

Do we need a discussion forum?

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This paper is a response to an issue that arose during a 2013 ascilite Community Mentoring Project (CMP) in which the (social scientist) mentor and the (physical scientist) mentee discovered that they had very different assumptions about the ways in which people learn online. This paper begins a process of unpacking the complex relationships between discussion forum behaviour and the ways in which lecturers and students think about higher education and their disciplines. A multiple case study approach is described in which discussion forum data is compared with themes emerging from survey and interview data in two different disciplines in two universities. It is suggested that the roots of these differences may lie not so much in the nature of the disciplines themselves but more in the ways in which people think in these disciplines. These findings will be of use in course and curriculum design.

Keywords: discussion forums, online dialogue, disciplinary differences, academic practice

Introduction

In 2013 an ascilite CMP project involved the design of online learning activities for the Science in Context Group at Victoria University of Wellington. The Group runs a suite of on-line courses that all explore some aspect of the relationship between science and society. The courses, which are all asynchronous, and which all contain a central discussion forum, have identical course structures and similar learning designs, but vary significantly in the level of discussion and dialogue by students. For example, a 300-level course on history of science run in the first trimester has a lot more dialogue than a 200-level summer course on contemporary issues in science and society. This is a common observation and there has been a great deal of research into student learning behaviour which attempts to explain this phenomenon (Hew & Cheung, 2008; Thomas, 2006; Wang, 2010). During the CMP project, the mentor and mentee discovered a difference in their assumptions about this behaviour, with the (physical scientist) mentee not understanding why the (education technology) mentor was so focussed on enhancing dialogue in the course's discussion forum. This paper therefore describes a proposed research study which takes a different perspective, seeking to explore the issue by unpacking the relationship between online discussion forum behaviour and the ways in which lecturers and students think about higher education and their subject areas.

Many of those who work in university learning and teaching centres come from a humanities or social science background and for them it is axiomatic that knowledge is socially constructed (Redmond, Devine, & Bassoon, 2014; Swann & Albion, 2013). However, they often find themselves at odds with lecturers in the fields of science, technology, engineering and maths (STEM), who see their course content as something they need to explain in order for it to be understood by their students. From one perspective, dialogue is central to learning. From another it is an optional extra. This proposed research study will compare discussion forum behaviour with the lecturers' and students' orientations to higher education and to their disciplines.

Conceptions of knowing and learning

The notion of signature pedagogies is well known (Gurung, Chick, & Haynie, 2009) and it grew out of a view of disciplines as territories and the academics within each discipline as tribes. It has been suggested that there are major "tribal" differences in the ways in which academics think about their disciplinary identity. This has led to a classification of academic knowledge based on the Kolb-Biglan model (described by Becher, 2001; Fry, Ketteridge, & Marshall, 2002; Redmond et al., 2014).

Table 1: Academic knowing and learning from the perspective of the Kolb-Biglan model

Classification	Knowledge is	Learning involves	Leads to	Disciplines
Hard pure	Cumulative, simplified	Abstract conceptualisation Reflective observation	Discovery or explanation	Physics Chemistry Maths
Soft pure	Holistic, concerned with particulars	Concrete experience Reflective observation	Understanding or interpretation	Humanities Social sciences
Hard applied	Pragmatic, concerned with mastery of the physical environment	Abstract conceptualisation Active experimentation	Products or techniques	Engineering Dentistry Medicine Healthcare
Soft applied	Functional, concerned with enhancement of practice	Concrete experience Active experimentation	Protocols or procedures	Social sciences Education Law

The tribes and territories view has been influential for about ten years, but recent work in the field of interdisciplinary studies has shown that this is only part of the picture (Manathunga & Brew, 2012). In a study of academic staff responses to a professional development programme in university teaching practice, Trowler and Cooper (2002) suggested the notion of “teaching and learning regimes” (TLR). They identified eight components of a TLR: identities in action; power relations; codes of signification; tacit assumptions; rules of appropriateness; recurrent practices; discursive repertoires; and implicit theories of learning and teaching. This was a study of academic staff undertaking a professional development programme in university teaching practice and so some of these characteristics may recede into the background in an undergraduate scenario.

In their 21st century revisitation of the notion of tribes and territories, Manathunga and Brew argued that the very word “tribe” carries pejorative, even colonial, overtones, and suggest an alternative metaphor, “oceans of knowledge” which opens out three domains of theoretical understanding of lecturers’ approaches to learning and teaching. These are lecturers’ own conceptions of education; a disciplinary perspective; and the way(s) they think about their own teaching. These domains may also be applied to a student perspective in order to generate comparable survey and interview questions.

Conceptions of education

Lecturers’ ideas about the purpose of education may be coloured by the customs and practices of their disciplines and they may change as they gain teaching experience. However, in a study of lecturers’ conceptions of education, Fanghanel (2009) has identified four educational ideologies which may be described as: education for its own sake; education to get a job; education for personal growth; and education for critique and transformation of society.

