Chapter 12
Cooperative and Collaborative Strategies in Blended and Online Learning Environments

Christine E. Nickel
Regent University, USA & Old Dominion University, USA

Richard C. Overbaugh
Old Dominion University, USA

ABSTRACT
This chapter presents the results of a study that investigated the differential effects of cooperative versus collaborative instructional strategies and blended versus fully online delivery methods on various aspects of academic community. Measures include the Community of Inquiry (CoI) Survey instrument, individual and group achievement, student satisfaction with process and product, and their value of community. The treatment was a group-work module in a university foundations-level instructional technology course (n=134). Results suggest that cooperative and collaborative strategies in online and blended environments are equally effective in regard to individual achievement, but that blended cooperative learners perform significantly poorer on group projects. Students were equally satisfied with their groups’ process and solution and the group activity did not significantly change students’ value of connectedness. Students did not differ according to their perceptions of social presence and cognitive presence, but significant differences were found in perceptions of teaching presence. The course module design highlights the essential elements typical of design strategy based on typical instructional design processes, while using the Community of Inquiry as a theoretical framework that enables “operationalization” of the instructional design process. The design emphasized teaching and cognitive presence but not social presence.
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INTRODUCTION

The primary purpose of this chapter is to present the results of a study that analyzed and interpreted differences between online and blended students utilizing collaborative or cooperative strategies for a group project. The focus is to explain the impact of a specific instructional strategy designed for and implemented in both blended and fully online formats that emphasized Teaching and Cognitive Presence but not Social Presence in terms of student perceptions of the CoI framework, student satisfaction, course success (individual and group achievement), and value of and preference for collaboration. Because the instructional strategy does not emphasize Social Presence, a unique contribution of the chapter is how students' Community of Inquiry perceptions were differentially affected.

A secondary purpose is to describe the instructional strategy and elucidate on some of the underlying aspects of designing instruction: (a) foundational elements that are typical of instructional design processes and (b) Community of Inquiry as a theoretical framework that enables the “operationalization” of the ID process in a particular teaching/learning situation. We use the word operationalize because most ISD models do not include instructional strategies, forcing the instructional designer to look elsewhere for a theory or model to guide development. We believe this brief section to be relevant because, in higher education settings, faculty often rely on instructional design professionals to convert or construct their courses or course modules without significant awareness of the underlying design elements required.

INSTRUCTIONAL DESIGN

Instructional Systems Design in Context

Course design in higher education has evolved rapidly and significantly over the past 15 years—an evolution commonly attributed at least in part to the adoption of distributed instruction and the attendant need to improve the instructional design capabilities of higher education faculty to ensure reasonable course quality. Clearly, successful instructional design has many facets and layers as epitomized by Reigeluth and Carr-Chelman (2010) but can perhaps be broadly represented by three major domains of (a) the instructional design process, (b) instructional strategies, and (c) theory/epistemology. The latter domain also includes important design or evaluation structures such as the Sloan Pillars of Excellence (Moore, 2002) and the Community of Inquiry Framework (Garrison, Anderson, & Archer, 2000) which have been validated in research literature and are well known to practitioners. Like many complex processes, the domains can be treated discretely but in practice are inextricably linked.

The instructional design process is often considered to be the structured procedural foundation upon which instructional strategies, theory/epistemology, and all related pieces are layered. Perhaps the most well-known is the Systematic Design of Instruction (SDI) by Dick, Carey and Carey (2009), now in its seventh edition. However, even though their SDI process includes critical aspects of instruction, such as learning outcomes, audience analysis, instructional environment analysis and evaluation, guidance on what instructional strategies might be appropriate and how best to deliver them is not provided. ADDIE is also very popular but ADDIE is simply an acronym describing a generic process (Molenda, 2003) that has long been interpreted as desired (Heinich, Molenda, Russell, & Smaldino, 2002; Seals & Glasgow, 1998). In either of these processes designers must