Chapter 1

Transitioning a Face–To–Face Class to an Online Class: A Knowledge Engineering Narrative

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ABSTRACT

This chapter speaks to knowledge engineering through the use of narrative, personal research. It is intended that the readers experience the development of an online class from the perspective of the instructional designer and the perspective of the subject matter expert and instructor for whom the instructional designer is working. In this experience, the reader will gain a view of knowledge engineering with respect to a number of issues and requirements regarding how to represent, create, manage and use ontologism as shared knowledge representations.

TRANSITIONING A FACE-TO-FACE CLASS TO AN ONLINE CLASS: A KNOWLEDGE ENGINEERING NARRATIVE

One of the most specific versions of knowledge engineering for organizational applications can be seen in the use of learning management systems (LMS) and learning content management systems (LCMS) in both business and academia (Lytras, Tennyson, & Ordonez de Pablos, 2009). Most institutions of higher education use some sort of LMS or LMS/LCMS combination to manage their online learning, as do most large businesses. At the University of Minnesota, the preferred tool is Moodle. It functions as both an LMS and an LCMS, the former in its interface with PeopleSoft to manage class enrollment and access to online classes, and the latter in its ability both to house content for classes and allow access to that content in whatever manner the instructor or instructional designer deems appropriate.

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Taking a Class to Design a Class

It all began the day the instructional designer decided she needed a more well-rounded understanding of what she was learning in pursuing the doctoral degree. She had learned most of what she thought she needed from all angles except the psychology angle. In the discovery process for classes she could take to round out that angle of understanding, she discovered one that was offered on the psychology of instruction and technology, which seemed perfect. Her background is in teaching, and her then-current field was information technology. She was deeply involved in several technology projects, including one instructional technology project, at work, and so it seemed a perfect fit. She was, at the time, a bit concerned that perhaps she had too much background in technology for this class, but she thought that the psychology angle would be the one she would get the most from. Little did she know how correct that thought was!

From the first class meeting, it seemed like she had a connection with the professor. He had a quirky sense of humor that spoke to her, especially when he asked her what the heck she was doing taking his class. She trotted out her explanation of the hole in her education, which seemed to satisfy. She kept her mouth shut about the 20-plus years of instructional design practice and training she had under her belt. That was an exercise in futility, though, because it is something one just cannot hide from an expert. It turned out that the class would be working together to understand technology and instruction in the guise of exploring how this instructor-led, in-person class could become a more student-led, online class.

Assignments

She is something of a smart-aleck, and so using the class assignments she decided to create the framework for building this online class. There was no external motivation for this, as the other students in the class were all novices in all aspects of the field of instructional design, technology, and psychology. She was internally motivated by a desire to challenge herself, and to see if she could make the professor laugh at her audacity.

The main assignment was broken into three parts: a learning philosophy, a learning theory, and an instructional theory (Tennyson, Wu, & Hsia, T.-L., in press). This was difficult for her, as the learning philosophy she used in the business world is almost exclusively behaviorist-based. This, she has found, does not match her internal beliefs about how adults learn. She falls firmly in the constructivist/cognitive arena. She had planned to move freely back and forth between the business and academic worlds. However, it was time that she started applying the psychological theorists to her beliefs, and identified what meshed and what conflicted. Thus, she wrote a learning philosophy based in cognitive and constructivist psychology.

Scope

It is important to note here that this main assignment was used to build parts of the online class eventually. In particular, the scope of the project was particularly laid out. Since the class was going to move from an instructor-led, classroom-based class to an instructor-guided/student-guided, online class, decisions needed to be made about what content needed to be transferred to an online book vs. using a textbook. Further decisions needed to be made on how to segment the class into lessons or modules, and what the difference ought to be between these. The scope of the problem included all activities around moving content from an instructor-led format to an online format. This included design decisions like
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