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### A MIXED METHODS STUDY OF DISTANCE LEARNING GRADUATE STUDENTS' MOTIVATION AND PROGRAM SATISFACTION AT AN AMERICAN STATE UNIVERSITY

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#### Purpose

Although the Internet, cell phones, and various other technologies have only been available to the mainstream world for the last two and a half decades, within this time frame, technology can be viewed as one of the most disruptive forces in the history of humankind. Whether this disruption has been good or bad is a matter of debate. What is not debatable, however, is the fact that technology disrupted many societal conventions, including education.

Though traditional education still exists around the globe, the popularity of distance education is evident. It should be noted at the onset of this proposal that distance education is referenced by many names. Smart and Cappel (2006) mentioned, "Many writers refer to 'e-learning,' 'online learning,' and 'web-based learning' interchangeably..." (p. 202). Within this proposal, the researchers often refer to distance education as online learning.

According to Seaman, Allen, and Seaman (2018), "As of Fall 2016, there were 6,359,121 students taking at least one distance education course, comprising 31.6% of all higher education enrollments" (p. 11). Close to one in three higher education students is enrolled in online courses, but some of these students take courses in traditional settings at the same time. In addition to popularity, distance education has been increasing at a fast pace over the last two decades. Seaman et al. noted, "The proportion of the higher education student body taking advantage of distance education courses has increased each of the last four years. It stood at 25.9% in 2012, at 27.1% in 2013, 28.3% in 2014, and 29.7% in 2015" (p. 11).

Online learning opportunities are redefining the higher education landscape, and a review of data makes clear various trends. A majority (68.9%) of distance education students attends public universities, and many institutions of higher education are designing distance education opportunities for a more localized population (Seaman et al., 2018, pp. 13-18). What is not answered, however, by the aforementioned descriptive statistics associated with distance education at higher education institutions is the rationale behind online program selection and the factors that lead to student satisfaction of online learning.

At a Midwestern university, Bradbury (2018) noted that graduate enrollment increased 88% between 2014 and 2018, exclusively due to online learning. It was within the context of program growth of two graduate programs at a public university in the Midwest that researchers sought to better understand student rationale for selecting graduate programs in educational leadership and curriculum instruction and which factors contributed to overall distance learning satisfaction. Satisfaction matters since enrollment can be impacted by student satisfaction levels, and program viability depends in large part on enrollment. As Parahoo, Santally, Rajabalee, and Harvey (2015) noted, "Higher education institutions consider student satisfaction to be one of the major elements in determining the quality of their programs" (p. 1). To determine satisfaction, this study looked at various factors related to satisfaction. Choi (2016) noted there are many factors to consider with regard to satisfaction, and each factor plays a role in determining overall student satisfaction with a program.

#### Theoretical Framework

Malik’s theory (2010) was used to serve as a guiding framework for this study. Malik noted that “...the main factor of E-L [e-learning] implementation failure is the student’s satisfaction. There are so many factors that are affecting student’s [sic] satisfaction towards E-L. The main factors are students, instructor, interface of E-L environment and technical assistance” (p. 77). This framework proved useful as a lens through which online learning satisfaction could be viewed. In addition, the framework helped guide the construction of the survey, which served as the data gathering instrument.

