving students encompassed the learning needs of students and benefits of innovative approaches to learning for student. The student force strongly-enabled curriculum change at all social levels at Gloucestershire. At an institutional level, Gloucestershire was implementing a plan to enculturate students into active learning. At the departmental level, student success was viewed as an enabling factor to market programmes with the new curriculum approach. At the lecturer level, positive student outcomes strongly-enabled initiators of the curriculum change. However, not all factors enabled change. A proponent at Gloucestershire noted that the majority of first-year students did not recognise inquiry-based learning as a relevant course option. Thus the perceptions of some students to inquiry-based learning inhibited change.

At McMaster, a student force was missing from the departmental level, therefore it was not considered a university-wide force as shown in Table 1.

Quality assurance

Quality assurance was a promoting force identified at Gloucestershire only. For example, one proponent said:

They've asked questions about learning and teaching and that's been a ...catalyst for some people to think about it [active learning] a bit more. (G4)

For this proponent, compliance with the requirements of quality-assurance ultimately supported the development active learning practice amongst her colleagues. This sentiment was reflected both positively and negatively at all social levels with a net balance in favour of enabling change.

Discussion

Contextual nature for curriculum change

Because we theorised curriculum change from a sociocultural practice perspective (Wenger, 1998), our findings suggest that the nature of curriculum change is highly context-specific. The research-intensive nature of McMaster presented a challenging context for curriculum change, while the teaching-focussed context of Gloucestershire was a strong enabler. However, within these universities, the social contexts (lecturer, department, and institution) were important sites for curriculum change. When curriculum change factors were regrouped by social context, it was apparent that the majority of factors in each university were located in more than one level of social organisation, shown by the overlapping regions in Figure 1. For both universities, it appears that the departmental level of social organisation had the least number of factors functioning in isolation. The lone force in the departmental context was territory. For innovators in both universities, it appears that departmental boundaries are an important aspect that can enable or inhibit others to adopt innovative teaching practice. The interdependent quality of all but one departmental force suggests that the departmental-level of social organisation may act as nexus for institutional and lecturer level factors. This conjecture is supported by the assertion that departmental structures and functions play a crucial role in the change process (e.g., Blackmore & Kandiko 2012; Trowler, Saunders, & Knight, 2003). Moreover, the empirical evidence for the connectedness of the department, lends strong support to Blackmore and Kandiko's (2012) idea of the department being an important network within the university.

[Insert Figure 1 here]

Figure 1. Contextual locations of curriculum change factors at McMaster (M) and Gloucestershire (G).

Only four factors were found in the same type of contexts at both universities: territory in the departmental context, vision in the institutional context, distribution of the resources in the institutional and departmental context, and identity as a teacher in the university-wide context. We suggest that the identical locations of these four factors may indicate a set of shared affordances or constraints of university culture rather than the local conditions in either institution. For example, identity as a teacher was found at all three levels of social organisation and may signal the critical role identity development plays in the process of curriculum change because of its personal and experiential nature (Clegg, 2008). The role of territory is particularly strong at the departmental level, and, as noted by others such as Trowler, Saunders, & Bamber, (2012), can be a powerful barrier to implementing change. However, as Shearer (2007) suggests, although boundary crossing may involve clashing expectations that can inhibit change, it can allow for unexpected synergies to take place amongst staff and students that can promote change. The importance of vision as enabling change has been well documented (e.g., Blackmore & Kandiko, 2012; de la Harpe & Thomas, 2009).

In contrast to the factors with shared contexts, the remaining factors were found in different contexts in each University and give the process of curriculum change at each university its distinctive character. At McMaster, the change process appears to be more ‘bottom-up’ or lecturer-driven than at Gloucestershire, since most of the factors at McMaster were found in contexts that included the lecturer-level. At Gloucestershire, the change process appears to be more ‘top-down’ or institutionally-imposed because most of the factors were found in contexts that included the institutional-level.

