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Abstract

This article explores the impact universities and colleges play in strengthening young women's (12th grade and beyond) perspectives on their achievement ability in STEM academic programs and careers. To attempt to understand what takes place during young women’s university enrollment decision making with STEM programs, one must understand what has happened with STEM exposure and support in K-12. This article reinforces the existing literature on the reasons for the underrepresentation of girls in STEM. The reasons are social and environmental factors; the school climate and the influence of bias. This article provides recommendations to address the documented causes of underrepresentation including; teaching a growth mindset to girls; exposing girls to female STEM role models all throughout K-12; educating girls about stereotype threat and providing strategies and support to overcome it; opportunities to build spatial skills needed to be successful in STEM; colleges and universities to perform inclusive outreach to high school girls about university STEM program opportunities; teaching resilience to girls regarding peer interactions; sponsor women run community of practice and STEM growth opportunities at universities; recruit and retain more women STEM university faculty; and incorporate grassroots STEM tools and equipment. The article reinforces the need to address the unique needs of girls as learners at a much earlier age (K-6) in order to successfully recruit and retain them in university STEM programs and later, in STEM careers. It also addresses what universities and colleges can do differently with young women in order to properly prepare, recruit, and more effectively support them in their STEM academic programs at their institutions.

Introduction

Although a recent 2016 movie, “Hidden Figures” has reignited the examination of the unacknowledged contributions of African American women in STEM fields in American history, it simultaneously draws needed attention to a continued issue of low numbers of women of all races in STEM fields. Historically, women have not had the same opportunities for academic achievement as men (Lalonde, 2017; retrieved from http://lmlalonde.com on 2/15/2017). This article is a brief exploration of the impact of post-secondary institutions in strengthening young women’s (12th grade and beyond) perspectives on achievement and career readiness in STEM programs, and the role of educators in preparing them for careers in a growing industry. The absence of women in STEM education and careers affect more than just women, it is a missed opportunity in those fields. How do we begin to understand what is the current state of STEM education for high school aged girls and young, college-aged women? Research suggests three areas as reasons why girls are underrepresented in STEM; social and environmental factors; the school climate and the influence of bias. To engage and retain girls in STEM, educators need to eliminate bias in the classroom, change school culture, introduce female role models, help girls assess their abilities accurately and
develop talent in areas related to science, technology, engineering, and mathematics. The creation of learning environments that are supportive of girls’ and women’s achievements, interests, and ideas within STEM will play a key role in encouraging more girls and women into vital STEM career fields (Meadows, 2016). Thus, when the K-12 years are addressed, the numbers of women college graduates in STEM related fields will increase.

**Reasons Girls are Underrepresented**

Academic research suggest three areas, which account for the underrepresentation of girls in STEM (Meadows, 2016).

They include the following:

**Social and Environmental Factors**

Social and environmental factors are one possible explanation for the loss of women being involved in STEM. From an early age, girls may be influenced by expectations and stereotypes about suitable roles and interests based on their gender. Girls may be socialized to believe that STEM related subjects are only for boys (Beedle et al., 2011). Girls may be treated differently than boys or they might perceive there are different expectations for them based on their gender. For example, school career counselors, teachers, and parents may advise girls to avoid going into STEM related careers, which leads them away from it altogether (Jansen & Joukes, 2012). Sometimes stereotypes are formed about some students before others even meet them, which can impact the way they interact with others. Students of color, foreign born, and others who belong to regularly stereotyped groups are aware of such biases. This awareness often causes them to react in ways that hurt their own performance on standardized tests (Walton, Spencer & Erman, 2013). Feelings of self-doubt and a lack of confidence can develop creating a self-limiting mindset. According to Correll (2001), boys do not pursue math activities at a higher rate than girls because they are better at it, they do, at least partially, because they think they are better at it. People who believe they are capable are willing to work harder as a stairway to achievement (Meadows, 2016).

The view of technology is different for boys and girls because they each have a different type of interaction with it. Boys appear to have more confidence for learning than girls do (Yau & Cheng, 2012). Some research supports the idea that girls are not exposed to technology as early as boys are and it is contributing to the gender gap in STEM fields (Schweingruber, Brandenburg & Miller, 2001).

Research has also supported that in academic settings, members of socially stigmatized groups were more uncertain of the quality of their social bonds and more sensitive to having social belonging. Walton and Cohen (2007) called this “belonging uncertainty,” and they found it contributed to racial disparities in achievement. It also contributes to the underrepresentation of women in STEM fields. Girls, especially girls of color, did not feel a sense of belonging.

Good, Rattan, and Dweck (2012) research found that a person’s sense of belonging predicted both men and women’s intention to pursue math in the future as well as other important math-related variables, such as math anxiety, math confidence, and perceived usefulness of math. These effects remained, even after taking into account past math achievement. Previous math success did not predict a sense of belonging, which is consistent with other research which indicates a person’s high abilities does not ensure a belonging. Girl’s sense of belonging is increasingly important for their intent to pursue a STEM career and to have high math and science performance (Rattan, Good & Dweck, 2012).

**School Climate**

So much of girls’ progress in STEM during their K-12 education has to do with the messages they are receiving. In 2006, the American Association of University Women (AAUW, 2010) conducted a survey of high school students and it showed that 44 percent of girls and 38 percent of boys agreed with the statement, “the smartest girls in my school are not popular,” and 17 percent of girls and 14 percent of boys thought that it was true that “teachers think it is not important for girls to be good at math” (AAUW, 2010).

Research indicates that in the United States, the majority of students who pursue STEM degrees make this decision during high school (Maltese & Tai, 2011). This is the reason students’ high school experiences are important for
understanding a student’s success or failure in college STEM courses. Unfortunately, girls and women are treated differently than men in subtle and overt ways. Often boys are given more attention and praise in class discussions.

The importance of students spending time with adult role models is extremely important in aligning teenagers’ ambitions toward college and career plans. Girls and young women look to faculty as role models/mentors for demonstrating how to balancing career and family. Women scientists need mentors who understand the difference between women and men in the sciences (Etzkowitz et al, 2000). There truly is a shortage of role models out there for women in STEM because there are so few STEM trained teachers (Watt, Richardson & Devos, 2013). Both role models and mentors are extremely important to encouraging and developing girls’ interest in STEM fields (Kekelis, Ancheta & Heber, 2005).

The Influence of Bias

Kane and Mertz (2012) researched the impact of cultural bias on student interest and performance in STEM fields in a large scale study using a gender gap index, which compares females and males in terms of income, education, health, and political participation to examine math performance across twenty-six countries. The results showed that math achievement for low, average, and high achievers was higher in countries with greater gender equity. The researchers suggest that to some degree the differences in the abilities of men and women are affected by the society in which they live. What this means is that the more girls and women are encouraged and included in learning STEM subjects, the more successful they are.

Solutions for Increasing the Number of Girls and Women in STEM

One way to encourage girls to choose STEM careers is to help them develop a strong belief about their abilities in these subjects. Parents and teachers can help build girls proficiency by teaching them confidence in their ability to learn and perform academically. Giving good feedback on strategies for continued progress and ways to tackle areas of needed improvement are essential in the learning process. This feedback enhances students’ beliefs about their abilities, typically improves persistence, and improves performance on tasks (Halpern et al, 2007). Not all forms of feedback are equal in their impact on student’s beliefs about their abilities (grades, test scores, statements from teachers, etc.). Negative gender stereotypes can create big problems for girls and women on tests in math and science (Halpern et al, 2007).

Teaching a growth mindset to young girls can encourage them, boost their intelligence, and help them improve their academic work. Dweck (2012) discovered that most people believe their basic abilities can be developed by dedication and hard work (Dweck, 2012). This growth mindset was also known as an incremental view of ability, which creates a love of learning and a resilience that is necessary for accomplishment. Teachers need to express the values and practices of a growth mindset to help their students stretch themselves beyond their comfort zone to learn new things (Dweck, 2012). Schools can also help girls in assessing their skills by building their spatial reasoning skills, which are crucial to scientific reasoning, into the curriculum (Ganley, Vasilyeva & Dulaney, 2014). In addition, high schools girls should be encouraged by teachers and counselors to take calculus, physics, chemistry, computer science, and engineering classes.

Educators Need to Work to Eliminate Biases in the Classroom (high school and college)

Biases in the classroom are referred to as “stereotype threats” and are concerns or anxieties that one’s performance or actions are seen through the lens of a negative stereotype (e.g., Shapiro and Neuberg 2007; Steele et al., 2002). It is a concern that disrupts and undermines performance in negatively stereotyped domains (Beilock, 2008; Beilock et al., 2007; for a review, see Schmader et al., 2008). There are many aspects common to academic environments that can produce stereotype threat, from being the only woman in an engineering class (Inzlicht and Ben-Zeev, 2000; Sekaquaptewa and Thompson, 2003) to interacting with someone who might hold negative stereotypes (Logel et al., 2009). This means that STEM instructors need to be effective in conducting an inclusive, healthy and safe classroom environment for all students.
Correll (2004) found that the environment (school or college) in which girls are influenced impacts their own self-assessment of their abilities and skills. Both K-12 schools and universities can cultivate a culture of respect. When institutions send the message that girls and boys; women and men are equally capable of achieving in STEM subjects, they are likely to see both genders assess their own abilities more accurately. Schools and universities are responsible for educating and have a unique opportunity to help students learn new ways to interact. By teaching students to recognize stereotypes, instructors can cultivate a culture of respect in their classrooms. In some schools and universities, the faculty may need to be taught first about their own stereotypes before reaching out to students.

**Introduce Female Role Models**

Mentors who are successful in math and science, can positively affect young girls’ beliefs about themselves and their own abilities to perform academically (Halpern et al, 2007). Role models clearly have an impact on female students (Austin & Sax, 1996), and improved attitudes about science have been linked to their exposure to role models (Clewell & Ginorio, 1996; Kekelis, Ancheta & Countryman, 2005). When one or both parents of students are engineers and/or scientists, both males and females will be more likely to pursue careers in the same area. But, if female students do not have a parental role model within the scientific community, they often find other role models, such as a teacher, to emulate (Nair & Majetich, 1995). Universities can be a valuable resource for elementary and secondary schools in establishing a positive image of women in STEM (National Research council, 2006). When female college students, faculty, and alumni interact with high school girls, a positive image is conveyed through activities such as after-school programs, weekend workshops, and summer camps. As young girls begin to think about careers and which upper level courses to take, they become more likely to choose and pursue STEM careers (Austin & Sax, 1996; NRC).

**Help Girls Assess their Abilities Accurately**

Girls have a harder time seeing STEM subjects as relevant in their lives. It impacts how they perceive their own skills. Boys tend to perceive science in a more positive way than girls as more relevant to their life through all age groups (Chetcuti and Kioko 2012; Farenga and Joyce 1999; Jones et al. 2000; Jovanovic and King 1998; Osborne et al. 2003; Schreiner and Sjoberg 2007; Zohar and Sela 2002). Gardner (1975) claimed that gender was probably the most important variable related to students’ attitude to science. This claim is still valid, especially for the physical sciences and engineering because these fields are still seen as masculine disciplines, in both boys’ and girls’ views (Farenga & Joyce, 1999).

So, how do we help girls to accurately assess their skills when their perceptions of their own abilities are disconnected from reality? There is still a false notion that men are mathematically superior and innately better suited to STEM fields than women with a large number of articles addressing cognitive gender differences as an explanation for the small numbers of women in STEM (Hill, Corbett & Rose, 2010). A difference in average math performance between girls and boys no longer exists in the general school population (Hyde et al., 2008), although the topic is still hotly contested. Lynn and Irwig (2004) found small or no differences in average IQ between the sexes; that is, neither girls nor boys are the “smarter sex.” Other researchers have found that girls and boys tend to have different cognitive strengths and weaknesses. Generally, boys perform better on tasks using spatial orientation and visualization and on certain quantitative tasks that rely on those skills. Girls outperform boys on tests relying on verbal skills, as well as some tests involving memory and perceptual speed (Hedges & Nowell, 1995; Kimura, 2002; Halpern, Aronson et al., 2007). One of the more promising research findings in this field are those of Sheryl Sorby (2000) which designed and implemented a successful course to improve the spatial visualization skills of first year engineering students who had poorly developed spatial skills. More than three quarters of female engineering students who took the course remained in the engineering school, compared with about one-half of the female students who did not take the course. Poor or underdeveloped spatial skills may deter girls from pursuing math or science courses or careers, but these skills can be improved fairly easily.

**Develop Talent in Areas Related to STEM**

Girls respond to formal and informal learning opportunities designed to create access to STEM subjects and careers, as well as helping them build their confidence in pursuing them (Battey, Kafai, Nixon & Kao, 2007; Clewell &
Out of school math and science learning experiences within leisure or academic forms of education impact their later choices when they gain mastery early. With that acquired confidence and familiarity, they begin to choose more STEM related courses as they move through junior high and high school (Eccles, Adler, Futterman, Goff, Kaczala, Meece & Midgley, 1985; Simpkins, Davis-Kean & Eccles, 2006). With more familiarity and comfort, confidence tends to build and increased success follows. Often when a level of mastery is achieved, young girls see a path to move forward within STEM course and eventually a STEM related career. Some simple ways to help young girls and women, especially of color, develop their talent in STEM courses and fields include some very practical methods. As mentioned earlier, mentors truly encourage and prepare young women with context and direction. In addition, sharing how many STEM directions there are to take advantage of is an effective means to inform how much is available to them as women. Coaching girls on how to study and prepare for their courses, exams and guidance on how to handle the high pressure environment of academic study is essential. Creating learning communities of girls/women who are pursuing STEM courses and fields establishes a safe place to share information, failures, successes, strategies for personal change, and valuable peer-mentoring. Once young girls and women have a supportive learning community with peer-mentors and adult female STEM mentors, an active recruiting process to help groom and open up doors for them is a necessity. It helps them see how their skill sets can be applied to an actual career (Davis, 2013).

Recruiting More Women into University STEM Programs

According to the Bieri Buschor, Berweger, Kreck Frei & Kappler (2014) research study, the decrease in STEM academic programs, careers, and courses does not occur during the transition from high school to university, but rather takes place much earlier than at the time of enrollment into universities. This is why the K-12 classrooms are highly significant in preparing girls and young women long before university entrance.

The study found some themes that impacted university recruitment of young women into STEM programs was the following:

*Early Sense of Identity as a Future Scientist* - There was a close link between early interest in science and family influence. Early science related learning experiences and the students’ keen interest in science in general played a crucial role in their decision making process later (Bieri Buschor, et al., 2014). Movies and stories, like “Hidden Figures” can help girls envision what is possible for them.

*Parental Support by Providing Learning Experiences* - Most parents provided a stimulating learning setting, which seemed to instill in their children the intrinsic need to gain knowledge and explore phenomena in natural sciences and technology. Parental support was one of the reasons girls choose a STEM major (Bieri Buschor, et al., 2014).

*Role Models in the Broader Network* - The girls had important STEM role models in their broader network than just in their core families. This network encompassed parents’ friends, neighbors, and relatives’ friends who served as a source of information that supported them during their decision making process later when deciding on a university program (Bieri Buschor, et al., 2014).

Long-term relationships are essential with STEM role models because although the girls may appreciate the intelligence and creativity of those role models, it does not insure they will choose STEM courses or later STEM careers (Bamberger, 2014). This finding supports the claim of Lightbody et al. (1996) that girls’ perception on a STEM career is “We can, I can’t.” Girls’ beliefs in general about their own capabilities need further study to determine how to overcome this barrier.

*Parental Concern* - Some parents will help their daughter decide on the best school to pursue a STEM career (Bieri Buschor, et al., 2014). For the parents who do not know how to support their daughter who might be interested in STEM, experienced teachers can come alongside those parents and help them understand how they can be more supportive.

*Mathematics as a Means to an End* - The girls hardly mentioned their mathematics ability, referring to their knowledge as “not bad” rather than “good.” The view of mathematics was seen as a necessary evil to pass examinations rather than seeing it in the context of a STEM career (Bieri Buschor, et al., 2014).
A Sense of Uniqueness - The study showed conditions either fostering or blocking the process of choosing a STEM major. Some students expressed their preference for collaborating with men rather than with women. They compared themselves with others and expressed a sense of uniqueness when choosing their major and career direction (Bieri Buschor, et al., 2014). Each girl needs support in finding her unique STEM interest as there are many different opportunities for study and later careers.

Broad Range of Interests - Due to the broad range of what students were interested in, varying from philosophy and psychology to specialized science majors (e.g., criminalistics), it was hard for students to choose a major. Students described themselves as being curious, confident, and determined to achieve their goals while seeking autonomy (Bieri Buschor, et al., 2014).

Minimizing Risk and Maximizing Profit - Students who chose the field of engineering mentioned they preferred a science oriented and hands-on major that would offer a variety of career options in different fields. In the students’ view, their choice of a STEM career was closely linked to social prestige and high job security due to a worldwide shortage of experts in the field. Having a variety of career options was also associated with the possibility of balancing family and work obligations (Bieri Buschor, et al., 2014).

The above study provides many important insights into recognizing that what happens with STEM related courses and support programs for girls in K-12 impacts enrollment in university STEM programs. With strategic changes in K-12 STEM related courses, mentoring, targeted STEM activities, there can be a larger pool of young women to recruit into university STEM programs. An important distinction in the research to highlight is on the link between early science learning at school and future occupational activities including reflection on gender stereotypes rather than on early vocational decision-making. The benefit to gain from the research is to work on reducing gender stereotypes. In this context, teachers’ awareness of their own gender stereotypes relating to mathematics and science is an important precondition (Bieri Buschor, et al., 2014). In turn, science teachers could help parents with any possible gender stereotypes relating to STEM subjects and their daughters’ current and potential abilities.

University Career Placement for Women from STEM Academic Programs

With so few women entering into STEM related programs at the university level, the impact of STEM career placement is low. It is a vicious cycle which is necessary to continue to research and solve. The underrepresentation of women in science, engineering, and technology threatens our global competitiveness. It is an issue for society, for organizations, for employers and for the individual (Greenfield, 2002). Although its roots are considered to be in the poor quality of K-12 public education in the sciences, the high levels of dropout from science courses at university, poor pay and career prospects for STEM workers in comparison with other professions and a failure to respond to the changing demands of an increasingly globalized STEM market (Seymour & Hewitt, 1997; Prados, 1998; Butz et al., 2006), it goes much deeper.

Small changes can make a big difference in attracting and retaining women in university and college STEM programs. For example, changing the admissions requirements to include a broader range of the field with introductory courses and providing student lounges could make a difference in a sense of belonging. Hiring more women faculty in the sciences and engineering departments can improve the integration of more women students. Women faculty tend to leave their academic careers in the science and engineering departments sooner than their male counterparts, so universities can work to retain talented female faculty through ensuring a positive and inclusive workplace (Hill, Corbett & St. Rose, 2010).

Recommendations

Providing recommendations that will easily remedy inequalities related to the number of girls and young women being actively involved in STEM related academic programs and careers is a challenge. There have been many initiatives, programs and projects aimed at improving levels of recruitment and retention among women in STEM subjects (WISE, 2007). Despite efforts to obtain positive results in recruitment and retention, women still show levels of under representation. And even though the research has shown many of the reasons why fewer girls and young women pursue STEM, it is still a challenge to increase the numbers of girls and women in the field.
Based on the consistent themes in the literature, we can reinforce some existing recommendations and add a few new ones.

1. Encourage girls and young women to have a growth mindset. Early interventions about what it means to be intelligent are necessary to reduce the vulnerability to negative self-perception or possible stereotype threats. Teach girls that intellectual skills can be learned and they need to work for those skills. Learning is incremental and persistence is necessary. Encourage them to know they will have the support to learn the skills.

2. Expose girls to successful female role models in STEM. When young girls see women that look like them doing what they want to do in the future, it encourages them to overcome self-doubt and/or possible stereotype threats.

3. Teach young girls what stereotype threats are and help them challenge and overcome those threats to what they want to accomplish.

4. Encourage girls to take STEM classes in grade, middle, and high school, along with college level courses, and provide the practical tutoring support for them to succeed along with the boys.

5. Explain to girls that spatial skills used in many STEM courses and fields are developed not innate.

6. Perform outreach to high schools to recruit girls already interested in STEM. Send an inclusive message about who makes a good STEM student and future professional in the field.

7. Address how students’ peers treat one another in terms of gender stereotypes and academic accomplishment in STEM. STEM instructors must be effective classroom practitioners.

8. At the university level, sponsor departmental social activities to create a comfort level with STEM faculty and possible informal/formal learning opportunities. Sponsor women STEM groups around academic and professional topics/fields.

9. Create an environment at universities that can retain female STEM faculty to encourage women students to remain in academic programs. Raise awareness about bias against women in STEM fields and help girls and young women with a strategy for focusing on the level of their own professional competence and resilience (Hill, Corbett & St. Rose, 2010).

10. Incorporate creative learning laboratory experiences into academic learning with other entrepreneurs, inventors, scientists, technicians, engineers, mathematicians, designers, technology experts in local makers labs, much like what is happening with CoCreateX (https://www.cocreatex.com), a Midwestern company providing a community to help clients innovate, design products, receive help with creative ventures, and much more. These types of learning environments are the future of education for both women and men with practical application for solving real world problems with STEM related tools, ideas, informal teams, and in a supportive community.

Conclusion

For girls to advance in STEM courses and later in STEM academic degrees and fields, their unique needs as learners need to be acknowledged, addressed, and celebrated much earlier. With practical strategies, families, schools, communities, and universities can create environments of inclusiveness, encouragement, and excitement to jumpstart the amazing accomplishment which is lying dormant in many cases, due to bias, neglect, and misunderstanding. Women’s educational progress is an essential part in strengthening our society, economy, and country.

References


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Using Various Tools to Engage and Support Distance Learning Students

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Abstract

Quality student engagement and support in distance education are critical components of student satisfaction and retention. The School of General Education at Kaplan University uses a number of different methods to ensure distance learning students are supported from their first-term through graduation, to help promote success beyond the classroom setting. This paper will review some of the most effective tools and strategies used to support and promote engagement of the distance learner enrolled in math and science courses.

Introduction

There have been numerous studies done on test anxiety and subsequent performance (Ashcroft & Moore, 2009; Beilock & Mahoney, 2015) in math and science. Considering that students often exhibit a sense of anxiety when initially faced with science, technology, engineering and math (STEM) fields, combined with the reality of being an adult learner returning to school after several years, distance learning may exacerbate those fears and waiver their confidence. The key to overcoming these barriers, whether in science, math, or any other subject, is strong support and innovative engagement. Sadera et al. (2009) found a strong correlation between learner interaction and engagement, sense of community, and success in online learning (p. 282).

To help math and science distance learning students face these fears and increase confidence, the School of General Education at Kaplan University focuses on:

1. Supporting students through a pre-class experience
2. Supporting students through outreach
3. Engaging students by helping faculty help students
4. Engaging students with resources for the classroom and beyond

1. Support - The Pre-Class Experience

To help ensure student success in Kaplan University’s distance learning environment, the School of General Education takes a proactive approach by supporting students before their classroom experience even begins. Kaplan University now offers a ‘preview period’ during which all registered students may enter the online classroom two days prior to term start. This affords them the opportunity to review the syllabus and/or reading assignments, prepare for the live synchronous seminar, or just simply to orient themselves so that they may hit the ground running on day one.

During this preview period, the Math and Science Departments also offer content specific “What to Expect” sessions that walk students through the classroom and give an overview of expectations. These sessions have proven to be invaluable in improving students’ confidence levels, as many of these incoming students are new to distance learning. Throughout the term, students in math and science courses also have access to LiveBinders; virtual three-ring binders which house multi-media resources. LiveBinders are developed by faculty who have taught the course
and are familiar with the areas students struggle with most. They are tailored to each of the weekly topics covered and serve as a one-stop shop for students seeking additional support.

2. Support - Through Outreach

Throughout the 10-week term, faculty monitor student participation and performance and work closely with students’ advisors. The Science and Math Departments have incorporated the 12358 Plan into their classrooms, where specific outreach activities are conducted during the term. Outreach activities not only include the standard-type email/phone call to students and advisors when a student appears to be struggling, but could also include congratulatory calls or emails for those students achieving higher grades. Tutors from the Academic Support Center (ASC) are also instrumental in student outreach.

Below is a sample of how a struggling student would receive outreach according to the 12358 Plan:

*Week 1*: The student receives a timely, personalized welcome reply to their introduction post. S/he also receives an encouraging email with the instructor’s contact information and availability, a checklist of all assignments due for the unit, and a reminder of all the additional resources available for assistance (i.e., LiveBinders, ASC, Tech Support, etc.).

*Week 2*: If the student is inactive, s/he will receive an email and/or phone call from the instructor, specifically mentioning that s/he was missed in the classroom activities during the previous week. An Instructor Concern Ticket (ICT) is created, informing the student’s academic advisor of her/his inactivity in the classroom.

*Week 3*: The student has become more active in the course. The instructor emails or calls the student, specifically mentioning how it was good to see her/him participating in the classroom activities. S/he may be congratulated for earning a perfect score on an assignment. However, if the overall course grade is below 75%, the student’s email address is submitted to an ASC tutor for further support.

*Week 5*: The student participated very little in the course during the previous week. S/he received an email or phone call from the instructor encouraging her/him to discuss plans and/or options to help the student get back on-track in the course. Another ICT is created to touch base with the student’s academic advisor pertaining to the student’s status and lack of presence in the course. The advisor is asked to make contact directly with the student as well.

*Week 8*: The student has been active in the course for the past few weeks, but is in danger of failing the course. The instructor puts together a summary of what must be completed during the remainder of the course in order for the student to succeed.

Faculty are encouraged to contact the ASC on behalf of those students earning less than 75% early in the course. A tutor from the ASC contacts students directly for additional assistance with course content. In 2016, the Kaplan University Science Center (KUSC) and Kaplan University Math Center (KUMC) alone touched close to 13,000 Kaplan University students through outreach and Q&A. At Kaplan, no student is left behind. We connect with and support each individual student based on their progress and needs.

3. Engagement - Helping Faculty Help Students

As a follow-up to the 12358 Plan, faculty are provided a link to an outreach database where they can track all outreach efforts and provide comments for administration. Comments are then used to gauge any positive or negative trends within the curriculum that may need to be addressed during a course revision.

In addition to the outreach tools provided for faculty to support students, Kaplan University also offers other resources to help faculty engage students both in and out of the classroom setting. Kaplan University proudly offers 11 honor societies and 20 different faculty-mentored student groups/clubs for students to join. These organizations cover a variety of disciplines such as the Student Nutrition Association at Kaplan (SNAK), National Association of Women MBAs, or the Kaplan University Law Society. Student clubs can enhance the student experience and
possibly influence career goals. Club announcements are shared within the course platform to allow opportunities for all to engage.

Daily emails are sent to faculty containing interesting science facts and current scientific research. Faculty are encouraged to share relevant information with students to further engage them during classroom discussions. In addition, inspirational and motivational quotes are sent to science faculty each week so that they may also share with students. Faculty are reminded that this encouragement might be the push students need to see that first glimpse of light in the tunnel.

4. Engagement - Resources for the Classroom and Beyond

The ASC is comprised of several content specific academic centers including Science (KUSC), Math (KUMC), Writing (KUWC), Business (KUBC), and Technology (KUTC). Each center provides students with free live, interactive tutoring, exam, and assignment review sessions as well as unlimited access to recorded webinars, video tutorials, blogs, plagiarism resources, and more. All Kaplan students have access to the ASC and their services as soon as they are enrolled. During their first or second synchronous seminar, math and science faculty immediately introduce students to their respective course centers; KUMC, KUSC, and most recently KUWC as well. Instructors take students on ‘virtual tours’ of the centers which are hosted by center tutors. In 2016, 343 virtual tours were held with greater than 14,600 students in attendance.

Introducing students to these academic resources has proven invaluable. Student usage of the math and science centers has been impressive and continues to grow. The project review service had more than 9,000 submissions. This service was just introduced in the KUSC in 2016 and has already seen a four-fold increase in the number of science disciplines available to be reviewed. Tutoring remains one of the centers’ strengths with more than 4,600 students visiting the math and science centers for tutoring help. Additionally, because the ASC is wholly online, its resources are available to students 24-hours a day, 7-days a week. This allows students to continue learning after designated tutoring hours. In fact, it was noted that there were approximately 4,100 views of various KUMC and KUSC recorded archives in 2016 alone.

Conclusion

Supporting distance learning students is necessary and even more vital when it comes to building the confidence of students taking science and math courses. At Kaplan University, a multifaceted approach is used to support and engage students comprised of faculty, advisors, tutors, and administration. Resources, such as the services provided by the ASC and clubs and organizations, support engagement efforts and enhance the student experience. Providing faculty with tools to engage and support students, empowers both faculty and students. Having a system of continuous support and resources in place allows Kaplan University to meet the expectations of today’s student by creating an environment for student success.

References


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Distance Learning: A Game Changer

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Abstract

Previous research identified a variety of special populations which may be serviced through online learning activities. These have included the military, Native Americans, prisoners, remote occupations, and others. This paper focuses the growing role of distance learning opportunities for student and professional athletes. Special attention is directed at the rules and regulations at the high school and college levels as well as the various types of programs and resources that have been developed for this population. Also, the development of online degree completion and graduate degrees for professional athletes are explored.

Introduction

Distance learning has been a significant component of education at all levels for more than a century. Through its evolution from correspondence courses, the advent of audio, video, interactive video, and now to internet-based learning, distance learning has provided asynchronous opportunities for an increasing number of constituencies (Moore and Kearsley, 2012). In particular, online learning is increasingly a part of the lives of student-athletes at the high school and college levels as well as those individuals pursuing careers as singers, actors, skaters, ballet dancers, golfers, tennis, gymnastics, and other careers that require extensive training from a young age. Because of demanding practice schedules, extensive travel for competition and at times, remote training locations many student-athletes are taking advantage of asynchronous learning opportunities at the secondary and college levels (Bates, 2012). Providing these learning opportunities requires not only creative and flexible program design, but also careful consideration of the rules and regulations associated with the agencies governing student athletes and the administration of these programs. Therefore, it is important that distance learning administrators developing or managing online learning programs for athletes be aware of the requirements and restrictions associated with serving these populations.

Secondary-Level

At the secondary or high school level there are a variety of distance learning programs available. The growth of home schooling has been a significant component of this growth. Online programs for K-12 students have grown significantly in the past 20 years. For example, in 2002, 1.6 million students were enrolled in distance learning courses. This number dramatically increased to 5.8 million in 2014 (Watson, 2016). This increase not only reflects the growth in distance learning supported home schooling, but also the rapid growth of distance learning courses and programs available in the public sector. Specifically, Watson, (2016) found that 28% of all post-secondary students were enrolled in at least one distance education course in high school and half of these were exclusively enrolled in distance learning and the rest in a mix of distance and on-campus courses. These statistics also reflected a change in the sources of distance learning courses with a large increase in courses being provided by non-profit and public institutions.

In the public sector, distance learning is less an institutional accessory and more an institutional necessity. For example, in Georgia, the Georgia Connections Academy is an online program providing a complete program throughout the state. Many public school systems coordinate this through an Open Campus Program. Likewise, dual-enrolled college/high school students who receive credit for both high school and college course work has been another source of online learning at the secondary-level.
Distance education opportunities for high school students, however, is not limited only to local school district sponsored programs. Students may enroll in any number of online K-12 programs throughout the country. However, to be eligible for interscholastic activities and sports, students who are being either home schooled or taking a majority of the academic courses elsewhere, must be registered at the school at which they are seeking to participate. In addition, they must be enrolled in the equivalent of a minimum of 2.5 Carnegie Units of course work counting towards graduation.

In the case of Georgia (2015), GA Rule 1.20 states that:

“(d) All or part of the course load of a student may be taken online through a virtual school as long as the student’s grades are being kept at the school in which the student is enrolled. Grades from virtual school courses must be on file at the school by the first day of the new semester in order for the student to be eligible.”

Not all states, however, have the same requirements. In Florida for example, a distance learning student is only eligible for extracurricular activities by registering with the school district in a Home Education Program and meeting the requirements of s. 1002.41 F.S. A student cannot be enrolled/registered as a full-time student, working toward high school completion or a diploma with a Florida private school, at the same time he/she is registered in a home education program (FHSAA, 2017)

Achieving eligibility for participation in extracurricular activities and sports is increasingly possible, however, for online learners. This special population must also be concerned about the future acceptance of these academic credits for those seeking further education and participation at the collegiate level. Many states and local school districts accept grades from a variety of sources. Though they are considered legitimate for scholastic competition, they may not be accepted at the collegiate level. Therefore, distance learning based student-athletes seeking to further their academic and athletic activities at next level need to consider the source of their academic credits.

Online learning at the high school level is offered, as previously stated, by many states as part of academic diversity. All of these programs are accredited through the states and their regional accreditation agencies. Student athletes who are enrolled in out of district or state online learning courses and programs must have these courses recorded through their school of record. In addition, to count towards meeting high school requirements and to be acceptable as meeting prerequisites for college eligibility, these courses must be from an accredited source acceptable to future institutions and the National Collegiate Athletic Association (NCAA).

Regional accreditation agencies, such as the Southern Association of Colleges and Schools (SACS) has a list of acceptable online high school programs and courses. Likewise, the Distance Education Accreditation Commission (DEAC) and the Council for Higher Education Accreditation (CHEA) also evaluates the quality of online programs and courses at the secondary level. The top 4 schools cited were: Laurel Springs School in Maryland, Brigham Young University Independent Study Program (BYU), the University of Nebraska High School, and James Madison High School. However, because of past concerns with BYU, the NCAA has stated the students not fully enrolled in the BYU high school program will not receive NCAA athletic eligibility credit for independent study classes (BYU, 2017).

Student athletes get involved in distance learning for a variety of reasons. For the fully home-schooled student, distance learning provides access to a full range of academic courses and enhances and enriches the home-school experience. By working with local school systems, distance learning supports athletic eligibility. Distance learning programs and classes offered through the local school district can also provide academic course work needed to achieve or maintain athletic eligibility. Furthermore, it may provide educational support for those student athletes who seek to graduate early in order to more immediately pursue collegiate competition.

An emerging trend among some elite student athletes is to consider early high school graduation and enrollment in college a semester or two early, especially those seeking to participate in spring football. For fairly obvious reasons, early enrollment and participation in spring drills may provide the incoming student athlete with a competitive advantage over incoming student athletes who enroll the following fall. It is in this context that distance learning has significantly aided the high school student athlete. Traditionally, the NCAA has been concerned with student athletes graduating late from high school, because of the need to complete course requirements that they had not
done in their regular academic progression, or attempting to post-pone graduation by being held-back in either junior or senior high school, in order to gain an additional year to develop physically (Infante, 2013). However, with the pressure and attention of early recruitment and the offering of athletic scholarships to underclassmen in high school football and other sports, leaving school before an athlete’s time rather than after, is becoming a greater concern to the NCAA. To help assure that this NCAA concern is allayed, a student athlete should consider graduating early only at his/her university’s suggestion, since the coaches or compliance officer at the university would need to be in close contact with the prospect to make sure they meet the requirements ahead of time.

Until the advent and growth of online learning opportunities, graduating early or making up credit deficiencies were considerably challenging and frequently involved some questionable tactics. For a distance learning course to be used to create athletic eligibility at the college-level, the course must prepare students for academic work at a four-year college. The courses must be comparable in length and rigor to traditional classroom courses and the student must have regular interaction with the teacher for instruction, evaluation, and assistance during the course. In addition, the course must be completed in a defined time period and that these courses be defined as nontraditional on a student’s official high school transcript (NCAA, 2017).

Deciding to graduate early is a major decision and one that can influence an athlete’s eligibility and students, parents. Current and future coaches should be aware of the risks and rewards that may be associated with this process. Since this action would likely involve some level of distance learning, program providers must be cognizant of the types of activities provided and how they impact the student-athlete and their high school or future college eligibility.

In addition, for the elite student athlete, the decision to pursue early graduation is a decision that should be made as soon as possible. Once again, distance learning can play a key role in this decision framework. Infante (2013) noted that early graduation is a decision that will require meeting all of the required high school graduation requirements in a compressed time period. Taking high school credit courses as early as junior high school and accelerating one’s education by enrolling in summer school or by taking approved online courses early in high school facilitate this process.

Finally, student athletes considering early graduation should verify that their school or district will permit this action. Many public schools limit or prevent early graduation (Infante, 2013). If early graduation is not possible, the student athlete may need to consider transferring to a different high school, often a private school, to finish early. Here again, online schools and distance learning are particularly flexible models that can provide significant benefit to the student-athlete. Special sports academies, such as IMG Academy, a boarding school designed to address the academic and athletic needs of elite student athletes, many of whom are planning to graduate early (IMG, 2017). Regardless of the type of school attended by the potential early graduating student-athlete, they must make sure the NCAA has approved the high school program or course work taken. This is especially important for those choosing online course work or an online high school degree.

Collegiate-Level

College athletes, in dealing with their rigorous practice, travel and competition schedules frequently must choose academic programs and majors that allow sufficient flexibility. Wolverton (2007) noted that approximately 20% of college athletes are limited in their choice of academic majors. Likewise, due to time constraints, most college athletes only enroll in the minimum number of credit hours (12) during the primary semester of their athletic activities, thus almost requiring their attendance during summer or other compressed academic semesters. With the advent of distance learning courses, many athletic-academic advisors have encouraged enrollment in distance learning courses as a way to better accommodate the demands of a sport and the requirements for academic eligibility. Knowledge of distance learning practices, their strengths, limitations, and the institutional and NCAA regulations have increasingly been noted in the job requirements of athletic academic advisors (Indeed, 2017).

The NCAA (2010) has stipulated that student athletes cannot be extended any special opportunities that are not available to all students (Bates, 2012). In particular, special attention and emphasis is placed on academic classes in general and distance learning courses in particular. The NCAA, when investing potential instances of academic fraud, frequently view course enrollments where a majority of the students enrolled are athletes (Willens, 2015). This is particularly important in distant learning or other forms of asynchronous learning. The accreditation
probation and the on-going NCAA investigation at the University of North Carolina has centered on potential academic fraud specifically involving course enrollment policies and documentation (Ridpath, 2016).

It should be clear then, that distance learning programs ought to consider student athlete participation when developing their program(s). In further support of this caution, in the fall of 2010, new requirements for nontraditional education were approved which stressed that distance learning courses must include regular and ongoing student/teacher interaction as a component of the learning experience. In addition, the same stipulations mentioned previously with regard to the acceptability on online courses acceptable for high school student athletes also applies to the content of college-level courses. This ruling specifically targeted correspondence-type courses, such as those made famous by BYU in the movie “The Blind Side.” However, distance learning courses which combine offline learning with interaction and feedback by way of online access, are not prohibited (Bates, 2012).

Nevertheless, there has been a significant rise in the number of institutions sanctioned by the NCAA for academic fraud. Over the past decade, 15 institutions were sanctioned for academic fraud, many which involved fraudulent assistance to athletes that were frequently associated with online courses. The aforementioned investigation at the University of North Carolina has revealed that over an 18-year period, 3,100 students, about half of them athletes took classes, frequently online, that were created and graded without academic oversight (Kerkhoff, 2016). This and numerous other instances of academic fraud have tarnished the reputation of student-athletes and likewise the integrity of many distance learning courses and programs (Willens, 2015).

Despite the potential issues of academic fraud, athletic programs at the collegiate-level increasingly have embraced distance learning as a vital component of the curriculum options for their athletes. Kreb and Locker (2009), in studying the perceptions, practices, and concerns about distance learning among student athletes noted that the flexibility of time management was very important. In particular, the ability to use their time away from campus for travel and competition, especially in revenue-producing sports, was very significant. Another noteworthy advantage of distance learning courses was that they did not have to deal with stereotypes about student-athletes from their professors and their fellow classmates. In fact, they felt that the distance learning environment helped them feel better able to express their views and opinions. The availability of some self-paced courses were also noted as helpful because of the flexibility of being able to take exams and quizzes during less demanding time periods. On the other hand, however, many of these advantages also were concerns in that the less-structured environment of online learning, and at times the lack of fixed deadlines were risks that they incurred. They noted that time management issues and the need for advanced planning and even limited interaction with some of their professors were constant threats to their academic success. Kreb and Locker suggested that blended or hybrid learning courses were an important option for many of these student athletes.

It is at the intersection of access, availability and concerns about academic discipline and effective time management that is increasingly of concern to athletic academic advisors. Martin and James (2012) stress the importance of developing these skills for all classes and to work with their academic advisors to keep on track for success in their courses, especially those distance learning courses which can easily slip under the radar during the heat of competition. They also stress that with international student athletes, they need to continually be aware of additional NCAA policies and regulations, such as signing I-20 forms when traveling.

As distance learning has become more sophisticated, the technology for its delivery has worked hard to keep pace. This has been an essential element in the appeal of distance learning for student athletes. For example, Mike Jarvis, a former college basketball coach, worked with V-Brick in developing i-Pod and MP4 based educational programs (V-Brick, 2006). Today, the use of multi-platform internet based delivery systems have been a significant factor in expanding the opportunities for all students, including athletes, to access online courses. The smart phone has made the mobile classroom a reality.

The role of distance learning and collegiate athletics is not restricted to the United States. The European Union has sought to address the educational needs of elite student athletes by scrutinizing the availability of academic services as well as post-athletic career services. Acquilina and Henry (2010) specifically note that the availability of distance learning is a critical component of the support of student athletes. Likewise, in a study of top level Croatian athletes, it was found that their technical knowledge of modern information technology contributed to their high rate of academic success in e-learning courses (ITI, 2010).
Professional athletes comprise another niche population for asynchronous distance education. Confronted with the demands of long training/practice periods and extensive travel for competition, many athletes entering the professional ranks have not completed their higher educational goals (Bates, 2012). Increasingly, professional sports in the United States are promoting distance learning as an important means in preparing professional athletes for post-performance careers.

The National Football League (NFL), beginning with rookie orientation, stresses the importance of continuing education and degree completion. With the importance of preparation for the NFL Combines (tryouts), most college players do not complete their final semester in college. With many players now entering the NFL Draft early, they have even more course work to complete before earning their undergraduate degree. Tom Kowalski (2017), the NFL Consultant for Continuing Education, notes that distance learning requires a very different skills set than traditional classroom learning, and that while some athletes have been quite successful adjusting to the process, others have not. The more successful athletes have been those who have been self-disciplined, have sufficient computer skills, and can work independently and often with little interaction with instructors. Also, they need to make sure that any courses they take online are from an accredited institution, and if it is not from their home institution, it can be successfully transferred.

In the area of professional basketball. The NBA specifies that teams cannot draft a player until one year beyond graduation of their normal high school class, though large majority of NBA players attend college for at least one year, and many for two or three years, though less than 70% have completed a degree program (Bates, 2012). Likewise, the WNBA requires that all players must have completed (not graduated) four years of college or two years of international competition. Both leagues have promoted degree completion programs which include academic advising, transcript evaluation, degree planning, graduate school entrance examination preparation and tutoring services (NBA, 2007). Additionally, all teams in the NBA have a player development assistant who works with players on their academic goals.

Unlike the NFL, NBA, and WNBA, professional baseball frequently recruits players directly out of high school, and as a result has not been as responsive to continuing academic needs of its players. In fact, given the minor league system and the frequent practice of trading players, higher education plans are left up to the individual. However, Richard Atros, academic adviser to the New York Mets, has worked with players within their system in conjunction with a distance learning program through Drexel University (Salemi, 2006). Further examples of individual efforts to complete their degrees include Al Leiter, a major league pitcher who completed his degree through the distance learning program at Penn State University as did Jamie Moyer at Indiana University, so the use of online programs in pro baseball is not unprecedented.

Because of its inherent schedule and logistics benefits, distance learning alternatives represent a significant opportunity for many of these professional athletes to return to college to complete their post-secondary educations. In fact, it may actually be the most appropriate avenue for a large percentage of professional athletes. To better illustrate this point, one only needs to take a closer look at the available player data.

According to the NCAA, Division I athletes in all sports combined boast a Graduation Success Rate (GSR) of nearly 85%. Broken by gender, this number represents 91% of female athletes and 79% of male athletes. Notably, Division I men’s football athletes trailed the average for all sports, averaging 74%, while Division I men’s basketball was slightly higher at 76%. Dropping down to Division II produces GSR of 51% for football and 58% for basketball (NCAA Graduation Rate, 2016). As stated above, Major League Baseball recruits the majority of its players directly out of high school so their college graduation rate is less significant to this study. In addition, since the overwhelming majority of professional athletes today are men, this illustration leans heavily towards assessing male athlete opportunities to return to college. Of course in recent years the number of women athletes having professional sports opportunities is growing and will most probably become a bigger part of this story in the coming years.

What this data projects is that in the NFL for instance, at least 30% of the incoming players have not graduated from college. Since the population of NFL players each year is 1,696 players and the average career length in the NFL of 3.3 years, over 25% (approximated 500 athletes) of the league is represented by first time NFL players. The vast
The majority of these come directly from the college ranks, which means that there are nearly 150 college football players joining the NFL every year who have not finished their degree requirements.

One of the biggest hurdles for pro athletes to return for their degrees involves convenience and logistics. Specifically, from a paperwork, application, and transcript perspective, it is a far simpler process for a pro athlete to return to their original college. The curriculum generally follows a consistent approach, the athlete has a certain level of comfort with their school, and there is minimal paperwork necessary to re-enroll. Unfortunately, pro athletes’ residences are most frequently not a practical distance from their original college either during their playing career of after their time in the league is concluded. A review of NFL rosters indicates that of the 1,696 current NFL players, only 5% percent play for teams that are even in the same state as their original college. Combine that with the fact that of the 5%, nearly half of those came from two states (California and Florida) which themselves are significantly large, it becomes clear that re-enrolling at their original college is most often logistically unrealistic without a more innovative approach. This is where distance learning programs can positively influence the number, and eventual success of their pro athletes wishing to finish their degree.

Conclusions

Previous research identified a variety of special populations which may be serviced through online learning activities. These have included the military, Native Americans, prisoners, remote occupations and others. One growing area suitable for distance learning opportunities involves the student and professional athlete populations.

At the high-school level, the availability of online learning opportunities has increased the learning resources and opportunities available to student athletes at the secondary level. It has provided supplemental learning for students in public and private schools as well as among home schooled students. The availability of online remedial learning opportunities has addressed the needs of some less prepared student athletes as well as providing accelerated learning opportunities for elite student athletes seeking to graduate early. Online learning is increasingly an intrinsic component of the high school learning environment. Online college courses for dual enrollment programs with local colleges lessen the demands of their first year college experience as they continue their athletic careers.

At the collegiate level, student athletes have embraced online learning as an important component of their educational programs. Its advantages are more flexible time management and asynchronous learning opportunities. The disadvantages of lack of structure and accountability are being addressed through active programs of advisement and counseling by athletic academic advisors. However, the almost complete immersion of student athletes into the uses of today’s technology have established a firm foundation for further use of distance learning for this population. Finally, the NCAA is taking a more active and aggressive position in monitoring the role or potential role of academic fraud, with special emphasis on nontraditional learning programs.

