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EXAMINING ONLINE DELIVERED ORIENTATION TO ONLINE LEARNING  
ASSOCIATION WITH COMMUNITY COLLEGE STUDENT SUCCESS

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A DISSERTATION

Presented to the Affiliated Faculty of

The College of Graduate and Professional Studies at the University of New England

Submitted in Partial Fulfillment of Requirements

For the degree of Doctor of Education

Portland & Biddeford, Maine

April, 2018

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Kelly White  
April 11, 2018  
Educational Leadership

Examining Online Delivered Orientation to Online Learning Association with Community  
College Student Success

ABSTRACT

The purpose of this research was to discover if there is an association between student completion of an online delivered orientation (OLO) to online learning and the student success factors of end of course grades and course completion. This study was conducted because course completion rates in online courses are unacceptably low. Educational institution administration, state and federal agencies have all taken an interest in student completion and retention rates. Discovering ways to improve the situation is gaining support. There are many factors which may influence student grades and completion rates. This study focused on the factor of an online learning orientation (OLO). An ex-post facto study was conducted using chi-squared tests of independence on data spanning six semesters, starting in the fall 2014 and ending in the spring of 2017. Three components of the SmarterMeasure readiness assessment were used to divide the sample group into two categories; students ready to learn in an online environment coded as SM+ and students not yet ready to learn in an online environment coded as SM-.

After completing statistical tests on various combinations of ready to learn, completed orientation there appears to be no statistically relevant association between passing an OLO and either course grade or course completion rates. These results could be due to the high level of student competence with technology as measured by SmarterMeasure or it may be due to

advances in modern learning management systems that allow students to learn and use them much more comfortable than in the past. While there may not be a statistically relevant association between OLO and grades or completion rates, the OLO serves many purposes. Many students do learn something while participating in an OLO. An OLO provides a method of just-in-time support for students throughout the semester. An OLO can be an avenue to build a community of practice for students who are entirely online. Institutions and students may not be best served by a mandatory OLO, but conditional OLO participation based on assessment scores such as the SmarterMeasure assessment should be considered. Optional participation and availability of an OLO throughout the semester may prove valuable. Integration of an OLO into a first-year experience course might also prove worthwhile.

University of New England

Doctor of Education  
Educational Leadership

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## ACKNOWLEDGEMENTS

The road to completing this dissertation has been longer than most, and it has undoubtedly been an arduous journey. There have been so many people who impacted me along the way that I cannot hope to mention them all. The most important person I must thank is my wife, Kristine. She is the one person who encouraged, supported, and stood by me even when the odds looked grim. While it may sound cliché, in all honesty, I could not have completed this without her. I'd like to thank my colleague Jenn Merritt, who I met at the very beginning of our journey together. We helped keep each other's heads above water because we were in the ocean together and knew better than anyone how difficult of a swim it was for us. I'd like to thank Fred Hills who supported me first as a colleague and then as a supervisor. Without your encouragement and support on a professional level, I'm not sure I could have completed this. I'd also like to thank Paul Illich. Your guidance kept the statistical analysis from turning my brain to mush. Finally, I'd like to thank the members of my UNE cohort support group. You all helped me maintain focus and perspective to see this through.

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## CHAPTER 1

### INTRODUCTION

Community colleges are a uniquely American invention with a primary goal to provide access to education for all who seek it regardless of social standing, academic experience, or heritage (American Association of Community Colleges, 2014). The nature of the community college's primary goal makes online courses a natural fit (Liu, Gomez, Khan, & Yen, 2007). The US Department of Education (2009) describes online learning as a subset of the broader distance education category which includes correspondence courses, educational television and video conferencing. Distance education, and online learning in particular, flourishes in the United States. Milligan and Buckenmeyer (2008) agree with Carey (2008) who states there are three primary reasons for their success: 1) online learning eliminates the vast distances which can separate learners from educational institutions, 2) there is high demand for higher education and online instruction can more easily and quickly fulfill this demand than traditional Face-to-Face (F2F) courses on campus (Kelso, 2010); and 3) within the last decade technological advancements have significantly enhanced the online learner's experience. As such, colleges and universities are embracing online learning as a viable way to meet increasing enrollment demands (Kupczynski, 2011), to provide a high-quality learning experiences (Allen & Seaman, 2011), and as a viable method to secure revenue (Casey, 2008).

However, distance education via online learning is not without its downfalls and challenges. Online student course non-completion rates can be as low as 50% (Meyer, Bruwelheide, & Russell, 2009). There are dozens of possible reasons cited in the literature for such low completion rates. Aragon and Johnson (2009) synthesized these reasons into five categories. The most commonly reported reason students provide for not completing their online

course is related to personal concerns and time constraints. Clayton, Blumberg, and Auld (2010) noted that 59% of the respondents in their 2009 study at two urban public colleges in New York City stated that students dropped or stopped working in their online course because it didn't fit with their schedule or lifestyle as well as they initially expected.

Aragon and Johnson (2009) state that the second most common reason for online course non-completion is due to poor course design and lack of timely communication from the instructor. If the students cannot navigate the course structure and if they are unable to receive answers to their questions quickly, they are more likely to drop. The third significant barrier to course completion is that students may soon discover they have insufficient technological skills and inadequate training on the required learning management system (Kelso, 2010; Milligan & Buckenmeyer, 2008). Liu (2007) reinforces this reason stating that technological factors are a familiar and widely used predictor for online student completion rates.

Institutional limitations that are outside of student control are the fourth reason for low online completion rates (Aragon & Johnson, 2009). Clayton et al. (2010) reports that 30% of students elect to enroll in an online class purely out of necessity, stating that the online course was the only instructional method available. Learning preference is the fifth reason Aragon and Johnson (2009) list as a factor in online student non-completion. Students overwhelmingly prefer traditional F2F courses (Clayton et al., 2010). Scheduling conflicts, no available F2F courses to enroll in, and fear of reduced instructor connection were all cited as reasons F2F courses are preferred (Woods & George, 2017). Students are enrolling in online courses not because they prefer them over F2F, but rather because they feel they have no other option that fits their schedules. They are doing so despite feeling they may not have the technical skills necessary to succeed (Kelso, 2010).

