

Chapter XII

Designing Online Conversations to Engage Local Practice: Implications of a Knowledge–Building Framework

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ABSTRACT

In this chapter, a model for the design of a conversation space to support knowledge-building is presented. While online environments are focused on, the model has much greater generality. The model, an expansion and adaptation of Nonaka's work, considers knowledge as consisting of complementary explicit and tacit dimensions. It argues that these two dimensions of knowledge are mutually reinforcing, inseparable, and irreducible, and thus, in order to build robust knowledge, both dimensions and, most critically, the relationship between them, must be attended to. The model conceptualizes the development of knowledge as a spiral between the complementary processes of externalization (through collective online reflection) and internalization (through conscientious local practice) and discusses eight principles for designing online conversations to foster effective externalization, thus promoting the knowledge-building spiral. The broader message of this chapter is that designers need to expand their frame for thinking about "online" learning to include not only the virtual space but also the local spaces which learners inhabit in order to create useful and engaging learning experiences. All of the eight design principles presented here support this consideration.

INTRODUCTION

Conversation has long been recognized as a core vehicle for learning. In recent years, rapidly evolving Web technologies have opened the door for learning conversations distributed across time and space and led to a new generation of Web applications (coined Web 2.0 by O'Reilly, 2005) that emphasize online sharing and collaboration over the centralized distribution of information. This ability to interact and converse with others has also played a large role in helping distance education overcome its status of second class citizen, and many now even see online courses as capable of providing richer educational experiences than obtainable in the face-to-face classroom (Mikulecky, 1998; Mahesh & McIsaac, 1999). In large, part of this shift is due to courses' use of learning conversations to move students from the common classroom role of passive listener (Auster & MacRone, 1994) towards that of (inter)active participant. From a constructivist perspective (von Glasersfeld, 1995), these conversational processes are one of the primary vehicles through which learners negotiate meaning in their quest to make sense of the world and construct a workable understanding of it. Such conversations are thus core in "knowledge-building" both from the perspective of a group collectively improving ideas (Scardamalia & Bereiter, 1992)¹ and from the perspective of the individuals in the group deepening their personal understanding (Stahl, 2000). In addition to the learning benefits, the convenience and relaxed logistical coordination required for online learning environments has led to the continued growth of distance education programs (Duffy & Kirkley, 2004a) meriting inquiry into how online conversations can best support learning.

In the work learning is considered as a generative process of knowledge-building at both the individual and group level in the sense described by Cook & Brown (1999), and focus on the relationship between group conversation and

the development of deep and actionable personal understandings. Similar to Kurubacak (this volume) we see this relationship through the larger lens of reflective practice, and like Harri-Augstein and Thomas (this volume), the intimate concern is with the representation of meaning and experience in knowledge-building conversations. Before proceeding, it is wished that the fact that the phrase "knowledge-building" is often inappropriately associated with a primarily cognitive processing stance on constructivism is highlighted. The term is used more broadly to refer to a rich process that includes multifaceted interaction with the world, negotiation of meaning, the development of interpretation systems, and the evolution and refinement of instincts and intuition.

The inquiry is started by examining existing approaches to the design of online conversations. The common problem of a gap between individuals' local practices and the attempt to generate knowledge through conversation, using Polanyi's (1966) conceptualization of knowledge as a tacit-explicit duality to help explain why a lack of shared practice is problematic are then explored. Expanding on this schematization of knowledge, the framework for knowledge-building as a spiral between the complementary processes of externalization (collective online reflection) and internalization (conscientious local practice) are described. Finally, the design of online spaces for externalization, capturing the implications of the framework as a set of eight principles for the design of online conversations, is specifically focused on.

THEORETICAL FOUNDATIONS

Existing Approaches to Designing Online Conversations

There have been three major and largely distinct approaches to thinking about how to design online conversations for learning. The first is seen in the

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