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Online Student Engagement: Problems and Potential Solutions

Abstract: Students in online-only degree-seeking programs are less likely to complete courses and programs of study than their peers in face-to-face classes. Student disengagement is one of the greatest risk factors for non-completion of courses and programs of study. For non-traditional students the achievement gap is even greater. This article discusses the factors that lead to student disengagement for non-traditional students and potential solutions.

Keywords: online education, student engagement, non-traditional students, adult learners

Getting a college education is often seen as a reliable way to improve one's chances in the job market. Many adults who, for a variety of reasons, did not attend or complete a college degree immediately after high school have found themselves in the predicament of having to compete for jobs with younger, more educated workers, or are in low paying positions where a degree provides potential for advancement. The growing demand for educational opportunities for non-traditional students[1] has fueled the rise of online-only degree awarding programs over the past decade. [2] While the increase of availability of programs for non-traditional students has led to greater educational opportunities, it has not thoroughly addressed the issue of retaining online students. Online-only students are far less likely than their face-to-face peers to complete classes and programs of study (Carr, 2000).The reasons why retention and completion are so problematic for online students are complex and hotly debated.[3]

[1] I define non-traditional students as students who had a four-year or greater gap between high school graduation and attending college or those who started college immediately after high school but have not returned to complete it in at least four years. These students are also undergraduate, not graduate students. Generally, these adults are either actively working, out of work and seeking work, or returning to the workforce after exiting military service.

[2] The focus of this article and my research in online-only courses of study like the online-only program at Columbia College of Missouri (http://ccis.edu), which awards undergraduate degrees and not massively open online courses (MOOCS).

[3] A cursory search on Google Scholar (http://scholar.google.com) for articles concerning the term "online student retention problem" since 2011 yields over 20,000 results.

In her review of recent literature on the subject, Carolyn Hart distilled the current research into eight key factors as to why online-only students fail to continue their studies:

- Students have decreased ability to process verbal information
- Students lack basic computer skills or are distracted
- Students who are not going to graduate within two semesters
- Students who have difficulty accessing online resources
- Student isolation and disengagement
- Students who do have ready access to computers or the Internet
- Students' personal time constraints, such as work and family obligations
- Lack of responsiveness from instructors and staff

Hart concludes that even though more institutions are creating online-only programs at an increasing rate, and course delivery systems have improved, low student retention continues to be a substantial problem and more needs to be done to combat it (Hart, 2012).

These conditions have a greater impact on non-traditional students/adult learners as they already have additional stressors compared to traditional students (Giancola, 2009). A few key factors stand out for non-traditional students/adult learners. The main three issues are access to online resources, isolation/disengagement, and personal time constraints. Most online programs are using Learning Management Systems (LMS) such as Blackboard or Desire2Learn. These platforms are problematic. Sites crash, students accidentally get locked out of quizzes, and user interfaces inexplicably change without warning from a student's perspective. Adult learners generally have enough going on in their daily lives that a disruption when trying to get course work done means that they have to take time away from other obligations to resolve the issue (Kleinman, 2001).

Isolation and disengagement are another issue that has a higher impact on non-traditional students. Unless an adult learner is taking a course face-to-face in addition to online courses, chances are they do not interact with other students outside of discussion forums. Getting real interaction in discussion forums is difficult at best. If a student is having difficulty in a course, they can only rely on instructors for help. If the instructor does not respond in a timely fashion, the student may give up and withdraw from the course (Holley, 2009).

Finally, personal time constraints is the biggest factor for non-traditional students that affects their ability to finish a course or program (Park, 2009). Many of these students are not only working, but

have children at home and/or aging parents to care for. While online courses have an advantage with scheduling in terms of asynchronous learning, that may not be enough to keep students in a class or program. A busy work-week, a sick child, or an aging parent with an emergency may prevent a student from getting assignments done. Working women with children are especially at risk (Stoessel, 2015).

To get a better understanding of the overall issue, I created an online survey and asked respondents questions related to the aforementioned eight factors as well as additional questions based on my experience as an online history professor. These included questions on metacognition, so respondents could reflect on how they best learn academic material, time management, and reading/writing abilities. However, participation was very low, with only fifty-two respondents in the final tally.

Since the sample size was so small, the survey results are more anecdotal than scientific. Still, there were some interesting insights gleaned from the results. Despite a survey sample of only fifty-two respondents, survey results were similar to another, larger study (Fetzner, 2013).[4] Out of the survey population, twelve fit the profile of non-traditional online students. They were between the ages of 22-50, seeking a degree for the first time, online-only students who had withdrawn or had not completed at least one course. For these students the main reasons for withdrawing from an online course were poor interactions with the instructor, trouble with keeping track of assignments, problems with the course website, and isolation from peers. In addition, half of these students also have dependents who rely on them for daily care, a common stressor for adult students. In order to help these students, I focused on the delivery system, which is typically an LMS, to improve interaction with instructors and peers and help students keep up with their work.

Updating Learning Management Systems (LMS) with new features to address the aforementioned factors and issues from the survey could be a way to improve student retention and program completion. To this end, I designed a prototype of an Intelligent Learning Management System (ILMS) to demonstrate some of the ways that current Learning Management Systems could be improved to meet the needs of online non-traditional students. The improvements fall into four main categories, learning methods, communication modes, student interaction, and time management. A brief discussion of each follows.