Nash (2005) states that first-year seminars, the establishment of learning communities, and the adoption of early alert programs are all viable methods colleges and universities may employ to improve student persistence. Student success improves their self-efficacy with the learning method (Clayton, et al., 2010). Students are more successful in F2F courses because they are more comfortable with that learning method. Therefore, initial success in an online class is one way to build self-efficacy for the online student.

Online Learning Orientations (OLO) have proven to be effective in improving student persistence rates (Kelso, 2010) as they act as a stepping stone to first successes related to online learning. Krampe, L'Ecuver, and Palmer (2013) report that nursing students who participated in an OLO were more successful than their program peers who did not participate in an OLO. Orientations have been shown to be equally successful for non-program specific groups of students. Students who enrolled in a broad range of courses, and also attended an OLO, had a course completion rate of over 91% compared to an 18% retention rate for similar students who did not attend an OLO (Ali & Leeds, 2009).

There is no one single predictor for online student success, but keys to improving student success and persistence lie in early identification of at-risk students coupled with swift remediation and support (Liu et al., 2007). Milligan and Buckenmeyer (2008) state that providing a one-time orientation to familiarize students with the learning technology required for online course success will increase their self-efficacy and in turn will lead to improved success and persistence.

## **Background**

**Description of the Location for the Study.** This dissertation study was conducted at a mid-sized community college in Texas. The college is a 2-year public institution granting certificates and Associate Degrees. There is also a University Center located on campus where multiple partner schools offer Bachelor, Master, and Doctoral degrees. This location was selected based on convenience factors in that it is the author's place of employment, which will afford unparalleled access to the data required for the study. According to the National Center for Education Statistics (2012), there are 9,913 students as well as 203 full-time and 256 part-time faculty members at McLennan Community College (MCC). Table 1 provides a breakdown of the student demographics at MCC according to the NCES (2012) College Navigator website. As reported by the U.S. Census Bureau (2010), Waco's population is 124,805. The high school graduation rate is 75%. English is spoken as a second language in 23.6% of homes in Waco. The average household income of \$31,288 per year is well below the state average of \$49,646, and the Waco poverty rate of 28.7% is nearly double the state average, which is 16.8%.

The Office of Institutional Effectiveness and Planning (IE personnel at MCC conducted a study in 2006, which showed that over 90% of the students at MCC had access to a high-speed Internet connection. The survey did not distinguish whether that access was from home, work, school, or via a public internet connection. Students in online classes at MCC have an average level of technological skill (Illich, 2011). They have necessary computing skills, with some familiarity with word processing, e-mail, presentations, and the Internet (Illich, 2011). This is at odds with Houser's (2005) findings that show traditional-aged students desire greater email communication from faculty members than non-traditional aged students. In the 2006 study, it is stated that students at MCC have higher efficacy with mobile devices like smartphones and

tablets, they tend to prefer instant messaging or texting rather than e-mail or telephone communication (Kelly, Duran, & Zolten, 2001; Rosen, 2011).

Table 1.

*Total Campus Student Demographics, Fall 2017*

Demographic	Percentage
<b>Gender</b>	
Female	65.7
Male	34.3
<b>Age</b>	
< 18	18.4
18-21	41.2
22-24	12.5
25-30	12
31-35	5.7
36-50	7.9
50+	2.3
<b>Race/Ethnicity</b>	
White	50.6
African American	12.3
Hispanic	30.8
Other	6.4
<b>Enrollment</b>	
Full-time	39.2
Part-time	60.8
<b>Residency</b>	
In-state	91
Out-of-state	4
Foreign	5

Instructors need no specialized training or certifications to use computer-based learning technology in their F2F courses; however, to be eligible to teach a hybrid or online course, they must complete a 4-week preparation course called Teaching Online: Fundamentals. The Dean of Education and Learning Services may elect to waive the Teaching Online: Fundamentals

requirement when the instructor has extensive previous online teaching experience. These rare waivers require the new instructor to provide access to an online course shell at another institution for the Dean to review.

**Learning Online.** Although instructors must complete a multi-week training course to teach hybrid or online courses at the college where this study will be conducted, students have no training requirement to enroll in a hybrid or online course. There is an optional online OLO available to students called Orientation to Online Learning. The OLO is a seven-step, self-paced video-based instruction course into which all students matriculated at the college are automatically enrolled. Although the instruction is self-paced, college staff members monitor discussion forums to ensure that students are provided timely and accurate responses to posted questions.

The college where this study was conducted is similar to many institutions of higher education in that the course offerings are categorized by the percentage of instruction and an instructional material which requires students to use the Internet. According to Allen and Seaman, (2011) traditional classroom-based or face-to-face (F2F) courses have 0% online technology used for required work. Web-facilitated courses, also known as web-enhanced courses have up to 29% of the required work delivered online, and hybrid courses, also known as blended courses have up to 79% of the required work completed online. With hybrid courses, the vast amount of online work frequently results in a reduction of time spent in a physical classroom. Allen and Seaman (2011) agreed with the U.S. Department of Education (2012) study that indicated that online courses have at least 80% of the required work and materials available online. In most cases online courses have no F2F requirement at all; and often, no way to meet with the instructor or classmates outside of the computing environment exists.

As a community college in the state of Texas, the college adheres to the guidelines for online and hybrid courses as outlined by the Texas Higher Education Coordinating Board. These guidelines state online courses have 85% - 100% of the course content and instruction delivered online; hybrid courses have 50% - 85% of the course content and instruction delivered online; F2F courses may have no more than 15% of the course content and instruction delivered online (Texas Administrative Code, 2015). This guideline results in confusion and inconsistency with courses that have between 16% and 49% course content and instruction delivered online. This discrepancy plays out when courses which have the same ratio of F2F to online instruction are categorized differently in the course catalog.

**Distinctive Characteristics of Online Learning.** Online learning shares many characteristics with traditional courses; however, some unique benefits and challenges are distinct to this delivery medium (Hartnett, St. George, & Dron, 2011). Online learning releases the participants from the constraints of time and space, allowing instructor and student alike to participate from anywhere at any time. This feature provides exceptional flexibility for the participants, but also requires a high degree of self-discipline and time management.

