

SUPPORTING NON-TRADITIONAL STUDENTS IN ONLINE ENVIRONMENTS: A REVIEW

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Abstract

In ever-evolving electronic learning environments, course retention of students in online courses is significantly lower than those studying in traditional classroom contexts. Through a research synthesis, three major factors seem to impact online course retention: levels of student engagement, the student's ability to self-regulate, and quality of teacher interaction and feedback. If any of these factors are missing from the student's online learning experience, it will be more difficult to keep the student engaged in the material, motivated, and connected to the teacher and classmates.

Keywords: *student outcomes, e-learning, distance learning, student engagement*

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Introduction

Due to an increase in demand for higher education in U.S. institutions, there has been a steady increase of the utilization of online education in various contexts. With the flexibility of time and location that electronic learning (e-learning) provides, one might expect a positive correlation between utilization of e-learning and student course retention. Yet, there is substantial evidence to the contrary given that since as early as 2000, the issue of attrition in e-learning courses has remained at the forefront (Carr, 2000). In fact, as of 2002, retention for non-traditional students is nearly half that of traditional students (Choy, 2002). Non-traditional students are comprised of those who: are over the age of 30, work full-time, and care for dependents (National Center for Education Statistics, 2011). Naturally, with increased job, familial, and now academic demand, non-traditional students are often faced with a difficult choice. Many students drop their online courses due to these time and financial constraints (Fairchild, 2003; Kohler Giancola 2009). However, for students who do not lead such demanding lives, the question remains: why drop out? From the student's perspective, it is often a feeling of increased pressure. In an informal interview with researchers Packham et al. (2004), students were asked to choose from a set list of reasons (other than life constraints) for dropping out and rank them using a Likert scale, and reported that the most salient factors were: the load of coursework, little understanding of the course, and lack of computer skills. Thus, further investigation is needed to examine why students often feel this way, and researchers should suggest ways we can facilitate online education in a way that is both perceived positively by students and leads to positive academic outcomes. This consideration of the topic has led to the research question: *How can student performance in online education be characterized? What are the implications for future pedagogical and organizational strategies?*

Three Components

A review of the literature surrounding the question of student retention in e-learning environments reveals three significant themes: the level of student engagement, the student's self-regulatory abilities, and the degree of teacher interaction and feedback. These three factors are equally important to student academic outcomes in online education. If one of the components is not present, the student is less likely to perform well in the course.

Student Engagement. The question of how to keep students engaged in class is an ever-evolving one, whereas methods of delivery, classroom structure, and curriculum continue to change. Many thought that increasing the sophistication of software used in online education would increase student engagement in the course, but as of 2010, no breakthroughs have been reached (Boyle et al., 2010). In fact, many online education courses communicate solely through email today. In an effort to better understand how to engage students more deeply in the material, Boyle et al. (2010) matched students in an online course with peer mentors. In assigning subjects to groups, 21 students received a mentor, and the remaining 19 did not. The results show that 89% of the mentored students retained the course, compared to 67% of the unmentored students. While the sample size is too small to be statistically significant, this does seem to suggest that the social connection and support which comes from peer mentoring could

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be significant in increasing student engagement. Additionally, students who were more engaged in the material retained the course more often than students who studied alone.

The other crucial aspect of student engagement comes from examining adult students and how they differ. Malcom Knowles (1974) theorized that adult students are different from children in certain ways:

1. Adults are motivated when they utilize their own interests in education.
2. Their learning centers around one's life experiences.
3. Experience is the best source for adults.
4. Adults are self directed – instructors should engage in mutual inquiry, rather than "knowledge transmission."
5. Individual differences among people increase with age. Adult education must make provisions for differences in time, style, pace, and place of learning.

Based on this theoretical model, the best way to maintain a significant level of student engagement in adult learners is to base learning on real-world scenarios and encourage use of their experiential knowledge and worldly interests when connecting with the course material (Britt, 2015).

In order for adults to fully engage in the material, connection is key. Students must be able to connect with their instructor, their peers (or mentors) and with their own experiences when utilizing online education. To support student retention in online environments, the human connection must be emphasized.

Self-regulation and social presence. Non-traditional students bring different perspectives and skills to the table than traditional ones. One of these traits is self-regulation, which is a combination of meta-cognitive skills related to behavior in stressful environments (Vallieres, 2008). Recent empirical studies have shown the practical implications that a student's self-regulatory abilities can have on their academic outcomes.

First, students who exhibit a high level of emotional intelligence are more likely to succeed academically in web-based environments (Angelaki & Mavroidis, 2013; Zembylas, Theodorou, Pavlakis, 2008). This is due to the student's ability to regulate their emotions and remain calm when faced with academic stress. In a study by MacCan (2019), a direct correlation between emotional intelligence and academic outcomes is apparent. In this study, emotional intelligence is defined as (1) the ability to recognize emotion in others, (2) a meta-cognitive ability to recognize emotion in yourself, and (3) the ability to use both observations in a way that dictates situationally appropriate behavior. This skill also translates well to a high level of social presence. Social presence in online education has been defined as "the degree to which a person is perceived as a 'real person' in mediated communication" (Gunawardena & Zittle, 1997, p. 9). It has been observed that social presence is strongly correlated with academic outcomes and overall student perception of a course. An example of this lies in Hostetter's (2013) work, in which researchers examined the types of comments in online discussion forums, which seemed to carry a high level of social presence according to Gunawardena & Zittle's definition. These factors included: affective comments such as use of humor or self-disclosure; interactive comments such as agreement, quoting another's post, compliments, or appreciation; and cohesive comments such as using vocatives, inclusive pronouns, and salutations. The students who used the above speech acts most scored highest on the Classroom Assessment Tool at the end of the course.

