



# A mixed methods study of graduate students' self-determined motivation in synchronous hybrid learning environments



Nikolaus T. Butz<sup>a,\*</sup>, Robert H. Stupnisky<sup>b</sup>

<sup>a</sup> University of North Dakota, Department of Management, 330 Gamble Hall, Grand Forks, ND 58202-8377, USA

<sup>b</sup> University of North Dakota, Department of Educational Foundations and Research, 252 Education Building, Grand Forks, ND 58202-7189, USA

## ARTICLE INFO

### Article history:

Received 26 November 2014

Received in revised form 26 September 2015

Accepted 16 October 2015

Available online 17 October 2015

### Keywords:

Synchronous hybrid

Online learning

Motivation

Self-determination theory

Mixed methods

Relatedness

## ABSTRACT

The purpose of this multiphase mixed methods study was to apply Deci and Ryan's (1985) self-determination theory in an investigation of the relationships among students' need satisfaction, motivation, and achievement in synchronous hybrid learning environments (i.e., simultaneously teaching on-campus and online students using webconferencing). The results from Survey 1 indicated that online students reported significantly lower levels of relatedness than their on-campus counterparts. Follow-up interviews were conducted with purposefully chosen students and faculty members. The findings suggested that four themes impact synchronous hybrid learning: peer relatedness, technology influence, instructor impact, and program structure. In vivo quotations were used to develop a scale to assess participants' self-efficacy of relatedness development. Survey 2 data indicated that the new scale had good psychometric quality and that students reported significantly greater levels of self-efficacy for relatedness development with classmates in their same attendance mode than with peers in the opposite format.

© 2015 Elsevier Inc. All rights reserved.

## 1. Introduction

Higher education is currently caught between two conflicting trends: expanding enrollments and contracting institutional budgets (Barr & Turner, 2013). The traditional brick and mortar model of higher education is not correctly positioned to accommodate these opposing forces. Consequently, many universities have adopted various forms of technology-mediated course delivery as a cost-effective approach to improving student access (Butner, Smith, & Murray, 1999). To date, much of the focus has been on online asynchronous courses; however, these time-delayed systems have been found to induce feeling of isolation (Liu, Magjuka, Bonk, & Seung-hee, 2007). Specifically, asynchronous programs lack opportunities for students to interact in real time (West & Jones, 2007).

In response to the shortcomings of asynchronous education, an increasing number of postsecondary institutions are beginning to implement *synchronous hybrid delivery* as a course option that provides simultaneous instruction to mutually exclusive groups of online and on-campus students in a single learning environment (Roseth, Akcaoglu, & Zellner, 2013). Although synchronous hybrid courses provide an interactive space for both online and on-campus students, little is known about how students perceive this emerging delivery mode and what impact their perceptions may have on associated learning

outcomes. Glazer and Wanstreet (2011) noted that online and on-campus synchronous hybrid students are still susceptible to feelings of social isolation; that is, they often perceive their interactions as being limited by the incompatibility of divergent attendance modes. The role of need satisfaction and motivation within a given social context was initially addressed by Deci and Ryan's (1985) self-determination theory (SDT). When students feel that their need for social interaction has been thwarted, they become disengaged, leading to declines in motivation and academic success (Rovai, Ponton, Wighting, & Baker, 2007). The purpose of this study was to investigate the relationships among graduate students' need satisfaction, motivation, and achievement (self-determination theory; Deci & Ryan, 1985) using a multiphase mixed methods design (Creswell & Plano Clark, 2010).

### 1.1. Synchronous delivery

Drawing on the seminal variables of space and time, Chow (2013) defined synchronous delivery as "two or more people in the same real or virtual space at the same time" (p. 127). Two-way, real-time delivery systems have existed since the early ITV networks of the 1950s (Saba, 2000); however, more recently, web-conferencing platforms have emerged as the de facto approach to synchronous course delivery (Bower, 2011).

At present, the most commonly used synchronous web-conferencing platforms include Adobe Connect™ (formerly Macromedia Breeze; Adobe Systems Inc., 2014), Blackboard Collaborate™ (formerly Wimba Classroom and Elluminate Live!; Blackboard Inc., 2014), and WebEx

\* Corresponding author.

E-mail addresses: nikolaus.butz@my.und.edu (N.T. Butz), robert.stupnisky@email.und.edu (R.H. Stupnisky).

Collaboration Suite (Cisco Systems Inc., 2014). Despite the wide array of vendors offering synchronous delivery solutions, Bower and Hedberg (2010) noted that each platform offers similar features:

- Presentation delivery — PowerPoint presentations or general documents
- Screen-sharing — entire desktop or single window
- Webcam — ability to stream a live video feed
- Text-chat — capacity to send to all or selected individuals
- Whiteboard — various color and font options as well as document overlay
- File upload/download — selected from computer or content library
- Polling — allowing questions to be displayed and participants to vote
- Attendee list — including status indicator and raised hand icon
- Notepad — to communicate instructions or enable collaborative authoring (p. 465)

This study examined a mixed group of online and on-campus students enrolled in graduate programs that utilized the Adobe Connect™ system.