At the professional level, professional athletes are exhibiting increasing desire to complete their degrees. The sheer number of collegiate athletes leaving school early, without completing their degree requirements, combined with the relatively short duration of professional playing careers, has resulted in a significant number of pro athletes searching for a means to complete their degrees. To meet this demand, the availability of online alternatives is rapidly expanding. More and more, universities that develop and place athletes in professional sports should expand their distance learning options, as the demand, simplicity and convenience of degree completion for their alumni will continue to grow.

Regardless of the level of competition, distance learning is a game changer for athletes and the institutions seeking to serve them. Distance learning administrators at high schools, universities, or even professional franchises need to consider the range of distance learning options and the specific needs of their athletes. At the school and collegiate levels, numerous rules and regulations must be considered as part of the equation of service. At the professional level, the athletes and advisors must continually be aware of the changing options available and the best strategies for degree completion or the pursuit of advanced degrees. For distance learning to be a game changer, it must play within the boundaries of the game.
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Assessing the Validity and Reliability of the SmarterMeasure Learning Readiness Indicator™

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Abstract

With the growth of nontraditional students in online education environments, there is increased interest in finding ways to support student retention. Assessments of readiness are often used for course placement, admission decisions, and to identify support services needed for remediation. One such assessment tool is the SmarterMeasure Learning Readiness Indicator™. This assessment is often utilized by online institutions to measure the level of preparedness of prospective students. Validity and reliability of the tool is needed to ensure effective remediation and support plans for at-risk students. The purpose of this study was to analyze the multiple dimensions of learning readiness, as indicated by SmarterMeasure, with a focus on the nontraditional student. In this attempt with a large sample size, we were unable to replicate each of the specified dimensions. Future research should be conducted to test the whether the constructs are replicable in other contexts.

Introduction

With more than two decades of growth in online offerings at institutions of higher education (Allen & Seaman, 2013), institutional leaders are challenged to identify strategies to retain students. Student retention rates are historically lower in online courses than in similar face-to-face courses (U.S. News and World Report, 2015). As such, there are several categories identified as critical to student retention, including readiness for online learning and student support to ensure success (Harrell, 2008). To ascertain online learning readiness and needed support services, tools must be developed and effectively used. One of the tools commonly used is the SmarterMeasure Learning Readiness Indicator™ (SMLRI). This tool is an online assessment of student readiness to engage in online or technology-rich learning environments (SmarterServices, LLC., 2016).

Once students complete the SMLRI, results are given across several domains:

- Individual attributes - Motivation, procrastination, willingness to ask for help, etc.
- Life factors - Availability of time, support from family and employers, finances, etc.
- Learning styles - Based on the multiple intelligences model
- Technical competency - Skills using technology
- Typing speed and accuracy
- On-screen reading rate and recall (SmarterServices, LLC., 2016)

Using this tool, it may be possible to correlate measured indicators with student retention factors. To test this tool’s applicability, model validity, and reliability must be ensured. While there are good data on validity and reliability overall, there is an absence of these measures for nontraditional student populations. This study includes an
assessment of the validity and reliability of the items included in the SMLRI specifically for the contemporary, nontraditional student.

In this research, three propositions were developed to guide the research process:

- **P1.** Learning readiness is complex and motivated by multiple factors
- **P2.** With large sample sizes, replication of the SMLRI factor structure and similar load coefficients will occur for the vast majority of the 18 subcomponents
- **P3.** Subsequently, each of the 18 subcomponents will exhibit relatively high item reliability (>0.60-.70)

**Literature Review**

There is great interest among many higher education stakeholders regarding the factors that influence nontraditional online student success. Higher education leaders are expected to create and administer policies that increase student retention (Johnsrud & Banaria, 2004). One of the policies that leaders must consider are the types of information gathered from students as part of the admission process or prior to enrollment in a student’s online program. The types of tools used greatly impact not only who is qualified for admittance, but how students meet expected outcomes once enrolled. While previous studies have been conducted on tools for general online student use, more research is needed on tools that are effective to use with nontraditional student populations. In this literature review, several themes will be reviewed including construct validity and item reliability of SMLRI to assess students, definitions of nontraditional students, and retention factors and needed academic support services.

**Model Validity and Reliability**

Construct validity is used to ensure an assessment measures the conceived psychometric concept, while item reliability is a measure of the consistency of a set of internal measurements. In other words, construct validity ensures an instrument will respond predictably across multiple administrations, while stability and consistency among items are expected if item reliability is established (University of Washington, 2017). Moreover, a robust model should be easily replicated in the same circumstances with adequate sample sizes.

Regarding the SMLRI model, it is stated on the company's website that "construct validity is a measurement of the degree to which SmarterMeasure is an indicator of a learner's level of readiness for studying in an online or technology rich environment" (SmarterServices, 2017, para. 1). In this case, we believe the appropriate reference is to predictive validity in lieu of construct validity. It is further indicated that results from several studies show relatively strong construct validity of the tool. Of note, while it is clearly indicated that the tool is not designed to predict academic success, multiple analyses are discussed on the website relative to components of the SMLRI model’s ability to predict student success or academic achievement. For example, one piece of research highlighted on the website showed statistically significant relationships between scores on several student outcome variables including academic achievement, engagement, satisfaction, and retention. However, this phenomenon is ameliorated in the material by indicating that many variables affect online student success, including faculty engagement and student abilities. Notably, the primary claim by the company is that the tool is designed to identify strengths and deficiencies of the identified domains related to learning readiness (SmarterServices).

It should also be divulged that SMLRI item reliability was evaluated by Applied Measurement Associates of Tuscaloosa in 2011. Cronbach's Alpha coefficient values showed reliable assessment for learning styles, individual attributes, life factors, and technical knowledge. Some lower reliability scores were reported for technical knowledge and technical competence, which could be related to the scale type used (SmarterServices, 2017).

**Defining the Nontraditional Student**

Nontraditional students account for a significant proportion of the undergraduate population (National Center for Education Statistics, n.d.), and are well represented throughout graduate and postgraduate degree programs. There is much debate around the factors used to classify nontraditional students, but most researchers agree that one or more of the following are indicators: students 24 years of age or older, students with family responsibilities, students who reside off campus, students who work fulltime, students who delayed college entrance for at least one year post high school, students who had a multiyear disruption in undergraduate studies, students who are veterans or active duty
military members, or students who must take a reduced credit load because of nonacademic obligations (National Center for Education Statistics, n.d.).

Because of the growing nontraditional student population, strategies are needed to support students meeting this classification. Nontraditional students have unique learning needs. These learners are highly motivated, self-directed individuals who engage in learning within the context of busy professional and personal lives. They bring personal and professional experiences to the learning task, and therefore, it is critical that curricular content be relevant and applicable to the student’s life. The nontraditional students’ academic success is closely tied to his or her sense of self-worth (Merriam, Caffarella, & Baumgartner, 2007).

Kapp and Knowles pioneered the theory of andragogy (Fidishun, n.d), which is based on the ways nontraditional students acquire knowledge. This theory purports that adults are autonomous, self-directed, goal oriented, relevancy oriented, practical, and desire respect (Lieb, 1991). Often these students have full time careers, families, and commitments that prevent a more traditional face-to-face learning experience. O’Lawrence (2006) noted that the online learning format has “increased opportunities for adult learners to accomplish educational goals” (p. 47). Nontraditional students have distinctive learning characteristics. By acknowledging these traits and working to accommodate nontraditional learners, educators can provide a meaningful learning experience (North Central Regional Education Laboratory, n.d.).

Academic success is crucial to an adult’s feeling of self-worth. If adults feel unsuccessful in the learning environment, they are very likely to quit. This factor contributes to the retention rate of online learners, so it is extremely important to utilize assessment strategies that make a learner feel successful and offer any necessary constructive feedback to guide the learner. Palloff and Pratt (2003) recommended that online students be provided informational feedback that can be used to guide the academic journey. Thus, tools like SMLRI may help support this population of students.

**Nontraditional Online Student Retention and Support**

Shaw, Burrus, and Ferguson (2016) conducted a study that resulted in recommendations for retention and support of nontraditional students. They noted that students who understand and can articulate their motivation for engaging in their program of study are more likely to persist. Further, students who are technically savvy and who are provided with regular feedback about performance are more likely to be retained. They also noted that readiness is a likely predictor of student success. Thus, institutions should provide resources for and remediation to students who do not possess fundamental readiness skills.

Tinto (2005) noted that integrative college experiences increase the likelihood of student persistence to degree completion. Kara and DeShields (2004) emphasized the importance of recognizing factors that contribute to student retention. Gilliam and Kristonis (2006) recommend institutions examine and identify problems related to student attrition and retention. Fike and Fike (2008) concluded it is essential to use data to guide decisions supportive of retention and to provide insight into factors influencing student retention. Researchers noted that it is always more cost effective to retain students than replace students (Flegle, Pavone, & Flegle, 2009).

Researchers have linked high school GPA and college entry exam scores with student persistence in college courses (Astin, 1993). Yet, many online institutions allow students to enroll without test scores and with no minimum GPA. Tinto (1993) indicated that least selective institutions often have low student retention rates. Tinto also linked lack of academic preparedness to higher student attrition.

Remediation is often required for students who enter college without requisite academic skills (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 2006; Kuh, 2007). If a student is indicated to be deficient in a certain area and then if the school provides appropriate remediation and/or support, then SmarterMeasure can serve as a retention tool by helping students succeed as they learn in the context of online or technology rich courses. (SmarterServices, 2017). Researchers link the provision of needed support services with student retention. To ensure appropriate supports are provided to students, tools are needed to accurately predict the types of services individual students need from the inception of their online program. Student success, persistence, and completion are of utmost importance, not only for the long-term success of students, but also for longevity of our universities.
Methodology

The present study was undertaken with the objectives to (a) replicate the factor structure of the three factorable primary components and 18 subcomponents of the SmarterMeasure Learning Readiness Indicator\textsuperscript{TM} (SMLRI), and (b) to measure the item reliability of its subcomponents. Of note, the 18 subcomponents of the SMLRI consist of a total of 79 items. The factorable components and subcomponents of the SMLRI are learning styles (solitary, logical, aural, verbal, visual, social, and physical), life factors (time, place, reason, resources, and skills), and personal attributes (help seeking, time management, procrastination, persistence, academic attributes, and locus of control). Of note, the two technology components (technical knowledge and technical competency) were not assessed in this study since the items are measured on a categorical scale.

As such, the following propositions were developed to guide the research process:

- P1. Learning readiness is complex and motivated by multiple factors
- P2. With large sample sizes, replication of the SMLRI factor structure and similar load coefficients will occur for the vast majority of the 18 subcomponents
- P3. Subsequently, each of the 18 subcomponents will exhibit relatively high item reliability (>0.60-0.70)

We followed a multi-stage research process to focus our analysis on the multiple dimensions of learning readiness as indicated by the SMLRI. Stage 1 of the process included appending multiple files based on a unique non-identifying record number that linked each student’s SMLRI responses from 9,222 students at a large university that has both on ground and online courses. The criteria for inclusion included students that started and completed at least one course during the study period (2013-2016), so that early academic success metrics could be examined after this factor analysis. Notably, the students in this sample answered all 110 questions pertinent to the SMLRI project scope, of which 79 of those questions are utilized in this analysis since they represent potential items of latent constructs and are factorable. Stage 2 consisted of analyzing the responses independently and attempting to replicate the factor structure of the SMLRI model in lieu of conducting confirmatory factor analysis via structural equation modeling.

The items in the SMLRI represent a number of questions and level of agreement statements that are linked to either constructs with established psychometric properties or proprietary SMLRI models. Of the 110 items, 79 are represented in SMLRI manifest variables leading to 18 latent variables.

Of those respondents who are included in this research, the vast majority (97.2%) are strictly online students. The average age of the respondents is 34.71 years with a range of 18 to 80, indicating a more nontraditional online student. Regarding place of residence, all 50 states, Puerto Rico, and the Virgin Islands are represented in the sample.

Following the guidelines set forth by Osborne and Fitzpatrick (2012), the primary objective of this research was to replicate the factor structure of the aforementioned factorable variables identified through the SMLRI model. The authors’ position is that, since replication with exploratory factor analysis (EFA) is also exploratory, and prefaces a more diligent and scrupulous confirmatory factor analysis (CFA), simple summary measures are preferred. Moreover, it is posited that with very large sample sizes, replication through additional EFA procedures should produce similar results in valid and reliable models.

Results

Prior to data reduction, the dataset was analyzed for missing and outlying data points, and there were none in this particular sample, because as stated earlier the matched dataset for this sample included complete data. Following the guidance of Tabachnick and Fiddell (2007), an oblique factor rotation (direct oblimin) with the specified 18 factors as set forth by the SMLRI model was first specified to examine the correlation among factors. Since the factors exhibited little correlation (per Tabachnick and Fiddell, the threshold is $r < .32$), it was determined that an orthogonal rotation was clearly most appropriate for this analysis.

Thus, a principal components analysis (PCA) with an orthogonal rotation (Varimax) was selected for independent data reduction. Following conventional protocol for factor analytic data reduction, the first step in the factoring process beyond rotation selection used in the first correlation matrix was to discard any inter-item variables.
correlated at less than .40 (Hinkin, 1998). This process serves to remove items that appear discrete to the common domain (Churchill, 1979; Kim and Mueller, 1978). In this phase of the data reduction process, since this was an attempt at replication, there were no prescribed number of factors. The resulting reconstituted factor solution incorporated 67 of the original 79 variables, generated 19 factors, and accounted for 48.02% of the total variance. More information on the 19 factors are presented in Table 1, and the variance explained with each factor is presented in Table 2. Notably, less than 60% of the SMLRI variables loaded as expected pursuant to their specified model.

There were only two item cross loadings in the new factor solution. Moreover, the majority (56.7%) of the factor loading coefficients were above .60, with 19.4% above .70. Notably, negative items were reverse coded to conform to criteria facilitating reliability analysis.

With the revised factor solution, an examination of the Kaiser-Meyer-Olin measure of sampling adequacy suggested that the sample was factorable (KMO = .894). The approximate chi-square for Bartlett's test of sphericity was significant ($\chi^2 (3,081) = 119,595, p<.001$), indicating that the correlation matrix was not an identity matrix. Both the eigenvalue criterion and an observation of the scree plot indicated a 19-factor solution, which accounted for 48.02% of the variance. Internal consistency for 18 of the 19 of the factors was examined using Cronbach's alpha. The alpha values for the 18 factors in which reliability could be measured was moderate to low, with 5 factors above .65, and the remaining factors ranging from .43 to .60. Hence, there are some concerns about unidimensional scale measurement. However, rules of thumb in this regard should be taken with caution when alpha has been computed from items that are not correlated highly.

**Table 1.** 
*Revised Factor Information and Interpretation*

<table>
<thead>
<tr>
<th>Component</th>
<th>Number of Items</th>
<th>Interpretation of Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>Procrastination</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>Anxiety about education</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>Communication</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>Time commitment ability</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>Spatial utilization</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>Assimilation</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>Motivation</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>Aural learning style</td>
</tr>
<tr>
<td>9</td>
<td>3</td>
<td>Persistence</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>Precision</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
<td>Solitude</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>Outcome control perception</td>
</tr>
<tr>
<td>13</td>
<td>2</td>
<td>Intellectual prowess</td>
</tr>
<tr>
<td>14</td>
<td>2</td>
<td>Extrovert</td>
</tr>
<tr>
<td>15</td>
<td>3</td>
<td>Outside distractions</td>
</tr>
<tr>
<td>16</td>
<td>3</td>
<td>Intellectual challenge</td>
</tr>
<tr>
<td>17</td>
<td>2</td>
<td>Intellectual equality</td>
</tr>
<tr>
<td>18</td>
<td>1</td>
<td>Hours worked</td>
</tr>
<tr>
<td>19</td>
<td>2</td>
<td>Other time distractions</td>
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Table 2.
Rotated Sum of Squared Loadings

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<tr>
<th>Component</th>
<th>Initial Eigenvalue</th>
<th>Rotated % Variance</th>
<th>Rotated Cumulative %</th>
<th>Cronbach's Alpha</th>
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<td>3</td>
<td>2.468</td>
<td>3.473</td>
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<td>4</td>
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<td>19</td>
<td>1.070*</td>
<td>1.578</td>
<td>48.020</td>
<td>.431</td>
</tr>
</tbody>
</table>

*The remaining components had an eigenvalue less than 1.000

Results Summary

The objective of this research was to replicate the factor structure of the SMLRI model. In lieu of conducting a full CFA, it was decided to follow the guidance of Tabachnick and Fiddell (2007) and first implement a straightforward and basic process, especially with a sample size of n = 9,222. It is suggested that, regardless of the direction provided from the literature related to the ratio of subjects to factors, this research event far exceeds any ratio minimum recommended in the literature. With such a large sample size and a failure of over 40% of the items to load on the congruent factor, this replication attempt failed to meet the basic test of having items assigned to the same factors. Hence, the second replication step of confirming that the factor loadings were roughly equivalent in magnitude was unnecessary. A reconstituted factor structure was generated, explaining 48.02% of the variance with 19 factors. Ultimately, the validity and reliability of the aforementioned components of the SMLRI tool were not demonstrated in this research.

Discussion and Conclusion

Researchers have conclusively shown the challenge of retaining nontraditional online students. It was surmised in this study that the SMLRI is one tool to help identify at-risk factors for selected student populations (SmarterServices, 2017). Based on the findings from this study, additional investigation is needed to determine the SMLRI model's validity and reliability with nontraditional students. It should be noted that a limitation to this study is that researchers were unable to fully include the technology domains that previous research has indicated may help predict student readiness. However, the sole purpose of this research was to assess the validity of the factor structure and reliability of the scale items that were factorable.

Considering the broader picture relative to the stated purpose of the SMLRI, examining the characteristics of students who withdraw before completing their first few courses would both inform enrollment policies and promote strategies to support students at the earliest stages of enrollment. In addition, it is suggested that more in-depth research should be conducted to more deeply understand student perceptions of factors that resulted in online program attrition. In particular, research should be conducted to explore student reasons for withdrawal at various
degree levels to provide a more complete picture of the interventions needed to support these students. Finally, long-term quantitative, experimental research should be conducted to determine if interventions provided to students, in response to data garnered from the SMLRI, resulted in any positive retention gains.

References


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Inverted Triangle Model for Course Design/Re-Design

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Abstract

When faced with the challenge of designing a new online course or re-designing an existing online course, it is not uncommon for faculty to feel completely overwhelmed. The most commonly asked question is, “Where do I start?” Building on the famous words of General Creighton Abrams, Jr., “When eating an elephant take one bite at a time,” the Inverted Triangle Model was created. The Inverted Triangle Model (ITM) provides a manageable way for faculty and course designers to tackle the design or re-design process of a course in a logical manner. The ITM uses a top-down, broad to narrow chunked approach to the course design and re-design process.

Introduction

The ITM consists of nine steps, beginning with how the course will be divided and ending with what elements to include in a Getting Started Module (Figure 1). Throughout this paper each step will be defined, examples given, a rationale provided as to why the step is in a particular place, and an outline of implications if the step were moved up or down the list.

Figure 1. Inverted Triangle Model for Course Design/Re-Design
Step 1: Making the Division

It may seem counterintuitive to begin a course design or re-design looking at the “broad view” by deciding how to divide the course or content up, but there is a logical reason for it. When assembling a puzzle, one begins by finding the edge pieces and putting them together. This is done to establish a framework for the picture. Deciding how the course or content is going to be split up is the same premise, it establishes a framework of where the parts and pieces of the course will fit. Content experts in math and science may see division of content by chapter or unit to be the best course of action. Whereas, an English course could be divided by genre with a module for poetry, short stories, etc. If this step were to come later in the design or re-design process, then it is very possible that a course developer would find discontinuity and disjointedness in the structure of the course. Granted they would be able to fix problems before the course went live, but many hours of work would have to be redone.

Step 2: Finding the Middle and the End

Midterm and final exams are major events that occur during a semester. Deciding when these exams occur in a course early on in the design process will have a twofold benefit. First, developers are able to ensure these exams do not fall at inconvenient times such as holidays or breaks. Second, developers are able to control what content comes before each event. This is especially important for the midterm. Adding the midterm as an afterthought of laying out the course content could pose an enormous scheduling problem. If the midterm is supposed to fall around week 8 in a course but the content is laid out in such a way that the material covered on the midterm does not happen until week 10, then students could potentially be tested over information they have not yet seen. Likewise, having a firm final exam date defines the stopping point of the course. Knowing where these events fall in a course early on will save a multitude of headaches and time in the future.

Step 3: Splitting the Content

With the framework established and midterm and final exam points set, it is now time to address the first step centered on course content. Before spending weeks putting lectures, videos, and readings, together it is paramount that the content be outlined in a brief form. This step is merely focusing on what content goes where. For example, an American History II class is divided into 16 weeks with week 8 being the midterm and week 16 being the final. The instructor knows that they want to be finishing up with The New Deal at the midterm. This means that the instructor now needs to divide the content from Reconstruction thru The New Deal over 8 weeks and then World War II through the present will be covered between the midterm and the final. Having a clear path in mind will allow the instructor to create a well-developed flow and rhythm to the content. Remember, the instructor is not creating the content at this point, just deciding when and where the content will live within the course.

The rationale behind this process is to allow instructors and course developers an opportunity to keep the big picture in their lens before being bogged down with the details of the content and assignments. This is the first point of reflection in the ITM. Asking if this progress makes sense can allow for changes to easily be made. A best practice that has been identified about this step of the method is to create an initial outline of the content, then leave it to sit for a week and look at it again. This time of digestion will allow the course developer an opportunity to have fresh eyes on the content layout before more detailed design activities are completed. Completing this step in the design process at any other point could extend the design process further. Imagine if all of the assignments were created, including the midterm and final, and then try to cram it into a course. There is a chance that too much material was created for the “space” and time allowed in the course, resulting in a redesign of the redesign. No one likes to do work twice, and putting this reflective step here prevents that.

Step 4: Putting Assignments in their Place

Now that a basic outline of the course has been created, the next logical step is to assign a placeholder for all other assignments within the course. Course developers are able to create the rhythm and flow of the course regarding assignments and due dates. If the course is divided by topic, unit, or chapter, this is the point where actual time constraints are designated. It may be that some topics or units require more time than others. This is the second point of reflection in the ITM. Similar to the digestion moment taken after the course outline is completed, a time of reflection is needed here. The assignment of a placeholder narrows the vision of the course providing another
opportunity for adjustment of content and overall layout (Figure 2). Developing full assignments at this point is not necessary as the content has not been fully developed.

Figure 2.
Example Course Outline

Step 5: Building the Gradebook

After reflecting on the placement of the assignments and activities of the course, it is time to construct the gradebook for the course. As the process of the ITM becomes narrower and narrower, elements of the course will begin to be fully developed. If the gradebook is completely created before that development starts, then the chances of an assignment or activity being left out are reduced. Most learning management systems (LMS) have the ability to link assignments and activities directly to items in the gradebook. The prompting for this linking generally occurs when the assignment is created. This saves time and is a check and balance for the course developer to make sure all assignments are created for the course. Additionally at this point it is a good practice to create the rubrics for the assignments. Similar to the linking process between the assignment and the gradebook, most LMS have the ability to link assignments to assessment tools like rubrics.

Step 6: Filling in the Content

The time has finally arrived for placeholders to be filled. The first item that needs to be fully built in this step is the content. Deciding on what material will be included within each content placeholder must be done before the
assignments are created. Logically you cannot create an assignment or activity without knowing what material the students have been taught. This is the opportunity for the course developer to be creative. The vast world of technology enables content to be delivered in a myriad of ways. At this juncture, the process of aligning the course content with the objectives of the course can really begin.

**Step 7 & 8: Building Assignments, Activities, and Exams**

This alignment strategy is carried over to the next step where the assignments are developed. It is a good practice to at least sketch out the assignment details as the content is developed. Whether the assignments are developed after all of the content is created or as each content placeholder is finished is up to the course developer. Making notes and highlighting important information for exam questions will save time in the long run. This information is useful too after the assignments are fully developed and focus is now turned to the next to last step of creating the midterm and final. This process of building content, then the assignments, and lastly the midterm and final are a triangle inside a triangle. The content being the foundation that builds up to the assignments that lead to the pinnacle of the midterm and final.

**Step 9: Getting Started**

As the point of the triangle is reached it is time to create a Getting Started Module. The thinking behind this element of an online course is that it serves as a centrally located place for everything students need to know to “get started” in their course. In addition to providing the road map for the students this is an excellent place to “blow apart” the course syllabus. Creating sub-modules based on the different sections of the syllabus makes the information easily attainable for students. It is also an opportunity to highlight student resources that focus on college policies, academic resources, and student support services.

**Conclusion**

In summary, this model has been used roughly a dozen times successfully and continues to show its advantages each time it is used. Faculty who have used it found that it is an efficient way to navigate through the design and re-design process.

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The Online Education Marketing Dilemma: Packaging

A Case Study of
NC State University Online and Distance Education

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Educational Marketing Group, Inc.

Abstract

Circumstances for institutions in higher education have the similarities and practices with their “Situations,” “Challenges,” “Solutions,” and creating the “Right Package” process. However, the institutions that traditionally focus on a silo-effect of support for individual online and distance education programs require the individual programs to become self-managing in their marketing, student recruitment and website development. These institutions should consider broadening tactics to include a more centralized level marketing and strategic student recruitment approach. Following best practices at the centralized level dramatically improves a program’s likelihood of student recruitment success and self-sustainability.

Online education has been the fastest growing segment of higher education for the past decade and has become the single most competitive market arena in all of academia. In 2014, about 72% of all institutions of higher education offered some form of online or distance education programming, with more entering the marketplace every year (Babson, 2015).

For more than a decade, for-profit educational providers drove the competition, pursuing online students with aggressive marketing campaigns to increase market share. But in recent years, as for-profits have been damaged by political and economic forces, public and private non-profits have jumped into the online arena seeking rapid expansion of new students, both nationwide and internationally. The result is that hundreds of millions of dollars are being invested each year into paid advertising for online student recruitment, the bulk of which is now coming from non-profit colleges and universities.

Advertising alone, however, does not put students in virtual seats. Once a prospect has been enticed to the institution’s website doorstep, quickly presenting him or her with a clear understanding of the benefits of online learning, the programs available, the institution’s unique advantages, and how to apply is paramount to converting today’s savvy consumer prospects into students.

This is where many organizations lose prospects. Websites for online programs are often confusing and off-putting, discouraging potential students.

At traditionally structured non-profit colleges and universities, responsibility for online programs resides with the respective academic department. While a central online education unit is typically responsible for the technology and delivery mechanisms, the website presentation of programs is spread across many units that manage different pieces of the online education process – colleges, departments, admissions, cashier’s offices, and support offices.
each are responsible for different elements of the process. Content is often inconsistent from unit to unit. In short, content is arranged in the way the college or university is administratively organized rather than from the point of view of the prospective student.

For many prospects, the experience of bouncing around an institution’s website to determine program offerings, cost, and application and enrollment requirements is confusing and frustrating enough that they simply, and quickly, click to a competitor site.

The Challenge

NC State University Distance and Online Education faced the dilemma discussed above: online programs and their web pages managed by departments residing in the University’s various colleges and an out-of-date, inaccurate centralized website. The institution’s mindset was, “If we offer the program, students will come.” There was little institutional support or budget for creating a central digital marketing and student recruitment infrastructure around online education. Furthermore, many believed that there was little competition for online programs in North Carolina, so there was little need to invest in marketing or a high-end website.

The outcome of this attitude was a bewildering array of websites for online programs, which totaled over 85, each presented differently and often buried within departmental websites. The central website did not include a listing of online programs that would guide prospects to the programs they sought.

However, program content on the central distance learning website tended to vary from the unit-owned pages, further confusing prospects as to which source was accurate. Together, these 85-plus sites served as the University’s main marketing presentation of its online offerings. Additionally, the design of the central distance learning site was outmoded, content was out of date, and the design, voice, and tone of the site did not adhere to University brand standards.

In short, the University’s Online and Distance Education programs suffered from three major hurdles:

- Lack of a university-wide format for consistent course and program descriptions, resulting in a confusing presentation responsible for the loss of many prospects.
- Absence of strong and compelling key messages that clearly defined reasons to choose NC State online and distance programs; and enrolling in NC State online and distance programs was the best choice.
- No clear motivational calls-to-action that guided prospects along the decision-making path to application.

The prospect, searching for online programs often via mobile devices, was forced to bounce from one disjointed site to another. NC State Online and Distance Education programs appeared unprofessional, and anything but customer-oriented. From a user-experience standpoint, NC State asked prospects to do a lot of work to dig through the University website to get to a decision point that should have been presented quickly and easily.

The Solution

In 2015, University leadership acknowledged that the increase in competitiveness in the online marketplace demanded a new approach if online and distance enrollment was going to continue to grow. Dollars were allocated to create a centralized, forward-looking web presence for NC State Online and Distance Education programs that would serve as the primary entry point for prospects responding to University outreach. NC State partnered with Educational Marketing Group (EMG) to identify the issues facing the presentation of NC State online programs and to define a process by which to implement both a new consumer-oriented mindset, as well as a new branded website (Babson, 2015).

Before the website project could start, the Online and Distance Education team had to determine how to bring together a diverse group of representatives from 85-plus campus organizations, all of whom had different work cultures, backgrounds, needs, and expectations. Identifying who should be on the team, what responsibilities they would have, and how decisions were made became key.
Preparing the organization for change presented another set of challenges:

- Shifting the mindsets from “everybody doing their own thing” to a unified approach to online and distance education marketing.
- Allowing the marketing experts to make critical decisions about program packaging on the website.
- Switching from a program-based marketing approach to a combination of overall brand marketing along with targeted program marketing.

The first task for the team was to update the existing name, “NC State Distance Education,” to more accurately reflect how prospects think about and search for online programs. This was also a key part of the shift in University presentation of online programs. With major research and analysis efforts and the input of units across the campus as well as University leadership, the unit was renamed “NC State Online and Distance Education.”

At the same time, research indicated that presenting the University’s online and distance education programs as an integral component of the NC State core brand through consistent visual/graphic presentations and connected messaging was fundamental to the formulation of a successful strategy.

Following the renaming and establishing a clear brand-architecture strategy, the following goals were identified:

- Creating a unified website representing the powerful NC State brand and showcasing 85-plus online and distance education programs by equally positioning and presenting all programs.
- Developing a high performing SEO website redesign that is mobile optimized, to serve as a strategic marketing and student recruitment tool to draw the right students.
- Establishing a central location to which to direct prospects to effectively combine product-focused marketing with overall image and awareness tactics.
- Instituting an automated, centralized website that would update content in real time from key University websites (e.g. Admissions, Financial Aid, The Graduate School, etc.) to keep key information updated.
- Designing an updated, forward-looking, consumer-oriented website that “everyone accepts.”

**Consumer Packaging**

Having navigated through the organizational challenges, NC State Online and Distance Education asked EMG to create a strategic website that reflected its goals. The initial process involved developing a user experience (UX) designed from the student point of view. To understand what the experience would look like, EMG created a set of user stories that defined each of the key users of the website. Stories defined the attributes of the user, their characteristics, reasons for visiting the site, what they wanted from it, how they used it, and the frustrations they experienced. Attributes for the user stories came from interviews conducted with prospects and students and issues reported by staff.

The user stories informed a detailed information architecture and UX-friendly design that strategically identified content, focused the navigation in intuitive ways, offered visual cues to help users navigate the site, provided multiple ways to access areas of interest, and presented clear and prominent calls to action.

With the architecture approved, EMG began work on creating prospect-focused messaging to lead prospects through the process of discovering the premier quality of the online education at NC State as well as the steps to apply. The messaging strategy was brand-advancing, tightly focused, succinct, and reflected best practices in consumer behavior modelling and motivating action. It was written in the differentiating NC State brand voice and tone. The site design followed the brand design guidelines set out by the University’s central communications unit.

**Site Functionality**

Another key goal for the site was to make searching, finding, and viewing programs easy for users to navigate and easy for the web team to maintain. Equally critical was the need for consistency of information. This was achieved by the development of custom applications to dynamically pull course information, application deadlines, costs, and
other data from databases and websites across the University that were the repositories for that data. This critical programming component was the “secret” behind keeping information on the site fresh and timely, while minimizing workloads for the NC State Online and Distance Education team.

Finally, an important requirement for each of the online departmental program directors was to be able to augment content when needed, thereby reflecting some of the individuality of their programs within the context of the brand. The program framework was built to allow customization of general descriptions, the addition of program-related news and social media posts, as well as the ability to add student testimonials and video.

Success!

The above insights and experiences can guide other institutions to take a proactive, approach to a centralized student recruitment strategy. As one NC State faculty member, who is also an Online Director said, “I am not a marketer or website manager! I am faculty and need support to recruit online students.”

Best practices and lessons learned from this successful project:

- Engage representatives that will yield the best results from centralized student recruitment early on. This is critical. Buy-in from online/DE program coordinators, faculty, IT staff involved, and administration is essential from the beginning.
- Develop a strategy that everyone contributes to creating and supporting. Hold those individuals accountable for their engagement and deliverables.
- Identify the correct partners and leverage key influencers: vendors, select program directors, representatives from faculty and administration.
- Implement project management and communications that will effectively manage all project resources and inform stakeholders about the progress of the progress.
- Use technology: Identify the best technology applications and strategies that will maximize efficiencies for program directors and administrators.
- Don’t be afraid to “Think Big”: Explore strategic ideas that are big and outside the traditional student recruitment strategies, e.g. rebranding the unit and redesigning the student recruitment strategy into a centralized function in a one year period.

An online program director recently stated, “We didn’t know what we were missing because we worked in silos. But by working together, we have all gained more by maximizing resources and implementing new strategies to recruit online students through a centralized portal.”

Please visit online.ncsu.edu to see the final product.

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Creating Online Programs for the Long-Term: A Systematic Process for Ensuring Program Validity within Dynamic Subject Areas

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Abstract

All courses require regular maintenance and periodic redevelopment in order to ensure their quality over time. Institutions determine for themselves if (and when) a course requires this process, and the task is often carried out by faculty, instructional designers, or both. The rapid growth of online education programs has created an opportunity to create a formal system of educational content review that will ensure enduring course quality and conserve resources by improving efficiency. Assigning a “Shelf Life” (SL) value to specific sections within courses (online or traditional) will provide institutions with an efficient means of content maintenance to ensure course quality. Some elements within an online course, such as website hyperlinks, require more frequent review. Other elements, such as the course textbook, may not need frequent review. The Shelf Life value will provide a simplified and rapid means of highlighting content areas that need attention, which will allow course managers to work more efficiently.

Introduction

Instructor control over educational content is changing. Traditional synchronous courses gave instructors control of course content. Now, however, institutions are encouraging instructors to digitize course content to enable greater learning flexibility and to reach international audiences. As a result, the instructor may no longer be in control of educational content and/or the technology associated with instruction. Instructional designers are now working closely with the instructor to design and modify material (Jamlan, 2004). This adds complexity to the course development and maintenance process (Donohue & Howe-Steiger, 2005) and many institutions do not have formal policies for curriculum maintenance. Another factor to consider is the amount of preparation time required to create an online course, either new or a modified existing program. Crews et al. (2008) found that 18 hours were required to modify each hour of a traditional course for online instruction. While not all course conversions will be this time intensive, additional time will be required to optimize content for online delivery. This will place additional demands on instructors and instructional designers who may already have little, if any extra time. And, although these courses may be created as enduring offerings, their contents and modalities should not be left unchecked in following semesters/years.

Literature Review

The distance education landscape is experiencing not only an increase in the total number of people taking accredited courses online, but also an increase in the available formats. Educational trends appear to be signaling a stronger emphasis toward open learning activities and network offerings. The design of these open learning networks/resources (OERs) focus on the concept of group learning via a delivery through various technologies available to the ‘average’ learner. Growth will only continue to increase; as of 2010, an estimated 49% of all schools are using OERs within their current curriculum (Allen & Seaman, 2012). While OERs are open to anybody with intrinsic motivation, finding them may be an issue for the learner. When considering the current activities within the field of CE/PD many organizations around the world are utilizing limited resources to navigate various levels of administrative control. This may result in a need to create courses and content that are somewhat dynamic and may contain content that could change more frequently than the traditional updating schedule allows (if such a schedule...
exists). It is assumed that these institutions wish to create courses that are high quality, reusable, and scalable. It is possible to add companion data to inform future course content handlers the specific areas and modalities that need monitoring.

Continuing education and professional development (CE/PD) courses are vital for adult learners, but administrators ignore their importance sometimes due to limited resources causing CE/PD curricula to languish. With limited resources for both postsecondary and continuing education it may be beneficial to have a means of determining the “freshness” of course content and instructional strategy agreed upon by both the instructional designer and the instructor who is responsible for the educational content ensuring that it is always up to date and accurate. In addition to accuracy, significant focus is being placed on the overall ability of learners to engage, and experience the overall content so as to increase the learners’ ability to show mastery in a variety of applications (iNACOL, 2011). The learner; objectives; methods; evaluation are the basic elements to any instructional design plan. However, when looking to the specific components of the ‘best practices’ around the design of online programs, much focus is placed on audience identification, lesson design, engagement strategies, criteria of learning, standards of communications, and overall resources (iNACOL, 2011; Morrison, Ross, Kemp, & Kalman, 2010). However, the instructional design research is not clear as to when content updates are needed to ensure the overall validity and reliability of the content is being ensured.

In the 21st century, approximately 100 million, or 20% of the college-aged population, are enrolled in some type of higher education (UNESCO, 2004). In addition, by 2020 it is projected that enrollment will increase by an additional 13% (Hanover, 2012). While there are many reasons for these real and projected increases, much of it may be attributed to online and distance learning programs facilitated by the expansion of the internet worldwide. Those taking at least one online course increased to 6.7 million in 2012 (Allen & Seaman, 2013), representing an increase of over one-half a million from the previous year. Online education allows greater access for adults seeking continuing education opportunities both domestically and internationally. The current growth of online learning offers an opportunity for institutions worldwide to create a system to ensure that course materials will not become obsolete. According to a recent report, at least 6.1 million postsecondary students took part in at least one online course in 2010, an overall increase of over 10 percent when compared to 2009 (Lytle, 2012).

**Tool Utilization**

As global institutions fill the growing need for online courses (postsecondary and CE) with finite resources, it is possible for them to create enduring content with minimized requirements for future upkeep. Assigning a “Shelf Life” (SL) factor to content will make the process more efficient. When assembling enduring course material, the instructor will assign a value to course sections that will allow him/her to check back on it within a certain amount of time. This value will inform the instructor whether the material should be updated or is unlikely to need updating. A section may be one lecture, a lecture series, or any educational component. Each course will have a form describing the assigned SL factor and will include those items within each section that require the most attention. This is not a means limited to keeping content fresh; it is also a means for allowing one to add or remove content based on relevance and modify the delivery method(s) if necessary. The SL form is also valuable when there is faculty turnover. A well-annotated SL document will provide a replacement instructor and/or instructional designer with invaluable insight to the course contents and delivery strategies to assist with future maintenance and development.

The tool’s utility is focused on the overall assessment of the content within the course. It is understood that fields of study are varying when it comes to changing of content and this will impact the frequency of revision. For example, computer and electrical engineering is likely seeing new and expanding application where art history may not.

Knowing this, we suggest that as a course is completed, subject matter experts and designers as the following questions during the debriefing stage:

- ‘Please indicate the level of change this field at this current time’
  - Rarely (A)
  - Occasionally (B)
  - Frequently (C)
The answer to this question will dictate the primary ranking of the section that will guide the review timeline. An example value scale associated with the SL factor is modeled from the traditional letter grade scale broken into three levels (A, B, and C). Those subject areas that change “rarely” will receive a letter grade A meaning that they need to be checked as a whole every three years. Those rated “occasionally” will get a “B” meaning overall reexamination every two years, and those that score “frequently” will be graded “C” requiring an annual examination.

To assist with this scoring, a number will be assigned to go with the letter grade that would allow for a course element to be evaluated more often. The second value will add greater detail to the letter score. Three areas to be examined are 1) ‘connectivity’ of the overall program; this is especially relevant within online programs. We suggest that software or human observers check the links and media elements within each online course environment to make sure that all linked elements point to valid targets; 2) ‘validity’ of the course. An individual human observer scans the content of an individual online course and notes outdated references to popular culture, news events, and concepts. The course designers or instructor replaces such content on a yearly-review basis; and 3) the overall ‘completeness’ of the course. The spectrum of course contents may expand or contract over time. Multiple human observers compare the contents of an online course against an established course outline using a rubric to ask questions about accuracy, bias, age of content, and relevance to course outcomes. This comes closest to the kind of review most face-to-face courses undergo every 3 years or so at most institutions. The numeric score is obtained by adding the score of each of the three categories. The net result ends up in a 0, 1, 2, or 3. The lower the frequency of evaluation, the smaller the number. Connectivity, validity and completeness will each have a potential score of 0, 1, or 2 (frequently, occasionally, rarely, respectively) resulting in a potential score of 0 to 6. Summing the values results in: 0-2: 0, 3-4: 1, 5-6: 2.

For example, elements within a course section (e.g., hyperlinks) might benefit from a more frequent review (see Table 1).

Table 1.  
*Shelf Life (SL) Factor Definitions*

<table>
<thead>
<tr>
<th>Shelf Life (SL) factor</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0</td>
<td>This course section should be evaluated every three (3) years; however, there is at least one element within this section that needs to be reviewed each time a course is offered.</td>
</tr>
<tr>
<td>A1</td>
<td>This course section should be evaluated every three (3) years; however, there is at least one element within this section that needs to be reviewed every two years.</td>
</tr>
<tr>
<td>A2</td>
<td>This course section should be evaluated every three (3) years; however, there is at least one element within this section that needs to be reviewed every two (2) years.</td>
</tr>
<tr>
<td>B0</td>
<td>This course section should be evaluated every two (2) years; however, there is at least one element within this section that needs to be reviewed every time a course is offered.</td>
</tr>
<tr>
<td>B1</td>
<td>This course section should be evaluated every two (2) years; however, there is at least one element within this section that needs to be reviewed every (1) year.</td>
</tr>
<tr>
<td>B2</td>
<td>This course section, including all associated elements, should be evaluated every two (2) years.</td>
</tr>
<tr>
<td>C0</td>
<td>This course section should be evaluated every (1) year; however, there is at least one element within this section that needs to be reviewed each time a course is offered.</td>
</tr>
<tr>
<td>C1</td>
<td>This course section, including all associated elements, should be evaluated every (1) year.</td>
</tr>
</tbody>
</table>

To illustrate, one course section may contain information that is unchanging, but has a few hyperlinks.
Thus, it would be graded “A0,” which translates to mean that the course section should be reviewed every three years, but that there may be a few areas within it (e.g., hyperlinks) that would benefit from a review each time the course is offered. The instructor could then check on the hyperlinks each time the course is offered but ignore the rest of the material until it was time to reevaluate the entire course section.

Conclusion

Many organizations within the PD/CE space are realizing specific pressures on budget. These pressures influence the specific area of program development and overall innovation. The intention of creating this tool is to help those organizations identify a model that allows for quick and specific edits in timely and strategic manner. The authors do not intend for this method to solve all content issues, but we put it forth to initiate discussion on a topic that is growing in importance with the increased focus on creating enduring content for distance and traditional courses. Establishing a “Shelf Life” for content and delivery methods will provide educators worldwide a modular framework that allows for strategic flexibility to focus their efforts on improving the entire educational process and to minimize the time required for ensuring that it is not obsolete.

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Assessing the Predictive Validity of a Modified SmarterMeasure Learning Readiness Indicator™

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Abstract

The continued growth of online education, increased access to education for nontraditional students, and institutional focus on online strategies has driven the need for educational leaders to understand the student factors associated with retention and student success. Although research on student attrition has been well documented over the past few decades, there is little research related to the ability to use non-cognitive student factors to predict student success and opportunities for support. For both student and institutional success, educational leaders need to understand the predictability of students’ ability to persist through completion. The SmarterMeasure Learning Readiness Indicator™ (SMLR) is an assessment widely used by online institutions to measure the level of preparedness of prospective students. However, there is little research demonstrating the predictive validity of the tool. This study was the second phase of a two-part study designed to assess whether the SMLRI could be used to predict academic success with nontraditional students. However, because the first phase of the study demonstrated lack of validity and reliability with this population, the second phase of the study could not fully determine the full predictive validity of the tool for this particular sample at this time. Instead, we utilized a reconstituted factor structure as generated in the first phase of this study to attempt to predict student success. However, this model exhibited low goodness of fit. Additional research is needed to determine the long-term utility of the SMLRI tool or perhaps to refine measures that can best predict student success.

Introduction

More than seven million U.S. students are enrolled in online education and nearly 71% of chief academic leaders reported online learning as critical to their long-term strategy (Babson, 2015). However, many institutional leaders have noted their biggest hurdles in online education are associated with lower retention rates and job placement after graduation (Babson, 2015; Eaton, 2011). As U.S. institutions offering online and open enrollment programs have continued to grow, more emphasis has been placed on persistence and completion (Carnegie Foundation for the Advancement of Teaching, 2011; Planty et al., 2008; U.S. Department of Education, 2011). Research on student attrition has been well documented over the past few decades (Astin, 1993; Braxton, Hirschy, & McClendon, 2004; Pascarella, 1985; Spady, 1970; Tinto, 1975, 1993), but with the growth of online education, open access universities and the heightened focus on institutional accountability, there is a documented need to better understand the predictability of students’ ability to persist through completion.

Many online institutions are challenged to retain students beyond the first few courses and many studies show that student attrition rates at online institutions are 3% to 5% higher than those of traditional institutions (U.S. News and World Report, 2015). Educational leaders rely on institutional definitions of the terms associated with retention in a way consistent with their mission and vision. For the purposes of this research, the following definitions from the research are offered for consideration. Bean (1980) provided one of the earliest examples of retention when he defined it as students’ successful academic and social integration into the college community, marked by the feeling
that one fits at the institution. That sense of belonging fosters positive educational attitudes and experiences. Astin (1984) supported Bean’s definition of retention as the degree of direct involvement of students in the academic and social life of their institutions (Astin, 1984). Soon after, Noel and Levitz (1985) suggested that retention was a by-product of student success and satisfaction and ultimately an indicator of institutional success. Similarly, Cabrera, Castaneda, Nora, and Hengstler (1992) described student success as the match between students’ motivation and academic ability and their academic and social characteristics. Tinto (1993) later offered that student success was achieved when students met clearly defined educational goals whether they were course credits, career advancement, or achievement of new skills. Finally, in 2001, Levitz provided a clear and measurable definition of retention and described retention as the successful completion of students’ academic goals of degree attainment (Levitz, 2001).

Given the work of Noel and Levitz, the following definitions are widely accepted within higher education:

*Persistence* is the enrollment headcount of any cohort compared to its headcount on its initial official census date. The goal is to measure the number of students who persist term to term and to completion.

*Progression* is the rate at which a cohort participates in any activity that an institution has determined to be correlated with persistence. Common measures are course completion rates, success rates of students on academic probation, and/or comparisons of academic credit hours attempted versus academic credit hours. Progression ensures that students demonstrate the skills and competencies needed to complete their academic program and continue successfully towards completion.

*Retention* is the outcome of how many students remained enrolled from fall to fall. This number is typically derived from first-time, full time traditional day students, but can be applied to any defined cohort.

