



# Online graduate educational technology program: An illuminative evaluation



Andrew Topper, Ph. D.<sup>a,\*</sup>, Sean Lancaster, Ph. D.<sup>b</sup>

<sup>a</sup> Educational Psychology, Grand Valley State University, Grand Rapids, MI 49504, United States

<sup>b</sup> Special Education, Grand Valley State University, Grand Rapids, MI 49504, United States

## ARTICLE INFO

### Article history:

Received 7 January 2016

Accepted 11 October 2016

Available online 21 October 2016

### Keywords:

Educational technology  
Program development  
Program evaluation  
Graduate education  
Online instruction  
Higher education

## ABSTRACT

With continued growth in online courses and programs in higher education a pressing need exists to evaluate their perceived quality and effectiveness. Evaluation criteria – course evaluations, student surveys and retention data – from previous online program evaluations were used in this study. An illuminative evaluation using descriptive and scientific analysis was undertaken for a graduate degree program in educational technology. Course and program-level data were analyzed to compare quality for two programs – an existing hybrid and new online. Analysis of student enrollments, course evaluations, survey results, retention, and time to completion reveal similar experiences reported from students in both programs. Results suggest that a majority of students were satisfied with their graduate experience and view those experiences as worthwhile. This illuminative evaluation provides evidence that online graduate programs are comparable and can satisfy stakeholders' expectations while maintaining high levels of quality.

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## 1. Introduction

Allen and Seaman (2011) reveal that 77% of individuals surveyed in public universities agree with the statement “online education is critical to the long-term strategy of my institution” (p. 29). The same study reported online enrollment as 31.3% of total enrollment in those public universities. Regarding online education, Allen and Seaman found a 34.4% steady enrollment in 2011 (p. 38) and a growth rate for online enrollment of 9.3%, with 32% of students taking at least one online course. Their definition of an “online course” is one having at least 80% of course content delivered online.

This growth in online courses and programs raise questions concerning effectiveness and student success when compared with traditional, on-campus offerings. Concerns about students' persistence and success in online courses surfaced shortly after institutions started offering them (Simonson, Schlosser, & Orellana, 2011). Deka and McMurry (2006) offered a baseline definition of student success: “Two common indices for measuring success are class grade and retention rates” (p. 2).

Tallent-Runnels et al. (2006) examined early studies of online courses and found that most were descriptive and lacked sufficient rigor. The authors defined three types of courses: traditional, face-to-face; hybrid or blended, with some online activities; and online, with no face-to-face activities. Four themes that impact online instruction emerged from their review: course environment, learner outcomes, learner characteristics, and institutional administrative characteristics. Conclusions drawn from this research identify students' preferences for convenience and self-paced approach to online courses, especially those with prior experience, the critical role of interactions in student success. Other researchers have identified loss of social connectedness, often operationalized in the literature as social presence, as an additional drawback with online courses.

### 1.1. Student success in online courses

Initial online course research demonstrated mixed results, which likely reflects the multiple factors successful online learning is dependent on – i.e., institutional support, pedagogy, faculty objectives, content, student characteristics, etc. Hara and Kling (2000) evaluated student experiences in Internet-enabled courses (hybrid) using a qualitative case study approach and found no evidence of isolation, increased student anxiety and frustration. They identified adequate technical support, clear expectations,

\* Corresponding author.

E-mail addresses: [toppera@gvsu.edu](mailto:toppera@gvsu.edu) (A. Topper), [lancasts@gvsu.edu](mailto:lancasts@gvsu.edu) (S. Lancaster).

development of social presence and prompt feedback from faculty as indicators of success.

More recent research comparing student course evaluations in online, hybrid and traditional formats (Topper, 2007) did not find statistically significant differences using measures of instructional quality. Richardson (2009) also found no significant difference in academic quality for online courses, with students adopting a different approach to learning spending more time learning, as well as appropriate training and support required for faculty.

In contrast, Atchley, Wingerbach and Akers (2013) reported statistically significant differences in course completion and academic performance between 2004 and 2009 based on format and discipline. Mayes, Luebeck, Akarasriworn, and Korkmaz (2011) identified learners, faculty, medium, community and discourse, pedagogy, assessments and content as elements of successful online courses.

Lee and Choi (2011) reviewed research on online course dropout rates and identified three main categories that influence students' decisions: student factors, course/program factors and environmental factors. Student factors include academic background, knowledge and skills, and psychological attributes, while course/program factors include design, institutional support and interactions. Environmental factors include work commitments and supportive learning environments. The authors also provide specific strategies for addressing these factors in their review.

