

Student satisfaction and perceived learning in online learning  
environments: The mediating effect of student engagement

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**Abstract:** Studies have shown that course structure and organization, learner interaction, student engagement, and instructor presence accounts for considerable variance in student satisfaction and perceived learning in online learning environments through a range of pathways, although no research to date has tested the mediational relationship identified. The researchers will investigate the structural relations among course structure/organization, learner interaction, student engagement, and instructor presence on student satisfaction and perceived learning. Furthermore, this study will explore the differences, if any, in student satisfaction and perceived learning based on whether or not the course is certified by Quality Matters. This study aims to expand upon the existing literature about online learning and the variables that influence student satisfaction and perceived learning. The results of this study should inform practice related to increasing retention and improving the quality of online teaching and learning.

**Overview/Purpose:** There are three primary objectives of this research. First, the researchers aim to collect evidence of validity and reliability on a modified version of a previously published instrument. Second, the researchers will use the data collected from this questionnaire to explore the relationships among course structure and organization, learner interaction, and instructor presence which have been reported to affect student satisfaction and perceived learning in online learning environments (Eom, Wen, & Ashill, 2006). In addition, the researchers will explore the mediating effects, if any, that student engagement has on student satisfaction and perceived learning (see Figure 1). Finally, the researchers will determine the differences, if any, in student satisfaction and perceived learning between students taking approved Quality Matters courses versus those that are not.

### **Review of the Literature**

This study will investigate the relationships of course structure, learner interaction (with each other and the instructor), and instructor presence, considering a previous study by Eom, Wen, and Ashill (2006) as a model upon which to expand. Using structural equation modeling to examine the “determinants of students’ satisfaction and their perceived learning outcomes” (p. 216), Eom et al. (2006) concluded that course structure, instructor feedback, self-motivation, learning style, interaction, and instructor facilitation significantly impacted student satisfaction. However, they found that only instructor feedback and learning style significantly affected perceived learning outcomes. They also found that student satisfaction was a significant predictor of learning outcomes.

Similarly, Richardson and Swan (2003) found that students with high overall perceptions of social presence scored high in terms of perceived learning and perceived satisfaction with the instructor. They suggest that it is important to focus on the interaction that takes place between students and instructors. Thus, active learning and student engagement is imperative for increased student learning and ultimately retention. According to Swan (2001), clarity of design, interaction with instructors, and active discussion among course participants significantly influenced students’ satisfaction and perceived learning.

While there have been many studies about student engagement in online learning environments, Kuh and his colleagues have suggested reported a positive self-reported learning gains, improved social skills, and greater student engagement in the learning process (Kuh & Hu, 2001; Hu & Kuh, 2001; Kuh & Vesper, 2001). Chen, Lambert, and Guidy (2010) further explored the effects of student engagement based upon the items on the National Survey of Student Engagement (NSSE) instrument (2008). As students are expected to work more collaboratively with classmates, students’ perception of their engagement in their learning and participation in courses increased (Thurmond & Wambach, 2004; Duderstadt, Atkins, & Hoeweling, 2002).

### **Research Questions**

What are the mediating effects of student engagement on student satisfaction and perceived learning? What differences, if any, are there in student satisfaction or perceived learning based upon Quality Matters best practices for online instruction? How does the model proposed by Eom et al. (2006) fit the data collected from students completing an online Educational Leadership program? What impact do course structure/organization, learner interaction, instructor presence, and student engagement have on student perceptions about their satisfaction and learning upon completion of an online course? What is the relationship, if any, between student satisfaction and self-reported learning outcomes?

### **Data Sources**

**Phase I: Pilot Study** – The researchers will collect evidence of validity and reliability of a modified version of a previously published instrument by completing a pilot study using a small sub-set of survey participants. The researchers will report internal consistency of the items on the instrument as well as test the proposed measurement model. This phase of the study will be conducted in fall 2014.

**Phase II: Study** – The researchers will use structural equation modeling to explore the relationships among course structure/organization, learner interaction, student engagement, and instructor presence on student satisfaction and perceived learning in online learning environments. In addition, the researchers will explore the relationship between the two outcome variables (perceived student learning and student

satisfaction). Finally, the researchers will explore the hypothesis that student engagement mediates the relationships between learner interaction, instructor presence and student learning and student satisfaction. This phase of the study will be conducted in spring 2014.

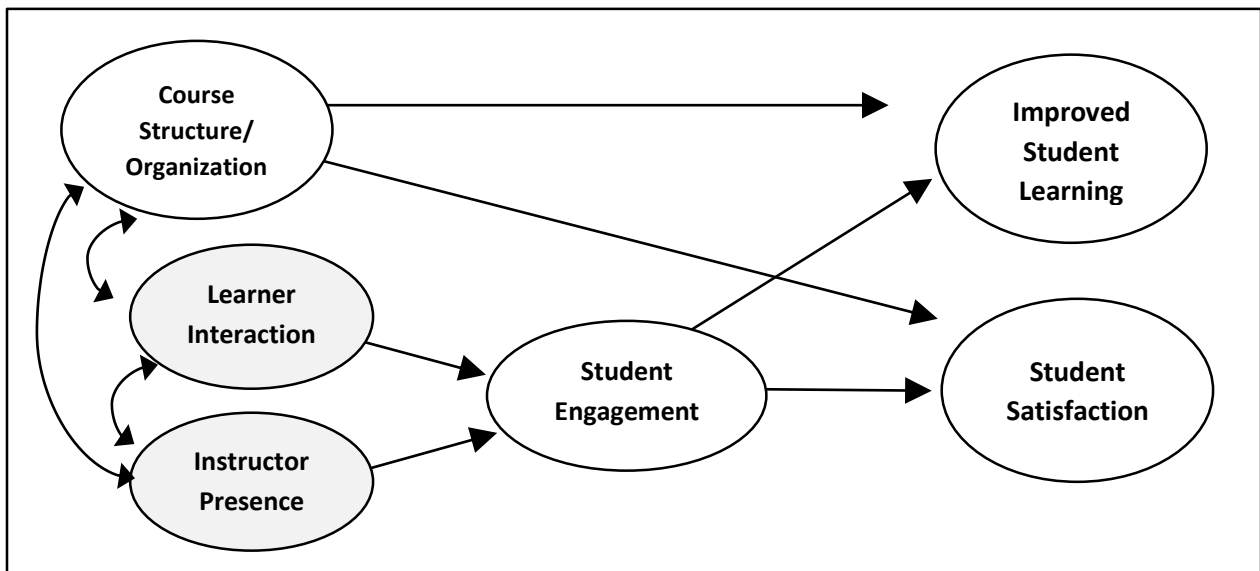
### Methodology

**Participants:** Students enrolled in a minimum of one online course during the spring 2015 semester. Study delimited to students pursuing a master’s degree in an online Educational Leadership program offered at a medium regional university located in the southeast.

**Procedures:** The researchers will modify an existing instrument in order to collect data about student satisfaction and learning outcomes from currently enrolled online graduate students. A cross-sectional design using survey methodology will be employed.

**Hypotheses:** We assert that course structure will have a direct effect upon improved student learning and student satisfaction. We also hypothesize that learner interaction and instructor presence will influence student engagement, which will in turn influence improved student learning and student satisfaction. Finally, we assert that each of the independent variables will have a relationship with each other.

**Figure 1: Conceptual Diagram Hypothesized Relationships**



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