

Online Learning 2.0: Evolving Institutional Experiences for the Next Generation of Online Graduate Students

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Over the past decade or more, emerging trends such as online degree programs and analytics have dramatically increased the ways learning professionals work (Sundt, Berry, & Ortiz, 2017). Some of the most recent data showed that 5.8 million students enrolled in online courses, with online enrollments showing a growth of about 4% a year (Sundt et al., 2017). Online education programs offer universities several unique advantages over traditional face-to-face education. Benefits include not needing a physical location, structure, access to new markets to increase enrollment, and increased global exposure for their offerings (Parks-Yancy & Cooley, 2015). The increase in online programs offered increased exposure to higher education and can help drive down higher education costs (Stewart, Bachman, & Johnson, 2010). While online degree programs continue to increase in popularity, barriers prevent them from achieving the same level of the student experiences their traditional offerings. Students enrolling in online courses face difficulties adapting to learning in an online environment, a lack of community, anxiety and depression, confusion regarding access to technical assistance, maintaining learner motivation, and combating a high attrition rate (Berry, 2018; Parks-Yancy & Cooley, 2015; Sundt et al., 2017). This literature review examines the emerging trend of online degree programs, addressing their challenges and the interventions used to face these difficulties.

Online Versus Face-To-Face Programs

Many studies illustrate the differences between online and traditional degree programs. Parks-Yancy & Cooley (2015) compared the academic performance of face-to-face versus online business school students. The writers pointed out that non-traditional students benefit more from online education due to their erratic schedules and familial obligations. Non-traditional students are generally over the age of 25, entering college with previous workplace or experience, a gap in time since their last formal education experience, and some students may have children. The researchers discussed some characteristics of non-traditional students, stating that they are often not tech-savvy and face higher attrition rates. While many online programs have an orientation program, many are not required. The authors suggested that a mandated orientation could provide better chances of success for both students and faculty.

Online programs carry unique challenges that traditional courses may not. Some common issues with online programs include lower retention, digital divide issues, issues with non-traditional student demographics, and an inability to rely on rapport-related concessions when struggling (Stewart et al., 2010). Also, many universities assume that online students are digital natives who naturally adapt without additional instruction and already possess "soft skills," which have been learned through adulthood (Prensky, 2001; Herx, 2014). Fifty percent of online grad students struggle with anxiety and depression (Berry, 2018). Another challenge facing online students is online programs with higher attrition rates than traditional courses. Contributing factors include a mismatch of skills, time conflicts, financial stress, online isolation, and an unfamiliarity with the online format.

Generational Differences

Online education programs currently cater to a wide age range of learners. Generations do not have defined start and end dates but are generally accepted as described in subsequent sentences. Baby Boomers consist of those individuals born between 1945-1964. Generation X includes those born between 1965-1980. Generation Y (also known as millennials) follows that with those born in-between 1981-1995. Generation Z, usually associated with birth years, roughly between 1995 and 2015, has begun to enter post-secondary school. While categorizing individuals based solely on the year they were born is risky, it is nevertheless valuable to acknowledge the generational differences these groups embody. These groups encountered common cultural milestones, used the same emerging technologies, and shared similar educational experiences that helped define their generations. When examining the efficacy of online degree programs, it is essential to measure institutional approaches to ensuring the success of their students, particularly Generation Z (also known as Gen Z).

When comparing the different generation groups, millennials prefer collaborative and team-work-based interpersonal approaches (Seemiller & Grace, 2016). Millennial students tend to be tech-savvy, preferring to communicate through electronic means (such as email, text messages, and online webinars) than traditional face-to-face methods (Wiedmer, 2015). Generation Z students, also tech-savvy, prefer to work and learn wherever they choose (Wiedmer, 2015). It would be wise for institutions to consider Generation Z's interpersonal learning preferences when designing group learning experiences for these students (Seemiller & Grace, 2016). All generations, from millennials to Generation Z, are digital natives, having grown up with easily accessible technology, although the levels of technology integration may differ from generation to generation (Schwieger, 2018). Digital natives, while comfortable with technology, might still benefit from additional guidance on how to interact with digital information and avoid cognitive overload, maintain accuracy, and evaluate data (Mohr & Mohr, 2016). Support services such as advising and counseling, provided throughout their time in college and fully integrated into their learning experience, could be beneficial (Selingo, 2018).