*Completion/Graduation* is the outcome of how many students within a cohort complete and/or graduate from an institution. This is typically measured in two or three years for associate level programs and four, five, or six years for a bachelor level programs (Noel-Levitz, 2008, pp. 3-4).

While there are many factors including demographics, learning style, GPA, and reading ability (Astin, 1993; Garman, 2015; Harrell, 2008) influencing students’ likelihood of success, student readiness and preparedness to start school are widely accepted factors associated with retention. Many institutions accept a certain number of underprepared students. However, community colleges, open enrollment universities, and those with a mission to provide access to underserved populations tend to have a higher population of students who may not be prepared for the college experience. Unfortunately, the least selective institutions often have the lowest student retention rates (Tinto, 1993). For universities wishing to serve an underserved population, it becomes increasingly important to be able to not only identify challenges associated with college readiness, but to (a) predict if a student will be successful and (b) use those assessment data to design student success-oriented interventions.

Tools like the SMLRI have been used by traditional and nontraditional universities to assess this type of readiness. This tool is an online assessment of student readiness and provides “readiness scores” in the areas of (a) individual attributes including motivation, procrastination, and willingness to ask for help; (b) life factors such as amount of time available, support from family and employers, and finances; (c) learning styles; (d) technical competency, (d) technical knowledge; (e) typing speed and accuracy, and (f) Reading Rate and Recall (SmarterServices, LLC., 2016).

Although not previously demonstrated in the literature, it may be possible to predict students’ likelihood to persist based on the SMLRI readiness ranges. This study is designed to test the SMLRI’s predictive validity for nontraditional students attending a predominately online institution.

As such, the following propositions were developed to guide the research process:

P1. GPA is an appropriate reflective measure of academic achievement
P2. Academic achievement can be predicted with some precision by student behavioral constructs exhibited prior to enrollment
Data Analytics in Higher Education

Student data and performance trends are being used by leaders in higher education to better understand student satisfaction, success, completion, and ultimately graduation (Kara & DeShields, 2004). The use of data analytics has grown tremendously in higher education and Gilliam and Kristonis (2006) recommended institutions examine and identify problems related to student attrition and retention.

According to SAS (2016), there are six reasons to implement a data analytics strategy focused on student success including:

1. Proactively identify at-risk students in order to retain them
2. Calculate retention or graduation rates of students and better understand which students are most at risk of dropping out or transferring
3. Know how many students in each major were retained each year and where the greatest attrition was so program changes can be made
4. Routinely identify at-risk students who might be having problems and create interventions to try to prevent attrition
5. Identify strategies that can be put in place to properly advise at-risk students and measure the outcomes of these programs to ensure they are effective
6. Analyze data regarding performance-based funding indicators such as course completion, time to degree, transfer rates, the number of degrees awarded, and the number of low-income and minority graduates

Having a better understanding of the type of student entering an institution provides academic leaders with the information necessary to identify the potential risk factors related to attrition, predict student success, and determine the most effective retention strategies.

Once educational leaders have a good understanding of the risk factors associated with a potential student body, work can be done to support the preparedness and long-term success of students. Universities should provide contextualized testing so students understand how the assessments are used and their significance in determining class enrollment and course of study (CBD, 2010). If students are taking academic placement exams, aptitude assessments, or non-cognitive assessments like the SMLRI, academic leaders should help students understand the purpose of the assessment and how the information will be used to guide the student on a path to success. However, learning analytics have to go beyond mere understanding of students’ readiness such that there are predictive models that offer intuitive and actionable insight for instructors and students (Pardo, Mirriaha, Martinez-Maldonado, Jovanovic, Dawson, & Gasevic, 2016). One of the largest challenges for learning analytics research and practice may be putting the power of learning analytics into the hands of teachers and administrators such that more informed decisions and interventions may be made (Rienties, Boroowa, Cross, Farrington-Flint, Herodotou, Prescott, Mayles, Olney, Toetenel, & Woodthorpe, 2016).

Predictive Modeling for Nontraditional Students

Much of the current literature on learning analytics and predictive modeling has been focused on the traditional student or on the understanding of learning process and environments. For example, Renties, et al. (2016) suggested specifically designed learning experiences may be used to predict student success and other researchers have been able to predict success based on student interaction with learning resources (Pardo, et al., 2016). The frequency and type of faculty interaction has also been used as a predictor of student success (Bégin & Gérard, 2013; Dixson, 2010; Robey, Ashe, Singh, & Clark, 2012; Salter-Dvorak, 2014; Willis & Carmichael, 2011). Prescriptive or intrusive advising models have been used as a method to both predict and influence students’ long-term commitment to obtaining a degree (Chickering & Gamson, 1987; Glennen, Farren, & Vowell, 1996; Heissere & Parette, 2002). Most predictive models have been designed to calculate the likelihood of course failure or poor grades (Barber, & Sharkey, 2012). However, there is much to be learned from the non-cognitive factors associated with attrition and the ability to use those factors to predict the long-term success of students.

Clearly, poor academic preparedness can be associated with increased student attrition (Tinto, 1993). Preparedness to start an academic journey may be purely academic. It may also be due to several life or non-cognitive factors such as those assessed in the SMLRI. In fact, many online students come from nontraditional student groups at greater
risk for attrition. At-risk student populations include older adults, military members, minorities, working adults, and parents. The National Center for Education Statistics (n.d.) suggested 75% of nontraditional undergraduate students either (1) do not immediately continue their education after high school graduation, (2) attend college only part time, (3) work full time, (4) are financially independent, (5) have children or dependents other than a spouse, (6) are a single parent, or (7) have a GED, not a high school diploma.

Among students with only one nontraditional characteristic, part-time attendance is the most common (36%), followed by full-time employment (23%) and delayed enrollment (23%).

Nontraditional students are often categorized into the following types of students:

1. Delayed starters
2. Certificate seekers
3. Career re-toolers
4. Degree completers
5. Continuing education returners

Thus, when working with nontraditional students, it is important to identify preparedness and motivation factors early in the process. Data should be collected prior to entry so student demographics, motivators, priorities, challenges, risks, behaviors and preferences can be understood. Students should articulate their motivation for engaging in their program early in the enrollment process because students who have clear reasons for enrolling are more likely to be retained (Shaw, Burrus, & Ferguson, 2016). While many institutions use non-cognitive assessments, few have been able to assess more than a corollary relationship between factors such as those assessed in the SMLRI and student success. Thus, more research is needed to better understand the predictive validity of non-cognitive assessments administered to nontraditional online students.

**Methodology**

In a previous study, Bradley, Burrus, Shaw, and Ferguson (2017) attempted to replicate and measure the validity and reliability of the SMLRI constructs that were factorable. This was a failed attempt since, with a large sample size of greater than 9,200, less than 60% of the SMLRI items loaded on the congruent factor. Hence, while the original intent of the current study was to measure the predictive validity of the factorable components of the SMLRI model, it became clear that universal model validity was a potential issue. Because of this finding, the direction of the current research shifted to measure the predictive validity of the reconstituted model created by Bradley, et al. while still utilizing the SMLRI items.

Specifically, the present study was undertaken with the objective of measuring the predictive validity of the reconstituted model as it relates to overarching academic achievement. In this study, the proxy measurement of academic achievement is student Grade Point Average (GPA). The reconstituted model created by Bradley et al. (2017) consisted of 19 factors that included 68 items utilized by SMLRI.

As such, the following propositions were developed to guide the research process:

- **P1.** GPA is an appropriate reflective measure of academic achievement
- **P2.** Academic achievement can be predicted with some precision by student behavioral constructs exhibited prior to enrollment

We followed a multi-stage research process to focus our analysis on the predictive ability of the reconstituted model. As stated in Bradley et al. (2017), stage 1 of the process included appending multiple files based on a unique non-identifying record number that linked each student’s SMLRI responses from 9,222 students at a large university that has both on ground and online courses. The criteria for inclusion included students that started and completed at least one course during the study period (2013-2016) so that early academic success metrics could be examined after this factor analysis. Notably, the students in this sample answered all 110 questions pertinent to the SMLRI project scope, of which 79 of those questions are utilized in this analysis since they represent potential items of latent constructs and are factorable. Stage 2 consisted of analyzing the responses independently and attempting to replicate the factor structure of the SMLRI model in lieu of conducting confirmatory factor analysis via structural equation
modeling. Finally, stage 3 consisted of generating a stepwise regression model with an aim to predict student GPA from the 19 factors in the model.

Of those respondents analyzed in this research, the vast majority (97.2%) were strictly online students. The average age of the respondents was 34.71 years with a range of 18 to 80, indicating a more nontraditional online student. Regarding place of residence, all 50 states, Puerto Rico, and the Virgin Islands are represented in the sample.

Results

Prior to predictive model creation, the dataset was analyzed for missing and outlying data points, and there was none in this particular sample, because as stated earlier the matched dataset for this sample included complete data. However, there were a small amount of missing variables related to GPA and these records were excluded from the analysis. A stepwise regression model was generated with the 19 factor scores as independent variables and GPA as the dependent variable. Stepwise regression was chosen in this case because (a) there is a paucity of theory guiding the selection of terms for the model, (b) one purpose was to interactively explore which predictors seem like a good fit, and (c) it would be feasible to improve the model's prediction performance by reducing the variance caused by estimating superfluous terms. The stepping method criteria included a .05 probability of F for entry and .10 for removal.

The stepwise regression results included 12 independent variables with an adjusted $R^2$ value of .078. With such a large sample size, the model was significant at the 99% confidence level ($p < .001$). Please see the reconstituted latent constructions in Table 1, ANOVA calculations and model significance in Table 2, and coefficients and independent variable significance in Table 3.

<table>
<thead>
<tr>
<th>Table 1. Factor Information and Interpretation</th>
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<tr>
<td>Component</td>
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Results Summary

The objective of this research was to create a predictive model of academic achievement with the reconstituted factors created by Bradley et al. (2017), as potential independent variables and GPA as the dependent variable. Following a stepwise regression process, the model proved not to be robust. In sum, the R value for this model = .281, while \( R^2 = .079 \), adjusted \( R^2 = .078 \), and the standard error of the estimate = .886. As such, only 7.8% of the variation in GPA can be explained by the variation in the independent variables. While low \( R^2 \) values are not inherently bad in regression models if the variables are statistically significant, the direction of a couple of the independent variables in this model is difficult to explain relative to an expected relationship with academic achievement. Hence, the predictive validity of the model is questioned even further.

Conclusion and Discussion

This study was part of a two-phase study that attempted to example the structural validity and reliability and predictive reliability of the SMLRI for nontraditional students. The researchers engaged in this initial examination of over 9,200 records from a predominately online university that serves nontraditional students as a way to examine the extent to which this tool can reliably inform early student academic success. It appears that while preliminary research may indicate the certain constructs may inform prediction, this investigation did not verify these results in this sample. In addition, the researchers attempted to predict key constructs of early course persistence, including enrollment at 180 days, which may be an important indicator of student success but could only determine very 

<table>
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<th>Table 2. ANOVA table.</th>
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<tr>
<td>Sum of Squares</td>
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<td>Regression</td>
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<td>Residual</td>
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<td>Total</td>
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<th>Table 3. Regression Model Coefficients</th>
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<tr>
<td>Unstandardized Coefficients</td>
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<td>B</td>
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<tr>
<td>Constant</td>
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<td>Outcome control perception</td>
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<td>Anxiety about education</td>
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<td>Hours worked</td>
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<td>Extrovert</td>
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<td>Assimilation</td>
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<td>Time commitment ability</td>
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<td>Precision</td>
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<td>Intellectual challenge</td>
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<tr>
<td>Other time distractions</td>
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<td>Spatial utilization</td>
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</table>
marginal results\(^1\). However, indicators such as outcome control perception and anxiety about education, perhaps differently defined, could be worth further examination.

References


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\(^1\) \(R^2 = .034, F(1, 8187) = 4.808, p < .000\)


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Laying the Foundation for a Data-Driven Course Revision Effort

James Castle
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Abstract

This paper outlines a process by which a central support unit at a large institution undertook a data-driven course revision initiative. The data sources used for this initiative were media usage data, discussion data, grades data, faculty interview data, face to face observation data, end-of-term evaluation data, and Quality Matters review data. The paper discusses the process of partnering with colleges across the institution and securing the data for each of these elements.

Introduction

The course revision initiative detailed in this paper focused on expanding availability of high-demand undergraduate online courses during summer semester. In partnership with each participating college, the central office tasked with supporting online learning at the institution identified potential courses for revision, proposed a revision process, and worked collaboratively with faculty members over two semesters to analyze and revise the courses. The initiative resulted in the revision of thirty courses with each course increasing in size (typically doubling the maximum seats offered).

Course Selection

To choose courses to recommend for this program, the central online learning unit analyzed enrollment data for all online undergraduate courses offered at the institution over the two previous academic years. Courses that had (a) been offered twice and (b) had a total seats taken percentage of 90% or higher were listed for consideration. Additionally, the analysis included looking at the enrollment figures for the corresponding face-to-face versions of the course to inform potential enrollment targets for each course. The results of this analysis were shared with the administration of each college, who made the final determination for which courses and faculty would participate.

General Program Overview

The program was split across two semesters. During the first semester, the instructional design team conducted comprehensive data-driven reviews of each course (detailed in a later section). The result of this course review was a project plan listing the specific revisions the instructional designer identified for the course. The project plan was then shared with faculty, who gave feedback regarding the revisions. Ultimately, it was up to the faculty to accept or reject each revision. Once a revision list had been agreed upon, it became the task list for the development portion of the revision effort, which took place during the second semester.

Data-Driven Decision Making

The No Child Left Behind legislation of the 2000s brought an increased focus to the use of data in education, particularly in its focus on assessment and accountability (Lasley, 2008). The resulting focus on using data as the basis for educational decision making (i.e., data-driven decision making) began with a focus on using assessment data (e.g., test scores) to base teaching and curricular decision. As data-driven decision making in education has evolved, it has moved beyond using data purely for accountability measures towards using data because its use has been shown to improve student learning (Carlson, Borman, and Robinson, 2011; Lai and McNaughton, 2016). Along with the shift in reasoning for using data to drive educational decisions, the definition of “data” has broadened beyond the scope of pure assessment data. For the purpose of exploring how data use informs decisions about course design, this paper defines “data” as information that is collected and organized to represent some aspect of schools (Lai and Schildkamp, 2013).
This broad view of data affords the opportunity to see data in many aspects of schooling. There is data in attendance, content consumption, and classroom behavior, just to name a few obvious sources of potential data. In the matter at hand in this research, data was used by instructional designers to inform decisions about revising existing undergraduate online courses at a large public university in the southeast United States. Seven sources of data were identified as representing some aspect of the course, and they were used to conduct an analysis of the current state of the course. Those data sources were: media usage data, asynchronous discussion data, grade data, faculty interview data, end-of-term evaluation data, face-to-face observation data, and Quality Matters review data. The analyses of these data sources were then compiled into a project plan containing a series of recommended revisions for the course, along with rationale from the data analysis for why each recommendation was made.

Data Sources

The data sources used in the course analysis/revision process vary widely in nature. Some data, such as the media usage data, were largely quantitative and did not provide explicit direction to the instructional designer as to how it should be applied. In other words, the instructional designer had to examine the data, extract information, make meaning of that information, and craft a revision recommendation informed by that meaning-making process. Conversely, other data sources were qualitative in nature and provided explicit guidance for how they could be incorporated into the recommended revisions. For example, the Quality Matters review involved analyzing the course’s adherence to 43 design standards (Quality Matters, 2014), each of which provide for explicit direction as to how they can be applied to a course revision effort. Below is an explanation of each of the data sources.

Media Usage Data

Data were collected from the institution’s streaming media system to show the number of times each video in a course had been played, and the percentage of the video watched on each playthrough. The instructional designers were able to analyze these data in order to determine the maximum number of students who watched each video in the course. Additionally, they were able to determine at what point in the course, chronologically, video usage either dropped or spiked.

Asynchronous Discussion Data and Grades Data

The institution’s learning management system contained data regarding student performance on assignments throughout the course and student participation in asynchronous online discussions. The instructional designers used this data to analyze student participation throughout the course and identify portions of the course that held potential for revision. One common strategy for using grade data was to identify quizzes where students struggled and perform a deeper item analysis on each question in the quiz.

End-of-Term Evaluation Data

Where available, the instructional designer was given access to end-of-term feedback left by students. This source of data was seen to be the students’ voice in the process, and the open-ended responses typically provided the most valuable insight into the course experience.

Face-to-Face Observation Data

Each designer observed at least one session of the face-to-face version of the course being analyzed, taking notes meant to inform the course revision process. These observations were meant to set context for the course revision effort and introduce the designer to the faculty’s teaching style. As a bonus, the sessions served to build rapport between the faculty and designer.

Quality Matters Review Data

Each course was reviewed by an instructional designer using the full Quality Matters rubric. During this process, the designer assessed the course’s adherence to each of 43 design standards, and assigned a value of “met” or “not met” based on the degree to which the course displayed the characteristics set forth in the rubric. For standards marked as
“not met,” the designer wrote a recommendation for how the course could be brought into alignment with the standard. These recommendations were then able to serve as the foundation for course revision recommendations.

Conclusion

The course revision effort detailed here represented a collaborative, data-driven initiative to improve quality of online courses and increase access to online courses at a large institution of higher education. The data used as a part of this program represents all data available to the instructional design team at the time. While the concept of data-driven decision making in education is certainly not new, working through an instructional design process using the variety of data outlined in this paper represented uncharted territory for all of the members of the team. Ultimately, the instructional designers were able to uncover trends and make recommendations that would not have been possible with the range of data provided.

References


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CBE: Build a Degree

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Alexandra Janney
Texas A&M University

Rinki Suryavanshi
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Abstract

We track our processes, as we build an online competency-based degree in Mechanical Engineering Technology to create design and development systems that place our university in a position to develop other such programs. Necessary processes include knowledge gathering, design of a delivery template, contracting subject-matter-experts, course and prior learning assessment design and development, delivery logistics, record keeping, and analytics.

Introduction

Institutional conventions such as departmentalization, majors, terms, three-credit hour courses, and transcripts constrain designers and developers of programs in higher education (Christensen & Eyring, 2011). These conventions did not exist until leaders invented them, thought them to be important and effective, and institutionalized them. Christensen and Eyring argue that the time has come to rethink the universal application of the Harvard model in our universities. They make provocative statements such as: “Across higher education generally, the result has been a decrease in the value of a diploma relative to its cost and the closing of doors to would-be students,” p. 343. Too many students leave college with oppressive debts (Houle, & Warner, 2017). And leaders in the workforce indicate that many are ill prepared to contribute to the workforce (Horohov, 2016). In addition, certain populations are underserved by traditional colleges and universities (Wang, Wickersham, & Sun, 2016).

Educators are tackling these problems through what is being called “disruptive innovation” (Christensen, Horn, & Johnson, 2008). Two disruptions that propose to address the above problems are competency-based education (CBE), when students receive credit based on their demonstration of skills learned, and prior learning assessment (PLA), giving college credit for college-level learning that a student has acquired outside of a formal college course (Tate, and Klein-Collins, 2015). Instructional design theory and the principles of CBE (Voorhees, & Voorhees, 2017) frame this study as the researchers attempt to better understand how to design, develop, implement, and evaluate CBE degree programs.

Supported by the Texas Affordable Baccalaureate Expansion Project, the design team is charged to develop a CBE degree in Mechanical Engineering Technology, a degree needed in the workforce. If carefully designed, the degree could take a student three years to complete and cost no more than $15,000, thereby appealing to underrepresented students. Designers need to better understand how to design CBE within the constraints of higher education. During design and development of the CBE degree program, a design team documented and studied the process continuously asking, “What processes can we apply to design, develop, and implement a CBE program within the constraints of a conventional institution of higher education?”

We share our development processes here for building a competency-based online degree in Mechanical Engineering Technology, how we develop prior learning assessments, and how we apply Blackboard tools to align competencies to courses and track student progress. We will describe how we address challenges along the path to online, competency-based degree program development.
Our Development Processes

Building a competency-based online degree in Mechanical Engineering Technology began with knowledge gathering. We had to learn what developing such a program involved. Given knowledge of what and who needs to be involved to have a successful program, we also had to establish whether or not CBE is possible on our campus.

We attend conferences and workshops focused on CBE, joined a CBE network, read literature, explore models such as Western Governor’s University, and invite experienced guest speakers to share their expertise. Each source of information shares the perspective that CBE is still in the invention stage. Definitions vary and the team needs to innovate as they design, develop, and implement a program.

Knowledge gathering included identifying constraints in our university that impact program. Institutionalized logistics such as three credit hour courses, financial aid, terms, and student information systems that align with the LMS grading systems had to be considered. Providing for offering and administering pretesting for course credit is a hurdle that must be surmounted.

Knowing what had to be done and what constraints had to be overcome, led to the need to know whether or not leaders of various departments on campus would help work out the logistics of delivery of such a program. Without their approval, effort, and buy-in the project could not succeed. We established a campus logistics team of administrative leaders. The team consisted of Provost, Dean, Department Head, Associate Provost for Academic Affairs, Compliance Officer, Registrar, Bursar, Financial Aid, MarComm, Planning and Institutional Research, Recruitment and Enrollment, Advising, and Undergraduate Studies.

External to the institution, we also partnered with workforce representatives who shared their knowledge of skills needed in the workforce so that instruction in those skills could be integrated into the program. Partnership with the local two-year college was also needed to provide the lower division program of study including common-core courses and articulation with our upper division program.

Project management consists of identifying tasks, deadlines, benchmarks, and people responsible for completing each task. The lead instructional designer and lead subject matter expert (SME) meet weekly to share accomplishments and identify what needs to be done next. Tasks include such details as putting together events such as meetings with workforce representatives and consultants, gaining participation with the adequate number of instructors, and creating the articulation agreement between our two and four-year colleges. Two critical tasks are to write catalog copy for the new program and gain approval from the academic department, college, Faculty Senate, and provost. This process takes at least a year.

We made a major effort to obtain funds to support faculty in course development and pay for closed-captioning of videos. Ultimately, we compiled funds from the Texas Affordable Baccalaureate, College for All Texans Foundation, the Texas Higher Education Coordinating Board, the College of Science and Engineering, and a United States Department of Education grant that supports educational programs for undergraduate students.

On this first effort of CBE design, development, implementation, and evaluation, we decided that within the constraints of our university, we would apply a course-based model rather than a model of continuous delivery of all competencies that students might fulfill at their own pace at any time.

Course Design and Development

Our biggest challenge thus far has been in identifying mechanical engineering faculty, with time and interest in online CBE course development. With funds from the Texas Affordable Baccalaureate program, we first offered $2,500 to each instructor who would work with us to develop one course. No instructors were willing to work for that level of pay. So, we had to dig for more dollars until we found the amount that enticed faculty. We settled on $4,500 with the agreement that the university shares the copyright with instructors who develop courses.

Instructional designers developed a template for all courses in the LMS. Links to competencies are in the course menu. When a learner clicks on any competency, they read what they will be able to do as a result of working through the contents of that section in the course. They have access to an optional pretest in the content of that
Competency 1

Conductive and Convective Heat Transfer

Be able to determine the material properties, apply knowledge of geometry involved, select the right thermal resistance formulas, and perform calculations to solve conductive and convective heat transfer problems.

Pretest for competency

Module - Material Properties

Module - Applied Geometry

Module - Thermal Resistance Formulas

Module - Conductive and Convective Heat Transfer Problems to Solve

Posttest

Students can test out of that competency by attaining 85% on the pretest or they can use the pretest to build expectations for learning. They then open a series of modules designed to lead to competence. The modules are followed by a posttest. Upon scoring 85% or higher on the posttest students move on to the next course competency (Figure 1).

**Figure 1.**

*Screen Capture of a CBE Course Blackboard Template*

IDers work with instructors to identify and add their competencies to the template. The number of competencies needed to address each course ranges from two to seven. The ID team also developed a template for each module in each course that consists of Rationale, Objectives, Foundations, Assignments and Activities, and Assessments. Instructors added modules and named each module according to topics that describe each competency. The number of modules needed to address each competency ranges from two-ten.

The first step in course development was to generate competencies using national standards from the Accreditation Board for Engineering and Technology (ABET), local course objectives, and workforce leaders’ input. We enter them in the template of each course for the instructors. We then conduct a goal analysis for each competency to build the learning objectives required for mastery (Table 1).

**Table 1.**

*CBE Course Design and Development Process Guide*

<table>
<thead>
<tr>
<th>Date Completed</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1. Sign the contract</td>
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<tr>
<td>2. Decide how many competencies, develop them, and add them to the content:</td>
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</tr>
<tr>
<td>• Use ABET standards, your course outcomes statements, and objectives and be sure to cover that you want students to be able to do</td>
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</tr>
<tr>
<td>• We will enter these competencies in your course or show you how</td>
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<tr>
<td>3. Determine module topics that provide foundations necessary for achieving competency</td>
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<tr>
<td>4. Develop pre- and posttests for each competency (these can be the same). Assessments</td>
<td></td>
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</table>
are the evidence of competence and can be in the form of projects, lab products, reports, presentations, (each perhaps with rubrics), etc.

5. Enter pretest and posttest into the template. We will align these with the competencies in the Goal Alignment tool.

6. Develop assignments and assessments for each module or a chunk of modules (homework). If students successfully complete this homework, then they have demonstrated competence associated with each module topics.

7. Enter assessments and assignments in your modules
   - For module 1
   - For module 2
   - For module 3
   - Etc…

8. Enter rationale in each module
   - For module 1
   - For module 2
   - For module 3
   - Etc…

9. Enter objectives in each module
   - For module 1
   - For module 2
   - For module 3
   - Etc…

10. Enter foundations in each module. These can be in the form of readings, ppts, recordings, learning objects, games, examples and non-examples, etc. to prepare students for mastery of the competency.
    - For module 1
    - For module 2
    - For module 3
    - Etc…

11. Inform students of specific requirements of the course (software like MS Project) in Start Here area of the template

12. Add Syllabus file as linked file (pdf or doc) AND as an item
    i. Ask students to complete their profiles with images
    ii. Create/add a one-page Course Schedule table in the syllabus or by itself. Tell students to print and post this in a prominent place.
    iii. Create item/statement describing instructor feedback policy
        • Optional: create syllabus or course navigation selfQuiz

13. Provide spaces for peer-to-peer interaction:
    • Create a social discussion forum (cafe, bistro, etc)
    • Discussions, blogs, wikis, or journals, etc.

14. Grade Center
    • Double check that columns are organized chronologically or by similar tasks
    • Double check that points reflected in the Grade Center Total column match points declared in the syllabus

15. Review instructions and expectations for each unit, assignment, and assessment to assure clarity
    • Check that all links (external and internal within course) are working and have meaningful names (do NOT use “click here”)

16. Course Files Maintenance
    • Check course size (average is 50-100 MB)
    • Clean up old files if necessary

Instructional designers work with SMEs to identify learning objectives and distribute those objectives across modules. After the SMEs identify objectives, they develop pre- and post-tests for each competency. We inform
SMEs that these pre- and post-tests can be students’ projects, lab products, reports, or presentations and that each can have corresponding rubrics. Quizzes might also be added to each module as a means of supplying feedback to provide scaffolds toward competence. Finally, the team aligns the assignments and assessments (any graded performance) to competencies using the goals-performance alignment tool in the Blackboard. The SMEs then build content necessary for achieving mastery on assessments and identify open-educational-resources (OERs), wherever possible to free students from having to purchase textbooks. For the lower division courses, the team works with local two-year colleges and lower division instructors on the four-year campus to put the first two years of courses online.

**Implementation**

Implementation of CBE involves processes that do not apply to traditional programs. For instance, our campus must agree to fees and administration protocols for prior learning assessments (PLAs). A statement regarding the fee structure must be included in the university’s catalog and course schedule. Marketing and recruitment plans need to be constructed and followed. Students need to be enrolled in the special program, and a coach needs to be hired who provides regular guidance to learners. Instructional Designers (IDers) need to follow-up with instructors while they teach in the program to assure regular and substantive interaction and feedback. And, records need to be kept regarding students’ progress through the program. As the program is offered, IDers need to evaluate the program’s effectiveness.

**Prior Learning Assessment Development**

With prior learning assessments, students test out of an entire course by passing a pretest that is a compilation of all of the course competencies. Students can also shorten the amount of time they take to complete a course by testing out of one or more of the course competencies. An example prior learning assessment for a given competency in the Heat Transfer course follows: Given the competency: Be able to determine the material properties, apply knowledge of geometry involved, select the right thermal resistance formulas, and perform calculations to solve conductive and convective heat transfer problems, the assessment aligns perfectly with this competency. That is, students are given a thermal conductivity problem and are required to determine the material properties, apply knowledge of geometry involved, select the right thermal resistance formulas, and perform calculations to solve conductive and convective heat transfer problems. Each assessment in the program aligns precisely with each competency. Some assessments are project based with a rubric, some are in multiple-choice and fill in the blank format, and some are a mixture of both approaches.

**Determining and Reporting Students’ Progress at the Course and Program Level**

The design team adopted Blackboard’s embedded analytics tools to track and analyze student’s progress through the program objectives and competencies (Barefield & Laws, 2016). At the course level, the team uses Blackboard’s Goal-Performance Alignment tool. Designers asked the university’s Blackboard administrator to enable this tool. It helps the team align competencies and assessments and makes it easy to track student progress through the mastery of competencies. It automates record keeping as students place out of a course and/or complete a course before the end of a term. It allows students, faculty, and administrators to monitor students’ progress at the course level. The first step in our process of creating goal alignment was to enter the competencies. As a next step, we aligned graded activities, such as assessments, assignments, portfolio artifacts, discussions, grade center columns, etc. to one or more competencies. To generate a meaningful report, regarding progress in competencies, activities must be graded.

The Goal-Performance alignment tool helped us generate three types of course reports. The course coverage report supports accreditation by displaying goals coverage information for a single Blackboard course. Data includes both covered and gap values for all curricular areas that the course is associated with, as well as a breakdown of the aligned course items to the goals. Course performance reports for instructors, students, and departments display information showing how a single Blackboard course performs against a selected set of goals (Figure 2). Performance targets and a range of acceptable performances for the course can be determined when running the report. Data includes averages for the entire course as well as breakdowns for individual students and goals.

**Figure 2.**

*Example Course Performance Report*
The learner performance report displays how each student in a single course performs against a selected set of goals (Figure 3).

**Figure 3.**
*Example Learner Performance Report*

To establish students’ progress at the program level, the team used Blackboard’s Analytics for Learn (A4L). A4L is a set of components that extract data from Blackboard Learn, transform it, and bring it into an analytics framework in combination with data from the university’s SIS system. A4L facilitates analysis of student progress through courses across the program. Students, faculty, and administrators have the ability to see these progress reports. The
reports from A4L provide overviews of success rates (percentage of students who graduate), retention rates (percentage of students enrolled after a specified terms), completion ratios (number of credits completed divided by number of credits attempted), comparisons between success of transfer vs. four-year students, and CBE students’ performances compared to traditional students’ performances, etc.

**Figure 4.**
*Example Instructional Technology Dashboard*
Retrieved from Blackboard.com

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**Conclusions**

In summary, designing and developing CBE is a complex task that involves institutional buy-in so that the development team can address the many challenges it will face. Challenges include having necessary knowledge regarding the many aspects of a CBE project including project tasks; federal, state, and local requirements; stakeholders; personnel; and communications. Identifying the various contributors to the project and gaining their approval, effort, and buy-in is a critical yet difficult step. Providing sufficient incentive to subject-matter experts is not an easy task, especially when the discipline of the program is in a field that brings instructor’s high salaries. Once instructors are on board, you need to share a systematic process for course development that meets project standards and develop a contract that instructors sign. And selecting and implementing the technologies that can be used to deliver the program and analyze outcomes allow you to document student progress through the program and evaluate the program’s effectiveness and efficiency.

Design and development research (McKenney & Reeves, 2012; Richey & Klein, 2007) needs to be conducted to better understand how to address conventions and overcome constraints of higher education to effectively and efficiently construct online CBE programs. Attributes of effective CBE programs need to be identified, and impacts of CBE on students’ learning, college experience, demographics of graduates, cost of degree, and workforce contribution need to be established. Comparisons to traditional programs across these variables would be valuable.

**References**


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Tending the Teacher: Self-Care Strategies to Prevent Burnout

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Abstract

Burnout is a common experience among faculty in higher education. In this article, we present five strategies that may help lighten faculty workload and alleviate symptoms of work-related burnout.

Burnout is defined as a negative response to long-term job stress. Maslach, Schaufeli, and Leiter (2001) identified three symptom groups related to burnout: exhaustion, cynicism, and inefficiency. Others have challenged this definition, and some now conceptualize burnout as a subcategory of depression (Kristensen, Borritz, Villadsen, & Christensen, 2005; Ahola, Hakanen, Perhoniemi, & Mutanen, 2014). Regardless of how we diagnose or categorize burnout, the phenomena remain all too real in academia. Creating a sustainable work-life balance is an ongoing challenge for many faculty members who struggle to balance administrative work, teaching and research.

Below are five simple strategies that may help lighten faculty workload, improve self-care and alleviate the symptoms of burnout.

1. **Practice Mindfulness**: Strong evidence suggests that a regular mindfulness practice can reduce burnout. Both Transcendental Meditation and Mindfulness-Based Stress Reduction have been shown to help, as have some less structured meditation programs, (Luken & Sammons, 2016; Elder, Nidich, Moriarty, & Nidich, 2014). Finding the time to learn and practice meditation can be a challenge for faculty. We recommend the apps Buddhify (http://buddhify.com/) and HeadSpace (http://headspe.com) as convenient tools to simplify the process.

2. **Use Tech Tools to Give Feedback**: Providing detailed feedback is one of the most time-consuming aspects of teaching. Leaving audio feedback rather than written feedback decreases time spent grading and adds a personal touch that students appreciate. Many LMS platforms have built-in audio response tools; you can also use the free tool Vocaroo (http://vocaroo.com) to quickly record and link to your comments.

3. **Incorporate Peer-to-Peer Learning**: Building community can be challenging in a distance learning environment. Although discussion forums are often used for this purpose, they can feel forced and typically require high levels of faculty involvement. Peerwise (http://peerwise.cs.auckland.ac.nz) offers an alternate method of creating community that feels more natural and requires little direct faculty intervention. Using the free and gamified Peerwise platform, students generate and peer-review multiple choice questions. They also provide anonymous written feedback for one another and revise their own questions in response to feedback.

4. **Don’t Skip Sleep**: One study of almost 1500 university faculty found that getting less sleep was related to higher levels of burnout, as were decreased social support and less leisure time (Padilla & Thompson, 2016). It can be tempting to work into the wee hours of the morning. However, most people find that they can think more clearly after a good night’s sleep. Sleep deprivation can adversely affect cognition and generally contributes to physical and mental stress – also called allostatic load (McEwen & Karatsoreos, 2015).

5. **Prioritize**: As tasks and projects build up, many faculty find that they lose sight of the aspects of the job that they enjoy. One study of medical faculty found that those who spent <20% of their time on what they
considered to be the most meaningful aspect of their work were the most likely to experience burnout
(Shanafelt et al., 2009). When planning your schedule, prioritize the parts of your job that bring you joy. If
you find that you are spending most of your time on tasks that are not personally meaningful, meet with
your chair or other colleagues to discuss ways to reconfigure your roles.

We recommend starting small when trying to prevent burnout. Rather than making sweeping changes, focus on one
adjustment from the list above. Small changes are easier to implement consistently and can lead to cumulative and
meaningful changes in physical and mental well-being. Emphasizing your own health doesn’t detract from your
work, but rather makes it more likely that you can sustain your commitment to your students, colleagues and field
over time.

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Abstract

Wake Technical Community College has launched a Quality Enhancement Plan (QEP) initiative based on best practices in eLearning called EPIC (eLearning Preparedness Initiative across the College). EPIC’s goal is to remove learning barriers and better support online student learning, persistence, and success. The college has developed a mandatory certification program for all online faculty. The EPIC Online Teaching Certification offers 30 hours of Professional Development that covers every aspect of online instruction, including LMS skills, pedagogy, andragogy, course navigation and design, UDL, assessment, communication/collaboration, and accessibility.

Overview

EPIC directly relates to Wake Tech’s institutional goal of improving outcomes related to eLearning. During 2014-15, Wake Tech had 15,326 students who took at least one online course, making it the largest provider of online courses in North Carolina. However, course statistics mirror the national trend: average student success rates (percentage of grades “A,” “B,” and “C” among all grades, including withdrawals) for all online course sections are, on average, lower than success rates of face-to-face course sections. Further, success rates of face-to-face sections of the highest enrollment “gateway” courses (the first courses students take in a program of study) with the lowest online success rates were on average, 8% to 10% greater than the online sections of the same courses during fall 2014 (4,631 students enrolled) and spring 2015 (5,009 students enrolled) academic year.

Research on best practices indicates that when students complete orientation programs that assess online learner skills and characteristics, and when faculty design and deliver online courses that promote student success, student outcomes improve. Recent research on course design and pedagogy indicates that while course organization, alignment of learning objectives, and leveraging technology in online courses may enhance the learning experience, student-faculty interaction has the largest influence on student outcomes (Jaggers & Xu, 2016).

Therefore, in keeping with Wake Tech’s mission “to promote individual success in the workplace and in higher education,” a broad-based team of faculty and staff developed two key objectives and the associated strategies for implementing them:

1. **Student Preparedness**: The Student Preparedness goal is to help students overcome online learning barriers and gain the skills they need to be successful online learners. Through the eLearning Intro Course, which is a mandatory, interactive student-readiness assessment with remediation modules, students gain the skills, tools, and awareness they need to be successful in an online course. The eLearning Intro Course focuses on the three broad skills sets necessary for a successful online student: expectation management, basic computer literacy, and familiarity with the learning management system (LMS), achieved through an LMS “boot camp.” Students have the opportunity to self-assess and remediate within the course prior to registration.

2. **Faculty Preparedness**: The goal of Faculty Preparedness is to help faculty better design and deliver quality online courses. Faculty develop the course design and delivery skills they need through an Online Teaching Certification Program.
Certification Program that provides instruction in the learning management system (LMS), pedagogy, instructional design, accessibility, and advanced training for teaching online. The certification program also offers a mentorship in which seasoned online faculty can lead the way for newcomers.

**Online Faculty Certification - A Faculty Preparedness Strategy**

The EPIC Online Teaching Certification pathways provide faculty with the additional training they want and need in pedagogy, andragogy, and technology. In 2015, a team of faculty and eLearning staff developed EPIC eLearning Quality Standards and an associated rubric for evaluating online courses based on research into best practices, including Quality Matters (2015). After the first year of implementation, both the rubric and standards were updated in 2016 to provide more clarity and to better organize the content. These tools provide the framework for the certification program.

Our first step was to implement a standardized menu for all online courses, with “early adopters” using this framework starting in spring 2015. The new menu was pushed out to all online course shells for the fall 2015 semester, with instructions on using the menu given to students in the eLearning Intro course. The training and certification process implementation began in fall 2015, with all online faculty scheduled to receive their online teaching certification by fall 2017.

The following describes EPIC’s three online teaching certification pathways:

*Pathway 1 - Online Teaching Certification through Professional Development*

Certification through Professional Development is one of three ways for faculty to earn their certificate in online teaching. This pathway includes 30 hours of online professional development training (referred to as “EPIC30”), concentrating on online teaching pedagogy and universal design for learning (UDL) principles. Pathway 1 certification is earned when a faculty member has obtained training in online teaching aligned with EPIC Quality eLearning Standards. Courses cover best practices in course navigation and design, online communication & collaboration, online assessments, UDL, pedagogy, andragogy, accessibility, and LMS skills training. Pathway 1 culminates with a capstone course that requires mastery-level demonstration of design and delivery skills described in the EPIC Quality eLearning Standards tailored to match the subject-matter taught.

Table 1 is a list of the courses which are part of the EPIC30 training:

**Table 1.**

<table>
<thead>
<tr>
<th>Pathway 1 - EPIC 30 Training</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EPIC Curriculum Faculty Online Teaching Certificate Courses</strong></td>
</tr>
<tr>
<td><strong>ACC 101: Introduction to Accessibility</strong></td>
</tr>
<tr>
<td>This self-paced, online course provides a basic overview of accessibility guidelines that will help participants gain an understanding of how to make their course content accessible to all learners. This course will include core accessibility concepts as well as instruction on how create accessible documents, accessible presentations, accessible multimedia, and accessible Blackboard content. Resources to facilitate the creation of accessible course content will be provided.</td>
</tr>
<tr>
<td><strong>Course Objectives:</strong></td>
</tr>
<tr>
<td>• Identify, describe, and explain core accessibility concepts.</td>
</tr>
<tr>
<td>• Create basic accessible documents, presentations, and multimedia.</td>
</tr>
<tr>
<td>• Identify resources to facilitate the creation of accessible course content.</td>
</tr>
<tr>
<td><strong>TLS 101: Introduction to Universal Design for Learning</strong></td>
</tr>
<tr>
<td>This course introduces learners to the Universal Design for Learning theory and offers participants tips and resources for applying UDL in their own courses. After completing this course, participants will be able to explain the principles of UDL.</td>
</tr>
</tbody>
</table>
### Course Objectives:
- Identify and explain the Multiple Means of Representation principle.
- Identify and explain the Multiple Means of Action and Expression principle.
- Identify and explain the Multiple Means of Engagement principle.

### BBD.101: Blackboard Skills Development – Course Structure and Navigation

This course provides an overview of how to customize the Blackboard course environment and access resources used to effectively present course materials in a logical manner. Upon completion of this session, participants will be able to customize the course menu, create course menu items, identify and apply course themes, and change the Course Menu color schemes.

**Course Objectives:**
- Recognize Wake Tech's recommended default course menu.
- Identify the steps to add and delete menu items.
- Identify the steps to rename menu items.
- Recognize recommended course themes.
- Identify the steps to apply a new course theme.
- Identify the steps to change the color scheme of the course menu.
- Describe online learning resources provided to faculty and students.

### BBD.102: Blackboard Skills Development: Managing Instructional Content

This course provides an overview of Blackboard’s course areas, content types, and the Course Files area. The session will help faculty learn how to present and manage course materials, content, and files in a Blackboard class. Upon completion of this session, participants will be able to create tool links and contact profiles, create folders and organize files in the Course Files area, upload course files and link to content items, differentiate between types of content in Blackboard, and create content items for an effective and efficient course design.

Pre-requisite course: BBD 101

**Course Objectives:**
- Add various content to a course.
- Manage and organize the Files Area in a Blackboard course.

### BBD.103: Blackboard Skills Development: Communication Tools

This course provides an introduction to online course communication and an overview of Blackboard’s most commonly used communication tools: Announcements, Discussion Board, Send Email, Groups, and Course Messages. Upon completion of this session, participants will be able to create and manage announcements, create forums and manage discussions, send emails to students within a course, and create groups with collaboration tools.

Pre-requisite courses: BBD 101, BBD 102

**Course Objectives:**
- Create, edit, and re-order announcements.
- Send an email to a course member using the Send Email tool.
- Develop a Discussion Board forum.
- Demonstrate how to create a group using the Blackboard Groups tool.

### BBD.110: Blackboard Skills Development: Managing Assignments and Tests in Your Course

This course provides an overview of Blackboard’s most commonly used assessment tools: Assignments and Tests. Upon completion of this session, participants will be able to create, manage, and grade assignments and tests. Topics include assignment creation and management, assignment deployment and settings, assignment grading and feedback, question pools, test question types, test...
creation and management, test deployment and settings, and test grading and feedback.

Pre-requisite Courses: BBD 101, BBD 102, BBD 103

**Course Objectives:**
- Create, distribute, and grade an Assignment.
- Develop, deploy, and score a Test.

<table>
<thead>
<tr>
<th>BBD.120: Blackboard Skills Development: Managing the Grade Center and Student Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>This course provides an overview of the Blackboard Grade Center. Participants will be introduced to organizing the Grade Center, recording student grades, weighting grades, running grade reports, and using the various tools available to faculty.</td>
</tr>
<tr>
<td>Pre-requisite Courses: BBD 101, BBD 102, BBD 103, BBD 110</td>
</tr>
<tr>
<td><strong>Course Objectives:</strong></td>
</tr>
<tr>
<td>- Identify components of the Grade Center.</td>
</tr>
<tr>
<td>- Create, edit, and delete columns in the Grade Center.</td>
</tr>
<tr>
<td>- Hide a column from the faculty's view and the students' view.</td>
</tr>
<tr>
<td>- Reorder and freeze columns in the Grade Center.</td>
</tr>
<tr>
<td>- Enter, edit, include feedback, and override grades.</td>
</tr>
<tr>
<td>- Establish weighted grading by category.</td>
</tr>
<tr>
<td>- Create Smart Views.</td>
</tr>
<tr>
<td>- Create a grade report.</td>
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<table>
<thead>
<tr>
<th>EPIC 101: Best Practices in Course Navigation and Design</th>
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</thead>
<tbody>
<tr>
<td>This course provides an overview of the Wake Tech’s standardized course menu. Participants will learn about the EPIC eLearning Quality Standards. How these standards will assist in creating effective and efficient course design. Participants will gain information on both the course menu design and how to customize course menu items for best practices in online learning.</td>
</tr>
<tr>
<td>Pre-requisite courses: BBD 101, BBD 102</td>
</tr>
<tr>
<td><strong>Course Objectives:</strong></td>
</tr>
<tr>
<td>- Identify the structure and components of Wake Tech’s default course menu.</td>
</tr>
<tr>
<td>- Select content areas and tools for effective and efficient course design.</td>
</tr>
<tr>
<td>- Recognize how the college-wide design of the course menu contributes to student success.</td>
</tr>
<tr>
<td>- Choose organizational and design strategies for structuring content items.</td>
</tr>
<tr>
<td>- Compare organizational and design strategies of collaboration tools.</td>
</tr>
<tr>
<td>- Recognize the purpose and function of the Tools and My Grades areas.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>EPIC 102: Best Practices in Online Communication &amp; Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>This course provides an overview of Wake Tech’s quality communication standards as part of eLearning Preparedness Initiative across the College (EPIC). Participants will gain information regarding effective communication and collaboration in online courses and fostering student engagement.</td>
</tr>
<tr>
<td>Pre-requisite courses: EPIC 101, BBD 101, BBD 102, BBD 103</td>
</tr>
<tr>
<td><strong>Course Objectives:</strong></td>
</tr>
<tr>
<td>- Identify how best practices and educational theory influenced the communications standards.</td>
</tr>
<tr>
<td>- Explain how interaction and engagement lead to student success.</td>
</tr>
<tr>
<td>- Identify strategies and tools that foster student-student and faculty-student interaction.</td>
</tr>
<tr>
<td>- Produce a communicative activity that fosters student engagement.</td>
</tr>
</tbody>
</table>
• Identify strategies and tools that provide effective, high-quality feedback to students.
• Identify engaging activities that support a growth mindset.

**EPIC 103: Best Practices in Online Assessments**

This course provides an overview of the Wake Tech’s quality assessment standards as part of eLearning Preparedness Initiative across the College (EPIC). Participants will gain information regarding creating and administering effective assessments in online courses.

