

## Chapter 2.4

# Developing Learning Communities: Improving Interactivity of an Online Class

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### ABSTRACT

This study concerns the design and development of online instruction and specifically targets interaction and communication between online learners. Facilitating appropriate and meaningful interactions in designing instruction is a major goal for anyone developing an online class. The guiding question of the study was: how do the instructional design elements and discipline area impact the quantity of learner-learner interactions? The data for this study came from the online courses offered at one of the major Rocky Mountain University. The research subjects and courses were taken from the College of Education, College of Business, College of Arts and Sciences and College of Health Sciences. Forty graduate online classes, 10

from each college, were analyzed. The findings of this study suggest that the interactivity in an online class depends on group size, grade weight for discussion, use of web 2.0 technologies and multimedia and the discipline it belongs to.

### INTRODUCTION

For hundreds of thousands of years, people lived in hunting and gathering economy until humans made the transition to an agricultural economy. The agricultural society continued until about 200 years ago, when the Western world ushered in the Industrial Revolution. A few decades ago, the industrial economy began to give way to the present day information-based society (Dagget, 1998). The advent of the computer and the Internet were instrumental in changing society to a global,

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knowledge-based economy or to what is known today as the information age (Crossman, 1997). This shift in society has had an insurmountable impact on institutions of higher education. Today higher education is reaching beyond the walls of the traditional classroom by providing alternative methods of educational delivery through the use of the Internet and the World Wide Web. This type of distance education delivery is referred to as online learning.

Facilitating appropriate and meaningful interactions in designing instruction is a major goal for anyone developing a course, especially an online course. Although not supported by a specific research study, Kearsley (1998) claims that the “single most important element of successful online education is interaction among participants.” He further states that it is “the instructor’s role as a facilitator to ensure that a high-level of interaction occurs in an online course” (p. 3).

The concept of interaction has received considerable attention in the literature related to distance Internet-based learning (Hill, Wiley, Nelson & Han, 2004). Daniel and Marquis’s (1988) challenged the educators to “get the mixture right” between independence (student-content interaction) and interaction (mainly student-teacher interaction). In the 21<sup>st</sup> century we are still challenged to get the mixture right (Anderson, 2003). Appropriate mixtures will result in increased learning and exciting new educational opportunities; inappropriate mixes will be expensive, exclusive and exigent. Our responsibility as experienced educators remain- to insure that the modes of interaction that we practice and prescribe maximize the attainment of all legitimate educational objectives and support and increase motivation for deep and meaningful learning (Anderson, 2003).

In this study the researcher assumes that the opinion of Kearsley (1998), “single most important element of successful online education is interaction among learners” (p. 3) holds and wants to understand the role the various instructional design elements and differences in discipline plays in

impacting the overall interaction among learners. Hence, the guiding question of the study is: do the instructional design elements and the discipline area impact the overall interaction among learners as defined by the number of learner-learner interactions?

## **BACKGROUND**

As access to the Internet and World Wide Web has continued to grow, Web-based learning has continued to expand. With approximately half of the households in the United States (or 150 million people connected to the Internet), an estimated 2 million students are taking post-secondary courses that are fully delivered online (Galt Global Review, 2001). Millions of other students at all educational levels (primary, secondary, post-secondary, continuing education) participate online in hybrid, mixed mode, and Web-enhanced face-to-face courses (Picciano, 2002).

Interaction has been recognized as one of the most important components of learning experiences both in conventional education and distance education (Vygotsky, 1978; Holmberg, 1983; Moore, 1993). Gunawardena and Zittle (1997) revealed that social presence contributed more than 60% of learner satisfaction with computer conferencing courses. A common element for learning in a typical classroom environment is the social and communicative interactions between student and teacher, and student and student (Stubbs, 1976). The ability to ask a question, to share an opinion with a fellow student, or to disagree with the point of view in a reading assignment are all fundamental learning activities (Picciano, 2002). In online education, it is particularly important to provide an environment in which meaningful interaction can occur (Collins & Berge, 1996).

There is a scarcity of research on the importance of interaction in education especially in online education. There have been a few studies and opinion papers on the relationship of interaction

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