Generation Z students are already connecting with people online, preferring to use technology in ways that are central to their lives (Cook, 2015). Generation Z students are

considered social learners. In a Harris Poll, 4 in 10 said they established friendships worldwide through collaborative technology, though outside of the classroom, this group tends to prefer to work individually (Harris Poll/Pearson, 2018). Generation Z students prefer flipped courses and rely on YouTube as a primary source of self-instruction (Seemiller & Grace, 2016). Campuses should be aware of the sophisticated and varied social-media habits of their Generation Z population to aid them in enrollment and retention (Selingo, 2018).

While colleges may have begun to adapt their millennial student populations, Generation Z students have a different set of needs, with different expectations and educational experience than the generations who attended college before them (Seemiller & Grace, 2016). Unfortunately, many universities have yet to adapt to the newest generation, offering the same student services, amenities, and academic offerings designed for millennials (Selingo, 2018). As the number of Generation Z students increases, colleges need to remain focused on experimenting with new approaches, gauge the progress of their interventions, and promote changes based on successes (Selingo, 2018). By considering Generation Z students' learning and social preferences and providing necessary support at the beginning of their degree programs, institutions may have the chance to impact their learning experiences positively.

Universities face a daunting challenge serving the needs of multiple generations of students and making their education programs challenging yet achievable. The programs are aided to a high degree by the emerging technology available for their use. Learning management systems (LMS) allow universities to place entire courses online, including tools for online interaction, teacher announcements, and turning in assignments. Readily available content creation software such as YouTube, Soundcloud, Camtasia, Microsoft Office, and many more are often utilized in online classes to construct and share their assignments. Productivity tools that aid in notetaking, cloud storage, and citing references are usually provided free of charge to students through their schools. Several of these technologies will be touched upon throughout this review.

Despite the abundance of tools at universities' disposal, proper development, implementation, and evaluation of support services for online graduate students are lacking. Universities must take the time to instruct students on the operation and suitable use cases for each tool. Assuming students will understand the software simply because their generations are digital natives does a disservice and adds additional barriers to student success (Prensky, 2001).

Theoretical Framework

Model of Institutional Departure

Research has shown the importance of fostering a sense of community to learners at the university level. Tinto (1975; 1987) linked academic and social systems processes to student retention. His Model of Institutional Departure focused on "the concept of integration and the patterns of interaction between the student and other members of the institution" (Tinto, 2006, p.2).

Tinto's model helped to connect student attrition to academic and social integration. Tinto (2000) felt that students performed best in settings where they were socially involved and where their expectations were clear and consistent. Investigating the link between learner engagement and satisfaction with their programs, Tinto identified a gap between research and practical application in different settings. Though Tinto's work focused on traditional (face-to-face) campus learning communities, the model can also be applied to online learning programs (Laing, 2015).

Online programs have typically shown high attrition rates, often due to student feelings of alienation (Rovai & Whitting, 2005), isolation, and lack of attention (Rovai, 2002) caused by their distance from the campus and peers. Tinto (1993) suggested that a sense of community helps learners feel involved in their courses and develop relationships with other students, thereby increasing their persistence and retention at the university. Wegerif (1998) also agreed that students who feel as though they belong to a community feel more motivated, involved, and satisfied with their programs. Boud and Prosser (2002) similarly argued that student perception and experience in their learning environment play a more pronounced role in learner engagement and retention than the design and implementation of new technologies.

Social Presence Theory

Willis (1993) argued that a possible connection exists between high attrition rates and students' perceived lack of social presence and interactions. These perceptions are contributors to feelings of alienation and dissatisfaction. Two critical aspects of the Social Presence Theory (Short, Williams, and Christie, 1976) are immediacy and intimacy. Intimacy describes the nonverbal factors in social situations – physical distance, eye contact, and smiling (Gunawardena & Zittle, 1997). Immediacy describes the psychological difference perceived between the communicator and the recipient. Immediacy might also include cohesive, affective, and interactive responses (Rourke, 2000). According to Easton (2003, p.90), immediacy behaviors are critical factors in "building a learning community."