Pre-requisite courses: EPIC 102, BBD 101, BBD 102, BBD 103, BBD 110, BBD 120

**Course objectives:**
• Explain the principles of effective assessments for online learning.
• Describe components of an effective grading rubric.
• Produce sample assessment for an online course.
• Explain how to create measurable student learning outcomes (SLO’s).
• Explain how to align student learning outcomes (SLO’s) with lesson/week/module/unit level objectives.

**EPIC 104: EPIC30 Capstone**

This course allows participants to create course components meeting Wake Tech’s quality course standards as part of eLearning Preparedness Initiative across the College (EPIC). Participants will evaluate and implement information gained from previous EPIC courses regarding creating and administering effective online courses.

Pre-requisite courses: ACC 101, TLS 101, EPIC 101, EPIC 102, EPIC 103, BBD 101, BBD 102, BBD 103, BBD 110, BBD 120

**Course Objectives:**
• Exhibit understanding of Universal Design for Learning practices in an online course.
• Demonstrate best practices of a faculty's role in facilitating communication in online course.
• Validate the ability to create an effective online assessment.
• Demonstrate knowledge of accessibility concepts in an online course.
• Create components of an online course according to Wake Tech’s Quality Course Standards

**Total Hours**

30

**Pathway 2 - Certification by Review**

Peer review is an option available to experienced online faculty who have completed extensive training in LMS technology and online pedagogy and andragogy. If experienced online faculty are employing best practices, it will be observable in their existing courses. With supervisor approval, faculty may opt to put a course up for review. A team of three certified Peer Reviewers will review each course using the EPIC Quality eLearning Rubric to certify faculty. Certification is awarded when the majority of the peer review team agree that the course reviewed demonstrates that the faculty member is already practicing online teaching aligned with EPIC Quality eLearning Standards.

Using Pathway 1 or 2, all current faculty teaching online who wish to continue teaching online are required to become certified by August 2017.

Table 2 provides the percentages of all Wake Tech faculty, full and part-time, who currently teach at least one course online and have completed certification or certification hours:

Table 2.
Snapshot of their Percentage of Online Faculty who have Completed EPIC 30 as of February 2017.*

<table>
<thead>
<tr>
<th>Summary</th>
<th>Total Number All Divisions</th>
<th>% EPIC30 Hours Completed All Divisions through February 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time and Adjunct Faculty who teach online</td>
<td>409</td>
<td>71%</td>
</tr>
<tr>
<td>Full-time Faculty who teach online</td>
<td>257</td>
<td>72%</td>
</tr>
<tr>
<td>Adjunct (P/T) Faculty who teach online</td>
<td>134</td>
<td>70%</td>
</tr>
<tr>
<td>Adjunct (F/T) Faculty who teach online</td>
<td>18</td>
<td>66%</td>
</tr>
</tbody>
</table>

*Source WTCC Certification Progress Tracking Data

Pathway 3 - Lateral Entry/Short Notice Hires

In the event faculty are needed to teach online courses on short notice (as determined by supervisors), they will agree to work with a qualified mentor. This relationship may last up to three 16-week semesters as these faculty members complete the EPIC Online Teaching Certification. A mentor’s role is to provide developmental feedback to the faculty to help them meet the EPIC eLearning Quality Standards in their online courses. The new online faculty member will complete the eLearning Intro course and agree to work with an EPIC Master Certified Mentor. This mentor will have earned the EPIC Master Online Teaching Certification and will be a member of the faculty’s department/program, or of the most relevant discipline area if there are no EPIC Mentors within his/her discipline. A pilot program was begun in spring 2017 with mentors assigned to nine faculty new to online teaching. New faculty who begin teaching online after August 2017 and are not certified will be required to take Pathway 3.

Summary

Currently 275 Wake Tech employees have successfully completed the EPIC Online Teaching Certification, 20 of whom elected to earn their certification through Peer Review. Of the 409 faculty who teach online, 53% have already earned their certification. Our data indicates that modest gains have been achieved in student success: when comparing online priority courses (high enrollment/low success) from spring 2015 to spring 2016, there was an increase in students successfully completing the course (earning “A,” “B,” “C,” or “P” grades) of 4%. Wake Technical Community College’s EPIC Initiative interventions/strategies relate directly to students’ online learning skills and their online learning needs. By reducing learning barriers through the mandatory eLearning Intro readiness assessment, and by ensuring that faculty have the skills they need to intentionally design and deliver courses according to best practices that promote student success, the EPIC Initiative is supporting student learning, persistence, and success in online courses.

References

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Engaging and Supporting Distance Instructors to Enhance Performance and Connectivity

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Kaplan University

Nikki Williams
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Abstract

Engaging remote faculty across the country can be challenging, especially when faculty have different roles and responsibilities. Despite these differences, the School of General Education at Kaplan University ensures that all faculty are given access to various tools that promote engagement and provide support before they enter a classroom. These opportunities continue throughout their Kaplan career.

Introduction

It is important to support faculty in order to be successful and engaged in the classroom. Kaplan University has three distinct types of faculty: part-time adjunct (PT), full-time regular (FT), and a new group, full-time adjunct (FTA). When the new FTA role was added in late 2015 through early 2016, it was important that the School of General Education look at what worked to engage and support faculty previously, and make changes to incorporate this new role. This paper will discuss how the School of General Education at Kaplan University engages and supports all faculty.

Faculty Types and Roles

Most institutions employ both full-time and part-time faculty. Beginning in late 2015, Kaplan University implemented a third type of faculty role, the full-time adjunct. Our FT and FTA faculty are hired from within by our highly qualified faculty in their respective disciplines. Full-time faculty typically teach three courses each term and have expectations around scholarship and university service (i.e., committee work, curriculum development, mentoring, etc.). Part-time faculty typically teach only one or two courses each term. The newest member of our faculty team, the FTA, has played a key role in increasing our student success rates. Full-time adjuncts may be thought of as teaching faculty with a primary role of teaching. They instruct between three to five sections each term start; however, they do not have the other expectations that our regular FT faculty have for scholarship and university service. As the name implies, FTAs have the same benefits package as other full-time regular employees. As with all faculty groups, FTAs are also supported in continuing development, faculty governance, and curriculum development as needed.

It is well known that part-time or adjunct faculty often work multiple jobs (Berger et al. 2002; Gappa, 2000; Santovec, 2004; Wallin, 2004; West, 2010) and may not be as fully engaged as full-time faculty (West, 2010). At an online institution, PT faculty are often considered “road warriors,” as they typically teach at various institutions, juggling multiple courses with different expectations just to earn a salary they can live on. Kaplan University wanted to provide faculty with an opportunity to have regular courses and the security of full-time employment. This would allow faculty to increase their engagement and focus solely on one institution, thus increasing student success and retention. Thus, the role of the FTA was created.

In an initial review of a first term composition course, we evaluated six months of data. FTAs taught approximately 3,000 students, and in the same period PT faculty taught almost 6,000 students. During that time, the FTAs had a
higher percentage of students persisting to the next term with an eight-percentage point difference from PT faculty of students who completed the course (Palmer, 2015a). Further research indicated that the composition sections facilitated by FTAs “fared far better than the control in regard to student persistence” (Palmer, 2015b).

The objective then became how can the University, specifically the School of General Education, engage and support this new faculty role while continuing our support and engagement of the other two faculty groups. The next section of this paper will describe the most effective ways identified in helping all faculty groups be successful.

Supporting Faculty

Despite having different roles and general responsibilities, the School of General Education has made it their mission to support all faculty by ensuring their success and growth as instructors so they can better support and engage our students. This support starts before faculty facilitate a class. Kaplan University provides an intensive three-week online training for all new faculty through the Center for Teaching and Learning (CTL) to help orient them with the learning platform as well as Kaplan’s high classroom standards. Incoming faculty are given first-hand experience as an online student which also helps them to empathize with any potential student challenges when assuming their role as a new faculty member. The CTL and Kaplan’s KapLearn resources are available to all faculty and staff and provide a wide-selection of pre-recorded trainings and workshops on topics ranging from creating a successful PowerPoint, leadership skills, conflict resolution, meeting the military student’s needs, and more. These various trainings are available throughout faculty members’ tenure.

Supporting faculty throughout their tenure with the university is extremely important. Initially faculty are paired with a more experienced FT faculty mentor during their first term in a formal mentor program. Faculty mentors and mentees meet weekly sharing best practices, answering questions, and providing additional classroom support as needed. However, faculty training and support does not end with the first term. Department chairs and assistant chairs regularly visit all faculty classrooms and share best practices and feedback in written and video format. Additional training is assigned as needed on topics including grading and feedback, discussion board, or seminar facilitation. Departments often include additional training as part of their monthly faculty meetings on a variety of topics. For example, a department may invite a speaker from the Kaplan University Writing Center to discuss available resources on plagiarism and also organize their FT and FTAs to share knowledge and experience on preventing plagiarism during 5-10-minute mini-presentations. Kaplan also supports employees’ growth throughout their career by offering continuous learning opportunities through the Gift of Knowledge program, where employees and their families can earn degrees at no- or low-cost.

Engaging Faculty

Keeping faculty engaged, not just in the classroom, but within the department, and throughout the university, is important. Research has shown that when virtual employees lack emotional belonging, it may affect their performance in the classroom (Dolan, 2011). Marshall et al. (2007), found that when faculty feel a sense of trust and strong communication, they tend to feel connected. Numerous opportunities to engage are provided to all School of General Education faculty at the Department, School, and University levels. At the departmental level, one method used to improve the sense of connectivity and community desired by faculty involves the utilization of live video meetings. Using Google Hangouts for FT and FTA monthly meetings has proven to have overwhelmingly positive responses. Additionally, there are regional faculty meet-ups held throughout the year where faculty have an opportunity to interact in-person with department leadership and other faculty in fun, informal settings. These meet-ups have been held around the country, and faculty have expressed feeling much more connected after having attended these interactive events. Blair (2015) reported that healthy collaborations can help virtual faculty feel connected to the department. Department leadership plays a role in promoting conference collaborations by facilitating surveys that connect faculty with common interests. As a result, faculty across multiple disciplines have represented Kaplan University and presented at both internal and external conferences.

At the school level, an All School Meeting is held annually uniting faculty from all departments across the School of General Education. In this meeting, the leadership team discusses the overall state of the school along with any new school and departmental information, as well as recognizing faculty and staff for various achievements. Community building activities can also increase these feelings of connectivity and increase faculty involvement. Some school activities and events have included annual spirit week, Awards Night, the Literary Festival, the Faculty
Interdisciplinary Roundtable, supporting organizations like the American Heart Association, virtual holiday parties, and celebrating Pi Day, Earth Day, and National Coffee Day using contests and trivia. The school also hosts an annual General Education Conference for the entire university. This conference allows faculty to work with others to develop a call for proposals, review submissions, host sessions, and present their research.

Faculty in the school are vested and their input and feedback are welcome as they help shape the curriculum in the subject area departments. All faculty roles are eligible to become Course Leaders and Subject Matter Experts. Course leaders hold regular meetings around each course because faculty feedback plays an important part in course revision. All faculty roles are further engaged in school activities whenever feasible. Faculty presenters are a valuable resource, since they demonstrate a vast level of expertise and are accepted by their colleagues, thus making it easier to share strategies and ideas. The presentations engage both the faculty presenter, who emphasizes the school’s needs and standards, as well as the faculty attendee, who may reflect on current classroom techniques, be challenged to think differently, and discover new ways to be successful in the classroom.

**Conclusion**

Engaging and supporting faculty can have a lasting impact on classroom performance. All faculty, regardless of role, need to feel connected and supported. Providing course feedback, incentives, recognition, and connections for possible collaborations, are some effective ways to engage and support all faculty roles. Institutions can help empower and equip faculty by providing resources, such as course material to enhance student success, offering trainings and workshops to ensure growth, and having the expertise of other faculty shared in meetings. Institutions that focus on supporting and engaging faculty are committed to the success and growth of their faculty, their students, and their reputation.

**References**


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A Comparison of Distance Education and Online Shopping

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Abstract

For almost three hundred years an effort to create an arrangement that acknowledges the delivery of education and specialized knowledge while meeting the transitional needs of our lifestyles and modern conveniences has been pursued. While technology and human effort have created a vast amount of change, there is still a mark regarding the delivery and quality of an alternative delivery method. A review of our historical past, current progress, and continued concern is of consideration for an overtaking of education.

History of Online Learning

Our quest to expand learning has demonstrated tremendous growth, from 1728, when the use of the written word to present when 98% of public institutions offer programs in an online delivery method, our quest to expand learning. To gain a better perspective, please visit www.straighterline.com for a visual of A Brief History of Online Learning, where you'll find an outline of the five eras distance education has developed: written, radio, TV, online, and modern eras.

Early efforts utilized the postal system relying on long periods of delivery and waiting for the return of materials. Courses were minimal and focused on specified skills thought to be required worldwide. As technology became a staple in the 1970’s and 1980’s as part of daily life, we began to see the usage of radio, TVE, and the introduction of the Internet. In the radio era, the first growth in technology began to impact our world allowing individuals to take courses from colleges and universities by listening to content delivered in a specified timeline. The TV era allowed the beginning of experimentation of providing specialized courses to specific audiences with visual and audio capabilities. During this time the world was beginning to expand its efforts to embrace technology and introduce convenience to industrial and personal lifestyles.

The most visible impact in education came in the online era. The late 1970’s introduced the use of computers and the growth of the Internet connecting students in a global environment. It allowed interested colleges and universities the ability to reach a larger demographic audience and provide a version of their expertise to the world. The modern era has provided the opportunity to fine tune and expand to meet the needs of students aligning learning needs, with quality content provided through a variety of technological methods. Education, both non-credit and credit, is now available to all who are interested and offer a price point to fit every level. Throughout these eras, two questions have always remained: one, will this delivery method eliminate traditional education and two, will it affect quality?

Could an Online Delivery Method Eliminate Traditional Education?

Research conducted by The Babson Survey Research Group and Inside Higher Ed (2012) noted faculty report being more pessimistic than optimistic about online learning (by 58 percent to 42 percent). Academic technology administrators, on the other hand, are extremely optimistic about the growth of online learning, with over 80 percent reporting that they have “more excitement than fear.”
Recently, faculty fears were captured in Penelope Adams Moon (2017) article Teach Online...Before It’s Too Late. The overall data noted faculty have a perception of poor quality of teaching and learning compared to their classroom experience. While often this has stemmed from misinformation or exaggerate tales of experiences, it has continued to create fear towards teaching in the online environment.

Quality of Online Education

The quality of online education can be identified by those who have taught online and those who have not; the experience can often create a better understanding of the quality and outcomes leading to greater support for online education. Faculty with online experience are more optimistic about the quality and controlling the results for a better student experience (Gallup, 2014).

A Parallel Example: Comparing the Launch of Online Grocery Shopping and Distance Education

On a recent CBS Sunday Morning segment regarding the onset of online grocery shopping and delivery services, it became apparent that the need for flexibility and convenience remains high, but the fear of the unknown still plagues the idea of online expansion. For some with small children are housebound due to illness or age, it is an answer to a prayer. For others, it is a convenience of front door delivery without the hassle of wandering aimlessly through the stores.

The naysayers felt it took away the joyful experience of selecting one’s food, seeing the options available and having a vast selection on site. They also felt it would be the demise of the grocery store as we know it. Online shopping would do away with the ground stores altogether if we were not careful.

The store or chain owners felt that online grocery shopping would never replace grocery stores but rather offer the same products in a different delivery method to provide for an audience in need of an alternative solution. There focus was on maintaining and gaining additional customers without reliance on changes to the neighborhoods they serviced, the demographics in the area, or the competitiveness with other chains.

Throughout the program, the one message that instantly resonated was directly related to comments made about online shopping. It was the same conversation that had – and still – occurs in higher education regarding online delivery of courses and degrees. The discussion of overall change and use of technology, the impact of new versus old, and the idea of the world being dependent and the human purpose no longer be needed all too familiar.

How Far Have We Truly Come?

In 1995, personal experience for many educators moved towards a new field called distance education. It was a small and vague focus but receiving introduction across the United States. The technology was allowing higher education to be delivered "to your door" in a format that didn't require attendance on any campus. Faculty immediately proposed that learning could not happen if a student would not be physically present in the classroom;
students could not learn in that manner. Moreover, there was a fear that if it were successful, universities would shutter their doors and students would prosper elsewhere. Most significantly, individuals felt it could potentially replace jobs. It was at the same time technology, and automation was in its infancy striking fear that it would replace all levels of jobs in the workforce and eliminate life as we knew it.

It has been twenty-one years since that initial conversation. Distance education (or online or eLearning as it is now often referred to) has grown and morphed and had its challenges. While some were able to make it profitable, most offer it as a necessary option for their institution. Moreover, it has gained popularity for its flexibility and allowance for many to finish what they started it has not replaced brick and mortar. It has forced a review of how classrooms are delivering teaching and learning, not allowed to just serve as a standard lecture hall anymore. It has taught us that students drive educational offerings through requests and attendance at schools which offer an immersion experience. Those generations raised with technology understand to question their service providers and learn in a manner that ironically aligns with the days of apprenticeships when learning was experiential.

The Future

The future of online learning remains a continuous evolution to meet more learning styles and needs. The fact is, it provides an opportunity that often may fit a lifestyle more so than a learning style. Convenience, particularly for adult students, often outweighs the option for the traditional classroom. There will always be a need for human interaction, and while we have raised a generation that has complete comfort with technology, it will be a long time before we only utilize technology to meet all of our needs.

Nationwide, we now discuss how rather than why we will expand or update our online learning initiatives. The discussion continues to look at how we will attract students, shoppers, readers, customers; our ability to share products and information and the opportunity for those online to consume at their leisure but also to gain their trust and loyalty.

For those who have experience teaching online at the undergraduate and graduate level, it is a quick lesson in knowing the expectations of students and how to provide the information in a manner that fits needs. For the grocery store, their “student” wants to choose from a variety of products before they commit to the purchase.

It is fascinating to think about where the next twenty-one years will take us. Perhaps our groceries will be delivered along with our course materials. Alternatively, we will have decided the human touch a better option after all. Perhaps shopping will become a one-stop shop offering everything from learning to buying of products all from the desktop. Online options clearly provide a venue for expansion and growth but with it comes a balance in maintaining the current audience and planning for the future.

References


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Teaching and Assessing Professional Competencies: A Focus on Multiculturalism and Diversity

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Abstract  

Teaching professional career skills within the undergraduate and graduate curriculum has recently been a focus of many educational institutions, including both private and public universities. University career centers are passing this responsibility onto the discipline specific and general education programs. Just recently, the *Chronicle of Higher Education* published several articles on broadening graduate curriculum in the Humanities to include professional skills that would assist students in being more prepared for non-faculty career options (Patel, 2017).

This paper explains how one university integrates professional competencies across multiple academic programs. These professional skills include teamwork, multiculturalism and diversity, communication, leadership, and personal presentation at the undergraduate level. This paper will specifically focus on the multiculturalism and diversity professional competency’s method of assessing these skills across different courses that enable the student to track their development.

Abbreviations  

- **Course Level Assessments (CLA):** CLAs are a multi-layered approach to student learning assessment. CLAs are utilized at Kaplan University to make sure students are mastering learning outcomes and course objectives.
- **Course Outcomes (CO):** CO are course specific and address the learning outcomes in each KU course.
- **General Education Literacies (GELs):** GELS are assessed across the university and created to improve academic literacies such as writing, critical thinking, communication.
- **Professional Competencies (PCs):** PCs are outcomes that professional skills and are spread out across the undergraduate and graduate programs.

Kaplan University Professional Competencies  

Kaplan University three-pronged approach to course level assessment includes General Education Literacies (GELs), Course Outcomes (COs), and the latest addition, Professional Competencies (PCs). All three make up the CLAs for both online and campus undergraduate and graduate students. In 2013, KU created professional competencies to allow students to enhance, improve, and express the skills that will make them successful within their chosen professional careers. The Association of American Colleges and Universities (AACU) report has recently revealed that employers considered the ability to communicate effectively, problem solve, and think critically to be more important than a candidate’s undergraduate major area of focus. Additionally, four out of five employers expressed that colleges spend more time on developing skills such as communication, analytic problem solving, critical thinking in a real-world setting (Hart, 2013). In response to employers’ request, Kaplan University developed its third tier of course assessments, PCs. These competencies included teamwork, professional presence, multiculturalism and diversity, and leadership at the undergraduate level. This paper will explore the multicultural and diversity professional competency in more detail.
Multicultural and Diversity Creation, Implementation, and Assessment

An understanding of multiculturalism and diversity continues to increase in importance as society becomes more diverse and globalization continues. Employers seek students who understand these concepts and how to leverage them to meet organizational goals. Katherine Phillips (2014) in *Scientific American* argues that “If you want to build teams or organizations capable of innovating, you need diversity. Diversity enhances creativity. It encourages the search for novel information and perspectives, leading to better decision making and problem solving.”

Understandably, teaching diversity is not easy. Howard-Hamilton, Phelps, and Torres (1998) noted years ago that “Although diversity coursework is essential, it must be recognized that teaching such coursework can be very challenging. In several aspects it is more difficult than any other type of coursework offered” (p. 60). To answer this challenge Kaplan University organized a committee to determine the key competencies for multiculturalism and diversity. This committee incorporates professors from the schools of business, health sciences, nursing, legal studies, psychology, and the humanities.

The committee developed three key competencies:

- **PC 4.1**: Assess the value of multiculturalism and diversity in a global environment.
- **PC 4.2**: Determine the understanding of how one’s perspective toward multiculturalism and diversity impacts an organization.
- **PC 4.3**: Apply concepts of multiculturalism and diversity to become an agent of change.

For each PC, a detailed rubric was developed for assessing the level of learning the following scale: 1 (Introductory), 2 (Emergent), 3 (Practiced), 4 (Proficient), and 5 (Mastery). It is important to note that the PC assessment is separate from the assignment course grade. This is because a student’s grade is a composite of several factors including content, grammar, style, and formatting. The PC assessment score isolates the student’s performance to just that one specific competency. Kaplan University curriculum is faculty driven and student centered. Courses and assignments are developed by subject matter experts who work in conjunction with curriculum specialists. The course designers and curriculum managers determine which PC to include within their course. Once the assignment is approved by the PC committee, it is implemented in the course. The instructor grades the assignment using the appropriate PC rubric. This system allows for the student to track his or her progress not just with letter grades, but with meaningful scores that are specific to the professional competencies literacies. Students can provide potential employers with a report on their assessed abilities in these competencies.

**Table 1.**
*Student Count for the Multiculturalism and Diversity PC, 2015-2016*

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
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<tbody>
<tr>
<td>PC-4.1</td>
<td>12347</td>
<td>12347</td>
</tr>
<tr>
<td>PC-4.2</td>
<td>9673</td>
<td>9673</td>
</tr>
<tr>
<td>PC-4.3</td>
<td>9986</td>
<td>9986</td>
</tr>
</tbody>
</table>
Table 1 represents the total number of assignments assessed for each Multicultural and Diversity competency across all of Kaplan University’s programs.

**Table 2.**
*Average Multiculturalism and Diversity PC Outcome Score, 2015-2016*

Table 2 presents the average scores for the three Multiculturalism and Diversity competencies for 2015 and 2016. The differences between the two years are slight, with averages near a “4,” which is at the “Proficient” level. More time is needed to analyze trends though it is certainly hoped that student ability will increase as they are taught the value and application of multiculturalism and diversity concepts.

**Challenges and Future Directions**

The introduction of Professional Competencies at Kaplan University represents a substantial effort among administrators, instructors, curriculum specialists, and subject matter experts. It represents a direct effort to meet the demands of a modern workplace. Challenges remain especially for concepts as difficult to grasp and apply as multiculturalism and diversity. Careful review of each assignment must be conducted to ensure competencies are accurately assessed. Rubrics must be detailed and faculty must be trained to reduce subjectivity. As often the case, the greater the challenge the greater the potential reward for success. Kaplan University is committed to providing quality education that prepares students for successful careers in today’s global economy. Teaching and assessing multiculturalism and diversity is an important ingredient in this endeavor.

**References**


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Online Graduate Program in Regulatory Affairs Impacts Biomedical Industry

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Abstract

To have an impact is to have a strong effect or influence on others. Academic programs can impact industry by providing educational services that fulfill a need within that industry. Industry buy-in is critical to the success of higher education programs including online programs. This paper explores the impact of an online graduate program in BioPharma Regulatory Affairs offered by the University of Georgia on a sample of companies and program graduates it is intended to support. This program was created as an economic development initiative for the State of Georgia to support the healthcare product industry. The program is now 12 years old and the authors wondered how the program is impacting the biomedical industry. To answer these questions, the authors’ sent surveys to a sample of students, graduates, and employers. This paper includes a review of the program and an outline of the steps taken to evaluate the program’s impact.

Background

The University of Georgia (UGA) College of Pharmacy created the BioPharma Regulatory Affairs (RA) Graduate Program in 2004. Its purpose continues to be to advance the understanding and application of the Food and Drug Administration (FDA) regulations through graduate-level distance education. The program was designed to help increase the number of professionals for an emerging academic discipline called Regulatory Affairs that is in high demand among FDA regulated companies. The curriculum was developed to disseminate unique regulatory information focusing on the US FDA requirements for pharmaceutical, biotech, medical devices, and animal health firms and to aid in developing competencies among biomedical regulatory and clinical personnel. These highly skilled individuals are critical in helping to assure the development, manufacturing, and marketing of safe and effective medical products. The UGA program offers the Master of Science Degree (MS) in Regulatory Affairs at 38 semester hours and the Certificate in Regulatory Affairs at 14 credit hours.

Since its inception, the RA program has relied on student feedback and industry advisory committees to ensure its appropriateness for the industry in both curriculum topics and methods of delivery. In addition, the majority of instructors maintain current competency in subject matter through consulting or employment in the biomedical industry. While these elements are critical for keeping the content leading edge, the information ascertained through these parties is limited. The program administration became increasingly interested in knowing about ways the program impacted industry, including graduates and students in the industry as well industry itself via representatives from human resources, management or regulatory directors.

This research effort focused on learning how the online delivery components factored into the program’s impact. As such, two groups were targeted in this survey:

1. Students and graduates of the program
2. Industry/employer representatives

The survey questions were designed to assess the impact of the program on the students and graduates as well as on employers. Embedded in this study were questions designed to evaluate the online nature of the program and the online characteristic factored into the target audiences’ perception of the program.
The Surveys

For both studies, two group administered questionnaires were developed using a simple free online survey tool called Typeform\textcopyright. Typeform\textcopyright allowed the authors to collect general data and provided an attractive, customizable interface for the user. The first survey was a 16-question survey sent to 160 graduates and current students using available list-servs. The survey was open for a limited number of days, which likely impacted the response rate. There were 28 responses received. The average time to complete the questionnaire was 7:36 minutes. Most questions offered preselected responses and responses were submitted anonymously. The second survey was a 15-question instrument sent to 50 biomedical employers or industry representatives, primarily in the Southeastern US. From this survey, five responses were received. As of the writing of this document, the study remains open so that additional responses may be collected. The average time to complete the questionnaire was 5:38 minutes. Most questions offered preselected responses, and those responses were submitted anonymously.

In this research, impact on the industry was defined in multiple ways. First, the impact of the program on students and graduates was investigated. Questions on receiving a promotion, bonus, or pay raise; landing a first-time job in regulatory, i.e. a career change; and increased leadership responsibilities were used to assess this quality. The students/graduates were also polled about their perceived impact on their employer resulting from their participation in the UGA program. More specifically, respondents were asked to rank a series of qualities including increased compliance with FDA regulations and the ability to provide long-term regulatory strategic planning for their company. About the online nature of the UGA RA Program, the authors inquired if the online characteristic of the program factored into their enrollment decisions. Also, the respondents were asked if the program had been delivered in a traditional face-to-face format, would the students have pursued this opportunity. Respondents in this group were requested to rank the top benefits and top disadvantages of the online nature of the UGA Regulatory Affairs Program.

Second, the research study investigated the impact of the program on the targeted biomedical industry. While the number of responses received was low, primarily because of the short response time allowed, it still provided valuable insight. For this survey, the representatives were asked to gauge the impact on the company of the employee, who has enrolled in or completed the UGA Program. Included in this assessment were the qualities of additional compliance with FDA regulations, providing long-term regulatory strategic planning, and an increased visibility of Regulatory Affairs among senior management. Questions were included to assess hiring considerations on the employability of current students and graduates of the program. Finally, the authors asked about the benefits and disadvantages of the online program for their organization.

Results from Survey One

An important research question was the nature and impact of the UGA RA Program for current students and graduates of the program. To address this topic, the authors relied on different research questions designed to assess if the students/graduates felt they received the necessary knowledge, education and credentialing to be effective in their jobs. Other related questions involved promotions, additional responsibilities, salary increases or bonuses.

About student/graduate motivation to pursue a graduate degree, the top three responses for engaging in this program were to:

1. Increase my knowledge about the regulations,
2. A job advancement, and
3. A desire of to have additional academic credentialing

Sixty-three percent (63%) of the respondents indicated they had received offers of higher responsibility with either their current employer or with another employer. Roughly 76% reported that the regulatory affairs program provided the necessary knowledge, education, and credentialing to be effective at one’s job. Of the 76%, two said that additional soft skills were helpful and one indicated it would help for future career changes. For those respondents who had five years or more experience in the field, which 13 respondents indicated they met this criterion, 85% indicated that the regulatory affairs program provided additional strength to their knowledge and expertise. Regarding leadership decision making, roughly 65% of respondents reported the UGA Program prepared the
respondents for decision making within their organization. To a multiple-response question on what impact the program has had on professional development, the top responses were received a promotion and a salary increase.

The U.S. Code of Federal Regulations governing pharmaceuticals, medical devices, biologics and other products and clinical activities states that personnel “engaged in the manufacture, processing, packing, or holding…” of a medical product or engaged in clinical research “…shall have education, training, and experience, or any combination thereof, to enable that person to perform the assigned functions” (United States Code of Federal Regulations). We wanted to know if the respondents felt prepared to fulfill this requirement from their experience in the UGA RA Program. To this question, roughly 89% of the respondents indicated that the program prepared them to meet this requirement.

Regarding the online nature of the program, 85% of the interviewees indicated that the online nature of the UGA program played a significant role in their decision to enroll, while only 11% suggested it was a secondary characteristic in their decision to enroll in the program. 50% of respondents indicated that they would not have enrolled in the program if it had been offered in a face-to-face format. Other questions addressed the advantages and disadvantages to participating in an online program. The top advantage was identified as convenience and flexibility of the program, while not meeting the instructor was noted as the top disadvantage.

Figure 1.
Impact of UGA RA Program on Professional Development

Other Responses:
- I am searching job in regulatory area.
- I was offered a position at a company and I had mentioned the RA program.
- Cannot determine the impact of the certificate alone; bonuses are based also on company performance.
- I have been recruited for a higher position at a different company.
- I am seen as an expert in my field and am consulted within my organization frequently because of the knowledge I gained in this program.
- I had received interviews and opportunities
- More thorough knowledge; more effective in my position.
- While I have not received an increase, promotion, or bonus, I have published and continue to write.
Figure 2.
Advantages and Disadvantages of the Online UGA RA Program

Results from Survey Two

The top research question directed to industry leaders was the nature and impact of the UGA RA program on the industry, i.e. the employers of the area. The initial inquiry involved the Code of Federal Regulations question to assess the employers’ opinions on meeting this requirement. The majority of respondents (80%) indicated that they felt the UGA RA program prepared its students to achieve this requirement. The most significant impacts an employee with the UGA degrees had brought to the employer was identified as additional compliance with FDA Regulations, provide long-term planning for company’s regulatory strategy and increased visibility of the regulatory affairs component among senior management.

Using a ten-point scale, where ten was the highest consideration level, five was a moderate consideration, and zero was no consideration, the respondents were asked a set of questions designed to gauge hire-ability based on the candidate’s years of experience combined with the UGA degree. With this, the authors found that the UGA RA degree combined with the years of industry experience increased over time. Using a similar ten point scale, respondents were asked about the employers’ willingness to recommend the UGA RA program to employees seeking incremental education on regulatory and quality areas. The authors also inquired about their willingness to consider UGA RA graduates as a potential source for hiring. To both questions, the responses indicated a moderate to strong willingness to consider the UGA RA program.

Regarding the online nature of the RA program, the first question to the industry representative group was to ask if the online nature of the program impacted the respondent's opinion of the program’s quality. Most of the respondents felt confident that the University had properly qualified the program, while one respondent was only somewhat confident that the University had properly qualified the program.

Regarding the advantages and disadvantages of the online nature of the UGA RA program, the respondents identified the top three benefits as:

- Provides lower cost training
- Exposure to a greater number of faculty, industry, or FDA experts
- Keeps the employee available during office hours, i.e., no absences from work
- Improved technical skills among employees
Regarding the disadvantages, the respondents indicated the following concerns:

- Uncertainty that the students get enough hands-on challenges and experiences
- Limited networking among students
- A concern that online degrees are less rigorous than traditional programs

Conclusion

From this initial survey, it is hard to fully assess the UGA RA program’s impact on the biomedical industry. The primary reason may have been the limited time that the survey was open. A second reason may have been the degree to which questions were directed to current students and graduates, without taking into consideration the level of work experience. To better address these questions, future research will need to include more in-depth studies of both graduates and industry representatives with more probing and detailed questions. The current results, however, have provided some valuable insight into student/graduate perception of the degree on their careers. For most students/graduates, the UGA RA program appears to have positively impacted their careers in the form of increased responsibilities and opportunities. For industry, it is harder to extrapolate conclusions as we had only five responses. The majority of employer responses suggest that the UGA RA program is having a positive impact on the healthcare industry, particularly in the Southeast US. Both surveys revealed that students/graduates and employers believe the UGA RA program is helping industry fulfill the requirements outlined in the Code of Federal Regulations.

Regarding the online components, the results of these surveys have cautiously confirmed some long-time assumptions regarding the online characteristics. These assumptions include that students greatly value the convenience and flexibility of the online program while employers value decreased training costs and limited employee absences.

Going forward, this survey has helped the authors to determine areas for improvement, including a need to help students feel less isolated and develop additional opportunities for networking among students. Another area for improvement includes more focused and improved marketing of the advantages and importance of online programs to industry. Although the sample size of employers was too small to reach a valid conclusion, it seems that there is still a stigma among some companies regarding the value and advantages of online learning programs.

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Bite-Sized Delivery Makes Big Waves with Micro-Learning

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Abstract

With increased use of smartphones, shorter attention spans, and other cultural and cognitive shifts, micro-learning, or bite-sized learning, is on the rise. Creators of workforce training and open education resources are capitalizing on the engaging and unique delivery micro-learning provides. Institutions of higher education would do well to take note of the recent successes of both industries and their application of micro-learning, and incorporate more micro-learning within online course design and delivery.

The purpose of this paper is to:

• Define micro-learning, sharing various quality examples
• Mention micro-learning opportunities for personal and professional growth
• Cover pros and cons when choosing micro-learning for content delivery
• Discuss how micro-learning can be created and incorporated into higher education courses.

What is Micro-Learning?

Micro-learning is not a new educational buzzword. It’s been around for a long time, just in different forms. Brief newspaper articles and one page flyers are examples of simple micro-learning that has been used for centuries. With the advent of YouTube and other video sharing websites, more advanced micro-learning via videos became widely available.

Micro-learning typically includes all of the following, which will be explained in further detail:

• Learning in small, “bite-sized” chunks (Gutierrez, 2014)
• Covers only one or very few topics
• Spaced repetition (when a large number of items are covered)
• Multimedia delivery (usually a video)
• Gamification included
• Five minutes or less
• Mobile

Learning in Bite-Sized Chunks

Research shows that when teaching a set of topics, bite-sized delivery is better received and information is better retained than longer methods of delivery, such as lecture, long videos, etc., (Andriotis, 2015). Millennials in particular are drawn to it, which makes sense, since most millennials can’t focus, can’t put their phones down, and have attention spans at or below that of a goldfish (Fernandez, 2014).

When people in general want to know what a word or phrase means, how to fix something, how to get to the next level of a video game, or learn about breaking news, most go immediately to the Internet or social media to find answers. One can easily go to Twitter and catch the latest news bits, or go to YouTube and search for a quick DIY video on any given topic. Most do not want to make the time to read multi-page articles or view lengthy videos on a topic. They want to learn only what they need, right when they need it. It’s the bite-sized offerings they flock to.
Apps that provide nuggets of learning are on the rise. One such app is Know Fast. You can choose a daily, brief video from a variety of topics (cooking, culture, finance, etc.). This app is great for those who enjoy personal, bite-sized learning in their free time. Reminders can be set up to help remember to complete the daily viewing.

Covers Only One or Very Few Topics

In the traditional classroom setting, the instructor covers multiple topics, definitions, and examples within one class period. In the traditional workforce training setting, groups of employees gather together in a meeting room and cover multiple topics over long periods of time. These methods are not favorable for engagement or retention. “Research has shown that we learn more (and retain it better) when we study in short focused bursts than when we’re forced to sit through hour long classes — but of course your younger self that was bored to tears at school knew that already,” (Andriotis, 2015).

With micro-learning, learners encounter only one (or very few) topic per module. Learners are less likely to disengage and are more likely to retain the information shared.

Khan Academy is a great open education resource filled with one topic videos in mathematics, science, economics, humanities, and more. You can find many videos that are five minutes or less, and they often provide follow-up exercises to test knowledge and understanding.

Spaced Repetition

When a large number of items or topics need to be covered, spaced repetition is key. It can be argued that micro-learning may not be the best mode of delivery when learning a large number of items, such as one would with a foreign or programming language. If spaced repetition is used though, strategically placing micro-learning review modules in the mix, it can be argued that micro-learning is a great way to retain such a vast amount of information. Duolingo is a popular, free app with bite-sized lessons for learning multiple languages. Within series of lessons you will find spaced repetition, using smart technology to focus more on areas of weakness than those that have been mastered. Uber employees in Columbia, Brazil, and Mexico have access to this app through their employer so that they can improve their English skills and attract more fares. Drivers can prove their English proficiency by completing of a certain number of lessons. Their cars then appear in a list when English-language travelers seek a driver who can speak their language (Kolodny, 2013).

Multimedia Delivery

Micro-learning can be delivered in a variety of ways. Google employees enjoy bite-sized learning from flyers placed on the back of bathroom stalls covering topics anywhere from best coding practices to health tips. Brief blog posts on single topics can also be effective micro-learning venues. Though these written versions of micro-learning work well in many settings, the most popular and effective method of micro-learning delivery is arguably video. Videos tend to be more engaging, take less time to convey information (if done well), and help learners retain information more since they appeal to both audio and visual learners.

A brief video by Hans Rosling provides a fascinating demonstration of the changes in human population, health, and wealth over two centuries. In his introduction, he mentions the importance of presenting the data in ways that people both enjoy and understand. He brings the data he’s sharing to life with his visualizations, hand motions, and audio - and he shares information covering 200 countries over 200 years in under five minutes.

Gamification

Many would argue that micro-learning isn’t effective unless it is paired with reinforcement. One of the best ways to reinforce learning is through gamification. Learners can also be more motivated to complete learning modules if they have certain game levels they can work towards, or peers they can compete with.

The Domino’s Pizza Make Course via AllenComm is a great example of how micro-learning and gamification can be utilized to create innovative and engaging new employee training. Employees go through thee micro-learning modules, which include simulations and games, to learn the menu. This new training delivery has decreased onboarding time, led to better accuracy, and faster pizza creation for new employees (AllenComm, 2015).
Five Minutes or Less

Most YouTube viewers look for what they need in the simplest format and in as little time as possible. If the introduction drags out, or if there’s too much background information shared in the beginning, viewers quickly fast forward to the info they are looking for or look elsewhere for another video that gets to the point. This is exactly what micro-learning achieves; it’s gets straight to the point, covering precisely what the viewer needs to learn in an engaging way, and not taking a moment longer than needed to do so.

An excellent example of brief DIY videos on YouTube can be found on the Tinker Crate channel. This company creates STEM kits for children ages nine and up. Each kit contains all the parts and tools needed along with a blueprint. On their YouTube channel, they include a video demonstrating the assembly of each kit. The audio portion of the video introduction is brief, often showing the end product in action in the background as a teaser for the viewers. They do an excellent job of visually walking viewers through the assembly of each kit, not lingering too long on each individual step. All of their demo videos are under 5 minutes.

Mobile

Micro-learning must be mobile. With the number of mobile device internet users surpassing the number of computer/laptop internet users in 2014 (Murtagh, 2014), mobile learning is on pace to become the primary method of learning. Students should have the opportunity to complete micro-learning modules during their down time at work, while in transit, while exercising, while waiting in line to pick up children at school or pay for groceries, etc. BrainPOP is an excellent example of high quality mobile micro-learning. This company has created a wealth of animated videos with topics from the fields of mathematics, science, social studies, English, engineering & technology, arts and music, and health. Quizzes accompany all the videos, and there are several games that can be paired with the videos as well. The mobile app is very user-friendly and can be used with cell phone data service or any Wi-Fi connection.

Micro-Learning for Personal and Professional Growth

As higher education professionals, we must constantly strive to improve ourselves in new and innovative ways. Micro-learning provides an excellent venue for busy professionals who wish to further or broaden their expertise. As mentioned earlier, Duolingo is a great app for learning a new language (or brushing up on it). Memrise is a similar app to Duolingo. It allows users to incorporate mems, which add humor and are helpful in with memorization. Peak, Lumosity, and FitBrains are great apps for brain training and improving your working memory. MTD (Management Training Specialists) has a tip app, Management Tips. It hosts a library with quick, simple exercises designed to help managers from all sectors and industries improve management skills. Coursera claims that it is the first micro-learning platform. Those who sign up can create their own micro-learning courses and/or enroll in courses on a wide variety of topics, most of them free.

Any app that provides a daily tip, daily brief video, etc. can be considered micro-learning for personal and/or professional growth, though it most likely won’t include all the characteristics of quality micro-learning. For example, there may not be quizzes or games paired with the micro-learning module, or maybe spaced repetition is missing where it might be needed. For those in higher education, Magna Publications offers some helpful micro-learning resources. Faculty Focus is a peer reviewed blog covering practical strategies that faculty and staff across higher education can benefit from. Magna Publications also has The Teaching Professor app, which provides a daily tip (created by faculty members) for faculty. Inside Higher Ed and OLC Insights are examples of great blogs where bite-sized learning can occur.

Social media is saturated with micro-learning (though some of the features that compose full blown micro-learning are often missing here as well). For example, on Facebook, Tasty provides brief recipes demos. These are shared via bird's eye view time-lapse videos (move quicker than actual speed). For the latest nuggets of news, Twitter appears to be the place to go, with 74% of those who use Twitter for news in 2015 doing so daily (Sonderman, Locker, Ivancin, Kjarval, & Rosenstiel, 2015). Vines are also on the rise for the purpose of bite-sized learning. For example, Lowes has several Vines (five seconds or less) demonstrating brief tips for household improvement and simple construction.
Pros and Cons of Choosing Micro-Learning for Content Delivery

As educators, managers, trainers, etc., the main pros and cons of choosing micro-learning for content delivery include:

Pros:

• Fun and Engaging
• Ease of revision (since micro-learning resources are brief)
• Very versatile (can be stand-alone or grouped with other micro-learning resources depending on the need)
• Often cheaper in the long run

Cons:

● Difficult to make high quality micro-learning modules (must be accustomed to multi-media software used, knowledge needed of quality video design, great script writing, tight editing, takes time, etc.)
● Can be expensive to develop (software, subject matter expert, etc.)
● Not right for every learning situation (covering topics that include several exceptions, lengthy reading necessary, etc.)

How Micro-learning Can be Created and Incorporated into Higher Education Courses

Micro-learning modules are a great fit within many subject areas in higher education and can greatly enhance courses, making them more appealing to millennials in particular. As several institutions are shifting towards competency based education, there is a great opportunity to create and include micro-learning in these brief courses focusing on one or few topics.

Here are just a few ways micro-learning can be incorporated into such courses:

● As an introduction/teaser to a course unit/module
● As a follow-up to reading material on a topic for reinforcement
● As a review leading into a quiz or test.
● As a conclusion to a course unit/module

How to create quality micro-learning modules seems to be the biggest hurdle to jump over. There is a plethora of free resources available on the internet for creating brief cartoons, videos, and screencasts. Most will even house these multi-media creations on their website for a small fee. One such site is Screencast-O-Matic. Users can create up to a 15 minute screen share, which is more than enough time needed to create a micro-learning resource. Screencast-O-Matic is great for creating how-to-videos, such as a step-by-step walkthrough on how to download software needed to complete coursework. PowToon is great for creating brief, animated videos for free, but the options for images, music, etc. are very limited.

Moovly is a more expensive option for creating animated videos, with several generators available if you prefer not to start from scratch. There are demonstration videos available on their website, including “What is the Zika Virus?”. If it is to be considered true micro-learning though, it would need to be paired with a quiz or game. Playbuzz is a great free resource for creating interactive quizzes, trivia, and polls, Poll Everywhere is also a good polling/quizzing tool, and Class Tools allows you to create free, online games reinforcing topics. Some games are based on classic games, such as Pac Man, and there is even Fakebook, where you can create profiles for fictional/historical characters.

A little more expensive, but also a great option if you don’t want to build videos from scratch, is PlayPosit. Existing videos from YouTube, Khan Academy, LearnZillion, TeacherTube, Vimeo, etc., can be enhanced with interactive, time-linked questions. This would be the best option for an institution with a low budget that already utilizes open education resources from YouTube, Khan Academy, etc. The key, and biggest challenge, is to select brief, to the point videos from these websites that only cover what is needed.
Adobe Creative Cloud for business is an excellent option for creating quality micro-learning videos, if funding is available, but would require an excessive amount of training. There are also companies that specialize in micro-learning module development, such as AllenComm and Grovo, for workforce training and professional development.

It’s of the utmost importance to keep in mind that, when creating micro-learning resources for courses, all third-party apps must be approved by the institution, and all videos must be closed captioned in order to meet ADA compliancy. Video files can be uploaded, captioned, and housed via YouTube for free.

Conclusion

Bite-sized learning is not a new concept, but has gained popularity with recent technological advances and cultural and cognitive shifts in learning. It is on the rise within the fields of workforce training and development and open education resources in particular, but most of higher education has yet to incorporate micro-learning in a uniform way. Micro-learning can enhance any online course and is particularly well suited for competency based education. The modules students must complete within this type of course delivery are the perfect set-up for micro-learning since there are few topics of focus within each module. If micro-learning resources are created and incorporated into competency based course modules, it will make modules more fun and engaging, hopefully attract more millennials. According to e-learning consultant Clive Shepard, “…it [micro-learning] is what learners want and it will make a valuable contribution to an organization’s learning strategy, so ignore it at your peril” (2016)

References


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Creating Successful Professional Development Activities for Online Faculty

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Abstract

Extant research shows that when faculty members are engaged within the university, they are also likely to be engaged in the classroom (Drew & Klopper, 2014; Umbach & Wawrzynski, 2005.) This paper will demonstrate how development of a framework for online faculty professional develop opportunities provides a vital component to overall faculty engagement and student success.