Second, the way in which students are oriented toward their goals is a component of self-regulatory abilities. In a study of 2,040 adults enrolled in various open distance learning courses, Neroni et al. (2018) examined the different ways students are oriented toward their goal of

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attaining a degree and how this affects their academic outcome. Contrary to their original hypothesis, students who were competitive and sought to perform better than their classmates received higher grades at the end of the course compared to students whose goals were only to attain mastery of the subject. A student's goal-orientation is the practical application of their intrinsic motivation, which is another important factor of self-regulation. This conclusion was demonstrated in a study that applied an intervention to online students with low optimism regarding their online studies (Hamm et al., 2019). In the study, students who received a "motivation treatment" retained their enrollment in the course and received higher grades than the control group.

Third, the way in which a student deliberates over problems and concepts can tell us more about how they self-regulate. According to Kahn (2018), students employ different methods of deliberation depending on their social environment. These methods of deliberation were based on a theoretical approach by Archer (2003) in which there are four modes of deliberation: autonomous, communicative, meta-, and fractured reflexivity. Archer argues that each of these methods of deliberation are individually specific, rather than situational. On the contrary, upon investigation into this theory Kahn (2008) found that in group settings, students who are classified as "communicative reflexives" tend to deliberate socially, that is, to discuss their thoughts with others before taking action, but may deliberate in other ways in different settings. Similarly, in isolated settings, students who are "autonomous reflexives" tend to deliberate internally before making decisions, but do not exclusively subscribe to this method alone (Kahn, 2018). According to Archer's (2003) model of deliberation, "meta-reflexivity" (deliberation on deliberating) and "fractured reflexivity" (deliberation based in anxiety and short-term solutions) are also methods of decision-making that have been observed in adult students. These methods, however, were not as frequent in occurrence as communicative reflexivity and autonomous reflexivity. Awareness of the different models of deliberation that students may use could be helpful in designing curriculum that supports individual and group work.

In sum, adults generally do well with regulating their emotions, their goals, and the meta-cognitive ways of solving problems. However, if online classroom environments do not support or facilitate motivation, goal-orientation, or the social presence aspect of group discussions, students can become frustrated, isolated, and lose connection and interest in the course. This can have consequences, such as resulting in lower academic outcomes overall.

Teacher feedback. In online courses and especially distance learning courses, students may have little to no contact with the professor other than answering questions via email correspondence. An online presence of the teacher is important for connecting the student more closely to the material and helping them stay motivated and engaged. Teacher feedback, as it appears in this review, is defined as "interaction designed to promote learning between professor and student or between students" (Wolsey, 2008). With such a broad definition, this can be in the form of emails, directed comments on online discussion boards, feedback on assignments, or video chat meetings. These teacher-student interactions must be meaningful in order to be effective. That is, it is not enough to simply "check in" on students. In fact, one study by Campbell (2014) supports this claim by showing that casual teacher-student interactions, such as friendly reminders and supportive emails have no impact on academic outcomes at the end of the term.

These findings beg the question: what characterizes meaningful teacher-student interactions? Students strongly prefer feedback on their assignments as well as a high level of teacher immediacy, which is the seemingly immediate teacher availability and response to

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questions (Martin, Wang, & Sadaf, 2018). To demonstrate this, Martin, Wang, and Sadaf (2018) collected various instructor-led facilitation strategies in their empirical study on student perception of helpfulness of facilitation strategies which increase instructor presence, connectedness, and engagement. These strategies include: video-based instructor introduction, being able to contact the instructor in multiple ways, being present in discussion forums, instructor timely response to questions and feedback on assignments, personal responses to student reflections, and self-created lesson materials. Overall, students strongly preferred receiving timely responses to questions and feedback on assignments over all other facilitation strategies. This is consistent with the findings of Campbell (2014), in which students reported no additional feelings of teacher presence from messages which were emotional in style, and not related to feedback. Combining student preference for timely teacher feedback with a lack of academic outcomes where it is not present suggests that teacher feedback is a crucial component to retaining student engagement, and thus, performance.

Implications

Performance in online education for non-traditional students is maximized when students have constant, meaningful connections and feedback both from their peers and the instructor. In addition, in order to engage adult students, course material should allow students to connect knowledge in the course with experience drawn from life. Based on theories of goal-orientation previously discussed, a competitive component may be added to improve the average student performance in the class (Neroni et al., 2018). Finally, instructors should provide ample opportunity for students to share ideas and socialize in an academic setting, whether that be a social media platform, an online discussion forum, or other web-based software. Instructors should ensure students are optimistic about their abilities in the classroom, perhaps by providing periodic reviews of students and reminding them of their successes thus far (Hamm et al, 2019). If these factors are taken into consideration, performance of these non-traditional students may be expected to improve.

Conclusion and Limitations

Through sophisticated examination of the factors surrounding retention of students in e-learning courses, three contributing factors have appeared across studies: levels of student engagement with materials and peers; the student's self-regulatory abilities, and the amount and quality of teacher feedback given. A weakness in any of these components can lead to poor academic outcomes, and in many cases, attrition of the course. This review is not without limitations. Most notably, in the field of instructional technology and growing attention to open distance learning, the organization of online courses and tools available quickly evolve. While adult learning theory and pedagogical strategies remain valid, the technology on which many of the studies were based may soon become obsolete, necessitating future re-evaluation. Furthermore, studies in this review examined institutions of higher education not only in the

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U.S., but also in the UK and Australia. Cost of education and other socioeconomic factors surrounding this topic may vary slightly between countries.

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