

Creativity, integrativism and a pedagogy of connection

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Abstract

A case is made for working in higher education across and between disciplines, variously known as inter- and multidisciplinary. Integrativism is proposed as an inclusive term for these different but related modes of academic work. Working integratively is presented as a creative activity. The application of integrativism to the curriculum leads to the notion of a pedagogy of connection. Sociocultural theory is a theoretical foundation for a pedagogy of connection which consists of a framework for focusing on the contexts of connection and tools for making connections. Activity theory is the basis of analysing context and analogy and conceptual blending are examples of tools. The pedagogy of connection is demonstrated through the example of a sense of place. The example takes the form of a design experiment.

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1. Introduction

The history of western education is inextricably linked with the Enlightenment project, its associated shift from qualitative to quantitative perception (Crosby, 1997), and changes in the organisation of knowledge. Machlup (1980) provides a comprehensive, taxonomic history of branches of learning and disciplined knowledge, tracing their development through classical and medieval doctrines, the rise of the sciences, and finally the institutionalisation of knowledge. The story that Machlup tells about the origin and development of disciplines is important to understanding why knowledge structures are so resilient and how they have shaped educational curricula.

Teachers require both specialist knowledge in a discipline and an understanding of how to make that knowledge accessible to their students. Shulman (1987) calls these qualities content knowledge and pedagogical content knowledge, respectively. Content, or discipline-specific, knowledge includes the important ideas, concepts, skills and methods of enquiry and verification of the subjects concerned.¹ Pedagogical content knowledge includes the ways that the teacher organises and communicates discipline-specific knowledge taking account of prior experiences of the learners. It is a

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¹ Alexander, Schallert, and Hare (1991) see content knowledge, domain knowledge and discipline knowledge as hierarchical subcategories of conceptual knowledge. These distinctions may in turn be related to the categories of disciplines identified in Biglan's seminal work on subject matter in academic areas (reviewed in Schommer-Atkins, Duell, & Barker, 2003). Such distinctions are not necessary at the level of generality with which I am concerned in this paper. I use the term discipline-knowledge because it is compatible with the notions of inter- and multidisciplinary, of working between and across disciplines.

form of practical or ‘mission-orientated’ knowledge (Short, 2002). In subject-based educational practice, discipline-specific knowledge and pedagogical content knowledge are closely linked.²

Although discipline-specific curricula dominate educational systems, especially at secondary and tertiary levels, there is a long-standing interest in working across, between and beyond disciplines (inter-, multi- and transdisciplinarity, respectively). Interdisciplinarity typically signifies the transfer of methods from one discipline to another (Nicolescu, 1997). Multidisciplinarity is working in more than one discipline simultaneously. The multidisciplinary relationship may simply be one of proximity, as in a joint honours course, or it may involve integration of content (Moran, 2002). Transdisciplinarity is concerned with the unity of knowledge (Nicolescu, 1997). My concern in this paper is with inter- and multidisciplinarity.

In educational terms, approaches to working across and between disciplines are known as cross-curricula or integrative. I use the term integrative, hence integrativism, both derived from integration, taken in a broad psychological sense as the combination of diverse components of perception. As a system of thought and action, integrativism has been strongly adapted from Bunge (1983) by Åhlberg (1998). These authors make the general argument that epistemic integration is needed because there are no perfectly isolated things, because every property is related to other properties, and because everything is a system or component of some system. More specifically, they claim that integration of approaches, data, hypothesis, theories and even entire fields of research is needed to account for things that interact strongly with their environment. The elaboration of this claim through aspects of sociocultural theory is set out below. So developed, integrativism is inclusive of approaches that otherwise go under the banner of inter- and multidisciplinarity.

The application of integrativism to the curriculum is developed in two interconnected ways. First, it is suggested that just as discipline-based teaching depends on having pedagogical content knowledge associated with discipline-specific knowledge, then so too should there be a pedagogy that is integral to integrative work in the curriculum. I call this *a pedagogy of connection*. The proposed pedagogy of connection consists of a framework and tools to conceptualise and facilitate integrative work. The framework focuses on the contexts of connection; the tools are used for making connections. Use of the framework and tools is illustrated with a case study of connections between creativity, the environment and music. These connections come together through the theme of ‘a sense of place’. The case study takes the form of a design experiment.

Second, it is suggested that working across and between disciplines is inherently creative. A simple definition of creativity sees it as generating something novel, original, unexpected (Sternberg & Lubart, 1999). Moving ideas between disciplines, integrating content from two or more disciplines to produce something different are also creative acts. In educational terms, making connections between subjects, and working in cross-curricular modes, are recognised routes to teaching creatively and providing opportunities for both learning about creativity and undertaking creative activity (e.g., Leach, 2001; NACCCE, 1999).

The paper is aimed primarily at teacher educators and practitioners in higher education, although it also speaks to the curriculum reform agenda.³

2. Sociocultural bases⁴

The purpose here is to elaborate the notion of integrativism to take account of sociocultural thinking about how individuals and groups undertake the activities through which they generate meaning and construct and express their

² So much so, that some (for example, Marks, 1990; Turner-Bisset, 1999) question whether in practice it is possible to make a distinction between the two.

³ Some of the ideas presented here have been refined through seminars in the Cultures of Learning Research Group at the University of Exeter, and presentations at the following events: Third International Research in Music Conference, Exeter, 2003, Fourth International Symposium on Teaching and Learning, University of Joensuu, Finland, 2003, and the Special Interest Group on Creativity at the British Educational Research Association Conference, Manchester, 2004.

⁴ I would like to thank the two anonymous referees for a detailed and constructive critique of this paper. The referees raised an issue about the level of generality of the discussion of different theoretical traditions, particularly with respect to sociocultural theory. The generality is an inevitable outcome of bringing together several theoretical perspectives in a single paper where space is limited. I have tried to be stylistically consistent throughout, i.e. by writing at a fairly constant level of generality and not dealing with the fine nuances of the theories I draw on. Rather, my purpose is to sketch out a general framework that may form a platform for further debate about cross-disciplinary work. Such a framework is provisional and open to further refinement. The important thing is to make the connections, to show the potential of bringing together hitherto unconnected or loosely connected traditions.

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