Introduction

The popularity of online programs within higher education continues to grow among student populations. Likewise, the number of faculty teaching online has risen as well. This has resulted in an increased need to develop successful professional development opportunities for online faculty. The purpose of the paper is to demonstrate how creating a framework for online faculty professional development opportunities serves as a vital component of both faculty engagement and student success. For the purpose of this paper, professional development refers to specialized trainings, continued education, or development of advanced professional skills undertaken by educators to improve overall knowledge and skill set. Online professional development does have benefits and challenges. For example, providing faculty opportunities that are high quality, provide continued support, have high impact results, produce faculty interaction, and respect faculty members busy schedules can be a challenge to program developers (Dade, Ketelhut, Whitehouse, Breit, & McCloskey, 2009). However, providing these resources online can enable faculty members to engage and complete training at their own time schedule, review the archived sessions, and repeat the training if necessary.

The rationale for examining this topic includes two key factors; increasing faculty efficacy in the classroom and promoting student success within online programs. In addition to detailing the benefits of online professional development, this paper will also address some of the challenges associated with developing opportunities that meet faculty needs and draw their interest. Rather than focus on a singular framework or model, this paper recommends utilizing a framework that blends measures specific to the organization, to teaching, and to developing a learning community in order to meet the unique needs of an online faculty population.

Faculty Do Matter: Keeping Online Faculty Engaged and Active in Professional Development via Formal and Informal Methods

One of the key components of creating successful professional development for online faculty is the recognition that faculty Do matter. Extant research shows that when faculty are engaged within the university, they are also likely to be engaged in the classroom (Drew & Klopper, 2014; Umbach & Wawrzynski, 2005). An important part of this is the recognition that both the faculty population and the overall student body have undergone a series of changes in the last ten years (Austin & Sorcinelli, 2013). As class sizes grow and more students arrive underprepared for coursework, faculty seek a balance of activities that support both their own professional growth and their ability to meet student needs. (Austin & Sorcinelli, 2013; Umbach & Wawrzynski, 2005). Professional development
opportunities must reflect these changes in order to be effective and engage faculty accordingly. As noted by Baran and Correia (2014), the “quality of online programs in higher education is strongly correlated with how the professional development approaches respond to the needs of online teachers” (p. 96). Within higher education, professional development plays an important role in the work of faculty. It serves to support good pedagogical (and/or andragogical/heutagogical) practice and allows for faculty to remain relevant within their respective area(s) of expertise. In the case of online faculty, there is a tertiary layer concerning technology that must be taken into consideration. Ideally, formal professional development opportunities for online faculty should incorporate a variety of offerings that support each of these sectors. Formal professional development offerings should include trainings and technology workshops, coaching/mentoring, targeted offerings for skill set deficits, and discipline based opportunities of scholarship (Kennedy, 2005).

Research also demonstrates that one of the ways that administrators and faculty developers can develop and maintain an engaged and supported learning environment for faculty is by creating a less formal community of practice (Kennedy, 2005; King, 2002; Wenger, 1998). Creating a community of practice helps faculty to become connected and active within online systems designed to support faculty. These communities are crucial for online faculty support and development as they focus on peer support and extend conversations beyond formal professional development opportunities (Baran & Correia; 2014; Rovai & Downey, 2009). By creating a less formal space for continued engagement and discourse among faculty, these communities allow for additional flow of knowledge and information. Faculty can continue the conversation, exchange ideas on topics pertinent to the community, and share experiences that lead to transformative practice (Kennedy, 2005; Poutiatine & Conners, 2012; Wenger, 2005).

Challenges and Benefits of Professional Development for Online Faculty

In order to create successful professional development opportunities for online faculty, administrators and faculty developers should consider both the challenges and benefits. As different delivery methods have unique challenges and benefits, so do faculty. While trainings and workshops are beneficial for technological and practical development, an overabundance of mandatory development can lead to disengaged faculty who receive the information but fail to apply it. They have the informational awareness, but not the desire to apply it (Baran & Correia; 2014; Mezirow, 1991). However, if professional development is all on an elective basis, faculty may not select offerings that help increase skills sets specific to areas of deficit. Modality can also impact this benefit/challenge ratio. Synchronous meetings and offerings (live events) can benefit interactive learners, but create challenges for those who are time bound. Visual and auditory learners, might appreciate interactive offerings that have options, the “click here to explore” effect. However for some faculty, interactive presentations might be confusing or technologically problematic. By offering a variety of different types of professional development offerings many of these challenges can be mitigated allowing faculty to benefit from a variety of options to fill professional development needs and requirements.

In order for professional development to be fully successful for faculty, they need to feel supported and engaged. When faculty are well supported and actively engaged by their professional development opportunities, they seek to actively apply the information received, and ultimately engage students in a way that fosters student success (Drew & Klopper, 2014; Umbach & Wawrzynski, 2005). With regard to online faculty, environment needs to be taken into context. Online professional development cannot be one-size-fits-all (Baran & Correia; 2014; Rovai & Downey, 2009). Professional development offerings also need to take into consideration the learning styles of faculty as well as faculty needs (O'Meara, Terosky, & Neumann, 2008; Rovai & Downey, 2009). Faculty need to feel like their individual needs, experiences, and identity as an online teacher are incorporated into their professional development activities for activities to move from informational to transformational (Poutiatine & Conners, 2012). As such, professional development activities should seek to reach this balance so that faculty can move from being passive participants receiving information, to active participants who learn, apply, transform, and lead.

Implications for Practice: A Framework for Creating Successful Professional Development Activities for Online Faculty

As noted by Austin & Sorcinelli (2013) faculty development is evolving - the students have changed, the faculty have changed, the challenges have change. In order to meet the needs of faculty teaching online, utilization of a blend of professional development strategies is recommended. Baran and Correia (2014) recommend a professional
development framework for online teaching that emphasizes three critical tiers of development: organizational, community, and teaching. This is demonstrated below in Figure 1.

**Figure 1.**
*Professional Development Framework for Online Teaching*

The approach developed in this paper utilizes this framework, but re-orients and extends the conceptual construct itself by placing greater emphasis on the development of a community of learning in order to help faculty develop strong pedagogical practice in teaching and ultimately meet organizational requirements. The framework provided here also provides examples of professional development activities that support each developmental level within the framework structure. This is demonstrated below in Figure 2.

**Figure 2.**
*Reorganized Professional Development Framework for Online Faculty*
This reorganized framework restructures the organization of the professional development tiers in a way that reflects an emphasis on community being foundational to faculty engagement. When faculty feel like they do matter and are part of a larger learning community, they become more focused on building skill sets and work to develop classroom atmosphere that foster student success. For example, required training assigned at an organizational level can be coupled with optional follow-up Q&A sessions during departmental meetings, and then application of techniques from the trainings can be discussed in a course specific context among faculty within course specific community forums.

Key to success within this framework is providing faculty with options for professional development opportunities, while maintaining certain parameters and then following up with targeted observation. This framework recognizes that some professional development activities cannot be optional due to the nature of the online environment, but also recognizes faculty as both adult learners and professionals who prefer to retain the ability to make decisions about their own online teaching (Baran & Correia, 2014; Poutiatine & Conners, 2012). Successful professional development engages faculty in a way that helps build skills sets and increase knowledge as well as motivates them to take that information and apply it; thus transforming their classrooms and increasing student success. Blending of these three critical areas keeps professional development targeted and meaningful allowing faculty both choice and voice. The success of existing professional development activities and initiatives can then be measured via targeted classroom observations during annual reviews. Administrators can then use those reviews to gauge effectiveness of overall measures and adjust offerings accordingly.

**Conclusion**

When faculty members are engaged within the university, they are also likely to be engaged in the classroom and applying new techniques and innovations that support effective online teaching. Ultimately, development of this extended framework for online faculty professional development should help institutions organize activities in a way that creates meaningful opportunities for growth and development of all faculty teaching online.

**References**


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Striving for Excellence in Student Success by Means of Assessment

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Abstract

Kaplan University (KU) has a three-tiered approach to outcomes assessment. This award-winning system has evolved over the last decade to include: Course Outcomes, General Education Literacies, and Professional Competencies. This paper will outline the approach KU has taken in assessment, data collection, and student facing data.

Introduction

How do educators diagnose and document students’ skill levels as they move through academic programs? How do educators make data-informed decisions about curriculum; discover how programs compare to other institutions of higher education (IHEs); or demonstrate to external constituents that graduates have the competences needed to be successful in their careers? The simple answer to these questions is assessment; however, what this means, how data is collected, and how information is shared with students is far more complex. During the last decade, Kaplan University has evolved an award-winning, three-tiered approach to outcomes assessment. This course-level assessment (CLA) program has a focus on data collection and use, as well as providing students information on their own progress, so that they can be well spoken advocates for the value of the degree they earned and speak to competencies not just courses and degrees.

Course Outcomes

During the last couple of decades as higher education dramatically shifted from in loco parentis to student-as-consumer, there was a greater push to clarify what specifically students would be expected to learn in a course and how the academic institution would get them where they needed to be. At Kaplan University nearly 1,000 courses were written and revised to allow students the opportunity to prepare, practice, and then perform through a series of low(er) stakes formative assessments, such as journals, class discussions, and live seminars before completing summative assessments, such as final projects. With this end goal in mind, in 2007, KU included specific course outcomes (COs) in each class to provide students with specific skills to achieve by the end of the term and faculty with key concepts upon which to provide guidance for student development. In Kaplan’s freshman composition course, for example, two COs are to demonstrate the ability “to apply strategies to write effective” academic and professional documents. For each CO, students spend time in class completing low(er) stakes activities to prepare them for a summative assessment at the end.

General Education Literacies

Although formative assessments help students develop skills and summative assessments like the COs evaluate learning (Crisp, 2012), realization that students cannot develop key literacies, such as communication and critical thinking, by taking just one or two courses. Studies have also shown that these literacies are what help propel graduates to longer term career success (Hart Research Associates, 2013; Hanusek, Woessumann, & Zhang, 2011). A more concrete assessment of these abilities was needed that was infused throughout all Kaplan University programs and courses. Because many of these skills tend to be general education course subjects: communication, math, science, ethics, social sciences, and arts and humanities, they were developed and housed within the School of General Education and named, General Education Literacies (GELs). Technology, research, professionalism, and critical thinking were also added.
In addition to the COs, each course has two GELs, embedded in the classroom. All courses have a communication GEL such as “Demonstrate college-level communication through the composition of original materials in Standard English.” The second GEL is one of the remaining areas and may include an outcome such as “Solve real-world problems using mathematical skills.” These GELs are not necessarily subject specific, but allow students to explore these topics as they are woven into their field of study and thus, help them become independent, critical thinkers who can express ideas coherently and engage in a diverse, changing world. All students will have been assessed formatively and summatively on all ten GELs by the end of their academic programs.

Professional Competencies

The COs and GELs have proven helpful in guiding student learning and assessing their attainment of knowledge and its application throughout their academic programs; however, a final tier was needed to ensure the success of graduates in the workplace. Employer surveys often call for the ability of employees to possess certain “soft skills” in order for them to be successful (cf. Hart Research Associates, 2013; AACU, 2013; Hanusek, Woessmann, & Zhang, 2011). Therefore, in 2014, these Professional Competencies (PCs) were developed and distributed throughout Kaplan’s undergraduate and graduate courses: Communication, Teamwork, Leadership, Problem Solving and Critical Thinking, Personal Presentation, and Multiculturalism and Diversity. Each core course within the School of General Education and required courses within each program includes an outcome of one PC so that, like the GELs, students will attain competency in each area by graduation and be able to carry their skills forward into their careers. For example, Cybersecurity students may learn to “assess the value of multiculturalism and diversity in a global environment” as part of the Multiculturalism and Diversity PC.

Student Facing Information

An important part of the course level assessment program is sharing information with students. This helps students to understand the material that is include in their coursework, the value of that information, as well as how they are being assessed on various outcomes. This also allows students to leverage that information to better stand out when applying for employment. To that end, a document is included in every classroom to help students understand the various outcomes within the course. Additionally, students are provided with a personalized competency report. This competency report helps each student understand areas of expertise that he or she has mastered, areas that may need more focus and more importantly, be able to highlight areas that he or she can bring to a position if hired.

Conclusion

Throughout students’ time at Kaplan University, formative and summative feedback is provided on the COs, GELs, and PCs to help them get the most from their academic experience and their careers. Students receive the timely feedback from faculty (Crisp, 2013) that is needed for learners to advance. Data and feedback are available to students in the competency report that may be shared with other faculty, Academic Support Center tutors, and even prospective employers. The hope is that the students themselves will become independent learners and achievers as they discover the level of skill in each area and receive guidance on how to develop further (Crisp, 2013).

Similarly, the University’s internal research team regularly collects generalized data on COs, GELs, and PCs to make sure students are making progress and that curriculum meets learners’ needs. The data is shared with leadership and faculty so that they, too, may advance in their skills in supporting students academically and professionally. The three-tiered assessment CLA system is also routinely reviewed and updated based upon the evolving context of the latest pedagogy, the economy, and expectations of employers. There is always more to be done, but the mix of COs, GELs, and PCs serves the Kaplan community well, as we ensure that Kaplan University fulfills its vision of being “a lifelong partner for career improvement by delivering a best-in-class educational experience with an unmatched commitment to student success” (Kaplan University, 2017).

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STLR: Student Transformative Learning Record

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Abstract

UCO’s Student Transformative Learning Record (STLR), tracks student learning in and out of the classroom. Students highlight their employability, communication, leadership, and citizenship skills in dynamic e-portfolios. STLR e-portfolios help show employers many of the skills they seek in addition to a student’s academic major (discipline specific) knowledge and skills.

Why STLR?

Employers are increasingly pointing out college graduates and new hires are lacking key job skills. They say college graduates are qualified with their degree or certifications, but are missing key skills that make them an effective employee such as: coachability, emotional intelligence, motivation, taking initiative, critical thinking, problem solving skills, and having the right attitude/personality suited to the particular job/work environment (AAC&U, 2013; NACE 2013; Murphy, 2015; Hart Research, 2013). Employers have told our university that they rarely look at the academic transcript to tell if a graduate will be a promising employee (STLR Employer Advisory Board, 2015). They say they cannot tell if a student made an A or B in International Marketing if that means they will understand how to work with a diverse group of clients, key stake holders, or other colleagues. If a student makes an A or B in a Management course, it does not mean the student will be a good leader or problem solver. In addition, accrediting bodies and legislators are increasingly asking how higher education institutions are being accountable and preparing students for the future (Spellings Commission Report, 2006). Should the way higher education has been “done” for centuries be the same way we continue because that is the way it has always been done, or because that is the way we as current academics had to do it? Innovation and progress would disagree.

What is Transformative Learning?

Transformative Learning, primarily founded by Jack Mezirow, is a holistic view of learning that goes beyond just cognitive skills, and even further beyond Bloom’s Taxonomy, which is still primarily application of cognitive learning and contexts. Transformative Learning theory, based in student development theory and adult learning
Transformative Learning Process

I theory, encompasses not just the academic context a student learns in, but the whole picture of a student’s progress toward adulthood. To break it down simply, Transformative Learning is the process in which a person becomes a functioning, responsible, aware, contributing citizen of the world (King, 2014). The basic crux of the Transformative Learning occurs in shifts in one’s perspective.

The nuts and bolts of Transformative Learning theory are:

Change of Perspective through:

- Willingness to be transformed (Taylor, 2007)
- Having an experience (Kolb & Kolb, 2015)
- Reflecting on that experience critically (Brookfield, 2004; Cranton, 2006)
- Discussion within or with others (rational discourse) (Mezirow et al, 2000)
- Shift in perspective (Mezirow, 1978)

Patricia Cranton of Penn State, a leading writer on Transformative Learning, says an “elegantly simple” definition is how people change the way they interpret their experiences and interactions with the world (King, 2012). Cranton said, “An individual becomes aware of holding a limiting or distorted view. If the individual critically examines this view, opens herself to alternatives, and consequently changes the way she sees things, she has transformed some part of how she makes meaning out of the world” (Cranton, n.d.).

According to King (2012), when people go through this type of change, they have essentially “transformed” their view of themselves or of the world and how they interact with others and their environment.

Transformative Learning at UCO

At the University of Central Oklahoma (UCO), based on these principles, our answer to how to help prepare students with 21st century skills is to “help students learn (University of Central Oklahoma, 2017; Soffel, 2016).” While that may seem incredibly simplistic, our mission breaks down to this: we cannot make students learn or transform. However, we can create environments, experiences, and situations that prompt students to potentially engage in learning in a positive, challenging, and transforming way. Since 2006, as an institution, we have adopted Transformative Learning as the way to create an atmosphere that fosters learning and progression into mature adulthood to create productive, creative, ethical, and engaged citizen leaders (University of Central Oklahoma, 2017).
UCO frames Transformative Learning around the Central Six tenets of learning (University of Central Oklahoma, 2017):

1. Discipline Knowledge
2. Global & Cultural Competencies
3. Health & Wellness
4. Leadership
5. Research, Creative, and Scholarly Activities
6. Service Learning & Civic Engagement

While UCO had been using the ideas of Transformative Learning since 2006, in 2014, a more concrete, specific UCO definition was developed out of a need to better define, assess, and record Transformative Learning.

Transformative Learning @ UCO:

- Develops beyond-disciplinary skills
- Expands students’ perspectives of their relationships with self, others, community, and environment

What is a Student Transformative Learning Record?

The UCO Student Transformative Learning Record (STLR) is a way to record and capture the learning that happens for a student in any part of their time at the university. Because we believe learning happens in many parts of a student’s life and experiences at UCO, STLR attempts to capture, document, and assess learning both in and out of the classroom, in both curricular and co-curricular contexts.

The STLR Process:

1. STLR-trained faculty and professional staff create engaging Transformative Learning experiences for students.
2. Students participate in the learning experience (STLR class assignment, co-curricular group or event, out-of-class project, funded project or student employment).
3. Students submit a reflective artifact to the Learning Management System (LMS) in a course shell.
4. The faculty/staff member assesses the artifact using an evidence-based, robust tool, called the STLR Rubric that describes levels of embodiment of the Central Six skills/values and provides written (typed) feedback to the student.

5. The student reviews the assessment, STLR rating, provided feedback, and then can “push” the STLR artifact to their STLR e-portfolio and curate examples of their achievement in their STLR printable record.

6. The student can view the STLR achievements in a STLR dashboard in the LMS and in their printable STLR Official Record.

7. The student can create a webpage presentation in the e-portfolio tool integrated inside the LMS.

8. The student can share out a link to a version of their STLR e-portfolio and/or their curated STLR Official printable record (snapshot page) to a future employer, graduate school, or scholarship application.

STLR Co-Curricular and Curricular Assessment in the Same Space

UCO identified a unique way to utilize the full extent of the LMS. Co-curricular STLR experiences are recorded and assessed in the exact same way as curricular experiences. Just as curricular course sections are provided a course
“shell” to submit assignments, STLR co-curricular learning activities are provided a course shell for students to submit their reflective artifacts. In curricular STLR experiences that involve class assignments, faculty are able to assign a grade, use their own rubric within the LMS, and the STLR rubric, all within the same “grading” screen. The LMS can handle both a grade and multiple rubrics – both a points based grading rubric and the holistic STLR rubric that is not related to the student’s grade.

STLR Dashboard

In addition, the STLR process is a digital badging system. Integrated within the LMS, a STLR dashboard was created for students to track their STLR achievements in real-time. As STLR-trained faculty or professional staff submit the student’s STLR rating and feedback, the student’s dashboard updates showing their current progress in each of the Central Six Tenets. When the student selects one of the Central Six Tenet areas, they can drill down to specific achievements in that tenet in the various levels (Green, 2015).

STLR Official Customizable Snapshot Print Out

In late 2015, UCO was asked to join the existing selected group of the Lumina Foundation Beyond the Transcript Project through a joint partnership between the National Association of Student Personnel Administrators in Higher Education (NASPA) and the American Association of Collegiate Registrars and Admissions Officers (AACRAO). The project provided multiple sessions to meet with a cohort of twelve pilot institutions from across the U.S. between July 2015 and December 2016, on-campus site visits from NASPA and AACRAO consultants, and attendance at a Lumina Foundation convening to introduce the new comprehensive student record models in November 2016.

According to the project, of the institutions selected, special attention was paid to select those that served traditional students, adult learners, residential students, commuters, under-represented groups, veterans, under-prepared, and highly selective students. The twelve institutions included: Borough of Manhattan Community College of New York, NY; Brandman University of Irvine, CA; UCO, Edmond, OK; Dillard University of New Orleans, LA; Elon University of Elon, NC; Indiana University Purdue University Indianapolis (IUPUI) of Indianapolis, IN; LaGuardia Community College of Long Island City, NY; Stanford University of Palo Alto, CA; University of Houston Downtown of Houston, TX; University of Maryland University College of College Park, MD; University of South Carolina of Columbia, SC; and the University of Wisconsin Extension and Wisconsin Colleges of Madison, WI.
The purpose of this record is to provide a visual representation of this student's achievement in the University of Central Oklahoma's (UCO) Tenets of Transformative Learning. This student's educational experience at UCO has resulted in achievements at the exposure, integration or transformation level as indicated below.

See the key on the back of this document for short descriptions of what these levels of learning indicate with regard to student knowledge and experience. These experiences have been assessed and validated by trained faculty and professional staff members at the University of Central Oklahoma.

Leadership

- Organizational Comm. Capstone - Capstone Project/Reflection - Spring 2016 - Transformation
- Fundamentals of Speech - Passions Speech Reflection - Fall 2012 - Integration
- Conflict and Negotiation in Org - Case Study Reflection - Fall 2014 - Integration
- Corporate Training/Consulting - Training Design Artifact - Fall 2014 - Integration
- Interviewing Practices - Mock Interview - Spring 2016 - Integration
- Internship: Recruiting, Event Planning, and Marketing Strategies - Fall 2015 - Exposure
- TEDx UCO - Event Participant - Fall 2015 - Exposure

Service Learning and Civic Engagement

- Integrated Knowledge Portfolio Project (IKPP) - Fall 2015 - Transformation
- Internship: Recruiting, Event Planning, and Marketing Strategies - Fall 2015 - Transformation
- Success Central - Service Learning Activity Reflection Paper - Fall 2012 - Integration
- MLK Day of Service - Event Participant - Spring 2016 - Exposure

Research Creative and Scholarly Activities

- Intro to Organizational Comm. - Reflection Paper - Summer 2014 - Transformation
- Specialized Publications - Research Project Paper - Fall 2014 - Integration
- Media Production - Media Artifact - Fall 2015 - Integration
- Major Quest - Event Participant - Fall 2015 - Exposure
- General Biology - The Decline of Bees Film - Spring 2013 - Exposure
- LA Symposium - Event Participant - Spring 2016 - Exposure
- Internship: Recruiting, Event Planning, and Marketing Strategies - Fall 2015 - Exposure

View EPortfolio - Clicking the provided link will open the student's portfolio in your computer's browser: [http://bit.ly/ZmESkDg](http://bit.ly/ZmESkDg)
The back of the STLR Printout (Green, 2017) provides a brief description of the Central Six Tenets and the levels of achievement in each tenet. This page is intended for quick reference for an employer or graduate school. The STLR assessment rubric is much more extensive and is discussed in detail later in this paper.

### Student Transformative Learning Record

#### Global and Cultural Competencies

<table>
<thead>
<tr>
<th>Transformation</th>
<th>Integration</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keen sense of cultural self and an identity as a global citizen has emerged.</td>
<td>Developing sense of cultural self, and relation to the global community.</td>
<td>Beginning awareness of cultural self, openness to learning.</td>
</tr>
</tbody>
</table>

#### Health and Wellness

<table>
<thead>
<tr>
<th>Transformation</th>
<th>Integration</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A holistic view of health and wellness for self and community is articulated and practiced.</td>
<td>A developing holistic view, some appreciation to self and community with some ability to evaluate own behavior.</td>
<td>Beginning awareness and understanding of health and wellness, initial attempts at personal change.</td>
</tr>
</tbody>
</table>

#### Leadership

<table>
<thead>
<tr>
<th>Transformation</th>
<th>Integration</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership knowledge and skill are applied effectively to community or campus issues.</td>
<td>Leadership skills are developing, knowledge and skills are applied at a basic to intermediate level.</td>
<td>Leadership skills are being tried out with increasing understanding.</td>
</tr>
</tbody>
</table>

#### Research Creative and Scholarly Activities

<table>
<thead>
<tr>
<th>Transformation</th>
<th>Integration</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>The &quot;why&quot; and the &quot;how&quot; of research and creation are grasped and shown in work.</td>
<td>Relevant inquiry about research and creative process &amp; skills are developing.</td>
<td>Skills in research and the creative process are developing, ideas are beginning to emerge.</td>
</tr>
</tbody>
</table>

#### Service Learning and Civic Engagement

<table>
<thead>
<tr>
<th>Transformation</th>
<th>Integration</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep engagement in the community, both through learning and helping.</td>
<td>Awareness of community issues and the importance of engagement.</td>
<td>First experiences in volunteering and civic action.</td>
</tr>
</tbody>
</table>

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**STLR E-Portfolio**

Once the student has STLR achievements on their STLR record, they can use the STLR printout to remind them of specific, concrete examples they will want to highlight to future employers or graduate schools. UCO encourages students to highlight only a few examples in each area, rather than expecting employers to hunt through a long list of
accomplishments. The UCO Career Services Office and Career Counselors are training to be able to provide feedback to students on their e-portfolios and provide workshops on tips to creating a solid, stand out e-portfolio.

**Example of a STLR E-Portfolio Welcome Page (Kilbourne, 2016).**

To view the live version, please visit http://bit.ly/2mESkDg
In my research, whether it was with a group or on my own, I have found that leadership means traveling the road less traveled. To be an innovative thinker who is looking to solve problems, I have found it takes digging deeper than the surface, reasoning down to the root problem, being willing to put in the hard work, and being willing to look where no one else is looking for answers. Learn More about my Leadership Roles on the UCO Ecology Group webpage, the STEM-STEP Outreach program page, or my Resume.

Collaboration in Action

In a Chemistry class my junior year, we had a service learning group project where we went out and tested the tap water of a local area with guidance from the Oklahoma Water Board. We created a report as a class and gave the report to the Oklahoma Water Board. The Water Board used our findings as part of a larger scale project they were working on, testing tap water across the metro area. We helped test one quadrant... Read More.

Work - Life Balance

When I’m not studying, working, or serving, I am an avid hiker and explorer. I’ve found many curious things on my hikes, whether it was a beautiful piece of twisted wood, an astonishing view from a cliff, or a personal revelation from taking time to breathe and think... Read More.

A Call to Serve

From being a first-generation college student, I know it’s a tough road to care about others around you and the environment when you’re trying to survive yourself. As part of a joint partnership between UCO and the Urban Riversports program, I served as a volunteer guide for urban youth (one of my boat groups pictured) at River Sports area in OKC. From this work and other service projects with the STEM-STEP Outreach program, I found my calling to ultimately work with urban youth to bring free programs to reduce child stress and encourage a connection to caring about the environment... Read More.

video link

from dropbox

Evidence-Based Authentic Assessment Using the STLR Rubric

STLR-trained faculty and professional staff use a robust rubric to assess the Transformative Learning experiences that happen both in and out of the classroom.

The STLR rubric has three levels:
- Exposure to the Central Six tenet
- Integration of the tenet
- Transformation by the tenet

A faculty/staff person uses the rubric to decide if just exposure to the tenet concept occurred, the student integrated the tenet into her reflection and work, or if there was demonstration that the student was transformed in the area. Achievement of Transformation is not expected in the General Education or early college years for traditional-aged students (Kilbourne, 2015; Verschelden et al., 2017).

However UCO has a highly nontraditional student population that includes adult students. If students come in with previous life experiences and demonstrate the level of Transformation even in lower level courses, the faculty/staff member can rate the student at Transformation if there is evidence in the student’s reflection to support the rating. Students do not have to achieve the lower levels on the rubric to get to being able to be rated at the higher levels. However, it is recommended that Transformation be reserved in few and far between cases, in order to maintain the integrity and value of the STLR process and assessment.

A group of ten to twenty faculty and assessment staff at UCO worked to create the STLR rubric, based on the American Association of Colleges and Universities (AAC&U) sixteen Valid Assessment of Learning in Undergraduate Education (V.A.L.U.E.) rubrics (AAC&U, 2013). The V.A.L.U.E. rubrics were created by a group of around 200 faculty from across the U.S from all disciplines. UCO faculty worked side-by-side with the UCO Office of Assessment and Institutional Effectiveness staff and Student Affairs staff to map the Central 6 rubric ratings and Student Learning Outcomes (SLOs) to the AAC&U Value Rubrics. Within the three levels of each tenet, multiple criteria exist for a student to achieve each level (King, 2014; Kilbourne, 2015).

The STLR Rubric and Badge Levels.

STLR Rubric and Badge Level Descriptions

<table>
<thead>
<tr>
<th>Tenet</th>
<th>Transformation</th>
<th>Integration</th>
<th>Exposure</th>
<th>Global</th>
<th>Cultural</th>
<th>Global</th>
<th>Cultural</th>
<th>Global</th>
<th>Cultural</th>
<th>Global</th>
<th>Cultural</th>
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</thead>
<tbody>
<tr>
<td>Health &amp; Wellness</td>
<td>The student personifies a holistic view of health and wellness (physical, spiritual, emotional, intellectual, environmental, financial, occupational, and social) and can articulate its meaning to others.</td>
<td>The student demonstrates commitment to care of self and others.</td>
<td>The student exhibits behaviors that demonstrate a change in perspective in fostering and sustaining a healthy community and natural environment.</td>
<td>The student has a basic awareness and understanding of at least one of the eight dimensions of wellness (physical, spiritual, emotional, intellectual, environmental, financial, occupational, and social) and can articulate its meaning to others.</td>
<td>The student is not engaged in any health and wellness activity or studies, and shows no interest in these areas.</td>
<td>The student participates in activities that demonstrate balance, wellness, and maintenance of a healthy lifestyle.</td>
<td>The student can determine the need for change to improve their own health and wellness and for the well-being of their community and natural environment.</td>
<td>The student has had a basic introduction to issues around the community and their natural environment.</td>
<td>The student is not engaged in any health and wellness activity or studies, and shows no interest in these areas.</td>
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<td>Cultural</td>
<td>The student demonstrates well-developed traits that support her/his sense of multiculturalism, e.g., awareness of her/his cultural self, flexibility, adaptability, inclusivity, creativity, and self-reliance as she/her willingly engages with cultures different than her/his own.</td>
<td>The student is just beginning to engage with different cultures in forms the ways/he/she will in the future.</td>
<td>The student has had a basic introduction to issues around the community and their natural environment.</td>
<td>The student has a basic awareness and understanding of at least one of the eight dimensions of wellness (physical, spiritual, emotional, intellectual, environmental, financial, occupational, and social) and can articulate its meaning to others.</td>
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<td>Global</td>
<td>The student demonstrates a developing sense of her/him as a global citizen.</td>
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<td>The student demonstrates well-developed traits that support her/his sense of multiculturalism, e.g., awareness of her/his cultural self, flexibility, adaptability, inclusivity, creativity, and self-reliance as she/her willingly engages with cultures different than her/his own.</td>
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target population. This data includes confidence intervals at 95% with statistical significance, conducted by the UCO Office of Institutional Research & Assessment (IR & IA) professional statisticians. In the breakdown of the incoming freshmen class take. STLR was launched to the entire campus population in fall 2016, with a goal of bringing awareness of STLR to all students through the 2016-2017 academic year and moving forward. The ultimate goal of implementing STLR is to increase retention among all students, but particularly among three sub-populations: low socio-economic status, first generation, and under-represented minority students. From fall to fall, STLR has been shown to raise retention and academic achievement both for the overall student population and the three sub-populations, to the tune of 13% in the three sub-populations and 19 percent in the non-target population. This data includes confidence intervals at 95% with statistical significance, conducted by the UCO Office of Institutional Research & Assessment (IR & IA) professional statisticians. In the breakdown

(Verschelden et al., 2017)

Results

The STLR process was piloted in the 2014-2015 academic year. STLR was soft-launched in fall 2015 targeting freshmen students, with a STLR assignment in every section of the Success Central freshmen success course that approximately 67% of the incoming freshmen class take. STLR was launched to the entire campus population in fall 2016, with a goal of bringing awareness of STLR to all students through the 2016-2017 academic year and moving forward. The ultimate goal of implementing STLR is to increase retention among all students, but particularly among three sub-populations: low socio-economic status, first generation, and under-represented minority students. From fall to fall, STLR has been shown to raise retention and academic achievement both for the overall student population and the three sub-populations, to the tune of 13% in the three sub-populations and 19 percent in the non-target population. This data includes confidence intervals at 95% with statistical significance, conducted by the UCO Office of Institutional Research & Assessment (IR & IA) professional statisticians. In the breakdown
provided, the UCO IR & IA staff provide info on low STLR and high STLR involvement. Low STLR involvement includes student participation at STLR event attendance only. High STLR involvement includes STLR experiences that included a more extensive STLR reflective artifact. UCO Provost and Vice President of Academic Affairs, John Barthell (2017) noted this is the first time he has seen this high of an impact on retention and achievement in decades.

(Scheideler, Hwang, & Wimmer, 2016)

*Includes confidence intervals at 95%.

**Target Population Definition: Low socio-economic status, first generation, underrepresented minorities. “Low STLR”: Engaged only through attending STLR-tagged events and automatically assigned lowest level of achievement (“exposure”); “High STLR”: Created a learning artifact assessed using STLR rubrics.

References


Barthell, J. (2017). *Student Transformative Learning Record (STLR) data update*. (J. King, Interviewer)


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A Concierge Model for Supporting Faculty in Online Course Design

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Bonnie B. Mullinix  
Walden University

Abstract

Individualized approaches to online course design benefit faculty in numerous ways. Using a “concierge” model approach, this paper describes the working principles and steps used in course development. The general approach directly addresses many inherent problems with instructional design processes, which often highlight discrepancies in preparation and background between instructional designers and faculty as “subject matter” specialists. The concierge model outlined re-centers the course development process around the unique qualities of individual faculty, their academic and professional knowledge of the course “content”, and the body of skills and knowledge introduced by a partner instructional designer. All members of this partnership stand to gain in positive ways, as faculty can share their passion and depth of knowledge “translating” traditional course material to online teaching formats with the supportive skills and insights of the partner course designer. To guide this interaction, the paper provides “10 Concierge Keys of Supporting Individualized Online Course Development.” Together these offer a manifesto to guide academic instructional design support staff and units responsible for course development.

Introduction

One approach to facilitating design of online courses can be to gather faculty into large group training workshops. This approach can prove to be a mechanistic experience, not to mention a nightmare to schedule, given perpetually busy and overloaded faculty schedules (Mullinix, 2006). Equally problematic are static, “self-serve” online materials that, while available and timely, only go so far and can leave faculty disengaged or confused (Riegle, 1987; Howland & Wedmen, 2004). Given the limitations of these approaches, one model that may hold promise, though less common in higher education, is an approach of personal support services modeled on the hotel concierge; a model that has been successfully adapted to healthcare settings and private industry (Michelau & Lane, 2010).

As faculty and faculty developers, we recognize that teaching is a highly individualized and personal process, which intersects the individual faculty member’s own perspective, content knowledge, and expertise. Further, course development is a complex and longer-term prospect. Outlaw and Rice (2015) report on the benefits of an individualized, 6-phase model of course development. As such, we need an approach that honors both the faculty unique perspective and the complexity of the course development process. Which brings us to the Concierge Model of Faculty Online Course Development.

Concierge Model of Faculty Online Course Development

Concierge course development and faculty support is a “just in time” model, recognizing the unique circumstances that guide the specific needs for technology and course design support. It is a highly individualized and personal response, with an instructional designer or course developer (Concierge Course Consultant or “CCC”) working with one faculty member at a time. The following document outlines the consultation steps to use (independent of course content, prior training, or location of the faculty member). Good teaching is good teaching, and a strong course design is strong whether technologies are employed in the process or not. So, while this protocol and guide is aimed at the online course development process, in truth it is applicable to any course improvement process where faculty are working with others at their institutions, whether others are peer faculty or staff working in instructional design or teaching excellence centers.

With our combined experiences in faculty development, we created a more personal and individualized response to course and faculty needs. As former faculty, we recognize that teaching is a highly individualized and personal
process that intersects the individual faculty member’s own perspective, content knowledge, and expertise. Every teaching professor has a unique passion for teaching, individual style, and habits of communication. The basic steps below are offered as a model and guide for faculty and staff engaged in supporting online course design and individualized faculty development processes.

Consultation Step 1: The Course Appraisal

Part 1 - Preliminary Appraisal and Preparation

Prior to the first meeting with the faculty member, the faculty member provides the Concierge Course Consultant (CCC) a copy of a traditional course syllabus and completes a Course Appraisal Questionnaire. The CCC reviews the syllabus, poses clarification questions reflect on the faculty’s level of self-efficacy (new online instructor, a seasoned online veteran, or somewhere in between). The CCC prepares for the first meeting with the faculty to address the desired elements or “instructional darlings” that need to be kept or dropped in the transition.

Question topics covered include:

1. Primary Course Type/Focus: Lecture? Reading? Lab? Project-based?
2. Main goals and learner outcomes/objectives clearly stated in the syllabus?
3. Content sources: Traditional texts, web-based, media, proprietary software... or some combination?
4. Interaction & Activities: Designed into the traditional course? Desired in the online course?
5. Assessments: Clearly outlined? Related to each learning outcome?
   a. What types of assessments are being used for each assignment?
   b. Do assessments encourage formative, as well as summative assessment? (Note: Importance of this in online courses where face-to-face interactions are non-existent or limited).

The CCC (instructional designer/consultant) schedules a time with the faculty member to meet them at their desired work location.

Part 2 - The Initial Interview

The first meeting proceeds in a conversational style, guided by the collected information and questions. The conversation should revolve around the following guiding points:

• The general topic, focus and scope of the course
• The faculty member’s motivation to teach this course (i.e. their passion for the subject or content; its relationship to any research interests)
• Any additional/relevant information not yet collected/shared during the preceding appraisal process

Consultation Step 2: The Initial Work Plan

Based on the appraisal process and interview meeting in Step 1, an initial work plan is drafted reflecting the appraisal assessment, agreed upon new elements of the course design, and a timeline for overall completion along with checkpoints to monitor progress. It includes specific suggestions for improvement or development as agreed. This can be formalized as a “learning contract” or not.

The goal of this step is to arrive at an agreed upon target (or targets) for specific improvements to the course. A work plan will contain the following:

• A list of the agreed upon tasks and goals (left hand column)
• Associated checkpoints, and outcomes/evidence (next columns)
• A realistic timeline for completion (last column) - Sufficient time estimated for successful completion of each task, including negotiated checkpoint and final review dates determined by faculty and CCC schedules (considering other commitments, scope of the task, etc.)
Each activity should be specific and achievable enough that the faculty member can work on it independently and be able to make sufficient progress between checkpoints. This plan provides specific activities that can be tracked and monitored for accountability.

Consultation Step 3: Periodic Progress Reviews

Checkpoint 1 - Progress Reviews and Consultations

At some point after any number of periodic reviews and consultations, a target time point or benchmark is reached and it is time for a final review. This review should be conducted in person, with ready access to the course documentation. At this point, the consultant and faculty member will agree whether the conditions of the workplan have been met, or if further work is required for satisfactory completion. This part of the process may also require a re-evaluation of the initial/evolved workplan and revision of the targets to support continued work, or to accurately reflect the joint work and accomplishments.

Checkpoint 3 - Peer Review, Internal and External

For workplans that involve more complete course re-designs or revisions, some additional review by internal, external (or both) reviewers, using original rubrics and outcomes in the workplan, can be beneficial to conclude the process. This may not be necessary or desirable for more specific and more targeted improvements, or where timeframes are condensed or quite short.

Guiding your Concierge-Style Consultation

A word about foundations. Essentially this process is one of change, on a personal, psychological level and on a cultural, social level, both for the faculty and for the course development consultants. Elements of self-efficacy, ego, beliefs and values, internalized and externalized behaviors abound in the domain of teaching. To address course improvement, without addressing these characteristics, is folly. Applying tools, methods and “best practices” outside the context of these inter and intra-personal realities can be ineffective and de-humanizing. The indignation that some faculty express at the idea of “faculty improvement” is understandable as many course development activities are based on a deficit model, focusing on assumptions about what faculty lack in perceived skills, rather than building on what they already know and do. The concierge, a good one anyway, serves a simple function: understanding where ‘the guest’ has been, where they want to go, what they want to do, and pointing out to them the best match in services or directions to get them efficiently and pleasantly on their way.

10 Concierge “Keys” for Supporting Individualized Online Course Development

1. *The Course is Being Developed, Not the Faculty.* Shift the focus from “faculty development” to one of “course development.” Naturally, the faculty member will “develop” during the process, as they must and will learn new skills and approaches, but the focus on course development allows us an objective basis for construction and reference.

2. *Meet Faculty Where They Are.* Reach out to faculty in situ whenever possible or convenient, not just physically in their space, but where they are in terms of their practice. This helps faculty learn new skills and techniques in comfortable and familiar surroundings, increasing the likelihood that they will be able to replicate any demonstrated behavior.

3. *The Faculty and Course are Unique.* Listen carefully and identify the essential content and suggest tools and design elements without presenting a “one size fits all” model. While templates and common formats may be helpful, each course and faculty member are individual and unique. Some content may suggest or lend itself to being presented in specific ways: through text, media, or demonstration. Ultimately any course designed is a complex confluence of the individual faculty member - with all of their unique characteristics as human beings, personality, history, proclivities, and habits, both good and bad - and the course content and activities.

4. *Keep it Simple.* Keep suggestions about things to change simple, and specific. Suggested course improvements should be specific, measurable and obtainable. Online teaching uses different processes
of communication, presentation of content, and assessment, which are often complex and unfamiliar. A faculty member may spend years learning what works for their classroom course, but may be expected to adapt those processes to an online environment in a matter of weeks. The changes should be implemented in a visible, manageable way, one at a time.

5. *It Takes Time.* Redesigning a course for online is a serious and time consuming undertaking. Faculty and instructional designers are busy people and time is always considered a precious commodity. There are no real easy or quick ways to redesign a course for online delivery, so having a clear plan and getting a firm commitment from the outset is important.

6. *It Will Change Them, and You.* Redesigning a course should leave both the concierge designer and the faculty member enriched, smarter, and wiser. Course redesign is a reflexive process that starts with a current course, explores and interrogates directions, desired outcomes and goals, and then moves to build a unique learning experience. As a Concierge Instructional Designer, we are privileged to be able to peer into the content and teaching of an individual course and engage the mind of the faculty member at work. At the same time, we consider ourselves as students, so that we may see the course through the student lens. In this way, the course, the faculty and the designers are all changed by this process.

7. *Rubrics are our Friends.* Incorporate rubrics to provide clarity and direction to the student and demystify the content and assessment of learning. A well written rubric, faithfully followed, yields good results. Rubrics take several forms, but the main intent is letting students know the details and form of successful responses to assignments. Exemplary course assignment instructions should include well defined descriptions of levels of expectations, performance, and/or skills reflective of and in rubric criteria.

8. *What to Keep, and What to Let Go.* Ask what elements or qualities of the traditional course are essential and should be kept at all costs. Have the faculty member identify the course foundations that should not be lost in the transition? These become the critical aspects of the course experience that need an effective online equivalent. Whether a specific bit of content or a communication process, finding the appropriate online equivalence becomes an opportunity for the faculty member to re-assess the usefulness of assignments or activities in the new environment.

9. *It is “Their Course,” Not Yours.* Remember your role in the overall exchange of ideas. Humility is a valued trait. As an instructional designer you may well know more about course design, they have to teach it. While the faculty author may “own” the course, the course concierge offers insights that can make a course an effective online learning experience.

10. *There is Always More to Do.* A good course is never finished as course development is an ongoing process. Look for new ways to improve some aspect of the course, and also recognize and leave intact those elements that provide evidence of success; “If it ain’t broke, don’t fix it.” The process of renewal should always be part of good course re-design, making each course an “always in beta” project.

With these 10 keys in mind, approaching online course design can be a constructive and collaborative team effort.

**Closing Thoughts**

We continue to refine this manifesto for faculty developers and course designers, building on both on our experiences and the concepts and guidelines shared above. In keeping with the “Society of the Crossed Keys” (Grand Budapest Hotel, 2014), we continue to engage our colleagues and revise the model and keys based on presentation feedback at conferences (including the 2016 Teaching Professor Technology conference in Atlanta and the DLA 2017 conference at Jekyll Island, GA) and invite ongoing reflections and suggestion. Together, using our own network and “Society” of faculty and course developers, we can develop a concierge-inspired model tailored to the reality of our respective institutional settings to best support faculty development of quality online courses and learning experiences.
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Online Self-Efficacy Modules for Prospective and Current Students:
Evolution of a Pilot Program for
University of South Carolina, Palmetto College

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Abstract

This paper describes a pilot project for an online learning orientation and self-efficacy course. New or prospective students interested in University of South Carolina Upstate, Palmetto College online degree completion programs are able to take any one of up to four proposed short modules in a course, offered online on an open education platform and free of cost, to gauge their own success or needed skills in navigating an online course. Such courses have been successful at other institutions (Drexel Online, Western Carolina University, and Broward College) and may serve to build greater self-efficacy towards success as an online learner as well as providing promotional experiences in recruitment efforts. The second part of the project involves the creation of a series of short (1 minute or less) video tutorials, aimed at helping new online students navigate their way through application processes, initial advising, course registration and account creation, and specific steps in participating in online courses as a student. The project pilots these efforts at USC Upstate in the Palmetto College degree completion programs, with potential application to other programs in the system.

Introduction

Problem and Background

Preparation and readiness for successful learner participation in an online course are widely variable across online programs. Several well-known identified factors can affect student performance in any course experience (Pintrich & De Groot, 1990). Levels of preparation for a first-time online course learner specifically can vary by technology skill levels to time management, learning style, attitudes, anxiety, previous course experiences, and other factors (Fong, et al., 2016). The sum of these factors can be summarized as the learner’s self-efficacy, a psychological concept developed by Albert Bandura and others. Self-Efficacy (SE) has been a much researched area in education for a few decades as a construct in the field of social cognitive theory both for its theoretical value in explaining motivation and persistence, and for its practical applications in teaching and learning methods. SE relates to the learner’s self-perception of potential success and speaks to motivation for attempted learning as well as persistence in the learning process once started. The challenges posed by technology dependent environments, particularly online and virtual learning environments, and their impact on potential students’ SE are largely under-estimated in both faculty and learner populations (Button, Harrington, & Belan, 2014). Some research has shown that student performance increases with higher degrees of SE, something that is accomplished with experiences that are authentic and which provide minimal or adequate preparation (Bandura, 1977; Bandura, 1997; Zimmerman, 2000; Kuo et al., 2014).