### 1.2. Self-determination theory of motivation

Self-determination theory (SDT) is a humanistic approach to motivation that explicates the dynamics of need satisfaction, motivation, and well-being (Deci & Ryan, 1985; Ryan & Deci, 2000). Deci and Ryan (2000) postulated that greater well-being is achieved through the satisfaction of three basic human needs: autonomy (the quality of being self-governing), competence (individuals' perceptions that they have the capacity to complete required tasks), and relatedness (feeling connected with others). From this perspective, a social context can support optimal motivation and well-being by providing opportunities for individuals to fulfill their basic needs, while the lack of contextual support can undermine individuals' motivation and well-being (Ryan & Deci, 2000).

According to Ryan and Deci (2000), three main types of motivation mediate the relationship between need satisfaction and well-being: intrinsic motivation (behavior for the inherent satisfaction found in the task), extrinsic motivation (behavior in relation to a separable outcome), and amotivation (choosing not to perform a behavior or doing so without intent). Ranging from externally- to internally-focused regulation, Ryan and Deci (2000) further divided extrinsic motivation into four categories: external (obtain rewards or avoid punishment), introjected (avoid feelings of guilt or anxiety), identified (achieve alignment with personal goals), and integrated (assimilate behavior to internal needs and values). Research in traditional classrooms has found stable relations between need satisfaction, motivation, and well-being (Guay, Ratelle, & Chanal, 2008); however, past empirical studies of motivation in technology-mediated learning environments lack methodological consistency and theoretical focus.

### 1.3. Motivation in technology-mediated learning environments

To date there has been a great deal of variation in the extant literature on technology-mediated learning environments. Although numerous studies in this area have shown that motivation is a critical factor affecting achievement (e.g., Giesbers, Rienties, Tempelaar, & Gijsselaers, 2013b), there has been little agreement in terms of what motivational antecedents are most salient. Therefore, a thematic literature review was conducted based on theoretical frameworks, disciplinary contexts, and data collection techniques.

In terms of theoretical focus, four studies were identified that used self-determination theory to examine motivation in technology-mediated learning environments. Chen and Jang (2010) found that students' perceived satisfaction in terms of autonomy, relatedness, and competence is associated with greater levels of self-determined

motivation in online programs. Using data from the United Nations Staff College, Roca and Gagné (2008) determined that perceived relatedness in online courses positively predicted learners' intention to continue in their program. In a study of synchronous online tutoring sessions, Giesbers, Rienties, Tempelaar, and Gijsselaers (2013a) showed that higher levels of relatedness were associated with intrinsic motivation. Moreover, Butz, Stupnisky, Peterson, and Majerus (2014) found that online synchronous hybrid students reported significantly lower levels of relatedness than their on-campus counterparts. Aside from these studies, however, explicit tests of SDT in technology-mediated learning environments are rare.

The current study examined the motivational context of synchronous hybrid programs that aim to prepare students for upper-level positions in professional sectors of the economy. Therefore, disciplinary context was identified as an informative consideration for this thematic literature review. According to the National Center for Education Statistics (NCES; 2013), approximately 40% of postsecondary degrees awarded through technology-mediated programs were in business and profession disciplines. In one study of a synchronous hybrid economics program Giesbers et al. (2013b) found that intrinsic motivation was positively correlated with final exam scores. Likewise, Cotler, Kassab, and Yuan (2013) examined class participation and perceived stress in a hybrid business program and found that students typically reported less stress in sessions conducted online compared to on-campus. Liu et al. (2007) used evidence from asynchronous discussion boards in business courses to determine that students are more motivated to engage with peers when teachers model effective online communication skills (e.g., summarizing previous comments, presenting questions, and injecting knowledge from web resources).

The final phase of the thematic literature review examined three relevant mixed methods studies, which are detailed below to inform the methodological approach used in the current investigation. Two of the three studies employed an explanatory sequential design (Creswell & Plano Clark, 2010), wherein individual interviews were used to explain the results obtained from quantitative surveys. Using this methodology, Irvine, Code, and Richards (2013) found that synchronous hybrid tools that mimic face-to-face delivery can help students maintain closer connections with peers. Moreover, Hrastinski (2008) found that students who verbally commented on their ability to work well with peers also had higher scores in terms of self-reported motivation. Taking a different approach, Watson (2010) implemented an embedded design in which students were asked to answer open-ended questions as part of a primarily quantitative survey. This study corroborated quantitative results, which showed largely favorable perceptions of online interaction, with qualitative findings, which revealed that students perceived peer interaction as an important feature of graduate education.

The importance of social interaction was reported not only in the mixed methods studies, but also in the SDT and discipline-based research. Variables such as student interaction, social support, and sense of community were identified as key elements in eight out of the 10 studies reported above. These findings support the use of the SDT framework in that these social elements are akin to relatedness, which is a main variable in Ryan and Deci's (2000) theory.

A limitation of the existing research is that no previous studies have sought to examine synchronous delivery using more than two phases of data collection. The current mixed methods investigation builds on the existing research in that it rigorously applied SDT in a three part study that integrated quantitative and qualitative phases.

### 1.4. The current study: a multiphase mixed methods investigation of SDT in synchronous hybrid programs

The intent of this study was to apply SDT in a multiphase mixed methods investigation of the relationships among students' need satisfaction, motivation, and achievement in synchronous hybrid learning environments. This multiphase approach involved a sequential design

Download English Version:

<https://daneshyari.com/en/article/357705>

Download Persian Version:

<https://daneshyari.com/article/357705>

[Daneshyari.com](https://daneshyari.com)