Online courses tend to have less structure and are more instructor-centric than traditional F2F courses (Bekele, 2010). Although an absentee instructor can be the demise of even the most well-designed course, online learning environments have the potential to help forge stronger interpersonal bonds between faculty and students, as well as between student peers. Tinto (1997) expressed a need to explore these critical links between classroom involvement and student persistence. Bekele (2010) stated that, although the overall connection between motivation and satisfaction in online courses is unclear, further research is needed on specific technology and support factors that could affect online instruction, student motivation, and satisfaction.

**Past Attempts to Improve Persistence and Retention.** Neill and Illich (2005) applied for a Title III federal grant to improve student persistence in online courses. The goals of the grant were to improve student semester-to-semester persistence and year-to-year retention by increasing online student support, improving the online learning management system (LMS), and redesigning seven entire programs specifically for online delivery using the latest learning theories, design, and usability practices. The Title III grant was awarded in 2006. At the conclusion of the 5-year grant period in 2011, all but one goal had been accomplished. The unmet goal was to improve student persistence in online classes to meet or exceed the persistence rate of F2F courses (McLennan Community College, 2011).

In 2011, the conclusion of the Title III grant funding period, the online course completion rate was 12% lower than the F2F course completion rate. The completion rate for students in online courses during the fall 2011 semester was 58%, whereas the drop rate for students in F2F courses during the fall 2011 semester was 70%, difference of 12% (L. Wichman, personal communication, March 17, 2014). Over time completion rates in both types of courses have improved however the disparity between online and F2F student drop rates has remained similar. In the fall semester of 2016, the completion rate for students in online courses was 64% whereas the completion rate for students in F2F courses was 74.3%, a difference of 10.3% (L. Wichman, personal communication, September 25, 2017).

College administrators agree that online student persistence continues to be a problem, as evidenced by the fact that the 2011 Quality Enhancement Plan (QEP) identified online student persistence as a priority concern. The QEP is required by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) as part of the periodic reaffirmation process that all accredited institutions undergo. According to SACSCOC, 2013, “The QEP describes a

carefully designed and focused course of action that addresses a well-defined topic or issue(s) related to enhancing student learning” (General Information on the Reaffirmation Process section, para. 3).

### **Problem Statement**

As stated by Bawa (2016), VanOra (2012), Jaggars and Xu (2010), and Kelso (2010), a problem with unacceptably low online student persistence exists on a national level. The issue is so pervasive that the U.S. Commission on the Future of Higher Education (Spellings, 2006) has placed all college and university retention rates under scrutiny, especially the traditionally lower retention rates in online classes (Lykourantzou, Giannoukos, Nikolopoulos, Mpardis, & Loumos, 2009, Doherty, 2006). The McLennan Community College board of trustees and administration agree that the problem exists at this college as evidenced by ranking last out of 50 Texas community colleges for the percentage of contact hours that students complete as reported in the Quality Enhancement Plan (Illich, 2011).

### **Purpose of the Study**

The purpose of this study is to discern the relationship between student completion of an online learning orientation and student success factors. Although a goal of the Title III effort was to improve online student completion through a variety of methods and implementations, the importance that orientation played in course completion rates and student success was not studied. By examining if an OLO delivered online is associated with student success factors such as course completion rate and grade point average, this study may help the college better develop and deploy strategies to improve students’ preparation and performance in their online learning experience. College administrators may find the results of this study useful in decisions related to planning and delivering similar workshops.

## **Research Questions**

This research addresses the following questions:

1. Is there an association between student success factors of students who are ready to learn in an online environment and students who complete an online learning orientation or those who do not complete an online orientation?
2. Is there an association between student success factors of students who are not ready to learn in an online environment and students who complete an online learning orientation or those who do not complete an online orientation?

## **Relevance and Significance**

This study adds to the current body of knowledge regarding the problem of poor student persistence in online courses by examining the extent to which completion of an OLO is associated with grade point averages and student course completion. Sansone, Fraughton, Zachary, Butner, and Heiner (2011) stated that the characteristics that make successful online learners, such as self-direction and self-regulation, must be applied to the material and to the students' motivation to learn. Mahle (2011) posited that with higher motivation comes increased student outcomes and thus, stronger retention. With a better understanding of the relationship between completion of an OLO and factors such as student motivation, instructors and administrators may be better able to address and improve online student persistence rates by, for example, instituting mandatory participation in an OLO before enrolling in online courses.

Previous studies have identified some possible contributing factors to the problem of poor student retention in online courses (Harrell, 2008; Jaggars & Xu, 2010; Lorenzetti, 2005a). Students who come from lower income brackets, nontraditional students, low student readiness levels, low instructor readiness levels, inadequate support from the instructor and/or the

institution (Harrell, 2008; Jaggars & Xu, 2010), low levels of interaction between students as well as between student and instructor, and lack of proper advising (Lorenzetti, 2005a) have all been identified as factors which may impact student completion rates in online courses. In 2006, the college's Center for Instructional Design began an extensive redesign effort funded by a Title III Strengthening Institutions Program grant (Neill & Illich, 2005). Student retention was unchanged in the seven programs targeted in the Title III grant despite a complete redesign using the most current design principles, learning theory, and practices as predicted by Jaggars and Xu (2010).

Stodel, Thompson, and MacDonald (2006) postulated that poor student completion and low-grade point average exist because the use of online teaching and learning techniques have outpaced best practices. Kim and Frick (2011) stated that retention was a problem at the university level, continuing adult education, and corporate training settings, and predicted that by 2019, 50% of high school courses would be offered online. Robichaud (2016) agrees with Phipps and Merisotis (2000), stating that a student orientation was *critical*, yet students at those institutions felt their needs were not being met. A better understanding of this problem may afford institution leaders a clearer understanding of how to leverage an OLO to improve end of semester persistence of students enrolling in their first online courses and by extension, year-to-year retention. Kim and Frick (2011) reported that highly motivated students not only tend to complete their online courses, they also tend to complete their program of study, and have a higher propensity to become lifelong learners.

Previous attempts to address the problem of poor student persistence in online courses were unsuccessful for several reasons (Stodel et al., 2006). For example, after an attempt at one institution, many students did not feel confident in engaging online or were afraid of missing

something important or of getting behind. Students reported that asynchronous discussion forums caused them to “lose their groove” (Stodel et al., 2006, p. 5), thus stymieing the interaction. Additional confusion was created because of extremely varied discussion expectations between courses.