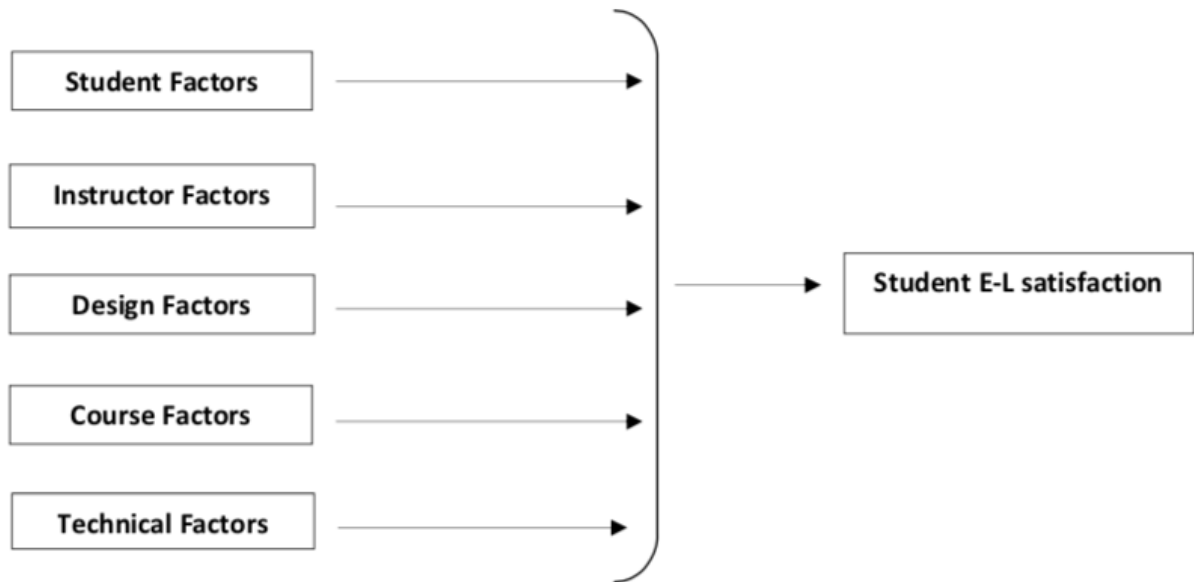


Figure 3. The framework outlines major constructs that specifically influence satisfaction with online learning environments. Adapted from “Factor [sic] Effecting Learner's Satisfaction Towards e-Learning: A Conceptual Framework,” by M. W. Malik, 2010, *OIDA International Journal of Sustainable Development*, 2(3), p. 78.

**Methods, Techniques, Modes of Inquiry, and Data Sources**

The researchers employed an embedded design for this mixed-methods triangulation study. Creswell and Plano Clark (2007) explained that “The Embedded Design is a mixed methods design in which one data set provides a supportive, secondary role in a study based primarily on the other data type” (p. 67). In this study, the qualitative data provided the supportive role, but an important one. When both data sets were utilized, the researchers were able to obtain a more detailed understanding as to why students had chosen the graduate programs under review and reasons associated with the satisfaction levels of their choices.

The researchers sought both quantitative and qualitative data through a single data collection instrument. The researchers utilized a Qualtrics survey that consisted of 23 questions. The first 21 questions elicited quantifiable responses via multiple choice or ranked choice responses, and the last two questions provided an opportunity to gather qualitative data through open-ended questions by focusing on positive aspects of the online programs and areas for improvement, respectively.

The survey targeted graduate students who took online courses during the 2017-18 academic year in the curriculum and instruction master’s degree and educational leadership master’s degree, specialist, and doctor of education degree programs at a public university in the Midwest. Since most curriculum and instruction students take two years to complete a master’s degree, most educational leadership students spend three years completing administrative licensure requirements, and doctoral

students are scheduled for three years for degree completion, more than one academic year of experience was represented via the survey results.

After data were collected, the quantitative data were analyzed using the Statistical Packet for the Social Sciences (SPSS). Descriptive and inferential statistics (i.e., t-Test) were calculated. Qualitative data were reviewed and coded as part of the concurrent data analysis procedures for purposes of triangulation within the embedded design, as explained by Creswell and Plano Clark (2007, pp. 136-142).

### **Results/Substantiated Conclusions**

Two hundred seventy graduate students received an invitation to participate in the study, 120 started the survey, and 113 submitted complete responses to all questions generating a return rate of 42%. The responses helped understand students' previous and current experiences with online learning. While some students had enrolled in online courses while completing their undergraduate degree, the largest majority had taken the bulk of courses while enrolled in the graduate program (94%). By the time of the study, more than half of respondents had completed at least three courses at MSUM (53%), and they had chosen this institution primarily because of somebody's recommendation or by browsing the internet (48% and 32% respectively).