A recent study of New Zealand graduates also found four main orientations to higher education. These were gaining a qualification for a specific job; preparation for a job; developing life skills and learning how to think; and education for its own sake—growing as an individual (Spronken-Smith, Bond, Buissink-Smith, & Grigg, 2009). While these are not exactly the same, they are sufficiently close for a comparison to be made between students’ and lecturers’ educational ideologies.

A disciplinary perspective

Apprenticeship in a discipline brings with it the absorption of distinctive approaches to learning and teaching, which in turn have their roots in a particular view of what education is. Again, Fanghanel has identified a number of views of a discipline:

- A traditionalist view sees a discipline as a culture into which students must be socialised.
- A personal growth view of a discipline sees it as something which students need to grow into, by changing the way they think
- A critical view of a discipline sees it as a vehicle for the development of critical thinking about the big issues which concern us all.
- A vocational view of a discipline sees it as something which students need to experience in as authentic a way as possible in order for their qualification to be relevant to the needs of the nation.

Thinking about teaching and learning

The way lecturers think about their own teaching

Lecturers' conceptions of teaching and learning have been classified along a continuum from a teacher-centred, transmission of knowledge to a student-centred, socially constructivist approach (Eley, 2006). In a study of the learning designs of 60 modules at the Open University in the UK, Bryan (2014) found that their theoretical frameworks fell into four clusters, which she called constructivist, assessment driven, balanced-variety, and social constructivist. However the relationship between teachers' conceptions of teaching and their actual teaching is dynamic, involving reflection on previous teaching experience, and adjustment of teaching in light of this (Eley, 2006).

Students' conceptions of knowing and learning

There are several theories which seek to explain how emerging and young adults think about knowledge as they progress through their university studies. Perhaps the most useful to educators is Baxter Magolda's (1992, 2002) work on student epistemologies, which distinguished four ways of knowing: absolute, transitional, independent and contextual. For each of these, there are several domains which match well with Fanghanel's account of lecturer epistemologies above.

Table 2: Ways of knowing and domains (Baxter Magolda, 1992)

Domains	Absolute knowing	Transitional knowing	Independent knowing	Contextual knowing
Role of learner	Obtains knowledge from instructor	Understands knowledge	Thinks for self Shares views with others Creates own perspective	Exchanges and compares perspectives Thinks through problems Integrates and applies knowledge
Role of peers	Share materials Explain what they have learned to each other	Provide active exchanges	Share views Serve as a source of knowledge	Enhance learning via quality contributions
Role of instructor	Communicates knowledge appropriately Ensures that students understand knowledge	Uses methods aimed at understanding Employs methods that help apply knowledge	Promotes independent thinking Promotes exchange of opinions	Promotes application of knowledge in context Promotes evaluative discussion of perspectives Student and teacher critique each other
Assessment	Provides vehicle to show instructor what was learned	Measures students' understanding of the material	Rewards independent thinking	Accurately measures competence Student and teacher work toward goal and measure progress
Nature of knowledge	Is certain or absolute	Is partially certain and partially uncertain	Is uncertain—everyone has own beliefs	Is contextual; judge on basis of evidence in context

Method

A key aspect of this research will be a more robust development of a methodology which allows exploration of discussion forum behaviour in light of these perspectives. A multi case study approach will be taken, with each case a different course. Staff and students in an online course in each of two different disciplines at two universities will be surveyed to find out what they see as the purpose of education; how they see their own discipline; and how they approach their own teaching/learning. The survey items will be drawn from the theoretical perspectives of Fanghanel, Baxter Magolda and Eley (see above). Discussion forum data will also be gathered from the same courses, measured in terms of number and distribution of posts across the semester, and social network analysis as an indicator of levels of interaction among students. A social network may be visualised as a map which shows the connections among participants. Network density is a measure of the number of different connections that participants have with each other. Thus, a low network density indicates monologic communications in which participants post but do not often reply to others. A higher network density indicates a more dialogic network. Themes emerging from these data will be explored in greater depth through interviews of the lecturers and some of the students involved in each course.

Conclusion

This research initiative arose as a result of an ascilite Community Mentoring Project. The question of why some students participate in discussion forums and others do not has perplexed educational researchers for more than a decade. The perspective taken in this research study will enable the examination of discussion forum behaviour in light of recurrent practices in the pedagogical approach of a discipline, and the ideologies and values which underpin them. It is hoped that this will provide some answers which can inform course and curriculum design.

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Please cite as: Swann, J., & Salmon, R. (2014). Do we need a discussion forum? In B. Hegarty, J. McDonald, & S.-K. Loke (Eds.), *Rhetoric and Reality: Critical perspectives on educational technology. Proceedings ascilite Dunedin 2014* (pp. 509-513).

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