Scagnoli (2001) reported that OLOs improved academic and social interaction, enhanced a sense of belonging to an online community of practice, and improved retention at the university level. Students using distance learning technology should be provided with training and support (Phipps & Merisotis, 2000). Ali and Leeds (2009) found that student attendance in a F2F OLO positively influenced student retention at the university study site. In the study presented here, the relevance of orientations to online learning for the community college population is explored.

### **Assumptions, Limitations, and Delimitations**

One of the limitations of this study is that it is not possible to determine whether students voluntarily participated in the OLO; anecdotal evidence suggests that a small percentage of online instructors provide bonus points to students who participate in a workshop. Other instructors have self-reported that they have a first-week assignment which stipulates that students participate in the OLO. A selection bias may be introduced from using a non-representative sample of purely voluntary students participating in optional, additional training.

A compounding limitation on a wholly voluntary orientation participation scenario is that it is plausible only the stronger, more invested students opt to attend an OLO. This may increase the success metrics for students who attend orientation due to their inherent strengths not related to an increase in efficacy or skills acquired from the orientation thus artificially inflating the significance that orientation participation played in the student success figures.

A limitation is imposed by the LMS used at the college in that it does not record fine detail regarding how much time, nor in what areas of the orientation, each student worked. The system only reports that items were opened, but not when nor for how long. For example, it is difficult to determine whether a student clicked into the course shell and exited without reading the material, or if they thoughtfully worked through all the material, or perhaps accessed the orientation periodically throughout the semester as the need for more information was encountered. Each of these very different student interactions with the OLO appears identical in the data reports that this study will leverage. Without proof that students fully engaged with the course material, it is not possible to ensure that the orientation provided the student with new knowledge. A high assessment score may be due to a student's preexisting knowledge.

This study was conducted at a single institution which is a delimiting factor. Gathering data from multiple institutions could improve the generalizability of this study. However, the researcher was unable to find another institution within a reasonable distance that maintained this information and was willing to share their data with someone outside of their institution. As a result, the choice was made to use a purposeful sample population at the institution where the author is an administrator.

Another delimiting factor is that 100% of the online student enrollment was used as the population for this study. In the 2017 fall semester, 26.9% of the total online enrollment (2,388 students) transferred three or more course credits into MCC from another institution (L. Wichman, personal communication, February 23, 2018). It is difficult to filter out students who have previously enrolled and possibly succeeded in an online course at this, or at another institution because there is no way to determine if transfer credits were earned online or earned F2F. Previous online course experience may affect the success factors. Previous success in

online courses may contribute to continued success in the orientation to online learning and successive online courses. Unaccounted previous online success may skew the results. It is plausible that students with previous success in an online course may not elect to attend an OLO but be entirely successful in an online course which may artificially inflate the success rates of students who do not participate in an OLO.

### **Definition of Terms**

Some terms utilized in this research study can have multiple interpretations, and therefore, could inadvertently be confusing. The following list is presented to establish a clear understanding of some of these terms.

*Attrition* – Any student who does not appear on the course roster at the conclusion of the semester, regardless of the grade earned, contributes to the attrition rate (Kim & Frick, 2011; Milligan & Buckenmeyer, 2008). Attrition is an antonym of retention (Ali & Leeds, 2009).

*Blackboard (Bb)* – A learning technology company, Blackboard provides the learning management system (LMS) that the college utilizes to deliver the bulk of its online, hybrid and web-enhanced courses. The college subscribes to the Bb Learn+ v9.1 enterprise platform as well as to the Bb Mobile platform.

*Course completion rate* – This value is the ratio of students who are retained earning a grade of D or higher and students who fail, withdraw, or are dropped by the instructor for the course.

*Drop* – As stated in the college's student handbook (2014): a course drop occurs when a student voluntarily requests to receive, or the instructor selects to give, a non-punitive grade of W on the student's college transcript.

*Face-to-face (F2F) instruction* – Courses in which the learning objectives, the bulk of communication, and assessment are conducted in person, typically in a classroom environment are referred to as F2F courses (Harrell, 2008). The name is derived from the fact that the students and instructor can see each other “face-to-face.”

*Hybrid (aka Blended) instruction* – Courses having significant portions of instruction, communication, and assessment with both F2F instruction and online instruction methods are referred to as hybrid courses (Bakia, Shear, Toyama, & Lassetter, 2012; Mayadas, Bourne, & Bacsich, 2009; U.S. Department of Education, 2007).

*Instructor-mediated model* – These courses are led by faculty, who frequently require student participation. The faculty member addresses questions and provides guidance either privately or en masse (Mayadas, et al. 2009).

*Online (OL) instruction* – Courses in which the learning objectives, most of the communication, and assessment are conducted in an online learning environment are referred to as OL courses (Bakia et al., 2012; U.S. Department of Education, 2007).

*Persistence* - Any student who appears on the course roster at the conclusion of the semester, regardless of the grade earned, is considered to have persisted in the course (Ali & Leeds, 2009).

*Retention* – Any student who has earned a grade of D, C, B or A at the conclusion of the semester is considered to have been retained in the course (Ali & Leeds, 2009). Students who earn a grade of F are not considered retained.

*Success Factors* – This blanket term is used as a convenience measure in order to consolidate a number of separate but related factors such as persistence through to course completion, semester-to-semester, grade point average (GPA), graduation and transfer rates

(Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Lopez-Perez, Perez-Lopez, & Rodriguez-Ariza, 2011).

*Web-enhanced* – F2F courses with some aspects of eLearning that do not replace F2F instructional time are referred to as web-enhanced courses.

## **Summary**

Community colleges were started in America to offer high school graduates the opportunity to garner a college education close to home. As such the primary mission of a community college is to provide access to learning. Since the second annual meeting of the American Association of Junior Colleges in 1922 when the definition of a junior college was drafted (Cohen & Brawer, 1989), community colleges have kept pace with the unique and ever-changing demands that have been placed on them. In the past, affordability and increasing the diversity of course offerings are two demands that have been successfully met. More recently, both students and administrators have focused on the need for scheduling flexibility to meet the increasing time constraints of the typical community college student. Online and hybrid courses are effective methods to meet this demand, but access is not enough. Students must be able to be as successful in these more recent instructional models as they are in the traditional classroom-based instructional model. Students expect it; instructors strive for it; and the governing bodies and the Department of Education demand it (Lykourantzou et al. 2009).

