Chapter 18
Understanding Critical Distance Learning Issues:
Toward a Comprehensive Model Predicting Student Satisfaction

Stephen K. Callaway
University of Toledo, USA

Saad M. Alflayyeh
University of Toledo, USA

ABSTRACT
Distance education has been the topic of a substantial amount of research. However, prior studies have shown mixed results when trying to determine if a difference exists in student satisfaction between students in distance courses versus traditional courses. Prior empirical studies have been too narrow in scope, and a more comprehensive model is needed to better explain the factors influencing student satisfaction. Therefore, the current study includes student demographic factors, comprehensive measures of student motivation, and course format, as well as specific course features included, to fully explain student satisfaction. Structural equation modeling is used to test the model. Results indicate a positive association between demographics and motivation, between motivation and course format, between one demographic factor and course format, between course format and preferred features, between course format and satisfaction, and between course features and satisfaction.

INTRODUCTION
Distance education is an increasingly important component of higher education. For example, according to Hatfield (2006), approximately 3.2 million students, or about one in six, completed at least one such class during 2005 (Hatfield, 2006; Jackson & Helms, 2008). As such, distance education has been the topic of a substantial amount of research. However, prior studies have shown mixed results when trying to determine if there is a difference in student satisfaction...
between students in distance courses versus traditional face-to-face courses (Hara & Kling, 1999; Hirschheim, 2005; Pucel & Stertz, 2005; Storck & Sproull, 1995). Such studies have often simply compared satisfaction between traditional and online students, without considering other important factors influencing satisfaction. Perhaps these empirical studies have been too narrow in scope, and a more comprehensive model is needed to better explain the factors influencing student satisfaction, including demographic factors, comprehensive measures of student motivation, the format of courses selected, as well as specific course features included.

Keegan (1980, 1996, 2002) has proposed various definitions of distance education. One is that distance education can be defined as “use of technical media, such as print, audio, video, or computer, in order to unite teacher and learner and deliver the content of the course” (Keegan, 2002, pp. 22-23). The key points of these definitions are the uniting of teacher and learner, and the two-way communication, which is conducted at a distance. Ultimately, distance education comprises both distance teaching, which focuses on delivering instruction to the learner, and distance learning, which focuses on maximizing learner cognition (Bryant, Kahle, & Schafer, 2005; Keegan, 1996, 2002).

In order to understand satisfaction with distance courses, we must understand the demographics of students who select distance vs. traditional courses and programs, particularly whether they are essentially the same market segment, entirely distinct, or comprise some overlap. Then, the issue is whether these market segments have identical, similar, or distinct motivational factors influencing what courses they select. As such, comprehensive multi-item measures of motivation are required, which encompass the various factors different students may value. Finally, the model needs to assess not only which type of course is selected (distance or traditional), but what specific course features are preferred. Then, a comprehensive multi-item construct for student satisfaction is needed for the predicted variable.

Therefore, the current study has constructed and empirically tested such a model. This study created a comprehensive model showing the mediators that may affect student satisfaction, based upon the literature and upon interviews with university administrators. Specifically, this study collected and examined the chief demographic factors of the market segments, the course format selected (traditional or distance), and the specific course features that may be offered in a course. Moreover, the variables student motivation and student satisfaction comprise comprehensive, multi-item constructs in order to better understand student behavior. That is, customers may be segmented according to certain demographic characteristics, and administrators may use this information to understand customer satisfaction and predict certain customer behaviors, and accordingly create better strategies (Andrews, Brusco, & Currim, 2010; Kumar, Norris, & Sun, 2009). Ultimately, the final model was tested using structural equations modeling (SEM). The model is shown in Figure 1.

In short, the key contribution of this study is presenting a comprehensive model that shows a complete picture that more fully explains the

---

**Figure 1. Comprehensive model predicting student satisfaction**

![Figure 1](image-url)

Hypothized relationships shown in black, exploratory relationships shown in grey dotted line.