[4] Marie Fetzner's study at Monroe Community College in Rochester, NY had 438 participants.

Learning Methods: Students learn in different ways, and an important strategy for student retention in online courses is providing multiple ways that students can access and process information (Johnson, 2003). The ILMS provides content in both video and written formats so students can chose what works best for them, dynamically. As shown below (Figure 1), students can also take notes electronically while watching the video or reading the transcript and the ILMS retains their individual notes for the student's future reference and study. This is a critical feature as studies have shown that the act of note-taking and reviewing notes promotes learning (Bauer & Koedinger, 2006). If a student decides to switch formats on a particular module, they can still access their notes and not have to start over.

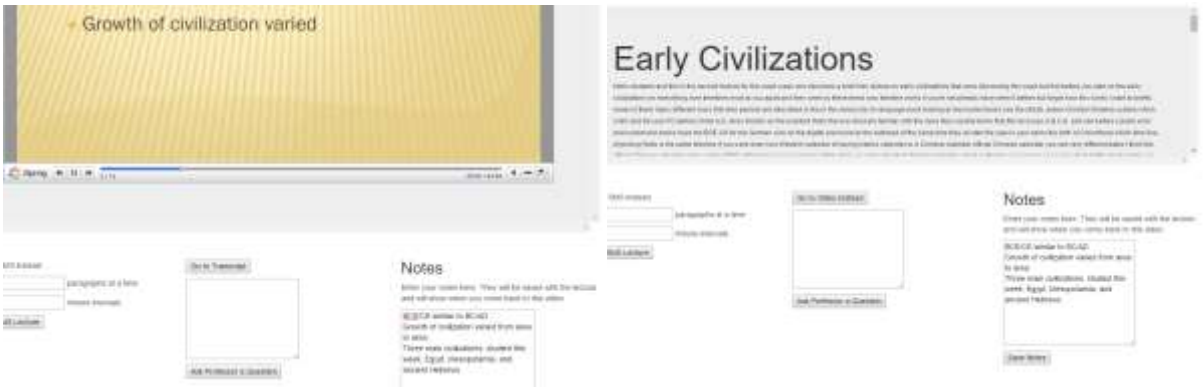

Figure 1. The ILMS content and notes features.

Communication Modes: Students do not always have immediate access to access to a computer, which means their ability to do schoolwork can be limited. In my survey, 79% did most of their coursework at home. One of the ways to improve student retention is making the course available to them, wherever they are. A study by Yuhsun Edward Shih and Dennis Mills, found that SMS could be a useful tool in student engagement (Shih, 2007). In the ILMS prototype, students have the option to have content sent to them in intervals via SMS (Figure 2). Students can select how many paragraphs to get at a time and the interval, so it better matches their reading speed. A future version of ILMS will be a mobile app with offline storage capability so students have even more accessibility.

Figure 2. SMS feature for increased accesiblity to content.

Figure 3. Sample page with "Ask Professor a Question" feature

Student Interaction: As previously discussed, student isolation from peers and instructors is one of the main reasons for student disengagement. The ILMS prototype addresses this problem in three different ways. First, by simplifying the discussion post system for ease of use and access. Instead of building a custom discussion post system, the platform uses the commercially available Disqus comment system. By utilizing a discussion platform that exists on over 3 million websites, it is likely that students have used it before (Disqus, 2015). This familiarity could improve overall student interaction since it greatly lowers the learning curve of the user interface.

Second, nearly event student accessible page has a prominently displayed feature (Figure 3, above) to allow students to send a question directly to the instructor. This feature allows students to contact the instructor whenever a question comes to mind versus having to switch over to email or post to a discussion board, which could interrupt a student's flow of learning. The questions appear in the instructor's dashboard (Figure 4, below) so they are highly visible and easy to respond to. A future enhancement could be to eliminate the email functions in the instructor dashboard and use direct communications within the platform.

Figure 4. Instructor dashboard.

Third, the ILMS will track student activity such as how often a student logs in, how long they stay on the site, how many discussion posts they do, and if they are behind on assignments. Once a student is below the overall class average level of activity, the ILMS will alert the instructor and prompt to send a message to that student (Figure 4). A recent experimental study demonstrated that sending motivational emails to online-only students improved engagement and performance of the students who received the emails over those who did not (Robb, 2014).

Time/Assignment Management: The ILMS protoype has an intelligent system to help students keep track of their assignments and on task.

Figure 5. The Student Preference screen.

Students can set reminders by email and SMS (text) for assignments and tests in a variety of configurations. As deadlines approach, the ILMS will alert the students to complete the assignment, exam at the intervals a student has set until the student has completed the assignment/exam, or the deadline passes. In addition, the ILMS will warn the student before opening additional browser tabs if the student selects this feature, in order help easily distracted students stay on task. Students can use the array of features in the ways that best suit them.

The ILMS prototype demonstrates how technology can assist online-only students to stay engaged in their courses and complete their programs of study. It is backed by research of the known issues with online-only programs. The next steps will be beta testing the platform with my students in the spring of 2016 to further refine and improve the system, followed by a purely mobile version. A mobile version will eliminate the need for SMS and allow students to take the intelligent agent built into

the ILMS with them, and it will have offline storage capabilities, so they can access content wherever they are.

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