Many methods may be employed to help increase student persistence in online classes. One method that has been effective in the traditional instructional delivery model is the student orientation (Kelso, 2010). Many colleges and universities have extended this method to orient students to the online instructional model. However, little research has been done to determine if this method is useful for online learners.

In the next chapter, the Literature Review, the author will provide an overview of the cogent topics as they relate to this study. The strengths and weaknesses of previous attempts to solve this problem as well as the gaps in the literature will be detailed. Similar studies will be analyzed to determine if they were valid and reliable. The pertinent literature will be presented in a manner such that a new perspective on the literature is gained by the reader.

## **CHAPTER 2**

### **LITERATURE REVIEW**

Low student persistence and retention negatively impact an institution in the form of lost revenue earned from tuition. Low persistence and retention have a negative impact on students by delaying their time to graduation, as well as creating negative reinforcement of failure. First generation students are particularly at risk as they may already struggle to adapt to college life (Ali & Leeds, 2009). Jaggars and Xu (2010) generalized that underprepared online students are more likely to quit in comparison to their face-to-face (F2F) counterparts who experience similar difficulties.

The objective of reviewing the literature is to examine issues relevant to online student retention trends, possible causes for the trends reported in the literature, and the methods that have been attempted to improve online student persistence and retention rates. This literature review begins with an overview of trends affecting online learning in general to provide a context in which to discuss the challenges and strengths of online learning environments. Student retention and theories that address retention will be reported, with a focus on the connection that student motivation has with retention. A detailed discussion on the stated reasons in the literature identified for weak and robust retention will be followed by a presentation of strategies on how to improve retention. In conclusion, the impact that orientation attendance has on student retention will be reported with a description of the various methods of delivery stated in the literature.

#### **Trends in Online Learning in Education**

Community colleges are increasingly relying on technology for course delivery and enhancement. Online course demand is a primary contributor, but students are driving the

adoption of technology even for traditionally taught courses in the classroom. This trend is no better exemplified than in the developmental writing courses for which students must submit documents in electronic format (Ratliff, 2009). The inherent capability of the online environment to provide secure communication and interaction for the learners has increased the use of the web in education by orders of magnitude since its inception (Sharma, Banati, & Bedi, 2011). Although dealing with the demands of work, family, and life in general, online students have reported that the flexibility offered by online courses is a primary factor in enrolling. “Online students tend to be somewhat older” (Lorenzetti, 2005b, p. 6) than are F2F students, with an average age differential of 3 years between on-campus and online students (Lorenzetti, 2005b).

Ratliff (2009) reported that students believed that different technologies existed for different purposes. For example, they tended to agree that e-mail, the World Wide Web, discussion forums and learning management systems (LMS) such as Blackboard were reasonable ways to communicate with their instructors and classmates. They also believed that instant message services, such as Google Talk, and social network sites, such as Facebook, were best used for personal communication and should not be used for coursework. Conversely, instructors reported that they were being forced to change their teaching methods to adapt to the new technological environment. Lecture alone is insufficient to hold student’s attention in the wake of current learning technologies. Instructors must incorporate new tools into their courses if they are going to capture and maintain student interest (Ratliff, 2009).

### **Challenges of the Online Learning Environment**

Educators frequently expect that incoming students already possess the technical skills necessary to succeed in an online environment, but according to Ratliff (2009), this notion is often an unfortunate misconception. The perception among instructors is that as a result of being

exposed to technology from an early age, their younger students possess a satisfactory level of computer skills upon entering college. Multiple studies have proven that this assumption is incorrect (Ratliff, 2009). Receiving instruction via the Internet, and being part of a cohort is something very new to many students starting a distance education program (Britto & Rush, 2013; Scagnoli, 2001; Wozniak, Pizzica, & Mahony, 2012). Researchers had found that online learning environments are useful when student expectations and individual differences were analyzed first and aligned with the best instructional method for each student (Uzunboylu, Bicen & Cavus, 2011). Faculty members then may have to first provide remedial instruction to their students in the proper use of the technology used in the course before they can approach the course material. This additional instruction reduces the amount of time available for course content delivery (Ratliff, 2009) and frequently requires instructors to change their teaching practices (Scagnoli, 2001). These adjustments may pose a tremendous challenge for some instructors who may be novices themselves with the proper use of learning technologies or the LMS.

Students may be experts with instant message chatting, Twitter, Facebook, and other social networking sites, but they may simultaneously be inexperienced with attaching documents to an email or writing an essay using proper formatting tools in Microsoft Word. Many students who infrequently corresponded with their instructors via email frequently did not have to format in their messages, ignored punctuation and grammar rules, and used slang terms or acronyms which with the instructor is unfamiliar (Ratliff, 2009). Although the majority of students have had some technological influence throughout their lives, a significant number are underprepared to learn in an environment that relies heavily on technology. New students may not be able to

leverage technology to conduct basic research, analyze the information, write an essay, or develop a basic presentation with Microsoft PowerPoint (Ratliff, 2009).

The self-paced and self-directed characteristics of eLearning, which have been shown to attract students to online courses, have frequently been the same characteristics that led students to have lower levels of engagement or to disengage completely (Sansone et al., 2011). Minimally and non-engaged students pose a severe problem for retention because an online instructor cannot always be online to assist students who should be participating (Uzunboylu, et al., 2011).

### **Strengths of the Online Learning Environment**

Digital culture has infused all aspects of modern life, thus creating learners who innately have some level of digital literacy and communication technology skills (Uzunboylu et al., 2011). Colleges must make a concerted effort to ensure that their online courses are of equal rigor and sophistication to their traditional classroom-based courses (Lorenzetti, 2005a). Aiding this effort, online learning environments provide a place for students to actively engage with peers and instructors (Sansone et al., 2011) in a way that is familiar to the digitally aware student providing anytime, anywhere access (Mueller & Strohmeier, 2011; Uzunboylu, et al., 2011). The online learning environment also provides a convenient electronically accessible area in which to store and deliver course content as well as to collaborate and communicate (Mueller & Strohmeier, 2011). This level of access contributes to students reporting that they find online courses to be a more efficient use of their time as compared to traditional classes (Lorenzetti, 2005a). This increased efficiency associated with online courses is particularly true for the students who do not require much outside help with pacing and task management. The propensity for the online asynchronous discussion for flexibility and convenient access to

communicate with the instructor and peers fosters a productive learning environment for the digitally comfortable student (Sharma, et al., 2011).