Presently, some students newly admitted into one of the Palmetto College online degree completion programs come to their first courses with little or perhaps no prior experience with online learning. Adult, post-traditional students in degree completion programs tend to be older, enrolled in coursework simultaneously with family and community obligations, and often less familiar with technologies like uploading documents, streaming video, or navigating virtual learning environments (Canty et al., 2015). At Upstate, students in the RN-BSN online nursing program with Palmetto College for example, tend to be older working adults with full-time work responsibilities at clinics or hospitals. Preparation for using technology in online environments is a well-known challenge in the program although a long-term decreasing trend is noted as familiarity with online environments generally increases (C. Ramos, personal communication, March 4th, 2016). Finally, lack of confidence or self-efficacy with online skills may prevent prospective students from even inquiring or exploring online learning options in the first place. Conversely, learners already enrolling in online programs may have sufficient SE with technology skills to self-
select into the virtual environment. Existing online populations may be skewed in favor of learners with high SE. The program in development and reported in this paper explores the possibility that raising SE through an initial contact course may contribute to self-selection into registration or admission into online courses and programs.

For online learning in general, while self-reported efficacy for technology use may be high, actual skills in navigating and managing work in an online course may be underdeveloped or non-existent (DeTure, 2004; Tsai & Lin, 2004; Kauffman, 2015; Kennedy, 2015; Lewis, 2015). A number of factors have been identified which are linked positively to overall student success and persistence in online courses; self-efficacy with general technology skills, study and time management skills (Smith, Murphy & Mahoney, 2003; Bozarth, et al., 2004; Smith, 2005; Puzziferro, 2008), and learner control over study practices and learning process (Stansfield, McLellan, & Connolly, 2004). Orientation programs in particular have been cited as beneficial to retention and overall success in academic programs (Derby & Smith, 2004). Wang, Shannon, and Ross (2013) further report on the connection between higher success rates among online learners with prior online learning experiences.

Further, online learning readiness surveys, widely used as a passive and semi-interactive tool for online student preparation, have had mixed results. Hall (2008) and Wladis & Samuels (2016) report that the predictive validity of such surveys are consistently low. The surveys are generally intended as a pre-entry self-assessment of technology skills and/or learning styles related to typical online course design and experiences.

The grant-funded pilot orientation program consists of:

1. Developing a self-efficacy online course with one module on meta-cognition and learning behavior, and four authentic content modules
2. Creation of online orientation materials, delivered through interactive video tutorials - capable of being used to track fundamental skills
3. Initial learning assessments targeted for tracking student academic success

Engaging new online learners through these introductory experiences could positively impact their persistence and success in their degree programs.

Project Activity

Funded under the Palmetto College Chancellor’s Innovation Grant program, a grant was awarded to develop Self-Efficacy course material and Video Orientation program material for current and prospective online students in the USC system. This grant-funded activity was designed to develop pilot materials for an Online Learner Readiness course at the Upstate campus, with possible wider implementation pending evaluation and further development.

The Office of Distance Education at USC Upstate initiated the concurrent development of two separate, but integrated innovations to serve as a pilot for a wider implementation. First, four online course modules were designed and developed by USC Upstate faculty, one in each of four areas; Humanities and Arts, Science and Technology, and Professional Studies. Each of these courses would be short (no more than 3 or 4 modules in Blackboard), free of any fees or tuition costs, publically available to anyone with a simple registration (potential for integration with enrollment services data capture and recruitment), and designed for interactivity in such a way as to delivery self-efficacy feedback to each student. Course module design and focus centered on some basic principles; the content of each course should be interesting, current, and easily processed by new or first-time online learners. The courses should also employ meta-skills development (learning about how well they learn while they are learning the content) structures and assessments. The course development would be supported by the grant in the first year, with optional recurrent replacement or refresh every two or three years. Course proposals would be sought from current Upstate faculty and would encourage inter-disciplinary, creative course content intended for new or prospective students.

Secondly, a series of short (approx. maximum one finished minute length) professionally produced videos describing and demonstrating processes ranging from initial contact, pre-advising and registration, to online course enrollment and navigation, are being developed and published. The video materials will be interactive in that each video, once clicked and played on a web platform, will display interactive links to appropriate and related resources, forms for information input and capture, and links to other tutorials. Arizona State University developed a model program, hosting close to 30 such short videos, organized under four categories (Introductions and overviews,
Getting Started, Preparing for Class, and Stay Connected). The Office of Distance Education developed storyboard and treatments for each of a number of short videos in similar categories. Video recording and editing is being finalized and will be published in the coming year and posted as each segment is available.

Assessment of the pilot program is designed around mixed methods that employ a treatment/control comparison group study as it is anticipated that sufficient pools of students will participate in both unassisted program entry and courses (control group) and through the pilot program. Qualitative interviews using NVivo qualitative data analysis software will be used to derive patterned responses from student and faculty informants. Survey tools will be used to further support assessment of the effectiveness of the video materials. Data from those surveys would be used to further refine or edit the material.

Course Description and Goals

This short course is an open/self-enrollment course aimed at increasing self-efficacy of a current or would-be online learner.

The basic goals for the course are:

- **Present** the basic format types of an online Blackboard course at USC Upstate
- **Complete** one required common course module on learning and meta-cognition
- **Complete** one other required module (from among four subject/content alternatives) for experiential “look and feel” of an actual course content module
- **Self-assessment** of participant’s self-efficacy and readiness for online course experience
- **Provide** follow-on information for enrollment recruitment and/or admissions processes

The basic course design will consist of an introductory section, with general navigational information and welcome; a required module on learning, which will present basic concepts of learner-readiness and meta-cognition and which will contain the self-efficacy and readiness self-assessment; and a second required module selected from one of four content module examples provided by faculty.

The participant in the course will be able to choose from among four planned, authentic short content modules. Each module will consist of two or three short information sections (text, video and audio) that model various forms of course content, a short assessment (open-ended and auto-scored quiz) encouraging multiple attempts and an unmonitored general discussion area to simulate a typical discussion forum. Faculty were encouraged to develop general interest topics that would model online content modules but not be limited to specific course syllabus content.

Current modules in development are:

1. How We Learn; Ready to learn and meta-cognition for the successful online student (required)
2. Living a Healthy Life (undergraduate health/nursing)
3. Graduate Nurse Leadership principles (graduate nursing)
4. Revisiting Algebraic Concepts (math)
5. Celebrity and Expectations of Privacy in the Public Sphere (journalism/media)

The course will be mounted in Blackboard Open Education®, a public and open version of the Blackboard Learn LMS requiring a basic account creation (email address and password). The course itself will contain opportunities to request additional information about Upstate and specific information about online academic courses and degree programs.

Sustainability

As a pilot project, the activities in this program would be designed to allow scalable implementation throughout the Palmetto College system and its constituent academic degree programs. Nearly all of the existing programs design and implement some form of online orientation for their students once enrolled, but offer little support to prospective or new students about general experiences online. This project supports existing program orientation
materials. The design of the video materials, in fact, assumes that prospective and new students would seek further information about their chosen program through that institution’s own orientation efforts for online degree candidates. Once completed, final versions of the video materials will be adapted to system-wide release. The materials should not need further development or maintenance. Some additional editing, or the replacing of one or more of the online short “self-efficacy” course modules to refresh the experience and content may be funded under existing budgets.

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Striving for Excellence in Online Leadership Effectiveness and Interpersonal Legacy

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Abstract

Online program leadership and legacy were examined to report the history, demographics, and current issues of online leadership effectiveness and interpersonal legacy. This institutional history of distance learning leadership dates back to the 19th century. A trend occurred in the sector over time with an increase in enrollment followed by decreased enrollment as societal or legislative changes occurred. Leaders hold governing power to guide online programs, and the interpersonal legacy of leaders are just as impactful compared to public and private brick and mortar programs. Many levels of leadership help with the enrollment services and educational services of online programs requiring interpersonal skill and relationship building. Current issues for online learning leaders include leading with legitimacy against brick and mortar institutions, accreditation, debt of students, gainful student employment, impact on faculty, data analytics, advertising, academic quality, competition, technological advancements, and student and faculty relationships. Together these findings suggest that the future of online educational leadership depends upon several effectiveness and relationship factors.

Introduction

Online colleges and universities are experiencing leadership hardships in higher education as the higher education culture continues to change. How could a higher education leader in online learning effectively manage so many changes? What level of quality education could an online leader achieve given his or her resources? Several questions still linger with online education, and the debates still occur about federal regulations. What will be the future of online colleges and universities in regards to leadership effectiveness and leadership legacy? Will these programs and leaders still be able to continue flourishing? Will there be a market correction due to the robust addition of so many online programs? In the following argument, online colleges and universities will be reviewed to address the current issues facing leadership effectiveness and interpersonal legacy.

Historical Issues in Online Higher Education Leadership

Rosenthal (2012) tracked the history of distance learning back to 1854 with a Midwestern chain called Bryant & Stratton. Like the online colleges and universities of current times, the availability of distance education flourished and proliferated at that time period. The number of distance colleges increased from 150 to 500 by 1890 (Rosenthal, 2012). Some of the approaches resembled the strategies used today by online institutions. The colleges filled a gap for those trying to improve business skills. However, the finances marked a drastic difference to the strategies of current times. They called the financing a “life scholarship” where the student paid an upfront fee equal to a monthly paycheck at the time, and they enrolled in classes whenever they wanted to increase their skills. By 1897, 92% of college students were enrolled in distance colleges. Well known business entrepreneurs such as Andrew Carnegie and John D. Rockefeller also attended distance colleges to increase business skills (Rosenthal, 2012). Similar to the situation of online learning now, some distance colleges survived and some did not based on quality and reputation. Quality effectiveness of leaders and interpersonal reputation are important factors to still track with online education leadership. Quality effectiveness and interpersonal legacy still matter, and this study argues that focus must be given to these vital outcomes.

In more current times, Floyd (2007) indicated that prior to 1990 higher educational scholars gave less attention toward online education. The attention of scholars and legislators shifted back to online colleges and universities when competition started to increase for students at two year and four year degree granting institutions. These online institutions also gained national and regional accreditation for higher education. Selingo (2013) described the common perception that all online colleges and universities were just seeking profit. However, public universities...
and private universities of the current times offer exclusively online programs for the purpose of educating students. Regardless of the historical time period, online educational leaders effectively met the needs of certain populations. These populations tended to be working adults and underserved minority students. Online universities’ enrollment included a higher percentage of many racial and ethnic minority groups, but the percentages are mostly higher for Black and Hispanic students, and American Indian/Alaska Native students. This higher enrollment did not apply for Asian, multiracial students, Hispanic students at the four year degree level compared to public enrollment, and Black students at the two year degree level compared to private nonprofit institutions. Toldson and Iloh (2013) reported that 82% of Caucasian students attended four year colleges, while 68% of Black students attended community colleges or online institutions. Online programs contribute a large role to the outcomes, accessibility, and equity of minority students (Toldson & Iloh, 2013). Many of those students are disadvantaged or ill-prepared students (Deming, Goldin, & Katz, 2013). Effectiveness in meeting student needs and building an interpersonal legacy in higher education served as important success factors during the increasing competition in online higher education. Enrollment numbers were often high in online colleges and universities. However, Lederman (2015) reported declines in online enrollment from data collected by the National Center for Education Statistics. Lederman focused on the shrinking sector of online colleges and universities with a decline of the overall number of online institutions. Overall in terms of history, online leaders in higher education served many minority students, coped with changing numbers of students, and managed increasing regulations.

Current Challenges for Online Leadership Effectiveness and Reputational Legacy

Online leaders with effectively managed change and increased their interpersonal legacy, but the market also eliminated some online colleges and universities due to increased requirements for transparency and increased regulations. Completion rates, job outcomes, and loan default rates were worse than other types of higher education programs (Deming et al., 2013). Rosenthal (2012) reported that online colleges and universities revenue depended on federal funding paid for by taxpayers, and the concern was that profit went back to shareholders, investors, and executives. The report also mentioned that online institutions met the needs of adult learners and minority groups. However, some online leaders were found to leave students with high debt and low gainful employment after graduation. As the market eliminated some online colleges and universities, several current issues surfaced for online leaders to manage. Competition with the high number of online colleges and universities along with increased competition from new public and private institutions newly offering online degree programs forced the need for high quality effectiveness of leaders and high rates reputation for a quality legacy. Selingo (2013) reported a new attitude to meet the demands of the student as a “customer” in a business transaction rather than a student taking college classes. Issues surfaced for online education leaders with “coming to market” with innovative student engagement ideas, increased faculty credentials, striving for accreditation of specialty areas, and increased services for remote students. Higher education leadership turned to business strategies such as increasing adjuncts to reduce costs, technology to persuade students into the classrooms, and extensive data analytics to gather student information. However, effective online leaders analyzed students more for recruiting and retention purposes. Leaders effectively monitored gainful employment outcomes and measured the outcomes as a quality reputation mattered to governing bodies. Kinnear (2014) also reported negative perceptions by employers that could block gainful employment after graduation from online college or university. Online education leaders had to effectively find ways to cope with these current day challenges while building a quality reputation and legacy.

Another issue facing online higher education leaders is changes in faculty governance and the lack of faculty buy-in to “service” without additional compensation (Beaky, Besosa, Martinez, & Bradley, 2013). Faculty at online institutions experience a high workload of monthly classes with increased research demands due to the goal of achieving and maintaining institutional accreditation. As additional transparency occurs with online colleges and universities, areas of faculty relationships and student effectiveness may become more scrutinized and be determining factors of online leadership success or failure (The Chronicle of Higher Education, 2011). For students in addition to online leaders, Jones (2014) called for increased knowledge on both sides in order to avoid more regulatory measures. This approach would include increasing students’ knowledge of college finances and increasing online education leaders’ knowledge of ways to prepare students for the demands and needs of the gainful job market. Faculty relationships will also require online higher education leaders to understand faculty needs and increase their leadership legacy of listening to faculty and helping faculty development in an altruistic way. A legacy of true care and concern for faculty and student well-being will be a necessity and a measured outcome for online higher education leaders.
Conclusion and Future Research

The history of distance education leadership dates far back into the 1800s, but similar issues emerged over time with two key themes of leadership effectiveness and excellence in a reputational legacy. Working adults and minority groups find opportunity for learning at convenient online colleges with more opportunities for open enrollment. At different time periods, the enrollment increased significantly and then decreased when low quality programs lost students and lost their reputation. Several current issues challenge online colleges and universities. These issues include the high loan default rates, low employment outcomes, aggressive advertising strategies, decreased faculty satisfaction, and the extensive funds spent on marketing while a significant portion of revenue links back to federal funding regulations. Competition for students forced many online higher education leaders to move quickly in the industry to innovate ahead of others. New marketing initiatives to attract and please students have resulted in regulatory actions.

Additional research would be helpful on certain issues and trends in online higher education leadership effectiveness and reputation legacy. Student perceptions of their online college experience would provide potential students with the opportunity for more informed decisions. Faculty may be less willing to work extra to implement extensive new initiatives without additional compensation. Some full-time faculty may also be working for several public and private institutions while also teaching online. This may decrease the quality of students’ education with faculty who are over-extending themselves to work more efficiently for multiple institutions. The online sector of higher education may be forcing leaders to have higher vigilance of faculty working beyond part-time work for other colleges and universities and also working more extensively to help faculty well-being. Overall, more detailed tracking of student, faculty, and administrative well-being by online higher education leadership would facilitate leaving reputational excellence in quality education.

Regardless of the extensive challenges over time, online leadership with effectiveness and high quality legacies benefit many students. Failures and closures of online programs place students in difficult positions when their college investment literally disappears. Deming et al., (2013) called for a solution that involves increased higher education leadership accountability and transparency to fully educate potential faculty and students on the costs and benefits of their investments in online higher education. This also aligns with Belasco, Trivette, and Webber’s (2014) recommendation for college students to gain greater education and awareness of the college loan and gainful employment landscape. Therefore, even though the online model presents many issues to higher education critics, the continuous striving for excellence in effectiveness and quality legacies of online leadership supports the public good and the American Dream given the high number of students who continue to invest in online education for their upward mobility in society.

References


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Early Alert System in Online Education: Student Profile and Efficacy

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Abstract

Globally and across the United States, distance learning administrators are increasingly attuned to the importance of student persistence and retention initiatives and innovations. One innovation that appears to be widely implemented is an Early Alert System, which provides a link between online faculty and academic advisors with the intent to intervene with students at risk for early program attrition. Little is known about the characteristics of those students likely to obtain an Early Alert. This study explored the descriptive characteristics of students that received an Early Alert in a sample of courses at a large predominately online university in the United States. The results of this study indicate that gender, marital status, passing the course and course grade are associated with receiving an Early Alert. Recommendations for future research include a focus on predictive analyses of variables that are associated with receiving an Early Alert in an online course.

Introduction

Throughout the United States, universities have focused on efforts to improve student retention and graduation rates (Braxton, 2002; Eaton, 2011; Hayes, 2009; Ishler & Upcraft, 2005, Shaw, Burrus, & Ferguson, 2016). One approach to facilitating higher education is online learning, which continues to expand. Fall 2014 enrollments for students taking all courses online was 2.85 million and students taking some courses online (but not exclusively) was 2.97 million (Allen, Seaman, Poulin, & Taylor, 2016). Demographically, students who take online courses differ from peers who take courses in more traditional settings (Ortagus, 2017). To improve student retention and graduation rates, online universities need to develop and advance effective interventions specific to at-risk students in online classes. One such intervention that has been proposed in academic and practitioner literature is an Early Alert System (EAS) (Allen, et al., 2016; Cai, Lewis, & Higdon, 2015).

Literature Review

Student retention and graduation rates have long been a topic of institutional concern and academic examination (Allen, et al., 2016; Braxton, 2002; Eaton, 2011). Online education changed the way students learn and are retained, and while graduation and retention rates continued to be a focus for colleges and universities, new tools to increase these rates became necessary (Donnelly, 2010). Due to a difference in modality of delivery, online courses are structured differently than traditional on-ground or blended courses (McElroy & Lubich, 2013). Online courses, due to a lack of a specific meeting time and place require that students possess more intrinsic motivation (Wighting, Liu, & Rovai, 2008) and higher levels of organizational and time management skills. Additionally, due to the flexibility of online education, a different type of student is drawn to this course format than to a traditional education setting. An examination of National Postsecondary Student Aid Study (NPSAS) data from 2012 shows that several demographic characteristics such as being married, being a parent, and a full-time employee were positively
associated with online course enrollment. Additionally, NPSAS data showed that minority students were less likely to engage in online education than their non-minority peers (Ortagus, 2017).

Students who take classes online tend to have more responsibilities and less time to engage in their learning, therefore, university intervention systems that allow different student support teams to communicate with one another can improve the students’ experience, performance, and lead to an increase in retention and persistence (Cai, et al., 2015; Donnelly, 2010; Ortagus, 2017). While some universities have explored interventions such as academic alert systems (Donnelly, 2010), theoretical explorations of vigilance mechanisms built into learning management systems (Wright, 2016), and using activity of successful student online to aid students who may be struggling (Fritz, 2011). However, the academic literature about efforts to investigate effective interventions is either focused on theoretical explorations of interventions for students who are struggling or have not focused on an integrative approach, such as EAS.

To offer effective interventions to students in online courses, these interventions need to be well-matched to the online learning environment (Allen, et al., 2016; Donnelly, 2010; McElroy & Lubich, 2013) as well as to the demographic characteristics of those who are most likely to struggle in their course work (Ortagus, 2017). To explore student demographic characteristics of students who received an EA in an online course, EAS data from a large, primarily online university were explored.

The following questions guided this research:

1. What is the demographic profile of students who received an Early Alert?
2. How do students on who received an Early Alert differ demographically from students who did not receive an Early Alert?

EAS Implementation Context in the Current Study

The online university featured in this study employs an EAS to encourage course completion by alerting a student’s Academic Counselor (AC) to contact the student to discuss academic concerns raised by the faculty member and/or an automatic alert system. The EAS was implemented in 2007. The goal for implementing this intervention was to increase student success in individual courses, which could lead to improved student persistence and retention. Since its inception, this system has consistently been updated and the current version (updated January 2016) automatically alerts the student’s Academic Counselor (AC) if the student did not submit an assignment or participate in the online discussions. Faculty members now utilize the system to send an alert regarding concerns with the quality of a student’s work such as not following APA standards, grammar skills, not providing substantive posts, student confusion regarding assignment guidelines or fails to follow the directions, concerns with student’s computer skills, student lacking the required computer hardware/software needed for the class, student is not submitting documents in the correct file format, and student is not participating in learning team assignments. Faculty members access the alert system through the online gradebook and class roster; both items are in the digital classroom.

Data Source and Method

The data for this study were collected from the university Office of Business Analytics and Operations Research. The university regularly collects data on student enrollment, retention, performance, financial status, and demographic variables. The data that were used for this study included records from students who were issues an early alert either by the course instructor or the learning management system (LMS) sometime during their course (referred to as “EAS students” here and throughout) and students who were not issues an early alert (“non-EAS students”). Data included courses with start dates between November 24, 2015 and January 26, 2016. A total of 26,573 student records were accessed and used in the study of which 2.4% (n = 640) were EAS students.

Descriptive and nonparametric statistics were used to answer the research questions. Frequencies of demographic variables are reported for both EAS and non-EAS students and chi squared comparisons are reported to evaluate differences and similarities between the demographic profiles of EAS and non-EAS students.
Results

To answer the first research question (What is the demographic profile of students on whom EAS is filed?), frequencies of demographic variables were computed on the data of EAS students ($n = 640$). The demographic information is presented in Table 1.

Table 1.  
*Demographic Profile of EAS and Non-EAS Students*

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th>EAS Students (N = 640)</th>
<th>Non-EAS Students (N = 25,933)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years M (SD)</td>
<td>33.9 (8.59)</td>
<td>35.1 (9.15)</td>
</tr>
<tr>
<td>Number of people in family M (SD)</td>
<td>2.69 (1.41)</td>
<td>2.83 (1.50)</td>
</tr>
<tr>
<td>GPA M (SD)</td>
<td>2.57 (0.59)</td>
<td>3.10 (0.62)</td>
</tr>
<tr>
<td>Total transfer credits into the university M (SD)</td>
<td>14.17 (19.38)</td>
<td>15.8 (20.44)</td>
</tr>
<tr>
<td>Gender N (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>173 (27.4)</td>
<td>8,045 (31.3)</td>
</tr>
<tr>
<td>Female</td>
<td>458 (72.6)</td>
<td>17,677 (68.7)</td>
</tr>
<tr>
<td>Marital status N (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>379 (63.5)</td>
<td>12,935 (54.7)</td>
</tr>
<tr>
<td>Married</td>
<td>145 (24.3)</td>
<td>7,686 (32.5)</td>
</tr>
<tr>
<td>Separated</td>
<td>36 (6.0)</td>
<td>1,193 (5.0)</td>
</tr>
<tr>
<td>Divorced</td>
<td>37 (6.2)</td>
<td>1,819 (7.7)</td>
</tr>
<tr>
<td>Have dependents N (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>86 (14.5)</td>
<td>3,475 (14.8)</td>
</tr>
<tr>
<td>No</td>
<td>507 (85.5)</td>
<td>19,944 (85.2)</td>
</tr>
<tr>
<td>Military status N (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Military (past or current)</td>
<td>140 (21.9)</td>
<td>5,446 (21.0)</td>
</tr>
<tr>
<td>Not Military</td>
<td>500 (78.1)</td>
<td>20,487 (79.0)</td>
</tr>
<tr>
<td>Passed course N (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>268 (41.9)</td>
<td>21,351 (82.3)</td>
</tr>
<tr>
<td>No</td>
<td>372 (58.1)</td>
<td>4,582 (17.7)</td>
</tr>
<tr>
<td>Course grade N (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>10 (1.6)</td>
<td>5,890 (22.7)</td>
</tr>
<tr>
<td>A-</td>
<td>10 (1.6)</td>
<td>4,150 (16.0)</td>
</tr>
<tr>
<td>B+</td>
<td>14 (2.2)</td>
<td>2,052 (7.9)</td>
</tr>
<tr>
<td>B</td>
<td>18 (2.8)</td>
<td>2,011 (7.8)</td>
</tr>
<tr>
<td>B-</td>
<td>28 (4.4)</td>
<td>2,196 (8.5)</td>
</tr>
<tr>
<td>C+</td>
<td>26 (4.1)</td>
<td>1,297 (5.0)</td>
</tr>
<tr>
<td>C</td>
<td>31 (4.8)</td>
<td>1,331 (5.1)</td>
</tr>
<tr>
<td>C-</td>
<td>67 (10.5)</td>
<td>1,243 (4.8)</td>
</tr>
<tr>
<td>D+</td>
<td>22 (3.4)</td>
<td>614 (2.4)</td>
</tr>
<tr>
<td>D</td>
<td>42 (6.6)</td>
<td>554 (2.1)</td>
</tr>
<tr>
<td>D-</td>
<td>30 (4.7)</td>
<td>546 (2.1)</td>
</tr>
<tr>
<td>F</td>
<td>108 (16.9)</td>
<td>1,240 (4.8)</td>
</tr>
<tr>
<td>W</td>
<td>234 (36.6)</td>
<td>2,800 (10.8)</td>
</tr>
<tr>
<td>Form of payment N (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Direct Pay</td>
<td>27 (11.2)</td>
<td>2,313 (8.9)</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>558 (87.2)</td>
<td>22,638 (87.3)</td>
</tr>
<tr>
<td>Military</td>
<td>10 (1.6)</td>
<td>797 (3.1)</td>
</tr>
<tr>
<td>Scholarship (non-EAS only)</td>
<td>0 (0.0)</td>
<td>185 (&lt; 1.0)</td>
</tr>
</tbody>
</table>

| Program level N (%)                        |                        |                                |
| Associate                                  | 172 (27.1)             | 6,546 (25.5)                   |
| Undergraduate                              | 383 (60.4)             | 16,262 (63.3)                  |
| Graduate                                   | 79 (12.5)              | 2,875 (11.2)                   |
To answer the second research question (How to students on whom EAS was filed differ demographically from students on whom EAS was not filed?), four independent group t-tests (due to a violation of several assumptions MANOVA was not used) with a Bonferroni correction ($\alpha = .0125$) were used to compare EAS and non-EAS students on age, GPA, number of people in their family, and total number of units that were transferred in by the student when they started at their current university. The results of the t-tests indicated that the mean age of EAS students ($M = 33.9, SD = 8.59$) was significantly lower than non-EAS students ($M = 35.1, SD = 9.15$), $t(26,497) = -3.336$, $p < .01$. There was also a significant difference in student GPA, with EAS students having a significantly lower GPA ($M = 2.57, SD = 0.59$) than non-EAS students ($M = 3.10, SD = 0.62$), $t(26,514) = -21.119$, $p < .001$. The difference in the total number of units that were transferred in by the student when they started at their current university approached significance ($p = .046$), and the difference in the number of people in the students’ family was not significant ($p > .05$).

Chi square tests of independence were used to examine whether categorical demographic variables (gender, marital status, military status, passed course, form of payment, and program level) were associated with students’ EAS status. The results of the chi square tests are shown in Table 2. A significant association was found between EAS and gender; female students were more likely to have an early alert, $\chi^2 (1) = 4.276$, $p < .05$. A significant association was found between EAS and marital status; students were single were more likely to have an early alert, $\chi^2 (3) = 23.047$, $p < .0001$. Likewise, there was a significant association between the two performance variables, passing a course in which the early alert was filed, $\chi^2 (1) = 673.994$, $p < .0001$ and grade in the course in which early alert was filed, $\chi^2 (13) = 930.036$, $p < .0001$. Students who had an early alert were less likely to pass the course in which early alert was filed, three times more likely to withdraw from the course, and four times more likely to fail the course.

Table 2. Chi Square Values Applied to EAS Status Related to Gender, Marital Status, Dependents (yes/no), Military Status, Passed Course (yes/no), Course Grade, Form of Payment, and Program Level

<table>
<thead>
<tr>
<th>Variable</th>
<th>Chi-square</th>
<th>$df$</th>
<th>$p$-value</th>
<th>$\phi$ ($p$-value)</th>
<th>Cramer’s V $\phi_c$ ($p$-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>4.276*</td>
<td>1</td>
<td>.039</td>
<td>-$0.31$ (.039)</td>
<td>.031 (.000)</td>
</tr>
<tr>
<td>Marital status</td>
<td>23.047**</td>
<td>3</td>
<td>.000</td>
<td>-.001 (.820)</td>
<td></td>
</tr>
<tr>
<td>Dependents</td>
<td>.052</td>
<td>1</td>
<td>.820</td>
<td>-.001 (.820)</td>
<td></td>
</tr>
<tr>
<td>Military status</td>
<td>.288</td>
<td>1</td>
<td>.592</td>
<td>.003 (.592)</td>
<td></td>
</tr>
<tr>
<td>Passed course</td>
<td>673.994**</td>
<td>1</td>
<td>.000</td>
<td>.159 (.000)</td>
<td></td>
</tr>
<tr>
<td>Course grade</td>
<td>930.036**</td>
<td>13</td>
<td>.000</td>
<td>.187 (.000)</td>
<td></td>
</tr>
<tr>
<td>Form of payment</td>
<td>4.362</td>
<td>2</td>
<td>.076</td>
<td>.088 (.076)</td>
<td></td>
</tr>
<tr>
<td>Program level</td>
<td>2.365</td>
<td>2</td>
<td>.307</td>
<td>.009 (.307)</td>
<td></td>
</tr>
</tbody>
</table>

* = Values significant at the .05 level  
** = Value significant at the .0001 level

Conclusion and Discussion

This study sought to explore the descriptive characteristics of students who received an EA at a large predominately online university located in the United States. The results of this study indicate that students who receive an EA tend to be younger, have a lower GPA, and fewer transfer credits. These students also appear to be more likely to withdraw from a course in which they encounter difficulties. These findings suggest that students in this sample who received an EA tend to be more academically “at risk.” Surprisingly, EA status was not associated with those demographic characteristics that would be considered to add more responsibilities outside of school, such as the number of dependents a student has and were associated with higher incidence of EA among single than married students. Females were also more likely to receive EA than males. While many hypothetical explanations can be put forth regarding the demographics of “at risk” students who’ve received an EA, any demographic analyses should be interpreted with caution. Additional data and further analysis, including parametric statistics, and hierarchical linear modeling to account for potential nested effects should be conducted before conclusions are drawn about the extent to which demographics may predict early course persistence.
References


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The Evolution of ePortfolios and Rethinking Assessment

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American College of Education

Jason Caudill
King University

Abstract

The use of ePortfolios for learning assessment in graduate programs has seen rapid growth in recent years. In order to effectively use these tools institutions must have a system in place that provides students with appropriate direction and support to enable them to be successful in the portfolio process. This paper will present the redesign process recently completed by the American College of Education to streamline the portfolio process for master’s students in Educational Leadership and improve the learning experience in connection with the ePortfolio.

Introduction

As the pedagogy of distance learning continues to develop programs and practitioners must continue to identify new opportunities to assess student learning based on the objectives of the academic program. Increasingly the answer to this need is the use of electronic portfolios, ePortfolios. These portfolios are seeing increased use to inform institutions about how and what their students are learning and, by extension, to inform teaching practices (Lim & Lee, 2014). This increase in use is particularly tied to the growth of distance learning and increased interest is seen across disciplines and levels of education, including K-12 and higher education (Wakimoto, 2014).

This growth is, however, recent, and ePortfolios are a new component for graduate education (Burke & Snead, 2014). In addition to being new, ePortfolios also offer a broad range of different potential approaches and technologies, which present a complex instructional environment for those programs wishing to implement an ePortfolio assessment. Matthews-DeNatale (2013) explains that this newness and complexity has exposed a real need for more research into the ePortfolio process from the perspectives of both design and pedagogy. This paper will explore the use of ePortfolios as a capstone assessment tool for the graduate programs at American College of Education (ACE) and provide an analysis of how a change in the administration of the program has impacted student success and institutional administration of the program.

Defining Portfolios

The use of ePortfolios as assessment tools is focused on helping students understand both the content and context of their work in an academic program so that they may reflect on and learn from what they have done. Goertzen, McRay, and Klaus (2016) explain that this is not just a collection of student work, but student work supported by reflective statements framing the work in the learning objectives of the program. Pedagogically the ePortfolio approach includes elements of constructivism, experiential, and connectivist learning (Matthews-DeNatale, 2013), positioning the ePortfolio process as a student-centered assessment that challenges students to construct meaning. While this approach has been a part of portfolio assessment in the past, the opportunities students have to integrate digital media in ePortfolios provides a much better platform on which students can create their own reflective interpretation of program content and their personal learning (Keenan, Rosenberg, Greenhalgh, & Koehler, 2016).

Types and Purposes of Portfolios

Goertzen, McRay, and Klaus (2016) explain that both students and faculty benefit from the ePortfolio process, with students gaining an understanding of what they have learned along with a means to display their accomplishments, and faculty receiving an in-depth picture of what students are really taking from the program, which offers information on what is or is not working and how things may be improved. The opportunity to inform improvements in a program is a core attribute of the ePortfolio process. Reflecting on what is displayed in the ePortfolio provides
students with evidence of where they need to focus their future education and professional development and also where they have strengths that can be capitalized on for professional advancement (Lim & Lee, 2014). Burke and Snead’s (2014) review of the ePortfolio literature revealed many more advantages to the ePortfolio assessment process, including: longitudinal assessment, the display of multiple student competencies, success in program goals and objectives, flexibility, and minimization of test anxiety, among others. These advantages provide a rich assessment environment for an academic program and it is from this foundation that the administration of the portfolio program is built.

Administration of a Portfolio Program

The ePortfolio assessment process is uniquely suited to leadership education like the Master of Educational Leadership (EL) program at ACE. Including reflective practice for learners, such as that provided in the construction of an ePortfolio, is specifically identified as an element of leadership learning (Goertzen, McRay, & Klaus, 2016). Part of engaging the students in this reflective practice is the proper administration of a program. While the ePortfolio is a capstone exercise at ACE, students are required to submit elements of the portfolio throughout their coursework, a best practice that aligns with the recommendations of Goertzen, McRay, and Klaus (2016).

The process by which students build their ePortfolio should include multiple elements. Matthews-DeNatale (2013) explains that an ePortfolio should feature the elements of Connect to Learning’s Catalyst for Learning Framework, specifically Inquiry, Reflection, and Integration. ACE uses performance, learner-centered, and quantitative assessments to meet the standards of the framework.

ACE’s Change in Approach

Studies in the literature have explored the redesign of ePortfolio programs. Goertzen, McRay, and Klaus (2016) found that it was important to have a structured process for students to submit elements of the portfolio at designated times throughout the program, and also for the institution to maintain frequent communications with students to ensure that they understood what they needed to do to satisfy the portfolio requirements. Matthews-DeNatale (2013) focused on redesigning the portfolio process to use as a tool to inform curricular changes and program assessment. ACE’s experience in redesigning the ePortfolio process was focused on reducing expenses, decreasing student complaints regarding Taskstream, and creating rubrics to make effective decisions for curricular changes.

Results

Students’ work in ePortfolios was evaluated through a case study including observation techniques and document reviews to gather data from a sample of 697 Master of EL program students from November 2014 to January 2016 and 371 students from February 2016 to August 2016. Additional feedback was received from Taskstream coordinators and capstone reviewers in the form of a narrative via email and phone. The narratives were utilized as extended commentary to support data analysis. The purpose of the study was to explore how a change in the administration of the program has impacted student success and institutional administration of the program.

ACE started using ePortfolios in 2011, using Taskstream. Upon entering the capstone course, students demonstrated mastery of the program outcomes by presenting three artifacts for each outcome. Evaluators marked the artifact as meeting the requirements, not meeting the requirements, or sent back with revisions. The data found in Taskstream revealed the number of students meeting the requirements of each program outcome. If a student did not meet a program outcome, the only indication of what was being missed or what needed to be revised was a qualitative comment from the evaluator. Taskstream was also an outside system for students to create the ePortfolio.

ACE moved away from Taskstream in February 2016 to reduce expenses. Integrating an ePortfolio system within the Canvas Learning Management System (LMS) was also thought to be easier for students. While using Taskstream, students frequently experience problems related to account expirations, renewals, and forgetting passwords.
The following changes were noted:

- Instead of requiring three artifacts, two artifacts were found to have enough focus to measure student mastery.
- Rubrics were created for each Program Outcome, which aligned with an Academic Outcome. The rubrics could better identify gaps in student work, as well as misalignment to the Program Outcome.
- Assessments were increased to include:
  
  o **Performance Assessments** – Evidence-based application assignments, components of all courses and capstone, demonstrate students' mastery of program outcomes aligned to college-wide academic outcomes and their ability to apply experiential learning demonstrating the application of theories and concepts in a realistic manner.
  
  o **Learner-Centered Assessments** – These assessments are reflective in nature, measuring changes in students’ internal thought processes while also documenting the acquisition of content knowledge through pre- and post-course self-evaluations, reflection assignments in all courses, and the original contribution to the program of study and the comprehensive paper in the capstone course.
  
  o **Quantitative Assessments** – These assessments, aligned to program outcomes and course objectives, use the overall score from final exams or quizzes developed specifically for each course as a measure of knowledge acquired through the course components. External quantitative measures, such as licensure exam pass rates and domain area scores, were included in this category of assessment.

In 2014 and 2015, the EL program averaged 70-75 unique student inquiries per 5-week term. To help ensure all student questions were answered, there were three people monitoring the Student Commons discussion board. With the transition from Taskstream to Canvas in 2016, the number of student inquiries decreased immediately, as shown in Table 1. Many of the student questions were repeated questions by different students. Particularly for the first two terms after the transition, students who were about to graduate had many questions about finishing out in Canvas instead of Taskstream. Moreover, with the decrease of student inquiries, one person monitored the Student Commons discussion board in 2016.

**Table 1.**

<table>
<thead>
<tr>
<th>2016 Student Taskstream Inquiries in Educational Leadership Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Term</strong></td>
</tr>
<tr>
<td>February</td>
</tr>
<tr>
<td>April</td>
</tr>
<tr>
<td>May</td>
</tr>
<tr>
<td>July</td>
</tr>
<tr>
<td>October</td>
</tr>
<tr>
<td>November</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Follow up research is recommended to analyze effectiveness of this initiative to advise any upcoming program level ePortfolio implementations at ACE and other colleges.

**Conclusion**

In 2015, when ACE started the discussion of changing ePortfolio systems and the impact on student success, the updates to the academic curriculum for the Educational Leadership program were still in progress. The immediate challenges included having little data and evidence to execute decisions within the program. The changes in the ePortfolio system show significant potential impact on curriculum changes, as well as immediate impact on student inquiries. The improved ease of access should provide students with a better learning experience and allow them to focus more on content than process in the ePortfolio program. There is more data to be gained from the rubrics, such as determining which program outcomes are not up to par with others, what students are missing, and how to improve the assessment and the learning around the assessment.
References


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Educators’ Perceptions of Open Educational Resources

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Abstract

In order to guarantee productive usage of Open Educational Resources (OER) in educational contexts, it is important to understand educator perceptions of OER. The purpose of this study was to explore educators’ perceptions of OER use and how the perceptions are different by their educational contexts (K-12 vs. Higher education) and/or teaching experiences (less or more than 10 years). This study will contribute to the design and implementation of OER in various learning contexts.

Introduction

The desire to improve the resources that facilitate learning is a priority for educators. Open Educational Resources (OER), in this sense, are making their way into a variety of educational contexts from K-12 to higher education. OER refers to “the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes” (UNESCO, 2002, p. 24). As prominent users of these resources, educators often play a key role for making a decision on what to teach and how to teach (Allen & Seaman, 2014). In order to guarantee productive usage of OER in educational contexts, it is important to understand educator perceptions of OER (Hu, Li, Li, & Huang, 2015; Kelly, 2014).

Many perception studies (e.g., Allen & Seaman, 2014; Bliss, Robinson, Hilton, & Wiley, 2013; Lindshield & Adhikari, 2013) have explored faculty and/or student perceptions of OER in comparison to traditional educational resources. These studies showed that the majority of faculty and students perceive that the quality of OER is similar to or better than traditional educational resources. Although these perception studies might provide a comparative picture on traditional resources and OER, understanding how educators perceive OER in detail is needed to better implement OER. Few studies have explored how educator perceptions are different by their teaching contexts and/or teaching experiences. Teaching contexts are important in OER usage because K-12 learners and higher education learners have different needs. Teaching experiences are also important because educators’ perceptions about the use of OER might be colored by their teaching experiences (Guo, Zhang, Bonk, & Li, 2015). The purpose of this study was to explore educators’ perceptions of OER use and how the perceptions are different by their educational contexts (K-12 vs. Higher education) and/or teaching experiences (less or more than 10 years).

Methods

To investigate educator perceptions of OER use, an openly shared set of data of the OER Research Hub (OERHub, 2015) was used. Based on their teaching contexts (K-12 vs. Higher education) and teaching experiences (less or more than 10 years), a total of 280 participants were split into four categories: less experienced K-12 educators, experienced K-12 educators, less experienced higher education educators, and experienced higher education educators.

For this study, three categories of survey items were selected as follows:

1. Purpose/selection criteria of OER use.
2. Impact of OER on teaching and student learning.
3. Challenges in using OER. The impact of OER was measured using 5-scale Likert scale, and the other three categories were measured using yes/no responses.
Results

Educator Perceptions of Adoption of OER

To investigate educators’ adoption of OER, the purpose of OER use and selection criteria were explored (see Table 1). For the purpose of OER use, the strongest motivation was to learn about up-to-date knowledge for less experienced or experienced K-12 educators and experienced higher education educators, while self-study material was the strongest for less experienced higher education educators.

Then for OER selection, the most important criterion was resource accessibility for less experienced or experienced K-12 educators and experienced higher education educators, while resource reliability was the most important for less experienced higher education educators. Regardless of their teaching contexts and experiences, organization requirement was ranked as the least important criterion for choosing OER.

Table 1. Educators’ Purpose and Selection Criteria of OER

<table>
<thead>
<tr>
<th>Purpose of OER use</th>
<th>To broaden the range of resources</th>
<th>To broaden the range of teaching methods</th>
<th>To learn about up-to-date knowledge</th>
<th>To offer self-study material to learners</th>
<th>To engage learners in a topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-12, &gt;10 yrs (n=70)</td>
<td>67.1%</td>
<td>75.7%</td>
<td>82.9%</td>
<td>48.6%</td>
<td>52.9%</td>
</tr>
<tr>
<td>K-12, &lt;10 yrs (n=70)</td>
<td>47.1%</td>
<td>52.9%</td>
<td>72.9%</td>
<td>42.9%</td>
<td>45.7%</td>
</tr>
<tr>
<td>H-ed, &gt;10 yrs (n=70)</td>
<td>70.0%</td>
<td>71.4%</td>
<td>68.6%</td>
<td>87.1%</td>
<td>71.4%</td>
</tr>
<tr>
<td>H-ed, &lt;10 yrs (n=70)</td>
<td>54.3%</td>
<td>50.0%</td>
<td>74.3%</td>
<td>58.6%</td>
<td>48.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OER Selection</th>
<th>Resource Currency</th>
<th>Resource Reliability</th>
<th>Resource Accessibility</th>
<th>Resource Copyright</th>
<th>Organizational Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-12, &gt;10 yrs (n=70)</td>
<td>52.9%</td>
<td>68.6%</td>
<td>90.0%</td>
<td>50.0%</td>
<td>21.4%</td>
</tr>
<tr>
<td>K-12, &lt;10 yrs (n=70)</td>
<td>32.9%</td>
<td>62.9%</td>
<td>94.3%</td>
<td>32.9%</td>
<td>22.9%</td>
</tr>
<tr>
<td>H-ed, &gt;10 yrs (n=70)</td>
<td>41.4%</td>
<td>65.7%</td>
<td>61.4%</td>
<td>62.9%</td>
<td>10.0%</td>
</tr>
<tr>
<td>H-ed, &lt;10 yrs (n=70)</td>
<td>42.9%</td>
<td>58.6%</td>
<td>81.4%</td>
<td>51.4%</td>
<td>21.4%</td>
</tr>
</tbody>
</table>

Educator Perceptions of Impact of OER Use

Educators’ perceptions of OER impact were measured in terms of the impact on instructors and students. As presented in Table 2, regardless of their teaching contexts and teaching experiences, they perceived utilizing OER is effective on student engagement and satisfaction. It is interesting to note that, consistent with previous research (e.g., Kelly, 2014), K-12 instructors perceive OER more useful than higher education instructors.

Table 2. Educator Perceptions of Impact of OER Use (Max = 5)

<table>
<thead>
<tr>
<th>On instructors</th>
<th>On students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teaching Methods</strong></td>
<td><strong>Up-to-date knowledge</strong></td>
</tr>
<tr>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>K-12, &gt;10 yrs (n=70)</td>
<td>3.71 (1.24)</td>
</tr>
<tr>
<td>K-12, &lt;10 yrs (n=70)</td>
<td>3.41 (1.17)</td>
</tr>
<tr>
<td>H-ed, &gt;10 yrs (n=70)</td>
<td>3.83 (0.90)</td>
</tr>
<tr>
<td>H-ed, &lt;10 yrs (n=70)</td>
<td>3.43 (0.97)</td>
</tr>
</tbody>
</table>

Educator Perceptions of Challenges of OER Use

To explore educators’ perceptions of challenges in using OER, three categories—resource, organization, and instructor—were explored. For resource, regardless of teaching contexts and experiences, quality of OER was the biggest concern, and copyright of OER was the least concern for educators to use OER. Then for organization, as compared to other challenges, organizational support does not seem to be a significant barrier for educators. In terms of instructor, the results indicated that lack of time was bigger concern to educators than lack of skills to edit OER.
Conclusion

This study hypothesized that educator perceptions of OER use are different by their teaching contexts (K-12 vs. Higher education) and teaching experiences (less or more than 10 years). The quantitative analysis of 280 educators’ responses supported the hypothesis by showing that their purpose, selection, perceived impact and challenges of OER use are different by their teaching contexts and teaching experiences.

The findings from this study will benefit creators and designers of OER to better meet educators’ needs. In a comparison between purpose and impact, for example, although learning about up-to-date knowledge was the strongest motivation for most educators, their perception of impact of OER on it was lower than other outcome variables. In a comparison between selection criteria and challenges, although resource accessibility was ranked the most important for OER selection, the educators seem to have concerns with accessibility issues. Consequently, this study will contribute enormously to the design and implementation of OER in various learning contexts.

References


Table 3.

Educator Perceptions of Challenges to Use OER

<table>
<thead>
<tr>
<th>Resource</th>
<th>Accessibility</th>
<th>Currency</th>
<th>Quality</th>
<th>Copyright</th>
<th>Organization</th>
<th>Skills to edit</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-12, &gt;10 yrs (n=70)</td>
<td>47.1%</td>
<td>44.3%</td>
<td>54.3%</td>
<td>24.3%</td>
<td>12.9%</td>
<td>27.1%</td>
<td>68.6%</td>
</tr>
<tr>
<td>K-12, &lt;10 yrs (n=70)</td>
<td>44.3%</td>
<td>42.9%</td>
<td>54.3%</td>
<td>24.3%</td>
<td>14.3%</td>
<td>17.1%</td>
<td>50.0%</td>
</tr>
<tr>
<td>H-ed, &gt;10 yrs (n=70)</td>
<td>51.4%</td>
<td>41.4%</td>
<td>61.4%</td>
<td>31.4%</td>
<td>18.6%</td>
<td>28.6%</td>
<td>61.4%</td>
</tr>
<tr>
<td>H-ed, &lt;10 yrs (n=70)</td>
<td>34.3%</td>
<td>38.6%</td>
<td>47.1%</td>
<td>31.4%</td>
<td>18.6%</td>
<td>11.4%</td>
<td>44.3%</td>
</tr>
</tbody>
</table>


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Documenting Teaching Effectiveness in the Online Environment Through Peer Observations

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Abstract

Teaching observations are commonly used among educators to document and improve teaching effectiveness. Unfortunately, the necessary protocols and supporting infrastructure are not consistently available for online faculty. This paper presents a brief literature review and reflective narratives of educators representing online education at multiple organization levels within a comprehensive university. Each vignette presents strategies for implementing peer observations among online faculty, including considerations for teaching faculty, their supervisors, and online education administrators.