Model of Student Progress in Distance Education

While Tinto's model pointed to a lack of social community to explain high rates of attrition, Kember's Model of Student Progress in Distance Education (1995) instead pointed to outside factors like unexpected life events, time management issues, and similar distractions (Koehnke, 2013). The potentially adverse effects of these external factors are especially noticeable in the case of doctoral programs during the final dissertation stage, including feelings of isolation, lack of motivation, and issues regarding the online program expectations (Rockinson-Szapkiw, Spaulding, & Spaulding, 2016). Kember suggests a gradual-release model wherein ample support is provided to the student earlier in their academic career. This support is gradually withdrawn as they become more experienced online learners (Kember, 1995).

Connectedness

Students from millennials to Generation Z are accustomed to using technology to connect to others across geographical barriers. The ability to interact with those worldwide to discuss similar interests, play games, and find information has been available throughout a Generation-Z person's lifetime (Cook, 2015). This interaction is not novel to this generation, no more so than the automobile to baby boomers. Unfortunately, this submersion into a technological and information-driven society has created a misconception that those who use technology are naturally technology literate across all areas (Bawa, 2010). This belief ignores that educational technology is a different context than using technology socially, such as posting a selfie on Instagram or using text-speak in a message to a friend using Whatsapp.

Specific supports are needed to empower the online graduate student population. A student who has familiarity with the apps mentioned above, or produces a slideshow using Microsoft PowerPoint, may find themselves struggling to navigate an institution's learning management system (Herx, 2014). Furthermore, they may require supports that include administrative, instructor, socio-emotional, and peer needs. Most online graduate students need to feel connected to stay engaged. If a student becomes socially disengaged and feel they are not compatible with the institution or their peers, the likelihood of dropout increases (Tinto, 1993). Available software, widespread broadband internet use, and technology integration as part of their social being necessitates the need for institutions to transition from traditional support models. Doing so provides supports that match the expectations of Generation Z online students. Generation Z uses different media and technological tools to match the needed outcome. There is not a preferred one-size-fits-all approach, nor should this be the approach of the institution (Seemiller & Grace, 2016)

Academic Success

As highlighted earlier, universities often assume that modern students are digital natives and are familiar with many of the online tools available. Demographics may also support this view, showing a population of graduate students whom universities assume should already have developed the necessary academic skills to succeed in school (Bawa, 2010). However, this assumption can be dangerous as it makes sweeping generalizations about learner generations and their skills as students.

Students need to be prepared to participate in online degree programs. Many skills required in online programs differ from those required in traditional face-to-face offerings. For example, time management skills are necessary (Koehnke, 2013). Universities can recommend many online apps and programs to help students manage their time. In addition, while not school-related, many online graduate students cite financial stress as another barrier to their success (Kuh, 2010). Several programs, such as Mint and Quicken, can help students control their finances better. Introducing these tools to students early in their college careers can help them feel more in control of their progress in their programs.

Students can benefit from instruction on how to research and notetaking best practices (Miller, 2014). RefWorks, Citefast, and Endnote aid in adding correctly formatted citations to research papers. Programs like OneNote allow students to create notes for their classes that can later be filed, stored on the cloud, and even searched through for critical terms. Cloud-based storage such as OneDrive and Google Drive can help students save their assignments or share them with their peers. Providing students instruction on effective means of using these tools could make a difference in their success in online programs.

Learning online through an LMS is another vital skill for successful online students (Bawa, 2010). Unfortunately, students may need to use an LMS with no training on functioning. Students navigating these systems without proper instruction may experience increased anxiety and cognitive load that may interfere with their academic success (Bawa, 2010). Other facets of new-to-online education include students' unfamiliarity with operational tools to conduct collaborative work. Assuming that online students are fluent in these tools without providing best practice instruction on their use risks their success in the program.