Online learning brings students together in its virtual environment bridging great expanses ranging from intercity to interstate, to intercontinental boundaries unlike any instructional method previously possible (Uzunboylu, et al., 2011). In research on student learning development, Ashcraft (as cited in Uzunboylu et al., 2011) found that students who were taught using an online collaborative instructional method tended to exhibit improved learning achievements (Uzunboylu, et al., 2011). In other research, students displaying a high degree of interactivity had a proportionately higher probability of knowledge gain as compared to their peers with lower levels of engagement (Sharma, et al., 2011).

### **Student Retention**

Distance education is long renown for possessing a poor record of retaining students (Meyer, et al., 2009). Retention rates in online courses are a concern at institutions of higher education across the nation (Kelso, 2010; Doherty, 2006; Lorenzetti, 2005a; Nash, 2005) as evidenced by the NCES 2003-2004 study titled *Profile of Undergraduates in US Postsecondary Education Institutions* in which Horn and Griffith (2006) stated, “student persistence is of concern to educators and policymakers” (p. iii) .

Doherty (2006) stated that online retention rates could be 20% lower than F2F retention rates, but that figure may be a gross understatement with some community colleges reporting online retention rates well below 80% (Aragon & Johnson, 2008). Meyer et al. (2009) stated that wide exists variation in reported online completion rates, with retention rates ranging from 80% to 50% or lower. VanOra (2012) further emphasized this point by stating that fewer than 30% of community college students would graduate with an associate degree within six years of starting

their college career. Retention data gathered aligns with Meyer, Bruwelheide, and Poulin's (2009) estimates. The Office of Research, Planning and Institutional Effectiveness reports an average online student completion rate of 63% for fall 2012 and 61% for fall 2013, this is in comparison to a F2F student completion rate of 75% for fall 2012 and fall 2013 (L. Wichman, personal communication, March 17, 2014).

In the past, poor student retention was considered as a failure on the student's part. Students who did not complete their degrees were thought to lack skill or motivation (Tinto, 2006). That perspective has mostly been abandoned and subsequently labeled as *blaming the victim*. With the intention of understanding the complex issue of student retention, Tinto (1997) stated that the classroom experience played a significant role in the student retention equation. For part-time and commuter students, the classroom may very well be the only social interaction that students have with peers and faculty. By fostering a high level of student involvement, faculty can contribute to achieving a high retention level (Tinto, 1997; 2006). Although adult students may place a high value on integration and interaction with peers and faculty, traditionally aged student retention may reap more significant benefit from these activities than their adult counterparts may reap (Meyer, et al., 2009). Due to this disparity of impact amongst different age demographics of students, the emphasis that Tinto (1997; 2006) places on interaction may not be entirely appropriate when considering retention factors for nontraditional community college students (Meyer, et al., 2009).

Bean and Metzner (1985) posited that interaction and social integration had a lesser impact on more mature and commuter students than they had on traditionally aged students and students in residence. Instead, these older and commuter students placed greater emphasis on the

utility of the education itself than they do on being able to find enough time and funds to continue with their education (Meyer, et al., 2009).

### **Student Motivation**

Mahle (2011) stated that the primary goal of education should be developing students who find learning enjoyable, and thus, would be motivated to learn. To achieve this goal, motivation must first be understood. VanOra (2012) defined motivation as students “yearning to learn and develop intellectually” (p. 26). Motivation influences what, when, and how one learns (Hartnett et al., 2011). Motivated students are more engaged, take on challenges, and have higher performance and persistence. Hodges (2004) stated that motivation drives student persistence, and ultimately student success. Tinto (1997) agreed, stating that motivation and persistence are connected. Hodges (2004) continued, stating that student motivation tracks positively with student to student, and student to instructor interaction levels, and student support systems or tools.

The interactivity of any type is an essential component of building student motivation for learning in an online course (Mahle, 2011). Distance students in particular need to be motivated to effectively work independently and to take responsibility for their learning.

There are two primary types of motivation (Sansone, et al., 2011), which Hartnett et al. (2011) describe as: intrinsic and extrinsic, which are variable factors. All students are influenced to some degree both intrinsically as well as extrinsically. To the intrinsically motivated student, performing a task is a reward in and of itself, whereas an extrinsically motivated student will perform a task as a means to an end, for example, to receive a grade. Mahle (2011) implied that online learners need naturally high intrinsic motivation and recent research supports the idea that online students, in fact, do have higher intrinsic motivation than their F2F counterparts (Clayton,

Blumberg, & Auld, 2010). Intrinsically motivated individuals placed the highest value on the expectancy that learning will occur. In other words, for these students, accomplishing the goal is its reward. The higher value that students place on a goal, be that learning a specific chapter or scoring well on an exam, and the level to which they expect to achieve that goal, the more motivated they will be to invest the requisite time and effort in order to reach it (Sansone, et al., 2011). *Goals defined motivation* is exceptionally strong in determining the order in which a student will approach their work. The type of motivation influences many student decisions, such as opting to enroll in an online course instead of a traditional F2F course and electing to read the material first rather than jumping straight to the assignment section of the material. Sansone, et al. (2001) suggested that instructors who make an effort to ensure that the students understand that the material and learning have implications beyond the classroom into *real life* may transform an unmotivated student into a motivated one.

Although online students may be strongly motivated from within, their motivation is not constant. External motivational factors, such as course structure, communication with faculty, and peer interaction, all have value for online learners. Motivation is demonstrated by mastery of set goals, the application of intrinsic and extrinsic factors and influences, and a student's sense of self-efficacy (Bassili, 2008). *Experience defined motivation* involves placing the highest value on the simple act of taking part in the learning experience. In other words, reaching the goal is essential, but the process of reaching it is. Intrinsic motivation is more likely to be sustained over long periods and better at influencing subsequent actions than is extrinsic motivation (Sansone, et al., 2011).

## **Reasons for Weak Retention**

Student motivation factors and their effect on student learning and attitudes are not the only variables in the student retention equation. Numerous other factors that contribute to weak retention in online courses are cited in the literature.