The authors expected the place of residency to be the main driving factor to choose online programming (27%). However, it was primarily the students' working considerations that drove their decision (48%). While the authors were aware that graduate students lived in Minnesota, particularly considering that many seek out administrative licensures to practice in the state, there was an interest in exploring their location at the time of survey data submission. Each computer IP address was translated into a geographic coordinate that was later used to identify the location. This information showed that while most respondents were in Minnesota or North Dakota, which created the potential for geographic isolation, others were outside the state or even the continent (e.g., Korea, Kenya). Both national and global mobility and geographic isolation would necessitate distance learning. It is not surprising then that 58% of respondents indicated that they had chosen MSUM precisely because it offered an online program and that the online program made the completion of their degree much easier (88%).

When asked to select the two most important aspects of their online courses, students chose the organization (66%) as well as the content (40%). Navigation features, consistency in the design of modules, embedded links to assignments, opportunities to discuss issues collectively are all characteristics of online programs that students identified as enhancing their learning the most (82%). Likewise, instructors' ability to provide timely communications such as response to questions and feedback on assignments was an important expectation (34%), but the opportunity to meet synchronously with course instructor and classmates was a critically important instructional characteristic for most respondents (59%). Students' level of satisfaction is instrumental in online learning program growth; satisfied students will recommend the program to others (78%).

In order to measure the impact online classes had on students' perceptions of the quality of online programming, students were asked two sets of four questions each, with both sets exploring their opinions on the same issues (i.e., comparison to in-person learning, impact to the educational system, instructional level of rigor, perception of the online modality). Students had to provide responses as a pre- and post-scenario; that is, before having completed an online course and after having done so. The four scores on each one of those two sets were calculated and both mean scores were compared. A one-sample t-Test was run, it showed that students' pre-online learning scores ( $M = 9.05$ ,  $SD = 1.76$ ) were lower than students' post-online learning scores ( $M = 9.61$ ,  $SD = 1.74$ ), and this difference was statistically significant,  $t(113) = 2.10$ ,  $p < .00$ . The practical significance of this finding confirms students' satisfaction with best practices, as related to student, instructor, design, course, and technical factors, are present since

the value as both mean scores are fundamentally the same. In other words, students' high expectations prior to taking online courses were realized during their online learning experiences, which resulted in continued levels of high satisfaction.

In consideration of the quantitative findings and the theoretical framework of Malik (2010), evidence of student, instructor, design, course, and technical factors were present within the qualitative data. Through a coding process as described by Braun and Clarke (2006), the researchers familiarized themselves with the data, generated initial codes, searched for themes, reviewed themes, defined themes, and wrote up themes. Major themes that added clarity in support of the quantitative data included flexibility, which cut across multiple theoretical framework factors utilized in determining satisfaction. Flexibility afforded students an opportunity for busy professionals to do coursework when it was most convenient for them. Moreover, the asynchronous course design afforded flexibility, even though the limited synchronous meetings were mentioned approvingly. Geography was noted as a factor within the theme of flexibility, since geographic isolation precluded access to graduate course work without an online platform, in at least some cases. Beyond flexibility, course design and instructors emerged as themes. Courses were described as relevant, rigorous, and worthwhile. Programming emerged as well-organized and clear. Respondents described quality instructors who were innovative, approachable, helpful, and positive.

While most qualitative data were found to be positive and supportive of the quantitative findings, themes emerged involving technical, student, and instructor factors. Technical capacity was found to be a concern for less technology savvy students who were frustrated by technology requirements and processes to gain access to courses and the inability of instructors to function technology support roles. Although arguably instructors have pedagogical and content expertise, not technology expertise, student expectations suggested that online instructors should have a basic capacity to provide some support. Beyond technical capacity limitations of students and instructors, instructor organizational skills, such as sending out syllabi prior to the start of the online course, updating courses, clear communication, and timely feedback were mentioned under the theme of instructor organizational skills.

### **Scholarly Significance**

Given the factual increase of individuals who opt for distance education, studies such as this one are critical for purposes of continuous program improvement. While this study is not generalizable, localized results, when considered within the context of available literature, can provide some sense of direction for institutions of higher education that wish to increase online programming. Moreover, this study could serve as a template for programs desiring insight regarding existing online educational programming.

Future research at this particular Midwestern institution would probe some of the concerns that emerged from the thematic analysis. Although the satisfaction level of respondents was high in consideration of the quantitative data, qualitative data both supported the quantitative results and provided additional opportunity for continuous program improvement in the name of increased distance learning satisfaction.

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