Sundt, Berry, & Ortiz (2017) suggested that combining analytics software with online degree programs could improve student performance. When students' assignments and interactions are online, they argue that we are provided with many data points to draw some conclusions. Indeed, the writers suggest that online programs generate even more data than on-campus ones. Student interest in online programs is undoubtedly present. Stewart, Bachman, & Johnson (2010) examined student interest in online degree programs. Specifically, they looked at intrinsic and extrinsic motivations for several factors such as age, parental status, online experience, gender, and race. The results of the study showed that intrinsic and extrinsic factors similarly motivated students interested in traditional programs and students interested in online programs.

Universities benefit from an online orientation program and introduce students to available tools while providing instructors with ways to utilize the quality of submitted student work (Berry, 2018).

Support Services

Support services are an integral component of any educational setting. According to Motteram & Forrester (2005), "Forming learning communities helps integrate students by instilling a feeling or perception that they belong to the program and are part of the student body within the wider university, which arguably facilitates successful retention within the course." While positioned to serve students' academic, personal, and social needs, these services serve to promote a learning community by creating a harmonious balance between the institution, instructors, and students (Laing, 2015). The level of support services an institution offers depends on leadership, enrollment, and need. Traditionally, these services are provided in a physical location wherein students utilize them. However, online support services have not kept pace with their traditional counterparts (Gast, 2013). A literature review finds a disconnect between the expectations of the quality of online courses and online support services, meaning

that online programs expanded ahead of the development of online support services. Furthermore, research into online orientation and support services has targeted undergraduate students; few studies exist specifically targeting online graduate students (Berry, 2018).

Retention

One of a university's primary difficulties with online programs is retention (Miller, 2014). As stated previously in this review, students are expected to take classes and interact with their peers online instead of in person, an approach that could be new for many of them. Expectations of the students are that they already possess time management skills that they may or may not possess and maintain enough motivation to stay in their program. Furthermore, students are required to participate in an online community that holds provide varying senses of belonging. 50% of online graduate students struggle with anxiety and depression (Berry, 2018). With such a laundry list of challenges facing online learners, it should be no surprise that retention tops the list of problems in online programs.

Universities can address these issues in several ways. Teaching students the proper skills for online learning can give them the self-management skills necessary to succeed in their courses (Kember, 1995). Providing essential school services may also help support students during difficult times (Kuh, 2010). Learning analytics programs such as Canvas and Course Signals allow universities to recognize at-risk students and take steps to assist. These programs provide them with an opportunity, unavailable in the past, to increase retention to establish a more robust social community.

Students in online programs often feel disconnected from their peers and teachers, disconnected from the overall university community (Motteram & Forrester, 2005). This feeling may seem at odds with the seeming abundance of communication technology available to universities. For example, online collaboration software such as Zoom and WebEx provide a means for synchronous class sessions while other programs like Microsoft Teams and the Google suite of products allow real-time collaborative work to be possible. Nevertheless, despite all these available collaboration tools, students of online programs still report feelings of isolation (Rockinson-Szapkiw, Spaulding, & Spaulding, 2016). So, what can universities do to increase the sense of community for their learners? One suggestion would be to utilize diverse online communication and collaboration tools at their disposal to bring students in closer contact. Alternatively, a university can implement mandatory online orientation sessions to provide a shared, consistent experience that includes them as part of the university community.

Burbaugh, Drape, & Westfall-Rudd (2014) examined a master's level online graduate program in the college of agriculture. Burbaugh et al. (2014) found that the ability of the instructor to "reduce the social distance" was a positive predictor of satisfaction, and interaction was deemed one of the essential components in online communication. Interaction can foster positive relationships that can aid in completing the coursework and program. Burbaugh et al. (2014) noted that higher satisfaction equaled lower attrition rates. Technology plays a vital role in delivering online programs, including the flexibility these students require. Burbaugh et al.

(2014) also discussed the learning curve. They suggested that online tutorials or videos may have helped students become more comfortable with the software used in the course. This outcome suggests that an orientation program and the ability to meet with instructors before the semester s might be helpful for students.

