

Chapter 16

The Role of Outside Affordances in Developing Expertise in Online Collaborative Learning

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ABSTRACT

Web 2.0 tools have introduced a dynamic aspect to learning in contemporary classrooms. Pre-service teachers require expertise in the use of these spaces. The metaphor of outsidership—engaging with distant peers using Web 2.0 tools—has affordances that support the development of this expertise. In this paper, a conceptual framework is outlined that links a model of developing expertise with the affordances of outsidership and a case study of pre-service teacher education is used to demonstrate the framework's possibilities and limitations. Implications are drawn for the use of online collaborative spaces in higher education.

INTRODUCTION

Contemporary pre-service teachers are likely to have experience of informal social spaces mediated by a range of emerging technologies e.g. Facebook and YouTube. These environments enable users to acquire a mix of collaborative, representational,

reflective and research styles and strengths (Dede, 2009). New teachers may view Web 2.0 tools as a potential means of providing engaging, albeit more artificially structured, learning spaces. Using technology to support collaborative learning allows neomillennial students to exercise their preference for taking responsibility for their own

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learning, operating in personally created contexts, and representing knowledge using multiple media (Resta & Laferriere, 2007). It recognizes that knowledge is distributed across time and space, both real and virtual.

The argument contained in this paper is consistent with current dialogue emphasizing the potential of online learning environments to support learning. Specifically, the metaphor of outside-ness – engaging with distant peers using Web 2.0 tools - is outlined and affordances identified that support the development of pre-service teachers' expertise. The central question examined is what role outsidership plays in affording and developing pre-service teacher expertise in collaborative online learning environments.

Constructing a pedagogical framework to support a critical community of inquiry through the use of Web 2.0 social networking tools is a significant part of teaching and learning discourse in higher education (Garrison & Vaughan, 2008). However, whether the full constructivist potential of these technological tools is achieved is questionable (Deed & Edwards, 2010; Melville, 2009). While the benefits are apparent to the digital generation of using Web 2.0 tools to stay in touch, to arrange meetings or to discuss the latest gossip, this is less so in terms of knowledge generation (Deed & Edwards, 2010). The problem appears to be that educators are trailing behind students in terms of familiarity, use, understanding, adoption and adaption of Web 2.0 tools as a means of learning. This paper makes a significant contribution to current discourse in teacher education about preparing teaching graduates who are proficient in pedagogy supporting the effective and efficient use of Web 2.0 technology.

CONCEPTUAL FRAMEWORK

Table 1 outlines how the elements of developing expertise are afforded by the metaphor of outside-ness. Following the table is a description of each

of the elements and corresponding affordances. Affordances are features of a context that allow or potentially contribute to the resultant activity (Greeno, 1994). Affordances and the ability and perceptions of individuals are integrated. Therefore, affordances are realized through the individual's perceptions about what and how something can be done. In this case the context is online collaborative learning, and one affordance may be the flexibility this offers to participants in terms of how often, or the way, they contribute.

Developing Expertise

The model of developing expertise put forward here is based on the work of Sternberg (1999). While there is no precise and encompassing definition of expertise, there are similarities or a "family resemblance" of experts in teaching (Sternberg & Horvath, 1995). This model extends prior accepted versions of expertise, including the reflective practitioner (Schon, 1983). Sternberg and Horvath suggest that an expert teacher can be differentiated from a novice by the amount of subject and pedagogical knowledge they use to respond to their teaching context; the efficiency with which they resolve emerging problems during their teaching; and the insight they apply to devise innovative and workable solutions to teaching issues (Sternberg & Horvath, 1995). This view of expertise is characterized by a dynamic capacity to adapt practice to local contexts, involving constant reflective monitoring and reinvestment of learnt professional practice knowledge and skills (Matthew & Sternberg, 2009). Expertise can perhaps be conceived of as the reflective, "... wise *and* intelligent use of knowledge" (Sternberg, 2003).

Sternberg's model of developing expertise proposes five interconnected elements that enable the development of context specific expertise. The five elements are outlined in Table 1.

The novice works towards expertise through deliberate practice. But this practice requires an interaction of all five of the key elements. At the

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