

# Using Gagné's Events of Instruction to Analyze Online Course Quality

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## INTRODUCTION

Student perceptions of online courses are likely influenced by two overarching aspects of quality: instructor quality and course design quality (Ortiz-Rodriguez, Telg, Irani, Roberts & Rhoades, 2005). Both of these forces in online education may be analyzed using a well-known model of instructional design - Gagné's instructional design and cognition theory, the centerpiece of which are the nine events of instruction (Gagné, Wager, Golas, & Keller, 2004).

Multiple studies positively correlate learner attitudes and perceptions of the online course to instructor quality. Early studies evaluating instructor quality attempted to correlate instructor quality with the attitude and perception of the learner, but not directly to learner success or course design quality. Researchers of online courses, such as Palloff & Pratt (2003), discussed the role of the instructor in depth while neglecting the roles of the learner, the institution, and course design. The main focus remained instructor-centered, and highlighted key instructor tasks such as understanding the virtual learner in terms of roles the learner plays, fostering team roles for the learner, designing an effective course orientation, and identifying potential legal issues the instructor might face (Palloff & Pratt, 2002, p. 16). A distant secondary focus was on effective course design. This highlighted instructor tasks in building an effective online learning community without highlighting the roles effective communication tools would play.

The term "effective communications tools" encompasses many different aspects of online courses. Asynchronous communication tools, for example, allow learners and instructors to effectively communicate regardless of whether they are connected to the course management system (CMS) simultaneously. Synchronous tools, on the other hand, allow users to communicate in "real time" while connected to the CMS. Learning these skills and instructor guidance in using these tools is correlated with current trends emphasizing instructor facilitation of learning. This

is also coupled with intense learner desire for a high degree of course customization. These forces strongly indicate a need to focus on increasing course design quality and flexibility – something few colleges and universities have done in a robust way. In spite of these shifts toward facilitation and learner desire for customization, few studies of learner perceptions have examined both course design quality and effective online communications tools.

## BACKGROUND

Few studies have included effective communications tools as a major determinant of learner perceptions. Reasons for this include the complexity of defining and operationalizing course design quality and instructor quality, the rapid advances in the technology of online learning, the difficulty of innovation diffusion in a complex system like education, and a cultural assumption that a good instructor is the center of good instruction.

Some researchers, such as Achtemeier, Morris, & Finnegan (2003), found that many of the tools used by colleges and universities for assessing the quality of online courses and programs do not measure important principles of online teaching and learning. Based on course evaluation instruments from thirteen institutions, the researchers determined that only eight of the eighteen identified teaching and learning principles were assessed. Specifically missing were questions about key communication components and tools used in online instruction, including cooperation among learners, active learning, learner-instructor interaction, and learner-learner interaction. Also missing were specific ties to accepted theories of education. Other, more limited research examining online course communications has found that communication tools do impact learner perception and success. For example, Conrad (2002) found that learners judge instructors

based on how clearly and completely online course materials communicate course details.

Online learners are becoming increasingly important to individual colleges and universities, as well as to the education system as a whole. As of 2005, more than 75 percent of community colleges offered courses online, and nearly 40 percent offer degree programs online (Sloan Consortium, 2005). These numbers are expected to climb in subsequent years. Additionally, US high schools are beginning to adopt online education in large numbers, with 57 percent offering courses or planning to offer courses (Gagné, et al., 2004). These researchers also noted that technology spending increased an average of nine percent per year in higher education, to reach \$4.7 billion in 2004. This is well behind the twenty percent growth in online enrollment, which reached 2.3 million in 2004 (Sloan Consortium, 2005, p. 10). In fact, as long as predictions remain accurate, annual technology spending will decrease from \$3,600 to \$2,800 per learner from 2002 through 2007 (Gagné, et al, 2004 and Sloan Consortium, 2005).

With explosive growth in online learning, and a large disparity between this growth and the level of technology funding, colleges will need to maximize the efficacy and perceptions of online learning. If good choices about instructor and online course design quality are made and implemented well, the result should be increased instructor-learner communications. This should also serve to enhance learners' perceptions. One way to guide the best choices is to focus on the role of the instructor and the role of communications tools in light of a widely-known theory such as Gagné, et al. (2004).

## **USING GAGNÉ'S EVENTS OF INSTRUCTION TO ANALYZE COURSE AND INSTRUCTOR QUALITY**

Gagné was generally dissatisfied with the explanation offered by the behaviorist theories of Skinner (Kearsley, 2006), and began to study both the learner and the learning environment intensely. During World War II, Gagné identified that there were different types of learning occurring and that different instructional methods and conditions were likely to foster individual learning in different ways (Gagné, 1985). This observation became a common thread throughout his research, and eventually came to be known as the Gagné Assumption.

Although this assumption has existed for more than sixty years, it is equally relevant for online learning.

Gagné is perhaps best known for the events of instruction, which have become the centerpiece of his theory. Gagné, et al. (2004) suggest that instructional events should occur in a specific sequence to enhance learning. These events are structured to support the way that learning occurs in the brain, and relate to specific processes such as storage in short-term memory, activation and modulation of longer-term memory, and retrieval to the various instructional events (Gagné, et al., 2004, p. 8-9). The instructional events should be designed to orient the learner to the activity, focus attention on pertinent skills and information, and encourage satisfactory performance with guided practice. Whether the instruction is traditional or online, the events are essentially the same (Gagné, et al., 2004).

Given that the role of the instructor is shifting to be more facilitative rather than prescriptive, examination of instructor quality on learner perceptions is changing (Jackson, 2007, Palloff & Pratt, 2007, and Wilson, 2007). The instructor as actor in a play – the deliverer of content and the force on which the production succeeded or failed – has been the historical perspective. In today's online classrooms, instruction is becoming more like a movie than a play (Wilson, 2007). Like the movies, the instructor remains important but is supported by a large team of professionals in technology, instructional design, administration, project management, graphics, and other functions.

Strategies in online learning still have a significant focus on the role of instructor immediacy, or increasingly e-mmediacy. Some researchers have described this role as influencing the choice of learning style and matching instruction to that style (Uhlir, 2006). This implies an ability to constantly assess and adjust learning interactions and communications, and foster active participation with both peers and instructor to increase learning. These strategies, then, are largely reactive and distinctive to the instructor. They are also skills that can be identified, measured, and improved.

By using the events of instruction (Gagné, et al., 2004) to analyze instructor and course quality, we can identify events on which the skill of the instructor and his or her communication patterns will have significant impact on learner perceptions, and others on which the communications tools have significant impact. There is little, if any, formal research in this area – what is presented here is experiential data from this author in

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