Orientation Programs

The first year of study is critical for student success (Berry, 2018). One way universities address the issue of high attrition rates is by implementing new student orientation programs. In one study, orientation to college life was considered the eight most crucial findings for improving college attendance (McGowan, 2018). A national survey found that 96 percent of all U.S. higher education institutions offered some form of new student orientation program (Chan, 2017). However, in another study, McGowan (2018) found that only 38% of reporting institutions mandated attendance in the online orientation programs, suggesting a missed opportunity. While many orientation programs have traditionally taken place on campus, advances in learning technology have pushed universities to grow their online education catalog. This growth has fostered a need to increase the requirements and quality of online orientation and support systems to meet the student needs. This quality improvement is critical as a growing number of students cannot attend the live sessions; the orientation needs to be more robust than simple online tours and PowerPoint slideshows.

Orientation Program Development

Cho (2012) described the process of developing an online student orientation program (OSO) modeling the instructional design process, which included analysis, design, development, and evaluation phases. The writer stated that students must know how to interact with others and gain familiarity with the technology used in courses for success online. Therefore, the completed orientation was separated into four objectives: helping students understand the nature of online learning, helping students use Blackboard skillfully, helping students solve technical issues they may encounter, and providing students with self-awareness of the learning skills required for online learning.

Chan (2017) suggested similar topics for new student orientation programs, suggesting issues such as college success, getting connected, and financial aid. McGowan (2018) also indicated that online orientation programs include modules on similar issues, including getting started online, technical requirements, success strategies, help topics, and college-specific information. McGowan also suggested structuring assessments to keep the students engaged and help deliver the information more effectively.

Doctoral Students

Several studies address the implementation of new or improved orientation programs. Berry (2018) conducted a qualitative study of implementing a three-day orientation session for graduate Ph.D. students. Berry pointed out that grad students typically get the short end of the

orientation stick. Many assume grad students are independent or already possess the skills and drive to succeed. However, student feedback about the orientation was positive, and the unstructured social events allowed the students to bond and build community. Several students even met after the program ended in an informal capacity.

Community College

Jones (2013) discussed the implementation of a mandatory orientation course for a rural community college. The author noted that the previous optional face-to-face orientation was not successful in helping students prepare for online learning because the students used different computers at the school than what they had at home. As an alternative, the college mandated an online orientation course provided within the LMS, was self-paced, included interactive activity, and required a passing grade of 80% or better on a final assessment before students could access their first course. Survey results showed that 90% of students thought the OSO was helpful. Retention also improved after implementing the OSO (79.5% vs. 71.8%) and has remained higher in the three years since its implementation (remaining between 80-84%).

International Students

Valosik (2014) discussed using online orientations for preparing international students for college life. Contents of these online student orientations included information about visa regulations, quizzes, and even certificates to prove the students completed them. The writer discusses the difficulties that international students have attending the live orientation, citing that in some cases, students are not even allowed to enter the country until 30 days before the semester starts. In addition, some schools send their staff to other countries to perform a "pre-departure orientation," but note that it does not replace the official school orientation, which provides a complete campus experience.

Increased Success

Glazer & Murphy (2015) looked at enhancing an orientation program to increase persistence in online graduate students. With a primary goal of increasing the retention of at-risk students, the researchers piloted a master's program in Psychology. One element that made this orientation different than others was that the school gave two assessments at the beginning – an English language skills test and an evaluation to identify potential barriers to success. Then, students were placed into different tracks based on their assessment scores, where some students received additional assistance with their writing and APA guidelines. Orientation elements included a web-based readiness center and an asynchronous online course. A key takeaway included a toolkit linking academic support services and additional resources. Results showed that the orientation program increased students' probability of success, gave them skills to persist, and introduced them to available resources, including those to help build their writing skills, studying ability, and time management skills.

Conclusion

Online learning is a forever-evolving technology. As more students move to online learning environments, universities have a unique opportunity to make education available to everyone, regardless of physical location, and increase the exposure of their academic offerings. However, despite the promise that online programs provide, numerous challenges must be faced. A lack of student online study skills, availability of support services, and fostering a sense of community contribute to higher attrition rates than in their traditional face-to-face counterparts (Atherton, 2014). Universities need to adapt to the needs of the student population, considering the unique social needs of each generation, technology available to help foster good study habits and connections, and building a shared sense of community in which each student can feel motivated and engaged. One way to accomplish this may be to offer mandatory online orientation programs, but it will ultimately be up to the school to ensure the success of these interventions.

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