Introduction

Teaching observations serve multiple functions for educators (Chism, 1999). The observations may serve as a formative evaluation of the faculty members’ teaching strategies. This use of teaching observations encourages reflection and self-assessment as a measure of professional development. In addition to utilizing the teaching observation as a data point for self-evaluation, teaching observations may also be utilized by academic units to identify professional development and training needs among the faculty. For example, online teaching observations could affirm the faculty member’s utilization of technology in the course or provide an opportunity for such recommendations. A variety of technologies exist to support faculty teaching in the online environment. Examples include screen capture and video recording software, educational social media tools, and expanded communications technologies that integrate with existing learning management systems (LMS). Additionally, research suggests teaching online influences instructor’s teaching strategies in traditional classroom settings. Therefore, teaching observations across multiple deliveries may provide a more holistic understanding of instructors’ strengths and weaknesses related to teaching (McQuiggan, 2012).

Research on online teaching suggests a differentiation between teaching personas exists among instructors who teach through varied delivery modes. For example, Richardson, Koehler, Besser, Caskurlu, and Mueller (2015) note that instructors may have distinct presentations of themselves in social and instructional elements of the course. Whether intentional or not, these distinctions may have a negative influence on student-instructor interaction as the student attempts to discern acceptable norms of engagement. Baran and Correia (2014) advocate for targeted professional development, such as that identified via online teaching observations, to enhance teaching effectiveness. Despite initial reluctance to pilot online content delivery, faculty members routinely express confidence and satisfaction with online teaching (Dietrich, 2015). It is important for current online educators to document their success and refine their practice in order to improve and sustain quality online education.

Educator Perspectives

This paper presents reflective narratives of three educators who teach online and have varying levels of responsibility for online learning administration. These narratives include perspectives from a tenure-track faculty member, an academic program director, and an associate dean who oversees distance learning for an entire college and advises institution-wide policy related to distance learning. The purpose of the multiple perspectives is to
present the unique insights among various constituent groups whose buy-in is necessary for implementing a sustainable culture of online teaching observations.

**Faculty Level Perspective**

Multiple professional development workshops offered by my university for teaching online helped prepare me to develop and teach courses online. These sessions were optional; however, I was hired with the understanding that I would further expand online course offerings in my department. This intentionality in the hiring selection process matched the department’s strategic goals with my experience and interest. As a former hybrid and online learner in both of my graduate programs, I naturally gravitated toward online teaching opportunities and welcomed the opportunity to develop and teach online courses. I personally experienced the advancements opportunities and benefits afforded by distance education programs, so I value the access provided by online courses to student populations who would otherwise be unable to pursue a college degree. Fortunately, online teaching is valued at my institution as evidenced by support units, incentives, and recognition. I imagine the quality of my online teaching would be different without such tremendous institutional support.

During my first year, my department chair completed a teaching observation in one of my traditional, face-to-face courses, which was helpful in affirming my teaching practice and identifying areas for improvement. In subsequent years, I found myself teaching predominantly online and began exploring online teaching observation protocols. I requested a peer observation of my online teaching because I wanted feedback on my teaching, to document what I did well in the online environment, and to be intentional in seeking out additional professional development to improve my online teaching practice. At the time, there was no formal process for online teaching observations that mirrored the existing protocol for traditional teaching observations, so I collaborated with my program director to develop and pilot a protocol and instrument to help facilitate the process. My goal was to address the aforementioned needs I had as an online educator and to also pilot a process that could be shared with colleagues and potentially adopted by my program and department.

To date, the protocol and instrument my program director and I developed has been disseminated among colleagues at my institution, with colleges in my discipline at national conference, and with fellow online educators at national conference for online learning. Most importantly, the feedback I received through the online teaching observation was helpful in developing strategies to improve my teaching practice and documenting areas of excellence. I believe these observations should be faculty-driven; however, there are strategies for program directors and senior academic administrators to help cultivate cultures of evaluation that support online teaching observations. Additionally, the information collected during online teaching observations may serve a variety of purposes that support student learning by informing practices at the program and college level.

**Academic Program Level Perspective**

In rapidly growing online learning programs adjunct faculty support is being incorporated at greater rates than ever before. This incorporation and the rapid growth of programs highlight the need for ensuring quality online instructors and consistency amongst program course offerings. A critical starting point is course development. Online course development done well creates a strong base for a program. Through the use of Quality Matters KSU has a robust and quality program that supports the creation of master courses that can become a shared space for course development for adjunct and full time instructors to engage in developing enhanced instructional opportunities. The collegial setting in which Quality Matters takes place provides a respected and meaningful place for exploring well-regarded teaching practices. As a program director, I see this space as a critical component to providing learners with a quality experience that supports learners at a variety of levels. The programmatic consistency offered in this type of program model provides learners with a certain familiarity and comfort with online learning.

A strong augment for this type of course development is the continued practice of assessment of program and instruction quality. The evaluative process of learning tools and instructors keep a program director in tune with areas of achievement and areas for program growth and improvement. The practice of teaching observations in the online space can support the validity of online programs and highlights the strong pedagogical practices that a number of online instructors engage in with their online instruction. The evaluation process and resulting findings can also become an opportunity for program benchmarking and developing measures for growth. A well thought out
an implemented assessment plan can provide meaningful data rather than relying on memory or anecdotal notions about successful online learning ventures.

As a program recalibrates its focus, a historical account or overview of effective instructional methods determined in part by observational review of teaching practices can assist with defining or refining a program’s focus. Programs have the opportunity to determine what their core values are as it relates to instruction and can develop opportunities to share what some instructors find success with practicing in their online learning environments and what areas may be challenging. When such observations are performed at a programmatic level, programs may begin to see patterns for success or growth.

**College and University Level Perspective**

Administrators of online education programs are constantly looking for innovative ways to conduct classroom teaching observations for their faculty members that allow for developmental and formative feedback. This feedback is imperative to facilitate the online faculty members’ professional and personal development and to provide them with strategies to enhance their online teaching skills. Moreover, this feedback often contributes to an overall improved classroom experience for the students. Thus, formative observations can be provide faculty members with not only positive feedback that encourages their best practices but also constructive criticism that promotes enhancements to their online teaching capabilities.

As administrators, we have encountered challenges in conducting teaching observations of the online course in our college, particularly in the areas of implementation and identifying knowledgeable and experienced online observers from among our teaching faculty. The primary difficulty regarding implementation is that online faculty members are often reluctant to invite observers into their classrooms when the institution does not require observations. Additionally, faculty members sometimes view the classroom observations process negatively, fearing them to be a high stakes assessment. Although some faculty members in our college actively seek out opportunities to improve through a developmental and formative teaching observation process, we must ensure the process – and faculty perception of the process – is collegial and supportive.

To ensure the feedback provided though online teaching observations is both meaningful and constructive, administrators of online education programs should provide training to ensure those conducting the observations are experienced and knowledgeable regarding the online environment and effective teaching in that environment. For example, training workshops can be offered throughout the year to provide faculty members the opportunity to observe the evaluation process from multiple perspectives.

**Discussion**

Online teaching observations are valuable tools for documenting and improving teaching effectiveness. Faculty and administrator buy-in is necessary for institutionalizing the process, and advocates for online teaching observations are advised to consider a multi-pronged approach that engages teaching faculty, academic program directors, and senior administrators.

To encourage faculty members to participate in the online classroom teaching observation process, the following strategies can be implemented:

- Convey to faculty the value of a developmental and formative observation through:
  - The testimonials of faculty who have participated in the process
  - The benefits as documented in literature on teaching practices
  - An explanation of the importance of this feedback as part of the evidence provided in promotion and tenure portfolios
- Provide faculty members with a detailed instrument that will be used to observe the online classroom in order to allow them the opportunity to review it and ask questions
- Provide faculty members with the option to choose one or more observers from a list of available, knowledgeable, and experienced online evaluators
- Promote the formative evaluation as a supplement to the KSU Quality Matters internal review process
Furthermore, when implementing an online teaching observation process, the following should be taken into consideration:

- Online teaching faculty should have the opportunity to share their perspectives regarding online teaching and the observation instrument to garner their buy-in for the process.
- Online program administrators should evaluate the opportunities and challenges of implementing an online classroom teaching observation process from all perspectives.
- Online program administrators should consider their organizational structure and culture before institutionalizing observations.
- Online program administrators should ensure proper protocols and infrastructures are in place to support the process.

While the online teaching observation process is valuable for full-time faculty, it can also prove useful as a means to provide formative feedback to part-time and adjunct faculty members.

Conclusion

Online teaching observations are a necessary element of online education and distance learning administration. With the end goal of providing professional development and strategies to improve teaching, the online teaching observation process, whether required or optional must be viewed positively by faculty if it is to be embraced and implemented successfully. Online program administrators would be wise to create such a culture among their faculty and secure their support as a first-step in the implementation process. Additionally, practitioner-oriented scholarship that explores strategies, challenges, and successes in creating systemic, organizational change to support online teaching observation would be helpful for both faculty and administrators seeking to implement that recommendations provided in this paper.

References


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Mastering Online Professional Development: A Design Case

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Abstract

Georgia State University has developed The Mastering Series, a set of online courses specifically designed to keep faculty abreast of emerging technologies and instructional design pedagogy for online course development and delivery. In this paper, we will present the design case for The Mastering Series.

Introduction

As online courses in higher education continue to increase, colleges and universities are faced with the challenge of training new and seasoned faculty to effectively teach in an online environment. Obtaining professional development through external agencies can be costly. To combat budgetary restrictions, in house course development can be a plausible solution. Georgia State University has developed The Mastering Series, a set of online courses specifically designed to keep faculty abreast on emerging technologies and instructional design pedagogy for online course development and delivery. In this paper, we will present the design case for the Mastering Series.

Local Context

Georgia State University is an urban public research institution with more than 53,000 students. The university offers 250 undergraduate and graduate degree programs in more than 100 fields of study in its nine colleges and schools. The university was recently part of a consolidation with Georgia Perimeter College (GPC) a local two-year college. GPC had a strong online program with over 8,000 students take courses online. 3,000 of those students were in fully online programs. The design of the series under discussion was initiated before the consolidation was announced. However, the courses are still being offered under the new direction of GSU Online. It was initiated to benefit several stakeholder groups which included students, faculty, department chairs, and deans. However, our main focus was online faulty and their desire to become proficient online instructors. The design team consisted of professionals that had over 20 years of collective experience in Instructional Technology and Design. Design team members have Masters or Doctoral degrees in the field. The combination of experience and education was essential in producing courses that would be favorable for the stakeholders. The Dean of GPC Online, Department Chairs and fully online faculty also had peripheral input into design development.

Design Context

Professional development was previously offered through a series of on-campus, face-to-face sessions in which faculty were primarily trained on how to use the features of the adopted learning management system. Several external factors began to limit the effectiveness and extensibility of the face to face teaching format such as the increasing number of faculty who wanted to teach online and the training of non-local faculty. The decision was made to begin offering online opportunities that would also utilize the advancement of collaborative technologies. As we began to consider online facilitation, we realized that it would be beneficial to our faculty to add instruction on best practices and online pedagogy. We created two courses that would be offered through our learning management system - Teaching Online With iCollege (TOWI) and Asynchronous Online Faculty Training (AsOFT). TOWI focused on the pedagogy and practice of online teaching and AsOFT provided step-by-step instructions on how to utilize our learning management system. Both courses were continuously modified to meet the ongoing needs of faculty and changes in university policy.
The development of The Mastering Series came from an initial analysis of course enrollments, feedback from participants in the TOWI and AsOFT courses, and university policy changes due to the consolidation. Course participation showed most faculty that completed TOWI also completed AsOFT. Although we received positive feedback from participants in both courses, the amount of content in TOWI was overwhelming. AsOFT also became difficult to manage. Enrollment in AsOFT was sporadic and so was the completion. Faculty could enter the course at any time during the year, even between semesters. This also meant that they had different completion times. We decided to develop and provide a pedagogy in practice experience that had specific start and end dates. As we began to develop the new series, the consolidation was announced. The consolidation would require us to work in the same learning environment with additional features and slightly different aesthetics. This design case presents the analysis, development, and implementation of a new suite of courses aimed at [re]introducing pedagogical content regarding online course development, sound technology integration, and sustainability of the courses across curricula.

**Design Process**

The first course in the series was Mastering Online Teaching (MOT) which replaced TOWI and AsOFT. The feedback we received through TOWI and AsOFT informed us of the major interests of our faculty – assessments, accessibility, engagement, and design. With that information, the team explored content that spanned topics such as transitioning from face-to-face to online teaching, writing measurable objectives, collaboration and engagement, accessibility, assessments, and reflective practices, to name a few. These topics would later be developed into courses for the series. The Director of Learning Technology also continuously solicited input from the Dean of the Online Campus, and the online department chairs also contributed content regarding the course topics. Most of their contributions included procedural and policy information that was previously absent from TOWI and ASOFT. After reaching consensus about the course content for various courses, there was still concern about the amount of content in the course. We knew that there were faculty who just wanted to learn the basics, but we also wanted to provide an opportunity for faculty that wanted more rigorous engagement. We divided the course into two tracks. The Completion Track required completion of course content and activities, while the Achievement Track included a capstone project.

**Module Structure**

When designing the progression of the course modules, it was important for us to structure the content so that each module built upon the next. The set-up of the first non-content module mirrored the information required at the start of most online courses which included university policies, administrative information, online teaching expectations, etc. The subsequent modules centered primarily around pedagogical content pertaining to online course development, student engagement, and general practices for teaching online. The modules also included key points on the benefits, challenges, and implementation of specific technology tools, and how integrating those tools could impact student learning and performance. The weekly modules guided participants through various topics and participants were expected to review the course material, participate in the discussion for the week, and complete weekly assignments and quizzes. Whether new to teaching online or seasoned, the goal was to demonstrate the complete process of building a course specifically for deploying online. Participants were also given an empty course shell (sandbox) to complete assignments and the capstone project.
After determining the content of the course, the team worked to design a look and feel that would be used for all courses in the Mastering Series (Figure 2). The overall design and color scheme was selected for each course. We also designed the Home page layout, reorganized the navigation, and created a custom header with icons that linked participants to specific pages within the content. We wanted a streamlined look that would work well for all courses in the series. Once the course design and course content was complete for the course that would launch the series, the team conducted usability testing.
Design Usability Testing

To evaluate the effectiveness and initial design of the first course in the series, MOT, a two-phased pilot process was deployed. The first phase, called the “pre-pilot” consisted of having the online dean and the online department chairs review the course and supply their open-ended feedback about any technical, grammatical, content, and design issues. They were given two weeks to provide their open-ended feedback about the course. The online chairs were also asked to provide the names of two faculty members from their departments to participate in the full pilot. Fifteen additional seats were also made available for those who wanted to participate. The feedback from the pre-pilot indicated that there were minor typographical and feedback errors. After there was a consensus of readiness, the pilot was conducted.
The Pilot

Twenty-eight (28) online faculty volunteered to be in the pilot. We hoped the group would be smaller for better manageability, but due to overwhelming support and heighten expectations from the faculty, we had to open the pilot to accommodate that interest. Course feedback was ingrained within the learning management system’s discussion board. There was a general feedback discussion board as well as individual module feedback boards. We decided to include module feedback so that participants could readily offer feedback and get any needed support. The pilot lasted six weeks - seven weeks for the content and an additional week for Achievement track participants to complete their project. Feedback form the pilot revealed that we needed to clarify course assignments. There was also some confusion about the tracks and how to access sandbox courses.

Course Implementation

After revising the course based on the feedback received from the pilot, Mastering Online Teaching, officially launched in the fall of 2015 with twenty-two faculty across multiple disciplines. This course would be the cornerstone for all courses in the Mastering Series. The overall goal of this course was to guide participants through the course development process starting with planning their course using the ADDIE model to evaluating their course using the Learning Outcome Assessment Matrix (Dick, Carey, & Carey, 2005; Szurmak & Petersen, 2010).

At the completion of the course, the team learned a few important lessons.

1. Setting goals and expectations even in a non-academic course is vital to its success. The development team often discussed if the course was too rigid. Since this was a non-academic course, a question that remained at the forefront of conversation was how flexible we would be since we were working with faculty that had other responsibilities. We decided to state goals and expectations at the beginning of the course to demonstrate to them as now students, the importance of scheduling, timely participation, following assignment and project guidelines, and grading policies.

2. Course size matters. Although some faculty enrolling in this course were required to do so by their departments given their desire to teach online, many faculty were not required to complete this course. Considering the number of emails received regarding faculty teaching, research, and other university responsibilities paired with the requirements of this course, for some it was just too much. To make this course more manageable for faculty, we had to revisit and revise the course materials and activities, focusing on what we deemed to be the most valuable components. Doing this over time has not only improved the course overall, but has also made it more manageable for the team as facilitators.

3. Collaboration with other course participants is essential. In the first offering of MOT, discussions were restricted to specific open and close dates and times. Our reasoning, if discussions were accessible at any time, engagement between participants would be lower. Specific timing would better facilitate collaboration amongst participants. We also thought that by enforcing close dates, grading would be more manageable. We began receiving requests from participants to reopen discussions so they could be finished. We saw value in their requests and decided to leave discussions open, but provide a due date for grading. This small modification was one of the best decision we made for the MOT course and it has been applied to all courses in the Mastering series.

Successes and Challenges

We are very proud of The Mastering Series and how it has been designed, developed, and received by faculty. When we first started the course, there was always a waiting list. We had to begin offering the course two times a semester to accommodate faculty interest. We provide continuous access to the course participants. Another success of the course is that our faculty continue to use the courses as a reference. The greatest success is that our courses provide a transformative experience when faculty themselves become online students. Our greatest challenge is the rapidly changing learning technology ecosystem. The introduction of new technologies and the demand to creatively integrate those technologies into online teaching is always present.
Next Steps

The next step is to continue the development of courses in the series. Mastering Online Accessibility has been developed and implemented. Mastering Assessments was piloted in the spring 2017 and Mastering Online Engagement is currently under development.

References


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Online Doctoral Programs: Strategies for Enrolling and Retaining Successful Students

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Abstract

Retention begins with admissions and enrollment. College choice decision-making behaviors and educational goals/objectives of the student serve as predictive indicators of student success (Astin, 1993; Bailey, Leinbach, & Jenkins, 2006; Hossler & Hoezee, 2001). This paper provides strategies for staff and faculty that support student success in online doctoral programs.

Background

The majority of research on college choice focuses on who enrolls, whether or not they persist after enrollment, and how to prevent attrition via enrollment management techniques or strategies (Cooke, Sim, & Peyrefitte, 1995; Willging & Johnson, 2009; Scarpena, 2016; Sowell, et al., 2008). This is because less than 50% of those who enroll in doctoral programs successfully complete their degrees (Gardener, 2009; NCES, 2014; Sowell, Zhang, Redd, & King, 2008; Willis & Carmichael, 2011).

Admissions staff, faculty, and administrative personnel use enrollment management practices to make informed admissions decisions based on institutional capacity and student characteristics (Astin, 1993; Black, 2004; Paulsen, 1990; Yadav & Pal, 2012). The systems developed to predict student success focus on the admissions process itself in the hope that once admitted students decide to enroll, they will remain enrolled and successfully complete their program (Astin, 1993; Scarpena, 2016). In this regard, enrollment management systems generally observe two key areas of student behavior to predict student success before admission: college choice decision-making behaviors and overall educational goals or objectives of the student (Astin, 1993; Bailey, Leinbach, & Jenkins, 2006; Hossler & Hoezee, 2001). This paper examines how college choice decision-making behaviors and educational goals/objectives of the student act as predictive indicators of student success and suggests strategies for retention in online doctoral programs and highlights a need for additional research that is specific to the online context (Astin, 1993; Bailey, Leinbach, & Jenkins, 2006; Hossler & Hoezee, 2001; Scarpena, 2016).

Literature

As an overall organizational tool, enrollment management remains foundational to strengthening institutional position (Goldman, Goldman, Gates, Brewer, & Brewer, 2004; Huddelston, 2000; Scarpena, 2016). Enrollment management practices assess student behavior and attempt to predict the likelihood of persistence, and ultimately graduation. The goal of enrollment management is to identify and admit students who are likely to graduate. Existing literature indicates a relationship between patterns of behavior and factors that result in graduate student withdrawal from online courses (Betts, et al., 2009; Cooke, Sim, & Peyrefitte, 1995; Willging & Johnson, 2009). Many of these factors are personal variables that can be difficult to mitigate. The likelihood of student persistence in doctoral programs can be assessed by examining factors such as student intent, level of student commitment, institutional expectations, and the individual student’s desire for achievement (Cook et al., 2005). In addition, factors that impact the college choice decision specifically such as personal considerations, flexibility of program, and access greatly impact students’ ability to both seek enrollment and subsequently achieve graduation (Scarpena, 2016).

Institutions mitigate some of these risks by using projection models, retention theory, and enrollment management techniques (Black, 2004; Dennis, 1998; Hossler, 1996; Yadav & Pal, 2012). These techniques, which include data mining and predictive analysis, typically remain reserved to the undergraduate application process. At the graduate level, the admissions process is multilayered and generally involves faculty members (Hossler & Kalsbeek, 2013;
Perkins & Lowenthal, 2014). Most of these systems are designed specifically for traditional programs with traditional aged campus based doctoral students.

Presently there is still need for research specific to the online doctoral student population and to online doctoral programs. Scarpena (2016) found that the majority of online doctoral programs utilized an admissions process similar to that of undergraduate admissions rather than in alignment with traditional doctoral student admissions. Though the admissions process did vary greatly between different online institutions, participants in the study noted undergoing a process involving centralized admissions rather than the traditional faculty driven, departmentally based method typical of traditional campus based doctoral programs. Furthermore, participants noted that interactions with admissions staff/administration impacted student's decision to enroll in their program of choice and in some cases impacted persistence (Scarpena, 2016). In addition to revealing this differentiation in process for enrollment in online doctoral programs, Scarpena (2016) also suggests retention in online doctoral programs begins with this enrollment process.

**Strategies to Support Student Success in Online Doctoral Programs**

As found in Scarpena (2016), retention in online doctoral programs begins with the enrollment process. Two strategies in particular can act as a good starting point for Program Administrators and Admissions/Enrollment Staff/Personnel seeking to increase student persistence in online doctoral programs.

The two suggested strategies here focus specifically on supporting admissions personnel/staff to ensure that the centralized admissions process admits students who then successfully persist:

- Implementation of key trainings that bring admissions staff and faculty together to examine the key influences impacting student enrollment and give insight into behaviors that would indicate either student success or attrition respectively.
- Provide additional support to students who meet admissions criteria but demonstrate potential risk factors that could hinder completion.

As demonstrated by the findings of Scarpena’s (2016) study and supported by extant literature, college choice decision-making behaviors and overall educational goal or objectives of the student can serve as predictive indicators (Astin, 1993; Bailey, Leinbach, & Jenkins, 2006; Hossler & Hoezee, 2001). As such, the first recommended strategy is to train key admissions personnel, staff, and faculty to recognize these indicators. As noted by Scarpena (2016), these include factors such as student background/demographics, speed to enrollment, institutional considerations, as well as student decision behaviors. The students’ overall decision making process itself can indicate ultimate success or attrition. For example students who only consider one institution/program and enroll very rapidly noted on reflection that there were factors they should have considered had the spent additional time during the college choice decision process (Scarpena, 2016). The admissions process ideally would become a team effort where key admissions personnel/staff would work with program administrators and faculty to create an overall picture of the successful online doctoral student. Admissions personnel and staff need to be trained specifically to ask students targeted questions that reveal underlying motivational and behavioral factors critical to student persistence after the enrollment decision. These questions should be developed in a way that assess whether the student is/are a good match/right fit for the program they seek entry into on more than a solely academic premise.

The second recommended strategy is to provide additional support during the enrollment phase to those students who meet admissions criteria but demonstrate risk factors for attrition. Ideally, admissions personnel/staff and/or faculty would track these students into an early intervention type program designed to help students self-identify their own risk factors and develop their own student success plan. Student would identify key areas where support might be needed, and then appropriate institutional supports would then be recommended by the admissions team. This strategy helps students take a proactive role in their own success, which is critical to long term retention and success during the dissertation phase (which is largely self-directed). This is a critical step as overall the structure of doctoral programs allows for attrition to remain largely invisible (Golde, 2005; Bersola et al., 2014). Students who do struggle often slip away quietly rather than make a distinct departure from their studies (Golde, 2005; Bersola et al., 2014; Scarpena, 2016). Helping these students to recognize potential areas of difficulty and giving them the information needed to reach out accordingly helps to mitigate the repercussions of delayed completion or non-completion (attrition) for students and institutions alike.
Conclusion

Retention truly begins with admissions and enrollment into online doctoral programs. College choice decision-making behaviors and educational goals/objectives of the student serve as predictive indicators of student success and need to be taken into consideration during the admissions process (Astin, 1993; Bailey, Leinbach, & Jenkins, 2006; Hossler & Hoezee, 2001). The strategies provided here for staff and faculty are designed to support student success in online doctoral programs, however there is still a need for additional research. As the popularity of online doctoral programs continues to grow, more studies that examine admissions and enrollment processes for online programs will serve to establish better practice overall and can help achieve higher rates of student persistence.

References


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A Comparative Typology of Student and Institutional Expectations of Online Faculty

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Abstract

Online faculty must uphold institutional expectations for their performance. Typically, online institutions have specific guidelines for faculty-to-student interactions; yet, student expectations of faculty may not necessarily align with institutional requirements. This study included a typological analysis of institutional requirements for online faculty in terms of student engagement. Then, student comments regarding faculty performance expectations were compared. Based on the findings, there are substantive differences which should be considered by institutions to ensure online student satisfaction with faculty is maximized. Recommendations for further study include replicating this with a purposeful sample of online students and doing a quantitative study of the relationship between faculty outcomes after implementing student performance expectations.

Introduction

Online education has seen unmatched expansion between 1993 and 2013, and universities and colleges across the country have expanded to meet consumer demand for online programs (Allen & Seaman, 2013). Institutional leaders are challenged to identify and uphold instructional best practices that meet the expectations and needs of students, while not being overly arduous for faculty, who often serve many institutions through adjunct work (Coalition on the Academic Workforce, 2012). With student retention closely tied to student satisfaction, studying online faculty practices that enhance student experience, engagement, and enjoyment in the online academic setting can have important consequences for better understanding student retention.

This research study arose after numerous discussions with online faculty who shared institutional expectations of performance, which often differed from the literature on student perceptions of quality faculty performance. Student experience is an essential element that should drive faculty mentoring approaches; especially in the context of developing a positive relationship (Izadina, 2016). Yet, there appears to be a gap in the literature about the role of student experience as a driver of faculty expectations.

To ensure standards of faculty performance, many institutions dictate expectations that faculty must meet on a regular basis such as grading timelines, online course engagement, and student communication practices. Online faculty members are often expected to comply with these expectations as a condition of continued employment. What remains unclear is if the expectations of the institution regarding faculty-to-student engagement align with what students expect from faculty. In this research study, a typology was developed whereby institutional expectations for online faculty-to-student engagement were grouped into themes. Then, an analysis of qualitative student feedback regarding their expectations for online faculty was sorted into those typologies to add rich experiential depth to the typology.
The research questions undergirding this study were:

1. What are some institutional expectations for online faculty-to-student engagement?
2. What are some student expectations for online faculty-to-student engagement?
3. What differences exist between institutional and student expectations of faculty-to-student engagement?

Theoretical Framework

Engagement Theory was used as the theoretical lens through which the data were evaluated. Engagement Theory was developed as a framework for technology enhanced teaching and learning (Kearsley & Schneiderman, 1998). As such, it is particularly relevant to the online setting. For meaningful learning to occur, students must be engaged in activities and interaction with others throughout the learning event. Technology facilitates engagement in ways that may not be accomplishable through other modes of communication (Kearsley & Schneiderman, 1998). Engagement Theory relies on the experience of students interacting with technology-based systems to draw conclusions about the role of engagement in learning (O’Brien & Toms, 2008). Engagement Theory often requires relational components such as communication and social skills (Miliszewska & Horwood, 2004). This aspect of engagement theory that most aligns with this research, as the faculty-to-student engagement in online education depends on relational components.

Literature Review

There is great interest among many higher education stakeholders regarding the factors that influence online student success and satisfaction. While higher education leaders are expected to produce and administer policies that increase student success (Johnsrud & Banaria, 2004), instructors are typically responsible for conveying instructional content, engaging students, and evaluating student work. In distance education environments, students rely on faculty engagement in either written, audio, or video formats to guide them toward improvement. Often, faculty must develop new skills and practices to effectively engage students (Gallien & Oomen-Early, 2008). Faculty members are presented with unique challenges to teaching in online settings (Anderson et al. 2011) including ensuring faculty-to-student communication supports learning outcomes and student satisfaction.

Student Satisfaction in Online Courses

Student perceptions of effective instructor engagement are an important consideration for educators. Student satisfaction is positively correlated with instructor communication, responsiveness, encouragement, accessibility, and professionalism (Bolliger, 2004; Kauffman, 2015). In a study of student perceptions of effective instructor engagement, researchers found that gentle guidance, positive, constructive comments, timeliness, and future orientation were important feedback considerations (Getzlaf et al., 2009). Further, Garrison et al. (2000) developed a community of inquiry framework, linking student engagement to cognitive, social, and teacher presence. Effective faculty feedback and engagement is correlated to positive outcomes for students. Students showed greater levels of satisfaction with the instructor and performed better academically when they received personalized interactions from the instructor on assignments (Gallien & Oomen-Early, 2008).

Student satisfaction has become a high priority among college administrators (Noel-Levitz, 2014). Students who report high satisfaction, defined in large part by their opinions of faculty teaching, tend to persist to graduation, which improves institutional outcomes and contributes to student satisfaction (Noel-Levitz, 2014). Faculty characteristics and behaviors, particularly faculty actions that engage students in distance environments, can directly contribute to student satisfaction (Kuh & Hu, 2001). Because student satisfaction is correlated with several outcome measures—such as persistence (Tinto, 2010), course quality (Moore & Kearsley, 2011), and student success (Noel-Levitz, 2014)—taking steps to improve how faculty engage with students in their online courses has a clear and direct benefit to the institution.

The Importance of Faculty Training on Institutional Expectations

Faculty interaction and student satisfaction are key predictors of student achievement and success (Astin, 1984; Kuh & Hu, 2001; Tinto, 2010). Faculty members can have a critical influence on the students’ academic experience.
Faculty described the online environment as positive with regard to faculty-to-student communication, which is a key indicator of student satisfaction (Bolliger, 2004); yet, many felt underprepared to teach online (Johnson et al., 2015). Institutions offering online courses may provide training for faculty, and most offer a set of faculty expectations to be followed regarding faculty-to-student engagement. Training for faculty is usually required to help ensure instructional quality (Meixner et al., 2010) and is often a primary concern for any higher education leader desiring to maximize student learning. Institutions must work to integrate faculty into the broader academic culture through training and support to ensure instructional quality (Fagan-Wilen et al., 2006). Faculty who are well trained per university norms perform better overtime (Green et al. 2009). For distance education faculty, universities that focused on professional development, effective communication, fostering balance, and forming relationships tended to have higher student retention and satisfaction (McIntyre & Jazzar, 2010).

Methodology

The design used in this study was a qualitative typology. Institutional expectations for online faculty were gathered from publicly available websites. Expectations for faculty-to-student engagement were grouped per themes and then sorted to create a typology. As noted by Kluge (2000) “Every typology is the result of a grouping process: An object field is divided in some groups or types with the help of one or more attributes component” (para. 1). Then, narrative feedback was gathered from online students using an open-ended questionnaire. The instrument was field tested by five professionals with extensive online education experience. Amazon’s Mechanical Turk was used to distribute the instrument to volunteer participants. Participants were compensated $1.00 for participation. Potential participants were asked several screening questions to ensure they had been online students at the undergraduate, graduate, or doctoral level. These students were questioned about their expectations for faculty-to-student engagement. Results were compared with the typologies identified from institutional faculty expectations. Based on the findings, recommendations were made regarding the types of expectations institutions should have for online faculty to maximize student satisfaction with faculty engagement.

Study Sample

There were two types of participant samples used in this study. First, institutions were identified with published, publicly available online faculty expectations. Second, online students who have signed up with Amazon’s Mechanical Turk to complete research surveys were queried to determine their perceptions of faculty-to-student engagement best practices. These two types of participants were required to juxtapose institutional and student expectations of faculty-to-student engagement.

A keyword search of the phrase “Online Faculty Expectations” yielded a list of publicly available websites that included that phrase. Search results that were for a higher education institution website, included faculty performance expectations, and were tailored specifically for online faculty were included in the study. The first 15 results that met these criteria were used to create a typology. Many of the institutional expectations were similar and thus, the researchers believe these typologies are transferable across many institutions. Only faculty-to-student engagement expectations were included in this study. Based on this distillation, a typology was developed where these results were grouped by theme and each theme represented a type.

Using Amazon’s Mechanical Turk, current and former online student volunteers were queried regarding their expectations of faculty-to-student engagement. A questionnaire allowed 22 current and previous online students to share their expectations for faculty performance around engagement. This sample size provided data saturation around the questions posed as evidenced by the homogeneity in responses. The student responses were sorted into the typology themes identified through the institutional faculty expectations analysis. For the student data gathered from Amazon’s Mechanical Turk, students were only included if they were at least 18 years old, had completed at least one online course, and agreed to the informed consent for participation in the study.

Results and Discussion

The design used to answer the three research questions in this study was a typology. Institutional websites were reviewed to determine faculty expectations for online engagement. These findings were sorted into themes, which were used to create a typology. Then, students were questioned about their expectations of this engagement. Based on the themes that emerged from student questionnaires, the results were compared.
Research question 1: What are Institutional Expectations for Online Faculty-to-Student Engagement?

The themes identified in the institutional website reviews for online faculty expectations included the following:

1. Substantive feedback
2. Timelines and
3. Course expectations.

Below are examples of comments by typology type.

**Substantive Feedback**

- Institutions require faculty to provide detailed feedback on student assignments noting strengths and weaknesses.
- Institutions require personalized comments provided to each student on all graded course activities.
- Institutions require faculty to provide comments to students on any rubric criterion not fully met.
- Institutions want faculty to share opportunities for academic growth based on comments provided to students.

**Timeliness**

- Institutions require faculty to grade student assignments on stated timelines.
- Institutions specify frequency requirements for LMS logins.
- Institutions specify timelines within which faculty must respond to student inquiries.
- Institutions require faculty to post grading within specific timeframes after the semester or term ends.

**Course Expectations**

- Institutions require faculty to post content in the course such as a weekly announcement or faculty biography.
- Institutions require faculty to interact with students on specific activities such as first week student introductions or weekly discussions.
- Institutions require faculty to post contact information for students in the course such as a phone number or alternative contact like office hours.

Research Question Two: What are Student Expectations for Online Faculty-to-Student Engagement?

In order to understand the user’s experience, student questionnaires were gathered and reviewed for similar themes. Of note, while the same themes from the institutional website reviews were used, additional trends emerged from the students’ perspectives of quality faculty performance and engagement. The differences will be explored in response to research question 3. The following emerged as critical examples for faculty-to-student engagement.

**Substantive Feedback**

- Students want instructors to provide consistent feedback on assignments and clearly state what the student did incorrectly.
- Students do not want ‘canned’ feedback from faculty.
- Students want the same level of detail in feedback for great papers as they do for ones that need improvement.
- Students want faculty to minimize feedback on writing and formatting and emphasize feedback on content.
- Students want faculty to share feedback on their expertise.
**Timeliness**
- Students want instructors to follow or exceed institutional expectations for assignment grading.
- Students want comments on previous work before another assignment is due, so they can make improvements needed.

**Course Expectations**
- Students want courses that are relevant, updated, and well-functioning.
- Students want consistency in course structure so that navigation is predictable.
- Students want faculty held to the same expectations across courses.
- Students want helpful answers and guidance from faculty on content in the course.

**Research Question Three: What Differences Exist Between Institutional and Student Expectations of Faculty-to-Student Engagement?**

After the institutional and student expectations were compared, some substantive differences were noted. Specifically, students found additional areas of importance for faculty engagement. Students commented more frequently on consistency, feedback types, and the desire to engage with faculty on their areas of expertise above the content of the course. While institutions had specific requirements for faculty engagement, students were less concerned with specific prescriptive approaches to timelines, feedback, and course expectations as they were with consistency, personalization, and faculty adherence to policies. These qualitative comments further substantiate the subtle differences in the findings of the findings.

Table 1. *Typology of Institutional and Student Expectations of Online Faculty*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Institutional expectations</th>
<th>Student Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substantive Feedback</strong></td>
<td>• Detailed feedback</td>
<td>• Detailed feedback on work regardless of quality</td>
</tr>
<tr>
<td></td>
<td>• Personalized comments</td>
<td>• Consistent and clear feedback</td>
</tr>
<tr>
<td></td>
<td>• Rubric utilization</td>
<td>• Personalized, not <em>canned</em> feedback</td>
</tr>
<tr>
<td></td>
<td>• Focus on academic growth</td>
<td>• Feedback on content, not formatting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Share expert knowledge</td>
</tr>
<tr>
<td><strong>Timeliness</strong></td>
<td>• Grading timelines</td>
<td>• Follow or exceed institutional expectations for timelines</td>
</tr>
<tr>
<td></td>
<td>• Frequency of LMS log in</td>
<td>• Grades returned on previous work before next work is due</td>
</tr>
<tr>
<td></td>
<td>• Responsiveness requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Final grade timelines</td>
<td></td>
</tr>
<tr>
<td><strong>Course Expectations</strong></td>
<td>• Required posted content</td>
<td>• Relevant, updated and well-functioning courses</td>
</tr>
<tr>
<td></td>
<td>• Required student interaction</td>
<td>• Consistence across course structures</td>
</tr>
<tr>
<td></td>
<td>• Required contact and/or office hours</td>
<td>• Consistent expectations of faculty across courses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Guidance on course content</td>
</tr>
</tbody>
</table>
Consistency

Students appreciated course consistency in terms of navigation and consistency in the quality of faculty support provided across courses. Students generally felt that some instructors were more effective than others and that the institution should do more to promote a more standardized experience for the student in terms of faculty engagement, expectations, and grading practices. Students clearly indicated that all instructors should be held accountable to the same high standards.

Faculty Accessibility

Students appreciated faculty accessibility and responsiveness. While institutions did state requirements for timeliness of responses from faculty to students to certain triggers, such as questions posted in the course, accessibility of faculty seems to be a more elusive theme than is currently captured in those requirements. Students desire faculty who are prompt in their responses, but also who tailor their responses to student assignments and needs. Students also indicated that because of the nature of online education, they want faculty to be available outside of the typical academic schedule. They want access to faculty during 'off hours.'

Course Content

Student responses imply they expect faculty to have total management over the content of online courses. Students expect their courses should function correctly with active links, current resources, and navigable structure, this theme was less of a focus for institutions. It is possible that instructional designers or master course shell development teams are seen as owning this aspect of engagement as perceived within faculty purview by students. In addition, students indicated they want content updated regularly, yet many institutions have scheduled times for course revisions that may require a shelf-life of 24 months or longer for current online offerings.

Conclusion

It is hoped that this brief study will open a conversation about the differences between institutional requirements and student expectations in terms of faculty engagement and how we, as faculty and administrators, can work together to close any gaps between the two. Typically, online institutions have specific guidelines for faculty-to-student interactions, yet student expectations of faculty do not necessarily align with institutional requirements. This potential gap can have serious consequences for mission fulfillment in terms of achieving effective faculty engagement and successful student outcomes. This study was informed by a questionnaire of online students to detect patterns about the user experience of faculty-to-student engagement. While this study included a small sample of institutions and students, it is believed that this information may be transferable across institutions offering online degree programs and to online students because of the literature supporting the findings overall. This study included a typological analysis of institutional requirements for online faculty in comparison with student expectations. Based on the findings, recommendations for further study include replicating this research across a broad group of online institutions, using a purposeful sample of experienced online students, including interviews with students, and compiling a quantitative study of the relationship between faculty outcomes after implementing student performance expectations. Finally, further research might include specific analytics measurements that can be used to identify and track issues with faculty engagement.

References


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Program Evaluation: A Process and an Example

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Abstract

Many approaches to quality assurance focus on best practices in courses. This session discusses evaluation of how well courses work together for the student. In addition to mapping course objectives against program objectives, review can ensure relevance and avoid duplication, unbalanced workloads, and inconsistent performance expectations.

Introduction

Online programs, which often rely heavily on a varied team of adjunct instructors, can present significant challenges for program administrators who want to ensure a high quality, consistent, and manageable learning experience for students. This paper will explain a process that is used in a program review to correct issues noted by students regarding duplication of content, workload problems, and inconsistent expectations for student performance from one course to another. It also explains program level issues that students may not be aware of but which can have an important impact on their learning experience and preparation for the job market.

Even if a program undergoes a periodic review process, the administrator may be surprised at how easily a program can lose focus and balance between reviews. In addition, it is easy to assume that certain quality aspects are well-covered because the faculty are talented, experienced individuals. To be sure of meeting all quality expectations, a comprehensive evaluation is needed. Here is an example of some things I discovered in a graduate program in which courses are staffed with adjunct faculty who are professional practitioners in their field.

One of the first things I noticed was a wide variation in workloads from one course to another. Some courses required substantial work submission throughout each course week for the entire term, while others provided time for study, reflection, and paced milestones to submit project work. A few courses did not seem challenging enough for students. The most excessive workload expectation I found was for students to read 300 pages of difficult material before a required discussion module due on Thursday of the first week of class. A similar workload pattern was followed throughout the course. Another issue that students identified was a duplication of topics among courses. Faculty were not familiar enough with the details of other courses to see that some of the material they added was already covered elsewhere. For a final example, but not the last that could be mentioned, there were insufficient connections established among courses for students to see how work in one course was related to the others and the subsequent “big picture” they represented for the students’ career goals. There also was little planned progression to present a logical development of expertise in both knowledge and skills from the beginning of the program to the final capstone course.

Evaluation Goals

The over-arching question for this kind of program evaluation is “How well-designed is the program for fulfilling its mission?” In examining program quality from the student perspective, there are at least six areas of investigation.

The goals to be met as a result of the review and revisions are:

- Program learning objectives are current and relevant for student needs
- Course objectives are mapped to program objectives
- Content topics follow a logical progression
- Knowledge and skills development moves from entry level to expert
- Workloads are balanced across courses
• Expectations are consistent across courses

**Ensuring Program Learning Objectives are Current and Relevant**

There are several sources for information when reviewing program objectives. Students are enrolled in a program to prepare for the next stage on their career path, whether that is a job upon graduation or a subsequent academic or training program.

Skills and knowledge they will need can be found through:

1. Scans of current job listings in the field
2. Interviews with employers who may hire graduates
3. Input from faculty and other experts in the field
4. Entry requirements for subsequent programs
5. Input from students

Information gathered from such sources can provide a current list of major competency areas the program should address. The next step is to analyze these areas to determine what the building blocks are for each area. In other words, what are the components of learning and skill development that a student needs to be able to demonstrate an ability to meet job requirements in each area?

**Mapping Course Objectives to Program Objectives**

Each course in the program should have as its foundation one or more of the competency areas identified for the program, and the detailed learning objectives should relate to the building blocks leading to student achievement of the larger objectives. Does course review reveal learning objectives not related to the program level objectives? Perhaps these need to be added to the program objectives, or perhaps they are no longer relevant and should be replaced by more pertinent content.

**Ensuring Logical Progression in Content**

Logical progression in subject matter for courses is specific to each program, but there is likely to be a preferred sequence, even if that sequence consists of groups of courses that can be taken in any order within the group but preceding advancement to the next group. Pre-requisite specifications are common, but there may be additional considerations that make it advantageous for students to take some courses before others. For example, students in a history program may find some aspects of history easier to understand if most of their coursework is aligned with chronology rather than an unordered collection of courses dealing with different time periods and/or countries.

**Ensuring Progressive Development of Expertise**

Some program subjects present obvious progression from entry level knowledge and skills through intermediate and finally to expert. For other programs consisting of a collection of course topics related to an overall program area, the need for planning expertise development may be less apparent. An examination of the components, or building blocks, for program learning objectives can reveal ways to align learning demonstrations or assessments with a progression in expertise and mastery of material throughout a sequenced program. This type of planning requires a holistic view of how courses in the program are related and how repetition of learning objective assessments at increasing levels of difficulty can be used to build confidence in learners as they move from novice to expert.

**Balancing Workloads**

What student hasn’t taken a course in which s/he has wondered, “Doesn’t this professor know I have more work than what is required in this course?” It’s easy to lose track of how much work is being asked of students if the focus is on content in chapters, articles, or other materials rather than how much time it can take students to access and digest the material. One technique that can help is to prepare a reading/viewing list and due dates for an entire course. For each item, include number of pages for readings and viewing or listening time for audio/video materials.
This schedule is useful for students to use for time management as well as for administrative course workload review.

Another aspect of workload balancing is to review due dates for activities, especially tests and project assignments, across courses that may be taken concurrently. Finding ways to support student time management can relieve stress and perhaps improve learning outcomes. Students are likely to benefit from an assessment schedule in which due dates for concurrent courses do not consistently fall on the same days throughout the term. One way to address scheduling is to create a master list of due dates for major assignments and assessments for the program and share it with faculty so that the program team can work together to alleviate study overloads for students.

Balancing Expectations

Rubrics are commonly used today to define expectations for student performance on assessments that are not based on tests like multiple choice; however, not all rubrics include the same level of detail. Faculty also may vary in their interpretation of rubrics, especially for ones that are more general. The result is that students may perceive that some faculty have higher expectations than others. Differences in expectations for student performance can lead to some students not being challenged enough while others may feel overwhelmed by expectations that seem to exceed their abilities.

The first stage of evaluation for expectations is a review of rubrics to determine how much variation there may be across courses. The next step develops an appropriate rubric model for the program, followed by work with the faculty team to develop a consistent approach regarding level of detail and interpretation.

Concluding Remarks

This brief view of a program evaluation process outlines the steps I am currently taking to improve a program that is already serving students well. I have found opportunities to make improvements in each of the areas listed. Improvements must be based on following the process from the top level (program objectives) down to the more detailed levels. Having seen some surprises during the evaluation, it has become quite clear that frequent holistic review and continuous quality improvement is needed to keep a program healthy and relevant.