Ownership of the change is perhaps less prominent in past research compared to forces such as resources and leadership, but several researchers do mention ownership explicitly (e.g., Blackmore & Kandiko, 2012; de la Harpe & Thomas, 2009). The

student force has also been reported, but perhaps with less empirical evidence than we have presented in this article. Quality assurance as an enabler is less well documented, and indeed in our study, quality assurance was seen to both promote and inhibit curriculum change. Kezar (2014) noted that compliance with quality assurance procedures may act similarly to external incentives. It was notable that quality assurance was only identified at Gloucestershire, likely reflecting the higher education landscape in the UK, with strong national quality assurance imperatives. It is worth noting that since the data was collected, new quality assurance factors have come into play at McMaster that may have an impact on sustaining or expanding inquiry-based learning (Higher Education Quality Council of Ontario, 2014).

Implications for academic developers

Academic developers can use the model presented in this article to as a matrix to help understand the social context, as well as function and intensity of change forces. Thus, a first step for an academic developer faced with initiating curriculum renewal is to determine the landscape within the institution. This step is particularly important for academic developers new to an institution or acting as a consultant in another institution. This should involve talking with initiators and proponents of curriculum change, with attention to all levels of social organisation to identify major forces. Second, each force, should be investigated to identify factors that may be enabling or inhibiting curriculum change. Each factor should be evaluated and considered as a possible point of leverage for change. Enabling factors can be added or enhanced, while inhibiting factors require removal, otherwise they may interact to produce a counterbalancing force such as the identity force at Gloucestershire (see Table 1).

Limitations

Our study was limited by the approach being a snapshot in time of the factors responsible for curriculum change in two universities. We do not suggest that the curriculum change factors identified in this study are inclusive of all possible curriculum change factors found in university settings. We only interviewed people that were identified by their peers as initiators or proponents of curriculum change in their universities in 2009. If we had interviewed staff from outside of that group or the same people more recently (though several staff at both institutions have since moved elsewhere), other factors may have been identified. Although the data gathering involved recollections of how the changes were implemented in each institution, longitudinal data tracking the development and implementation of such change would yield a more complete picture. The time that has passed since the data were collected is an important limitation when interpreting the findings as a description of curriculum change in each university. However, the time elapsed does not diminish the usefulness of the approach we have taken to investigate curriculum change, or the study's contribution regarding how we can conceptualise university-wide curriculum change. Our approach provides detailed and contextualised information that policymakers or academic developers can use to modify current policies and fine tune change initiatives in universities.

Conclusion

Implementing curriculum change across an institution is highly context-specific. By analysing 30 interviews with initiators and proponents of curriculum change in two universities with very different institutional contexts, we found that although curriculum change forces within each university differed, there were many similar factors operating in up to three social contexts, albeit with opposite functions and/or varying intensities.

Using multiple levels of analysis, we found six forces acting to enable and/or inhibit curriculum change – ownership, resources, identity, leadership, students and quality-assurance – with a range of associated factors. When the factors were viewed through conceptual and contextual frameworks, we found that the adoption of innovative teaching practice at McMaster appeared to be more lecturer-driven and localised than at as Gloucestershire, where it appeared to be more institutionally-imposed and pervasive. Our analysis helped us to identify the characteristics of curriculum change in each university. The approach taken should be of value to academic developers, since they can use it to identify curriculum change forces within their institution and instigate targeted interventions.

Further research could include revisiting the two universities that participated in this study to further track the progress of their change efforts. Future research that included other universities would help to clarify which factors are common to university settings versus unique to local situations. Bringing about curriculum change, as this article has indicated, is a complex context-specific process which needs further in-depth analysis. As Barnett and Coate (2005) argue ‘the academic community, alongside developing a scholarship of its own towards learning and teaching, should also develop a scholarship of curriculum’ (p. 159) and we have sought to contribute to the developing scholarship of curriculum with the approach we have taken in this study.

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