Jaggars and Xu (2010) suggested that, the greater number of online courses in which students enroll, the less likely that they will earn academic awards or transfer to a four-year institution. The enrollment trend of students increasing their online course load may be one factor for the high non-completion rate for online students. Tinto (1997) stated that students who had a higher involvement with college life might have experienced improved persistence over those students who were less involved. The very nature of online learning makes it extremely difficult or even impossible for students to engage in on-campus college life.

Students can arrive at colleges and universities mildly to severely academically underprepared because they possess pre-existing academic deficiencies. In addition, they may not have been adequately prepared for college-level classes during their time in high school (VanOra, 2012). Wholly inaccurate expectations of what an online course entails compounded these deficiencies. Lorenzetti (2005a) stated that, rather than increase their work efforts and dedicate more time to their learning, many online students have voluntarily withdrawn or simply stopped participating so that they would be dropped from classes that they deem to be too complicated. When questioned about why they do this, these students have reported that they expected the online course to be easier or to involve less homework and time commitment than a traditional classroom-based course.

Students may also be technologically underprepared, which results in poor retention rates. Certain subjects' higher than average technological demands exacerbate this problem.

Courses in fields that have naturally high technological proficiency requirements, such as accounting, business statistics, and computing, have had even higher attrition than their traditional classroom-based counterparts have had (Meyer, et al., 2009). Ratliff (2009) studied 331 incoming freshmen at a community college in the southeast United States over a two-semester period. These students were assessed on a variety of computing and technology skill sets. The results were that 41% of the first semester participants and 48% the second-semester participants scored below the passing mark of 75% capability with technology.

When student-initiated requests to withdraw from courses are examined, online students have frequently cited non-specific or very broad reasons that are similar to those that students have given for voluntarily dropping their traditional classroom courses. *Generic personal reasons* ranked near the top of the list, with family problems, such as needing to provide child care or adult care to a family member, frequently cited by students as reasons for dropping their courses (Meyer, et al., 2009). In one study, 16 out of 18 students described copious demands on their time as being the reason for their decisions to drop their courses, with many of these students reportedly working more than 30 hours per week (VanOra, 2012). In short, students reported that demands of life prohibited successful completion of a course or courses. "Most people are not retained because life happens" (Lorenzetti, 2005b, p. 3).

VanOra (2012) stated that the reasons for poor student retention do not wholly reside with the student. More than half of students in the 2012 study experienced what the author described as poor teaching from their instructors. Common complaints were a tenuous connection to the course material to their life experiences and awkward delivery, possibly stemming from a general disinterest in the students or their learning.

### **Reasons for Strong Retention**

Students are motivated by the opportunity to make their family members proud and to serve as role models (VanOra, 2012). They have an intrinsic yearning to learn and develop intellectually. By improving the course design of online courses, faculty can build upon this desire of the students to learn. Course redesigns that were focused on improving course retention have shown improved *drop-failure-withdrawal* rate, from 45% to 11% in a fine arts course at Florida Gulf Coast University, from 39% to 25% in an introductory sociology course at Indiana University-Purdue University Indianapolis, from 49% to 38% in a computer programming course at Drexel University, and from 28% to 19% in an introductory psychology course at the University of Southern Maine (Meyer, et al., 2009).

Online learning is attractive primarily due to its convenience for students whose selected program of study is not available locally or have the time to attend traditional classroom-based courses, which are often scheduled during the workday. Participation levels of both instructor and students can be a strong predictor of students completing a course or requesting to be withdrawn (Meyer, et al., 2009). Another predictor of both online and traditional course completion is age. Lorenzetti (2005) suggested that the older the student, the higher the chance of success. One of the most reliable predictors of online student success is the relevance of their course of study to their jobs. Employer mandated education as a requirement to maintain employment or to earn promotion has been associated with increased student completion rates (Meyer, et al., 2009).

### **Strategies to Improve Retention**

Strategies to improve retention have been studied. Effective retention strategies start during student enrollment. Retention increases when prospective students receive immediate

responses from faculty members or program representatives when they inquire about the program or a specific course (Meyer, et al., 2009). Using this feedback, and available program information, the student must develop realistic expectations regarding the type of work that will be required of them (Scagnoli, 2001). Ratliff (2009) stated that if a student could not correctly type an essay using a word processing program, they could not reasonably be expected to submit the essay electronically to the instructor. Colleges and universities have an opportunity to intervene early to provide remedial training on the technological tools and programs used in their distance education courses before student deficiencies in these tools lead to frustration and eventually student failure (Ratliff, 2009).

VanOra (2012) suggested that instructors might consider setting aside time early in the semester to present students with essential study strategies, such as effective time management, and using the syllabus and grading rubric to help determine what concepts are of greater importance. VanOra recommended that students be encouraged to draft a course calendar or a to-do list, as these tools may be of benefit to many students struggling with the staying on task in a self-regulated online learning environment. Meyer et al. (2009) encouraged instructors to integrate into their course environments various components that promote self-direction that students need to thrive such as, negotiated work assignments, and to provide an opportunity for rich peer interaction using tools such as a discussion board, blog, or wiki. In this way, successful online students can learn the material but must maintain the motivation for learning on their own (Sansone, et al., 2001). Developing meaningful connections is very important. Scherer (2011) suggested that by creating small groups, students can work on a problem and arrive at a solution, together. Then they can share what they have learned with their classmates and the instructor who can suggest additional resources or alternative strategies and solutions. Another strategy that

has been suggested to improve student retention is to blend the challenge-based and problem-based methods of instruction with collaborative learning, which helps the vigorously active learners in channeling their socializing skills in a constructive manner. Weak active learners, on the other hand, need instruction in a self-directed learning mode that lets them achieve the learning objectives at their own pace (Sharma, et al., 2011).

### **The Role of Orientations in Higher Education**

Scagnoli (2001) stated that student orientations are a traditional mechanism used by colleges and universities to help transition new students to the college learning environment. They are widely used because they have proven to be effective (Harrell, 2008). Orientations have been noted to improve F2F student satisfaction and success (Tinto, 1997) but they are also valuable for online students. The method of instruction utilized during an orientation to online learning workshop is irrelevant as Scagnoli (2001) stated that orientations are equally effective when delivered F2F or fully online. In a survey conducted by Nash (2005), 46% of student respondents felt that they would have benefited from an orientation to online learning. These students' opinions are supported by Harrell (2008) who stated that orientation is one of five primary categories which can positively impact student success, and by Wojciechowski and Palmer (2005) who claimed that attendance at an orientation to online learning is the second most significant factor predicting student success.