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Optimization of Multimedia Instructional Content

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Abstract
Research reveals that multimedia aids in faster learning, better understanding, and greater retention of information. Due to the increased accessibility of the tools necessary to create and utilize academic multimedia, there has been a proliferation in the use of these resources for instructional purposes. However, certain factors increase and decrease student engagement. This study examines how contextualization and segmentation of multimedia content impacts student engagement.

Introduction
Multimedia learning is the use of text, graphics, animation, pictures, video, and sound to present instructional content (Najjar, 1996). Research reveals that “students can learn more deeply from well-designed multimedia messages consisting of words and pictures than from more traditional modes of communication involving words alone.” (Mayer, 2003). The brain makes visual connections between images and concepts which significantly increases comprehension of new concepts (Vazquez & Chiang, 2016).

The current population of students tend to be more visual learners that are accustomed to acquiring information from short “bursts of content” in social media sites (Vazquez & Chiang, 2016). The massive increase in the use of social media has increased students expectation of educational multimedia content to enhance their motivation and comprehension.

Instructors have increased access to multimedia instructional content. Publishers provide a multitude of online media to complement traditional instruction (Vazquez & Chiang, 2016). Moreover, the technology necessary to create multimedia content is readily available, such as free hosting services like YouTube and computers with built-in microphones and cameras. Each of the above factors has led to an increase in the amount of multi-media used by educators for instructional purposes. But, all video content is not created equal. Certain factors increase and decrease student engagement.

The researchers in this study examined how contextualization and segmentation of multimedia content impacts student engagement. First, contextualization is the “practice of connecting academic skills (usually reading, writing and mathematics) to specific content that is meaningful and useful to students.” (Rathburn, M, 2015). Students must be motivated to learn the content and contextualization can impact motivation. For instance, students may not be motivated to learn writing skills in an English class if they fail to appreciate its relevance to their future endeavors (Cavazos, Johnson, & Sparrow, 2010).

Second, segmentation a “design principle in which the learning materials are divided into short units and distributed over [a] series of instructional events, such as topics or lessons referred to as segments” (Clark, Nguyen, & Sweller, 2006). Within the context of multi-media, it involves segmenting chunks of “dynamic visualizations that have an identifiable start and end point and which are distinguished by inserting pauses between different segments” (Ibrahim, 2012).

Research Questions & Methodology
The researchers queried whether the re-development of an online module to incorporate contextualization and segmentation would increase student engagement. The participants in the study consisted of students enrolled in a...
pure online 3000-level Legal Issues for Administrative and Technology Managers course. A total of 58 students were enrolled in the course and 38 students elected to participate in the study. Students were invited to participate in an anonymous survey. The web-based survey featured first-person questions and a five-point Likert scale for responses (Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree). The survey was conducted online in the learning management system and administered in conjunction with their weekly module and quiz deadline. The researchers compiled the results for empirical analysis.

Discussion

The subject matter of the module content was torts, a wrongful act or an infringement of a right, other than under contract, leading to civil legal liability. The original video included in the module was a 30-minute, narrated-PowerPoint, text-only lecture. The redesigned lecture incorporated the concepts of contextualization and segmentation as follows to improve student engagement.

Contextualization

The instructor recorded a video introduction of the subject matter in order to place the instructional material in context for the students. The students were advised that the material was “Important for business professionals and managers because often times businesses are sued for negligence so you need to know what the elements of a tort are, so you can guard against it.” The goal of this statement was to incentivize student learning by making the material personally relevant for the students and allowing them to recognize the personal benefit of learning this information to their career endeavors.

The instructor incorporated other best practices in multimedia development. The personal introduction video was recorded as a close-up of the instructor filmed within her office as research indicates that the office setting gives the student a sense that he or she is in a one-on-one session with the instructor during office hours (Vazquez & Chiang, 2016). Also, the instructor used an enthusiastic tone in the introduction to facilitate student engagement as research shows that fast-speaking instructors conveys more energy and enthusiasm than their slower speaking counterparts (Vazquez & Chiang, 2016).

Segmentation

The 30-minute lecture on torts, was segmented into a series of lectures which covered the elements: introduction, duty, breach, causation, damage and defenses. Research of instructional multimedia reveals that student engagement in shorter videos (six minutes or less) is much greater than longer videos (in excess of 6 minutes) (Guo, Kim & Rubin, 2014). The segmentation approach has additional benefits for the instructor and the student. Categorization by sub-topic allows the student to easily locate and review subject matter to prepare for the assessment. Also, the use of a series of sub-topic based lectures allows the instructor to easily locate and replace or update online lecture content (e.g. a video related to a current event).

Findings

With respect to contextualization, the students where asked whether the information included in the torts introduction video was beneficial to my future professional endeavors. A total of 60.53% of students responded that they strongly agreed and 39.47% responded that they agreed. None of the participants indicated they were undecided, disagreed or strongly disagreed with the statement. Thus 100% of the students polled (N=38) felt the introduction video was indeed beneficial to their future endeavors.

With respect to segmentation, the students were asked if they preferred that the lectures be segmented into multiple mini-lectures categorized by sub-topics (duty, breach, causation, damages) versus having one entire lecture over all the topics combined. 50% of those polled (N=38) responded that they strongly agreed with this concept and 36.84% responded that they agreed. Out of 38 total respondents, this represents a majority of the target group (86.84%), which agreed with the concept of mini-lectures by sub-topics over that of presenting all the material in one lecture. Those who were undecided on this concept represented 5.26% and the percentage of those who disagreed was 7.89%.
Conclusion

This study provides empirical evidence of the students’ impression of their engagement based upon elements designed to incorporate contextualization and segmentation into the multimedia content. With respect to contextualization, 100% of the students polled (N=38) felt the torts introduction video was indeed beneficial to their future endeavor. This would likely motivate them to make the investment of time and effort to learn the material. The researchers concluded that inclusion of short introductory videos at the beginning of each learning module would enhance the student learning experience. With respect to contextualization, a majority of the students target group (86.84%) agreed with the concept of mini-lectures by sub-topics over that of presenting all the material in one lecture. A minority of the students were either undecided (5.26%) or disagreed (7.89%). Hence, the segmentation of the multimedia content is a preferable method of delivering the instructional content.

References


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Finish What You Start: 
Open Degree and Courses at Kaplan

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Abstract

Today’s learner needs a flexible, customized approach to earning a college degree. Many adult learners have a wealth of work experience, transfer credit, military training, or credit from other sources. Part of Kaplan University, Open College at Kaplan University (OC@KU) provides access to free and low-cost open resources to support students with prior college-level learning during every step of their educational journey. This unconventional approach to education removes traditional barriers to college credit by placing learners in an open environment, which encourages independent and critical thinking.

This paper discusses the Bachelor of Science in Professional Studies degree, ways to earn credit, prior learning assessment, and open courses.

Bachelor of Science in Professional Studies (BSPR) Degree

The Bachelor of Science in Professional Studies (BSPR) at Open College at Kaplan University (OC@KU) is an undergraduate program that allows students to bring in credit through transfer and prior learning assessment and then complete requirements from an individualized learning plan (ILP) through assessments of new learning. Students are able to select courses and design a plan of study suited to their individual professional interests, known as an Individualized Learning Plan (ILP).

BSPR highlights include:

- Designed to allow creation of a program that meets professional and personal interests
- Offers flexibility in choosing elective courses in a specific program focus alongside required general education coursework
- Applies to a wide variety of possible career outcomes based on student interests
- Offers flexibility through an Individualized Learning Plan (ILP) which allows for previously earned credit to be applied in a more flexible fashion, maximizing prior learning
- Affordable monthly subscription model rather than tuition-based
- No college debt as the BSPR is not eligible for federal financial aid
- Students can earn an accredited degree at their own pace

While enrolled in the BSPR, students will be required to complete and pass four professional competency tutorials (PCTs) that mirror KU’s Professional Competencies, which are built into the traditional 10-week courses/traditional KU degree plans. Since BSPR students have an open degree plan, the PCTs were developed to ensure the professional competency requirements were met by BSPR students The PCTS cover: Teamwork, Leadership, Professional Presentation, and Multiculturalism & Diversity and are free and are not credit bearing. BSPR students are required to meet the residency rule requirement by completing 45 quarter credit hours at Kaplan University.

This will be achieved through:

- Course Assessments
• Portfolio Assessments of New Learning (PANeLs)
• PR499: Bachelor’s Capstone in Professional Studies
• Kaplan University credit already earned (returning students)
• Credit earned by completing “traditional” instructor led 10-week courses at Kaplan University

How does it differ from Traditional Degrees?

OC@KU encourages learners to take control of their education in a supportive, online environment by allowing them to:

• Organize previous work and life experiences that can be evaluated for college credit
• Enroll in free and low-cost open courses
• Earn college credit through Kaplan University or outside courses and completing assessments
• Complete a bachelor’s degree based on an Individualized Learning Plan (ILP)

Unlike a traditional discipline-specific degree program with a predetermined list of required courses, the BSPR degree allows greater flexibility for students to choose courses to meet their major requirements and major elective courses. Students also have the option of earning college credit through a variety of sources including transfer credit, experiential learning credit, course assessments (challenge exams), or open resources.

About the Individualized Learning Plan (ILP)

Upon enrollment, BSPR students will work with a coordinator to develop an ILP. The ILP is the roadmap for a student’s program of study. Students choose up to two focus areas that align with professional and personal goals, as well as a planned course of study. The ILP maps out the coursework to be completed as part of the degree plan, including any previously earned credit and Kaplan University general education requirements, as well as a program outcome that matches students’ career goals. Throughout the course of the degree, students will work with the coordinator to ascertain status and revise their ILP.

Credit through PANeLs

BSPR students may use the Portfolio Assessment of New Learning (PANeL) to document college-level learning acquired from resources such as open educational resources, MOOCs, video courses, textbooks, etc. to gain the knowledge and skills needed to meet the outcomes of a course described in their Individual Learning Plan (ILP). A PANeL is a portfolio created by the student that houses evidence of college-level learning that will be assessed to potentially award college credit for a Kaplan University equivalent course.

To ensure that students meet the KU equivalent course outcomes, we search out faculty members who are subject matter experts in the specific disciplines to develop assessment of new learning (activity assignments) that aligns with the KU course outcomes.

Ensuring Logical Progression in Content

Logical progression in subject matter for courses is specific to each program, but there is likely to be a preferred sequence, even if that sequence consists of groups of courses that can be taken in any order within the group but preceding advancement to the next group. Pre-requisite specifications are common, but there may be additional considerations that make it advantageous for students to take some courses before others. For example, students in a history program may find some aspects of history easier to understand if most of their coursework is aligned with chronology rather than an unordered collection of courses dealing with different time periods and/or countries.

Open Courses and Prior Learning Assessment

OC@KU offers learners the opportunity to take courses for credit or for simply enhancing their skill set. There are 18 different courses to choose from, including LRC 100: Documenting Your Experiences for College Credit. LRC 100 is a self-paced course designed to help learners earn undergraduate credit at Kaplan University for learning
acquired outside the classroom. The comprehensive course guides leaners through the process of creating an online experiential learning portfolio to showcase their learning from the workplace, volunteering, military training, etc. Once the portfolio has been completed, it is evaluated by subject matter experts who grant or deny college credit. Any credit earned through LRC 100 is reflected on the BSBR students’ degree plan. This is an excellent choice for learners with a great deal of life experience as it saves time and money.

Conclusion

OC@KU provides learners with the ability to design their own course of study. Learners may take individual courses, course assessments, or work toward earning bachelor’s degree. A program’s success depends upon the success of its students.

Here are a few testimonials from recent BSBR graduates:

"My bachelor's degree in Professional Studies opens new doors for me to be able to advance in my current field from entry level management to executive management."

“This program was flexible. I had lots of credits and needed to plug in some things to complete my degree. My advisor would tell me what I needed. She was quick to respond, always there for me and the reason I completed my degree."

References


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We Must Do More: Education and Difficult Socio-Economic Conversations

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Abstract

Traditionally, education functioned as a great equalizer and catalyst for change. As conversations about challenging topics such as race and personal liberty become increasingly heated, this vital process has intensified. This article reviews theories about difficult conversations in the classroom and explores pedagogical approaches that can enhance such conversations.

For centuries, academics, activists, and policymakers have supported education’s role as a great equalizer. As time passed, teaching and learning provided the framework and mechanisms for civil rights and gender equality. College students stood at the forefront of anti-war protests during Vietnam as well as the Occupy movement. The Southern Poverty Law Center’s (SPLC) Ten Ways to Fight Hate: A Community Response Guide (2010) argues that, despite worries about politicizing the classroom, “schools can offer lessons of tolerance and acceptance” (p. 5). While the SPLC’s primary focus is on teaching younger children about diversity and preventing the growth of stereotypes, college educators still play a crucial role in continuing this process both in preparing emerging educators and educating all students. Educators challenge students to confront the race, socioeconomic class, religious or other biases they have formed over the years. Unfortunately, as Lukianoff and Haidt (2015) note, “a movement is arising, undirected and driven largely by students, to scrub campuses clean of words, ideas, and subjects that might cause discomfort or give offense” (para. 1). How can faculty, particularly those teaching adult learners in online classrooms, confront this trend and encourage meaningful dialogue that can lead to social change?

Arao and Clemens (2013) charge educators with creating places and methods of discourse to facilitate productive conversations. They describe a shifting conception of “safe spaces” from places where students could talk freely towards an environment where they are given “trigger warnings” about material that may discomfort them so they can avoid challenging conversations. As the tenor and tone of social issue discussions have become increasingly heated, a trend even more noticeable in social media and other online spaces, Monahan (2016) notes the process is not easy, but educators cannot give into the pressures placed on them to scrub classrooms of challenging or politicized talk. In fact, Adams, Bell, and Griffin argue that “when we find ourselves at the limit of our comfort zones, we are in the best place to expand our understandings, take in different perspectives, and broaden our awareness” (as cited in Monahan, 2016, para. 6). Shielding our students from ideas that make them uncomfortable will not serve them in the world beyond the classroom; instead, it only exacerbates the lack of reasoned debate and dialogue in that world. Lukianoff and Haidt emphasize that fact, noting that a desire to protect students from uncomfortable topics “prepares them poorly for professional life, which often demands intellectual engagement with people and ideas one might find uncongenial or wrong” (2015, para. 8). Furthermore, they insist, instead of shielding students from depression and anxiety, a campus that shields students from uncomfortable ideas actually endangers students’ mental health.
Some ways that college educators can take the lead in fostering difficult conversations are to be realistic about goals, clarify to students what “safe” means, establish parameters, and build empathy (Adams, Bell, & Griffin, 2007; Arao & Clemens, 2013; Southern Poverty Law Center, 2010; Monahan, 2016). Educators need to work towards developing a teaching model that encourages students to contribute their voice to a subject that touches their lives and helps them to become better citizens. These conversations can also serve as vehicles for meeting course, program, and professional outcomes and literacies in critical thinking, teamwork, and effective communication. For example, in Kaplan’s College Composition I (CM 107) course, students write about topics in their field of study, identifying a problem in that field and learning to talk about that issue in an ethical, research-supported way. They articulate a point of view, create a thesis statement, and evaluate how audience and purpose affect their argument. Students majoring in legal studies, health, and education face a plethora of controversial topics they could tackle, including body cameras for police officers, expanded access to Medicaid, and the use of vouchers in public schools. These topics and others invite heated debate, but the discussions provide students the opportunity to encounter diverse opinions and shape logical rebuttals based on credible research.

In College Composition II (CM 220), students tackle a problem in their community or workplace they would like to solve, and they may choose thorny topics related to race, sexual identity, disability rights, and environmental concerns. As students respond to one another on the discussion boards and in live seminars, they often disagree, ask questions, and challenge one another. Helping students to see that such dialogue is healthy, not toxic, is key, but faculty have to be actively engaged in the discussion and provide a positive model for debate. Furthermore, students are encouraged to share their ideas with an audience outside of the classroom in both courses, writing a blog post in CM 107 and creating a presentation in slideshow or video format in CM 220.

This pedagogical model fits with Christian Weisser’s description of composition theory’s shift into “public writing” that encourages student writers to think about writing not as an isolated activity but part of a larger social framework, a “democratic enterprise” that “allows students to produce meaningful discourse that has the potential to change their lives and the lives of others” (2002, p. 90-91). Many students, especially those who primarily take online classes, tend to view writing as an isolated activity that begins and ends within the confines of a writing class. They may not realize that writing generates reactions that lead to discourse, both productive and combative. The internet too often gives students a false sense of confidence in engaging in online debate due to the anonymity writing alone in front of a computer affords. College faculty should help them consider the topic, their voice, and the effect their words will have on others. Students may be uncomfortable with this framework at first, even fearing to share their ideas in class discussions or challenge classmates’ arguments, but teaching them how to develop logical thesis statements, evaluate arguments for fallacies and weak assumptions, and find credible sources to support claims gives them more confidence in their ability to construct arguments, not rants, and to see debate as fruitful, not frightening.

Educators have to prepare for conversations that turn into uncomfortable disagreements. Students often have a hard time hearing constructive criticism, especially from classmates, and inappropriate conversations may emerge that denigrate a student’s intelligence, experience, or rationale about a particular subject. Faculty need to act as facilitators, reach out to students if needed, and even be prepared to go to supervisors if a discussion thread becomes too vitriolic. Conversations about gun control, Black Lives Matter, and other heated topics require careful management, but they cannot be avoided just because they may become uncomfortable. Integrating these difficult conversations into the course design and encouraging students to think critically about how their lives intersect with these issues will help students become better thinkers, professionals, and citizens.

References


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Managing Quality Assurance for Online Course Design

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Higher education has now taken the forefront for validating achievement of excellence for quality assurance in online courses. The need to engage in a purposeful design and delivery process is paramount to creating and sustaining a supportive online learning environment. Evaluating the quality of an online course or program can be arduous. Especially since faculty and student support are not addressed in several of the standards (Southerland, Mooney, 2015; Vlachopoulos, 2016). The fundamental problem with so many regulatory bodies is that many of these standards lack sufficient guidance on how to deliver online courses in a dynamic and purposeful manner (Schnettter, Lacy, Jones, Bakrim, Allen, 2014; Vlachopoulos, 2016). The Southern Association of Colleges and Schools (2012) has established rigorous guidelines for faculty to teach online courses to assure quality and integrity in higher education. The guidelines impose a duty upon institutions to ensure that distance education programs are properly maintained, supported, staffed, and equipped to promote the growth and development of students (Southern Association of Colleges and Schools, 2012). Institutional distance education policies must be refined to comply with these accreditation standards (Southard & Mooney, 2015; Southern Association of Colleges and Schools, 2012).

Institutions are required by the Southern Association of Colleges and Schools Commission on Colleges (2017) to document and justify that each faculty member is qualified to teach assigned courses. At Columbus State University, a policy was created for faculty members who design or teach online courses to complete the Quality Matters (QM) Applying the QM Rubric (APPQMR) workshop prior to the design or redesign and review of their courses. The expectation is to continue to expect further update training with the release of any revised QM rubric(s) prior to the design or redesign and review of future courses. Regardless of what rubric or standards an institution chooses to use as their framework the goal is to provide a consistent standard for designing and evaluating course quality. Online course design frameworks take a student-centered learning approach when building standards (Little, 2009; Persky, Joyner, & Cox, 2012; Meng-Jung, 2009). In addition, learners thrive on the individually tailored support being offered, and the learner-to-learner and learner-to-instructor high level of interaction (Vlachopoulos & Tsokkas, 2015).

Quality Matters was formed from a consortium of schools out of MarylandOnline, Inc. They developed eight standards that cover the different elements believed to contribute to effective course design utilizing the QM rubric. The eight areas covered in the rubric are Course Overview and Introduction, Learning Objectives (Competencies), Assessment and Measurement, Instructional Materials, Course Activities and Learner Interaction, Course Technology, Learner Support, Accessibility and Usability. The focus of the QM rubric is on course design and does not address course delivery (Quality Matters Program, 2014). A course review process is offered through QM. For a course to be QM certified, it must go through a rigorous internal and external peer review process where other faculty participate as part of a peer review team and who have been certified to be peer reviewers will do a thorough review of the course using the eight general standards and 43 specific review standards rated at different points. A course must receive an 85% or a score of 84 out of 99 points to be QM certified.

Technological and pedagogical advances in distance learning are evolving rapidly which has greatly improved the quality of distance education to include more opportunities for student discovery and engagement. Columbus State University (CSU) has witnessed the significant growth of distance learning over the past five years. More than 20 degrees and programs can now be completed solely through online delivery at CSU.

In 2015, CSU distance learning committee developed several Online Course Improvement Grants using the QM rubric and certification as the framework. The goal of the grants was to turn the focus on quality in online programs and courses. The standards provided by QM gave faculty and administrators the necessary tools to support CSU’s
online course quality assurance plan. The grant develops a basic framework that assisted to develop quality systems according to our own, specific requirements (Vlachopoulos, 2016). Support is offered to faculty developing and launching online courses/programs to reframe content and rethink traditional teaching methodologies and philosophy of learning. Faculty must be committed to creating student-centered approaches and encouraging critical thinking in new environments that embrace the web as a source for learning (Schnetter, Lacy, Jones, Bakrim, Allen, 2014). Since the grant's inception, 27 courses have become QM certified. All the required courses in the School of Nursing’s RN-BSN program have been approved making it a fully online QM certified program.

The Center of Online Learning (COOL) at CSU manages and administers the Online Course Improvement Grants ensuring the QM review process is followed for each course submitted. In order to effectively prepare and support faculty members for engaging in online instruction and to assist them with identifying and incorporating research-based design and delivery strategies and technologies in their distance learning courses, it is expected that faculty members maintain an ongoing dialog with COOL. Prior to designing or teaching an online course for the first time, faculty members are encouraged to contact COOL to help identify areas for professional development with respect to online course design, pedagogical strategies, assessment strategies, learning management system competencies, supplementary eLearning application skills, and strategies for meeting the QM Rubric Standards.

In addition to the APPQMR workshop all new CSU distance learning faculty members teaching online for the first time are encouraged to complete training on the learning management system (D2L Brightspace). To supplement their technical training, faculty are also encouraged to work with one of COOL’s instructional designers who are all QM certified Peer Reviewers and can provide expertise in learning theory, instructional design, course development and improvement, online teaching, assessment and evaluation, and course accessibility.

One of the keys to success in developing a quality assurance program for online learning is the support of university administrators. They must support their faculty in these efforts by providing professional development opportunities and recognizing that this type of proactive and deliberate instructional design takes time. Faculty often require additional support to learn how to create flexible resources, learn how to use emerging technologies and to work with their Disability Student Services offices to integrate specific supports that students might need for lifelong learning.

One of the important elements QM addresses is accessibility. The enrolment of students with disabilities in higher education has increased in the past few decades and this affords people with disabilities easier access to online education. It is important to note that while universally designed courses broaden the range of options to address a range of learners, students with disabilities may need additional support for accessibility. University Disability Student Services offices can assist faculty with the provision of specialized supports (Schelly, Davies, & Spooner, 2011; Rao, Edelen-Smith, & Wailehua, 2015). Maintaining flexibility to learn at the student's own pace, as well as the freedom from time and geographical limitations is an important element when designing online courses and programs (Schnetter, Lacy, Jones, Bakrim, & Allen, 2014).

In conclusion, the distance learning grants have been a success to enhance managing quality assurance for online course design. Our institution is better able to meet the growing demands of online learning from our diverse student population, all while maintaining compliance with stringent accreditation processes.

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Abstract

In order to create a climate of academic integrity across campus (and, yes, to catch cheaters, too), we can use a three-part approach that distinguishes the various definitions of “originality” in various disciplines. Once we know what we’re asking for, we can apply a second three-part protocol to the interactions we have with our learners. Moving from trust to verification to observation, we construct a campus-wide expectation of ethical practices for student work.

Introduction

Instructors and administrators utilize many tactics to help ensure that the work their students perform is conducted under rigorous conditions, and is actually created by or performed by the students themselves. Especially with the rise of online learning, academic integrity has created a business model, with companies like Turnitin and SafeAssign (now part of Blackboard) offering to compare student submissions against large databases of previous student work.

We must first address the different concerns—and definitions—of “originality” across the units of the higher-education institution. For example, liberal-arts disciplines such as English and philosophy place a premium on originality of content, where learners incorporate research materials within an argument largely of their own devising. However, in the sciences, such as biology and chemistry, the goal is originality of design, with experimentation being the area where learners demonstrate originality. In disciplines like education and psychology, academic integrity is measured by originality of method, where learners rely on—and sometimes duplicate—previous inquiries in order to build on the body of knowledge in the discipline.

Next, colleges and universities need a clear framework for identifying various types of academic-integrity strategies, and for matching those strategies to the needs of instructors, departments, and institutions.

The “three paths” mentioned in the title of this session have to do with the three levels of academic-integrity approaches, which cascade into each other:

- Trust,
- Verification
- Observation.

Finally, we need to define examples of each “path,” best practices for each, and practical implementation tips. For instance, at the level of Trust, an example is the academic-integrity statement. The statement is adopted by the institution, and may appear on syllabi, in the directions for assignments, and in the introductory materials for assessments. It is passive—learners are expected to read and abide by the code, but are not required to take any concrete action to acknowledge their acceptance. The best practices for Trust-based policies include publicizing the policy in several ways, asking students to respond to the policy, and “branding” the institution as one that fosters open and trusting dialog with its learners. To implement a Trust-based policy effectively, ensure that instructors, students, and administrators create the wording of the statement together, and that the statement features prominently in student-facing communications, such as the course schedule, institution web site, and learning management system.
In order for a thriving academic-integrity culture to take root, colleges and universities need their faculty members and staff to be able to:

- Differentiate among the three levels of academic-integrity approaches
- Create implementation plans for academic-integrity techniques
- Select academic-integrity tools and techniques based on course, program, and institutional needs

What is Originality?

In most institutions’ academic-integrity policies, there are clear statements about what constitutes a violation of the policy. Copying directly from a source without attribution, getting someone else to take an exam or write a paper, or sharing answers to tests (McCabe et al., 2012) — all of these are definite violations.

We get into murkier water when we try to create a clear definition of what we mean when we say “the student’s own original work,” especially at institutions where the things we ask students to create in order to demonstrate skills are so varied. Blanket originality-reporting tools like TurnItIn are useful for only a part of the institution, because what we call “original work” varies from discipline to discipline.

Originality of Content: In the liberal arts, originality is usually defined most closely to match the model adopted by those of us who create strategies for combatting academic dishonesty: originality of content. Learners are expected to create arguments, essays, reports, and presentations that rely on research of what others have said or done. The learner’s structure, logic, and ideas, however, are expected to be his or her own, and not simply a re-telling, re-ordering, or review of source materials. Originality-report tools are very good at catching learners who rely too heavily on source material, since the tools compare not just the exact words of submissions, but compare submissions against the logical structure of source materials.

Originality of Design: In the sciences, originality focuses more on the design of an experiment. Learners create experiments in order to test hypotheses or confirm results obtained by others. They work with existing data or interpret data that they have collected. The original part of the work is in analyzing outcomes and predicting next steps. Originality-report tools often over-report academic-integrity issues in design-based disciplines, since well-known experiments are often repeated, and learners are expected to work with content that is very similar to existing content.

Originality of Method: In the social sciences, methodological originality is most common: learners create new ways to test hypotheses. Rather than re-run existing experiments, learners experiment in new and original ways; they rely on, but seldom duplicate, previous inquiries in order to expand the existing body of knowledge in the field. They create logical ties to previous research, and point to potential future directions for the field. Originality-report tools often over-report academic-integrity issues in method-based disciplines, as well, since most content created by learners in method-based areas contains a literature review or other foundational set of lengthy citations.

Three Paths

Because originality-report tools are the most widely used academic-integrity methods in higher education, and because they serve non-humanities disciplines less effectively (Lancaster & Culwin, 2007), it is useful to think about the various ways that professors can approach academic-integrity issues in the various disciplines (cf. McNabb & Anderson, 2009). There are three main ways that we ask students to demonstrate academic integrity—trust, verification, and observation—and each of these three paths is best suited to specific kinds of learner activities.

Trust: The least intrusive method of ensuring academic integrity is trust. The professor trusts that the student will act honestly in creating content or taking assessments. There are three levels of trust, on a continuum from least to most interactive.

1) Honor codes are statements of expected behavior, and are typically housed in a non-course-specific location, such as the institution’s general web site (cf. Georgia Tech University, 2016). Honor codes, by themselves, are passive: learners need only read them, and professors do not have a way to tell who has and has not read (or, more importantly, agreed to) the honor code.
2) More interactive are sanction statements (cf. DeVry University, 2009), which outline not only the behaviors expected of learners, but the penalties for transgression. Sanction statements are most often placed at the point of need, such as in the directions for a test, where learners are most likely to be tempted toward dishonesty.

3) The most interactive trust method is a signed honor code (cf. Meyer, 2010). Whether the learner signs the code on paper or e-signs, the act of signing one’s name in order to agree to the tenets of the honor code provides psychological weight to the honor code’s provisions, and having a signature helps faculty members to hold to a stricter zero-tolerance stance when dishonesty is detected.

The best practices for trust-based methods include:

• Placing the honor/sanction statement in both a generally-accessible location and at the “point of temptation” within the learning environment
• Crafting honor/sanction statements that are clear, easy to understand, and brief
• Matching the level of trust to the relative importance of the assignment (e.g., ask for signatures only for mid-term and final exams)

In order best to implement trust methods, publicize them to learners early and often (cf. Sutherland-Smith, 2010). Remind learners that they are held to the standards outlined in the honor/sanction statements, and provide the statements to learners via multiple channels, such as in-course announcements, e-mail messages, and in the directions for assignments and assessments.

Verification: More intrusive than trust is verification. Verifications methods actively check learners’ work against some measurable criterion, such as a collection of existing work, an identity database, or the amount of time spent on a given task. The professor uses verification tools in order to get a sense of which learners are statistical outliers, and then uses the outputs from the tools in order to make decisions about how to respond to those learners. Verification methods are among the most common ways to ensure academic integrity today. Here are five, in descending order from most to least commonly used.

The big subscription databases, such as TurnItIn and SafeAssign (cf. TurnItIn, 2016 and SafeAssign, 2016), compare learner submissions against large databases of previously submitted content, Internet sources, and library-database sources. These tools produce “originality” reports, whose score indicates the amount of content in the submission that matches or is similar to existing content. Professors use the reports to verify the degree to which learners are creating original content (which is problematic outside of the humanities, as discussed above).

Often called the “poor man’s TurnItIn” is the practice of “Google fishing,” in which a professor copies a suspect passage from a learner’s work and pastes it in to a search engine to check for an exact match. This method relies on the professor’s ability to detect shifts in tone or linguistic ability in order to spot material copied from sources dissimilar to the writing style and complexity of the learner.

The most intrusive verification method, restriction, prevents learners from using outside resources when taking an assessment. In face-to-face classes, restriction is accomplished by asking learners to remove potential aids from the assessment area. For online assessments, tools such as the LockDown browser from Respondus (cf. Respondus, 2016) prevent learners from opening other programs, creating new Internet windows, or copying text from the screen. Professors also restrict online assessments by setting date/time parameters, passwords, and even IP-address restrictions.

Less common verification methods are statistical verification (measuring time on task or activity duration) and identity validation (granting access via fingerprint scanner [cf. Digital Persona, 2012] or only after answering identify-confirmation challenge questions).

For all verification methods, the best practice is to tell learners ahead of time that the methods will be employed. For some methods, such as fingerprint scanning, this is a must, but for others, such as the large database services, it is possible to use verification methods surreptitiously. Doing so undermines learner confidence and trust. In fact, many
of the most common verification methods allow learners to take part in the verification. For example, students can submit their work to TurnItIn themselves, and see their originality reports ahead of the professor, allowing them to review and revise.

To implement verification methods, follow the setup process outlined by the tool vendor; in the case of search-engine verification and statistical verification, include a statement in the syllabus or another frequently-visited document about how and when the professor will use the verification method. Also, be consistent in using the verification method; avoid being a “hammer” early and then not checking learner submissions afterward.

Observation: The most intrusive academic-integrity method is observation. Being able to see the learner as she or she completes the assignment or assessment is the best guarantee of academic integrity, going back to the days of proctored face-to-face tests. If the professor can see the learners, this minimizes the chance for academic dishonesty. In this category fall such things as face-to-face assessments, proctored tests (both in one place, and “distributed proctoring” at libraries and cooperating educational institutions), and online monitoring. Online monitoring is an emerging area of observation; companies now offer video-camera monitoring services for online assessments (Kryterion Online Services, 2016), as well as keystroke recording. Because of the synchronous nature of observation, long-term assignments are not typically suited to this method.

The best practices for observation are to be the least intrusive and the most flexible, especially for assessments where the learner is not located in the same place as the observer. Flexibility of scheduling allows learners to set up observations where and when they are best able to take assessments under the specified conditions; many schools, public libraries, and universities will proctor individual assessments as a courtesy. Observation methods often cause anxiety among assessment-takers, so methods that are the least obtrusive are deemed the most effective. For example, video-camera observations work best when the learner does not know when the camera is on or off, and when there is no indicator or video link showing the observer during the assessment.

To implement observation methods, prior notification is key, and, depending on stage guidelines, permission to observe learners remotely may be required. The range of implementation possibilities includes requiring learners to come to one location, to obtain trustworthy proctoring services, or to use e-monitoring tools.

Conclusion

In addition to the trust, verification, and observation methods outlined above, institutions can undertake several specific actions in order to foster academic integrity across campus. First, create campus-wide definitions and decision processes, including an academic-integrity policy and consistent definitions and penalties for infractions. Such documents should contain input from all campus stakeholders (e.g., faculty, students, and support areas). Set up regular communication among faculty who teach the same students, and consider creating an academic-integrity reporting/review board for handling cases in a formal way.

There are also several course-level best practices. First, know your students, either via personal contact or “introduce yourself” ice-breaker exercises. Next, model correct and incorrect processes as part of the course. The professor should provide examples of well and poorly done content. Adopt Universal Design for Learning (UDL), which allows for multiple means of representing content and multiple methods for students to demonstrate skills. Use the assessment randomization, pooling, and rotation tools in the learning management system. Well-pooled and – randomized assessments ensure that no two students receive the same assessment questions in the same order. Finally, build a library of good examples from former students—ask for their permission to use their work as examples for future learners, and share the good and bad examples.

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Using Media and LMS Data in a Course Revision Initiative

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Abstract

The initiative highlighted in this article focused on scaling a selected group of existing online courses from nine colleges. This scaling initiative incorporated gathering data from our media management system (Kaltura) and our learning management system (Desire2Learn/Brightspace) to inform decisions on how to most effectively revise these online courses in order to either increase the student enrollment in a single section or offer multiple sections of the online course with different instructors. Analysis of the data from these two sources assisted in the identification of areas for potential online course revision after consultation with the instructor (who was most often the course developer).

Systems Used: Brightspace and Kaltura

Both of the systems used in this case expose data via a RESTful Application Programming Interface (API). This means that at any point in time, anyone with the proper system-level credentials can obtain a snapshot of the data as it is in the system. In this case, the instructional design team used a series of Python (for Brightspace) and PHP (for Kaltura) scripts to output a csv of the raw data from the system. The data was then analyzed by an instructional designer in order to pinpoint areas for investigation and revision in the course.

LMS Data

Use of the tools integrated into the Desire2Learn/Brightspace platform offers the opportunity to gain valuable insight into the course. The data that is automatically generated by the learning management system provides both a “big picture” of the course as well as the opportunity to drill down for more granular information. While a student’s final course grade is ultimately what is recorded on his/her transcript, examining how this final grade is determined by inspecting the types and frequency of formative assessment provides valuable information. How often and what percent of the total grade is comprised of traditional assessments (quizzes and/or tests)? Were there particular assessment questions students seemingly struggled with and/or questions that the majority of the students excelled on? To what extent did students interact with one another via class discussions within the online course? Answers to these questions obtained through the LMS data can help inform decisions on how to maintain high instructional quality with an increased student enrollment, ultimately addressing the goal of our 2016-2017 Online Learning Fellows program.

Grades Data

Students’ mean quiz grades and comparison of these with their median grades can provide important information by revealing patterns in students’ understanding of the curriculum (or lack thereof) and indicate when further investigation may be warranted.

Example One

By examining the percent mean and percent median grades for a summer 2016 course’s quizzes, the difference between these two values was higher for one quiz than any other quiz, indicating a higher level of variability in the quiz scores. Upon further investigation of the assessment questions, five of the six quiz questions had an average grade greater than or equal to 80% while one question had a 38%. A closer look at this question revealed it was the
only multi-select question with the remainder of the questions being multiple choice format and that it had a 2-point value while the other questions were one point each. LMS data showed that 22% of the students’ answers to this question included at least one wrong answer choice. This LMS-derived data will be useful in identifying an area for potential course modification through content update(s) and/or revision of the assessment question. The same data was also extracted for the summer 2015 offering of this same course and similar results were found with this same quiz.

Example Two

Examination of quiz grades over an entire online term can pinpoint areas of concern as well. In one online course, the mean grade for one assessment is significantly lower in comparison to the other quizzes. As in the previous example, further investigation of the LMS-derived data revealed three questions that were missed by 23%, 25% and 42% of the students. All other questions on this assessment were missed by no more than 14% of students, with most questions averaging 5%.

Discussion Data

The data available from Desire2Learn/Brightspace pertaining to students’ involvement in course discussions include the total number of posts, total word count, average number of words, the number of original posts and the orphan count (defined as the number of original posts that do not receive any replies). While some of this may be determined by the instructor’s expectations with regards to the desired level of involvement in the course discussions, collectively, this data offers important insight into the general level of interaction among course participants. Potential course revisions that can be derived from such data may include more explicit instructor expectations, utilization of one or more Desire2Learn/Brightspace discussion settings to increase involvement, discovery of trends associated with course discussions, distinguishing discussion topics that seemingly pique students’ interests, and identifying the level of discussion participation over the entire instructional term as illustrated below.

![Graphs showing total number of posts and percent of orphan posts over terms.]

One important aspect of this discussion data is differentiating the level of interaction among students and that between the instructor and his/her online students.

Finally, discussion data derived from the LMS can help compare the level of student involvement over instructional terms but also help forecast expected level of posts with increased student enrollment.

Media Data

The University of Georgia utilizes Kaltura for media management. Videos integrated into an online course are embedded from the media channel that is associated with the course ID. The data available from Kaltura includes each video’s unique identifier, length, number of plays, and the drop-off rate based on student views within the online course. From this data and in conjunction with analysis of the online course, the total number of videos, video minutes per module (illustrated below) and for the course in its entirety can be calculated as well as the frequency of video plays.
Additionally, the extent to which these videos are being viewed by students can also be determined based on the drop-off rate. Video viewing patterns can be extrapolated and addressed with proposed course revisions. For example, analysis of data internal to the institution where the project took place suggests that the optimal video length should not exceed eight minutes, although the stated optimal length can vary from study to study. This is in alignment with best practices for video-based instruction as well and compliments what our data analysis found. One proposed course revision included in several online learning fellow project plans included decreasing video length in order to optimize student viewing: segmenting a 20-minute video into three shorter videos, for example. Finally, trends in student viewing over the duration of the instructional term can be identified as well, as illustrated below.

Limitations of Kaltura Data

While the media usage data provided valuable information into how students used course media, it did come with a few limitations. First, because of the type of embed codes used in the courses, we could not capture the identity of the specific student who watched the video. Rather, we could identify the number of plays that occurred in a specific timeframe. This gave us an idea for the maximum number of students who watched a video. For example, if a video was played ten times over the course of a semester, but there were 30 students in a class, then we know that no more than a third of students in the class clicked the play button on the video. Second, Kaltura calculates drop-off rate based on time events in its media player. That is, when the timeline on a video reaches 25% of the video’s length, an event is sent to Kaltura signaling that 25% of the video has been played. These events happen at 25%, 50%, 75%, and 100%. This limits that granularity with which we can specify drop-off rate, as a student who watched 49% of a
video will have a drop-off rate of 25%. Additionally, it is possible for students to scrub the timeline to 100% and show a drop-off rate of 100% (signaling that they watched the entire video).

Conclusion

Using LMS and media data in this course revision initiative proved most useful in identifying potential weaknesses in a course for the instructional designer and faculty to explore. These data alone can provide insight into the course, but when paired with the course’s contextual elements, the recommendations that grow out of this data can be quite strong. As demonstrated in the examples in this paper, RESTful data provides great flexibility for interpretation and analysis, depending on the data that the API system makes available. In this case, the instructional design teams worked to establish processes for finding the most pertinent information for each course being reviewed, but much work remains to be done to marry the value of data with the individual context of each course.

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EPIC Changes: Managing Change for QEP Implementation

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Abstract

This article discusses change management tactics used to implement Wake Technical Community College’s eLearning Preparedness Initiative across the College (EPIC), a QEP that was the culmination of a two-year college-wide participatory process focused on reducing online learning barriers and improving student success. The tactics discussed include information distribution, professional development, rewards and incentives, and EPIC ambassadors.

Introduction

Wake Technical Community College adopted eLearning Preparedness Initiative across the College (EPIC) as its Quality Enhancement Plan (QEP) in 2014, which at that time, was the culmination of a two-year college-wide participatory process focused on reducing online learning barriers and improving student success. EPIC is a two-prong approach directed at faculty preparedness through an online teaching certification process and student preparedness through an eLearning Intro aimed at preparing students for an online college environment. Multidisciplinary/cross college teams were created to fully develop and implement EPIC. Marketing, change management, and future sustainability for the initiative were given to the EPIC Marketing and Change Management Team. The team’s primary focus for 2014-15 academic year was marketing the QEP across Wake Tech’s many campuses. During the 2015-16 academic year, the team transitioned to focus specifically on managing the changes for faculty, staff, and students. To reflect the change, the team changed its name to EPIC Change Management (CM) and created a structured plan to guide the team’s work during the QEP’s implementation.

The EPIC CM Team’s plan was created using the Prosci ADKAR® model for change management, which stands for establishing awareness, desire, knowledge, ability, and reinforcement. This model allows for a more collaborative environment through participation at various institutional levels instead of focusing on a top-down model for change management. Using the ADKAR model, the CM Team compiled a series of tasks to help faculty, staff, and students adjust to the evolving online learning community and Wake Tech’s “eLearning Quality Standards,” which were created as part of the QEP. These tasks target faculty, staff, and students and have been essential in maintaining a level of transparency and engagement throughout the school. The most important tasks of the CM Team’s plan are the following: collaborate with QEP teams to create and distribute information to stakeholders via newsletters, visuals, and other documents; lead professional development events to educate and prepare faculty and staff for QEP implementation; manage a group of faculty and staff ambassadors to maintain an informed and collaborative environment; and recognize and celebrate the accomplishments of certified faculty and overall QEP support.

Distributing Information

Collaboration and communication in the beginning stages were paramount to the success of the EPIC initiative. Everyone was considered a stakeholder, as this was the QEP plan for the college. The CM Team worked closely with the college’s Communications Department to create the EPIC brand which is a part of all advertisements, documents, newsletters/blog, both internal and external to the college.

The CM Team created the EPIC Newsletter, which is now a blog, to inform stakeholders of EPIC and its progress. As EPIC continues through its phases of completion, the blog has been a source to keep faculty up-to-date with the different certification pathways available to them, as well as articles of interest concerning best practices, EPIC
Professional Development

Professional development is not only a specific pathway for EPIC certification at Wake Tech, but it is also an instrumental vehicle for change management. The CM Team Lead is an active member of the Faculty Professional Development Committee, which allows EPIC to have a voice in planning faculty professional development events. Wake Tech’s designated conferences and new faculty orientations (three separate events each academic year) include sessions to educate faculty and staff on the QEP and certification pathways. These scheduled events not only inform stakeholders about the QEP’s current status but also allow for question and answer sessions to directly interact with faculty and staff to enhance transparency during the implementation process.

During the 2014-16 academic years, the CM Team led faculty and staff professional development events and sessions focusing on the status of the QEP, outlining the pathways to certification, helping faculty and staff navigate the QEP’s online resources, and holding town hall style meetings for faculty to ask questions or voice their concerns. Currently, the CM Team is soliciting faculty ambassadors familiar with the QEP to lead professional development sessions and share their pedagogical techniques that foster communication and collaboration in online courses. This tactic addresses the knowledge and ability sections of the ADKAR model, and it includes recognizing the skills and work of the faculty who have been certified.

Rewards and Incentives

To incentivize and expedite the certification process, early adopters were encouraged to participate in cohorts when completing the EPIC 30 pathway or to complete the Peer Review pathway (a vigorous review process allowing seasoned faculty to bypass the 30 hours of professional development). The primary incentive for completers is to retain the ability to teach online due to being certified. Faculty who complete either pathway also receive a framed certificate to display in their offices, as well as a digital badge to display in their online courses and email signatures.

As an extra incentive to early adopters, the CM team created a tiered rewards program consisting of “EPIC Certified” performance polo t-shirts, saddlebags, and portfolios containing the EPIC Certified logo. The tiers were determined by costs of individual items, and the rewards were only available to around fifty percent of faculty who required certification. While the ultimate goal was to motivate early adoption and completion, the rewards also serve as effective visual advertising since each item displays “EPIC Certified” and the school’s name.

EPIC Ambassadors

An initiative as large as EPIC is a tremendous undertaking, even for a college the size of Wake Tech. The CM Team realized early on that it would take more than just the immediate team members to facilitate all the undertakings involved with implementation. The EPIC Ambassador program was created by the CM Team to fulfill numerous objectives, while at the same time continue the collaboration upon which this project is built. First, it allows everyone, faculty and staff, the opportunity to be an important part of the QEP. Second, by having Ambassadors, the CM Team has other personnel that could perform duties including, but not limited to, distributing printed materials, providing coverage of booths/tables at special events, and creating and/or presenting professional development workshops. Membership is based on the academic year, and each member has to seek reappointment as Ambassadors annually. To be considered, a request is sent to the CM Team. Then, the employee has to have his or her supervisor’s approval. Each Ambassador agrees to commit to five service/project hours in the academic year,
and in return, they receive a plaque for display in their workspace, the ability to use their service towards faculty ranking, if applicable, and at the end of the service year, ambassadors receive a certification of appreciation for participation. People who work on EPIC teams, such as CM, Professional Development, etc., are automatically included as Ambassadors, as they contribute to the initiative through their teams. They are excluded from the mandatory five service/project hours rule, but are encouraged to participate as well in these endeavors. Currently, there are over 50 active faculty/staff EPIC Ambassadors.

Conclusion

Wake Tech’s QEP will be completely implemented in August of 2017. This will include required certification to teach online (which is now school policy), multiple pathways to certification, updated eLearning intro preparedness module for students, and quality assurance checks to assess the QEP. To accommodate the implementation of all parts of EPIC, the CM Team will transition from managing change to focus on sustainability. Instead of marketing the QEP or incentivizing the certification process, the goal of the team will be to ensure that stakeholders have access to information that will help them build and improve their online courses. This information would serve to supplement the material covered in the EPIC 30 professional development courses and will be housed in an online repository. Ultimately, while many significant changes come and go with any major project, the EPIC CM Team recognizes that the QEP’s success requires a strong foundation of communication, collaboration, transparency, and support for its sustainability after the QEP is complete.

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