

## Chapter 46

# A Case Study of Social Interaction on ANGEL and Student Authoring Skills

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### ABSTRACT

*This case study examined a constructivist approach to creating an interactive learning environment on ANGEL for graduate students in a course: EDC 604—Authoring for Educators. The course curriculum was designed to help students construct knowledge to develop professional Websites. However, the class time was insufficient to meet the student learning needs and course objectives. The social interaction on ANGEL provided flexible time and space for participants to discuss the issues important to them. Findings revealed that practical action research combined with social interaction shed light on important issues of professional development through reflection on practice. The constructivist approach provided an interaction of two important sets of learning conditions: Internal and external levels for student cognitive development in authoring skills. Data were analyzed using a grounded theory approach. This study also identified issues for further research: The importance of curriculum design to meet students' needs, the effect of digital divide, and how student attitude impacts learning.*

### INTRODUCTION

This study examined the instructional practices of a constructivist approach to creating an online interactive learning environment on the students in a graduate course EDC 604—Authoring for Educators. Most students enrolled in this course

were in-service teachers for K-12 public school learners.

The course curriculum was designed to help students construct knowledge to develop professional Websites by a series of activities on HTML, Dreamweaver, Photoshop, Fireworks, and Flash. Most students entered the class without any background knowledge in these areas. This course has been based on face-to-face weekly classroom

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instructional mode. However, the class time for instructions and practice was insufficient to meet the student learning needs and course objectives.

I wish I could report that the course went off without a glitch, but that was not the case. To begin, the students experienced a great deal of anxiety over this fact: If the course was instructed on a regular meeting basis, would they be able to meet the course requirements and obtain the authoring skills? Additionally, most students did not have off-campus access to the programs such as Dreamweaver and Photoshop, which made content review after class difficult. The biggest hurdle for the instructor to overcome, however, was to understand what students had learned and what they did not yet know after each session of the instruction. While some students came to class with impressive knowledge of technology and they could acquire the new content at a faster pace, many others were helpless and panicked. Some of them asked the instructor questions by email, but the instructor could only respond to them individually at the cost of consuming a lot of time.

Effective interaction between and amongst instructor and class members became a key to the success of the course. Constructivist pedagogy would be helpful to enhance student learning. Student weekly learning journals would help me and the student themselves understand their learning process. In order to create an interactive learning environment, the instructor built a discussion forum on ANGEL, a Web-based application for curriculum, instruction and assessment, and required the students to post their learning journals online. The instructor read and responded to student questions and the other class members could access instructor's responses. This online activity allowed those who did have advanced skills to share them with their classmates; it afforded them a safe space for acquiring and developing those skills; it afforded all the class members a friendly space for social and academic interaction. It is important to note that these students were overwhelmingly pleased with the idea. This study

focused on the research question: How did social interaction on ANGEL enhance student learning and improve their authoring skills?

## **LITERATURE REVIEW**

According to John Dewey (1933), education is a social process. Education is growth. Education is not a preparation for life; education is life itself. Therefore, building social interaction in class should be a contributory factor for enhancing learning. Dewey believed that learning was useful only in the context of social experience. Constructivism is a critical way of building knowledge through societal practices, including schooling, reflecting, and meaning making (Wonacott, 2001). Activity theory in general, and the zone of proximal development (ZPD) specifically, initiated by Vygotsky (1934, 1978), suggest that such zones exist when a less-skilful individual or student interacts with a more-advanced person or teacher, or is stimulated by an instrument, allowing the student to fulfill the task not possible when acting on his or her own. Activity theory encourages collaboration, social practice, and critical pedagogy. Russell (1995) defined activity theory in this way: "Activity analyzes human behavior and consciousness in terms of activity systems: Goal-directed, situated, cooperative human interactions, such as a child's attempt to reach an out-of-reach toy...a discipline, a profession, an institution, a political movement, and so on." (pp. 54-55). Utilizing an activity theory perspective, the participants of this study extend current understandings of societal practices to include not only how constructivist approach works but also why it is effective.

Alessi and Trollip (2001) stated that interactive multimedia must be built on sound human factors to be effective. This has a strong implication for this study because it underscores how learning practices with social interactions are deeply connected to both content and context. The participants in this study were required to design and

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