Hart (2012), in her review of the literature on student persistence in online courses, provides a more nuanced interpretation of persistence, contrasting it with attrition – withdrawal from an online course – and identified factors that might contribute to persistence: satisfaction with online learning, a sense of belonging or community, motivation, peer and faculty support, time management and increased communication with instructors. Crawford-Ferre and Wiest (2012) identified course design, interactions and faculty preparation and support as necessary for effective online instructional practices.

While initial evidence regarding online courses indicate some areas of concern – retention, increased student anxiety, frustration, timely faculty communication and lack of social presence – more recent research measuring student experiences in online courses are comparable with traditional and hybrid formats. Research examining experiences of students in online or distant programs is less prominent but early results are promising.

### 1.2. Student success in online programs

Online graduate program evaluations are less prominent in the literature, as indicated by Horne and Sandmann (2012). Of over 150 published research articles they reviewed, only five met the author's criteria for inclusion in their literature review. The author's found that: "Program evaluation research is needed to test theoretical evaluation models or approaches to determine which are most useful and valuable in program planning and evaluation" (p. 575).

Martinez, Liu, Watson, and Bichelmeyer (2006) evaluated an online instructional design and technology master's degree using faculty and administrator interviews, and student surveys collected in 2004. Their results indicate the online program was equivalent in terms of quality, admission and evaluation criteria, while faculty found it more difficult and time consuming teaching online. Mills (2007) evaluation of an online and on-campus nursing program from 1997 to 2003 included student admissions, outcome measures, course grades, time to completion, retention and graduation rates. The author found that online students took longer to complete their program but had a higher overall retention rate, and while online graduate program enrollment increased, on-campus enrollment steadily declined.

Muller (2008) interviewed undergraduate and graduate women enrolled in on-campus and online programs focusing on learners' persistence to completion and found multiple barriers or factors that contribute to persistence: motivation, engagement in learning communication and appreciation for the convenience of online programs.

Faculty responsibilities typically include course development, instruction, course structure, evaluation and assessment among other factors (Crews, Wilkinson, Hemby, McCannon, & Wiedmaier, 2008). Faculty members are also responsible for timely communication with students, developing a sense of community or belonging, assessment, and structuring course materials in pedagogically appropriate and accessible forms.

McDonnell et al. (2011) evaluated an online teacher education program at the University of Utah in severe disabilities using pre- and post-test scores, IEP scores, performance within the program, average GPA in specialized courses, PRAXIS II composite scores, and student course evaluations. The authors' report no significant differences for students in the online program compared with their on-campus cohorts on measures of learning.

Paul and Cochran (2013) describe institutional responsibilities including infrastructure (e.g., server space, reliable internet speeds, and learning management systems), tutorials for students and faculty, instructional technology support, and help desks among other factors associated with successful online programs. While essential for successful development and implementation of online programs, institutional factors were addressed prior to program implementation in the North Central Association (NCA) accreditation proposal and are not considered as part of this illuminative evaluation.

A case study by Czerkawski (2013) described an online educational technology master's degree implemented in 2008 focusing on emerging technologies using a case study approach, highlighting the importance of pedagogical effectiveness for measuring program quality with attention on influences of university culture. The author recommends conducting a preliminary evaluation before a more comprehensive program evaluation.

Gazza and Hunker (2014) focused on factors that contribute to increased student retention in online programs – social presence, course/program quality and individual student characteristics. Their analysis of twenty-three articles exploring retention in online programs indicate that the issue is multidimensional and recommend specific strategies including holding virtual office hours, promptly replying to student inquiries, establishing clearing criteria, soliciting feedback via course and program evaluations, offering mandatory online student orientation and facilitating student-to-student and student-to-faculty interaction.

The small number of online program evaluations published to date provide some optimism for the future. Comparisons with on-campus and hybrid programs measuring quality, grades, time to completion, retention and graduate rates all indicate similar results online. A variety of factors clearly are required for success, including student characteristics, faculty development and pedagogy, and institutional support.

Based on a review of the salient research on online graduate course and program evaluations, the following data was used in this study: course-level – enrollments, student evaluations, perceptions of course quality, and retention rates; and at the program level – enrollments, retention rates, time to graduation and student perceptions of quality and value.

### 1.3. Purpose

The purpose of this illuminative evaluation was two-fold: (a) to examine data reflecting enrollments and quality of an online graduate degree program in educational technology, compared

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