### **Orienting Students to the Online Learning Environment**

Ratliff (2009) stated that assessing the skills of incoming students before they are expected to perform in a technology-rich learning environment, such as in a fully online course, is the responsibility of the institution. New student orientation programs and first-year seminar courses that are designed to help students make a successful transition to college have

traditionally been offered at colleges and universities. Institutions that offer distance education courses and programs need to consider offering orientation programs suited for students at a distance (Scagnoli, 2001; Kelso, 2010; Vail, 2013). For these orientation programs to be successful, they should provide learning experiences similar to those that the student will experience during their online courses which will maximize their adaptation to the new learning environment (Scagnoli, 2001).

Orientation to online courses serves the same functions and has similar objectives as more general college orientations in that they can facilitate social interaction and increase student involvement (Tinto, 2005), create a sense of belonging to a community of online learners, and improve student retention (Scagnoli, 2001). Many schools, such as Boise State University, have implemented a mandatory orientation to online learning, which Boise State University called *Boot Camp*. Boot Camp orientation resulted in an improvement in the online student drop rate from 40% before the orientation was implemented to less than 20% post-implementation (Carnevale, 2000). Koehnke (2013) and Vail (2013) both stated that having an orientation to online learning demonstrates to the students that the institution is serious about online learning and is invested in their success.

Scagnoli (2001) suggested that when programs are new to the college, or when a program of study has never been taught online before, that students will require additional information beyond the typical orientation information. Easy access to program information and useful, but proactive student advising can help alleviate student confusion surrounding new online programs by buttressing online orientation information.

## **Orientation Delivery Method Differences**

There are three possible delivery methods that are appropriate for orientations to online learning. The traditional F2F delivery model requires students and a facilitator to be together in a classroom or lecture hall. These types of orientation can be completed using traditional lecture methods, interactive group discussion, or a hands-on workshop. The blended learning or hybrid delivery model is infrequently used as it is more laborious for faculty and students alike. The proponents of the hybrid instructional model claim that it exhibits the best traits of both online instruction and F2F (Lopez-Perez, et al., 2011; Parcel, Eshet-Alkalai, & Alberton, 2009). The online delivery model requires participants to gain access to online tools and systems to engage in virtual learning tasks, which may or may not be led by a faculty or staff member. Each delivery method has its unique strengths and weakness.

Using the F2F instructional delivery method to orient students to an online learning environment may seem unusual, but Scagnoli (2001) stated that it could be quite useful in helping groups of students become familiar with different methods of distance-based instruction. Determining the technological level of the participants is more easily accomplished in a F2F environment than in a remote environment. Students may exhibit patterns of confusion or incomprehension that they do not vocalize, but an astute facilitator could recognize on their confusion and address it immediately. The F2F environment is ideal for supporting a hands-on workshop that supports kinesthetic learning. The workshop is conducted in a safe setting where the instructor can guide students through a process that the student may not have been able to complete on their own.

There is no definitive time limit that a F2F orientation may encompass; it may take hours, days, or even weeks to complete, depending on the depth of knowledge delivered in the

orientation. Long-term orientations typically involve multiple workshops, with several tasks that center around social activities designed to facilitate team-building and a sense of community (Krampe, L'Ecuyer, & Palmer, 2013; Scagnoli, 2001). Regardless of duration, a F2F delivery model for orientations to online learning can ease the transition from traditional to distance education, especially for the reluctant distance student. Krampe et al. (2013) reported that conducting a F2F orientation for the online staff preceptor nursing education program was essential to the program's success.

Conducting an orientation to online learning using distance education tools may seem inappropriate. One may wonder how students can use a tool that they have yet to be instructed how to use. As paradoxical as it may sound, using distance educational tools to orient students to online instruction can be very useful, working much like a foreign language immersion program. Students enroll in online courses for different reasons; limited access to campus due to proximity or scheduling conflicts are very commonly reported by online students as the impetus for their enrollment. Participation in a F2F orientation may not be feasible for all online students; thus, access to online orientation tutorials in the form of a workshop is welcomed by many distance education students (Scagnoli, 2001).

This type of online orientation is typically designed to focus on understanding the uses of and instilling familiarity with the different tools and sites used in the institution's distance education programs (Scagnoli, 2001). Students use the tools that they will be using in their courses, such as sending email messages, inserting graphics into documents, submitting class assignments and applying other skills. Setting the orientation in the same environment that they are being trained to use is much like a language immersion course, which can be very useful (Carnevale, 2000). It is possible to over-use or misappropriate technology when developing an

online orientation. Scagnoli (2001) stresses the need for a help desk or live help chat to provide immediate assistance to students who encounter trouble working through the orientation materials regardless of the technology used in an online-based orientation.

Although uncommon, the blended instructional model can be used to conduct an orientation to online learning. When appropriately designed, the online and F2F delivery methods can complement each other in an orientation program that focuses on three relevant areas: training students in technical skill building, group formation, and course information (Scagnoli, 2001).

### **Summary**

**What is Known.** A review of the literature investigating orientation of students to online learning environments revealed that although online learning has become the largest growth sector in higher education (NCES, 2006; Vaill, 2013), the bulk of the research conducted has been on student orientation to college in general. Many of the studies that do focus specifically on student retention in online courses do not address college-wide orientations, but instead involve orientations for specific programs or courses (Krampe, et al., 2013; VanOra, 2012; Meyer, et al., 2009).

The literature shows that students prefer the unparalleled scheduling flexibility that online courses provide (Lorenzetti, 2005a; Sharma, et. Al., 2011; Uzunboylu, et al., 2011), but they may not be as prepared to learn online as they, or as faculty presume (Uzunboylu, et al., 2011; Ratliff, 2009). The formidable technological skill sets that students bring to the online learning environment do not always translate well into an academic environment, thus leaving the student feeling lost or unprepared to learn (Ratliff, 2009; Scagnoli, 2001). This discrepancy

creates the need for remediation on technological skill sets, which frequently, the instructor must provide on a course-by-course basis.

Historically, student retention in online courses is much lower than in similar traditional F2F courses (Lykourantzou, et al., 2009; Meyer, 2009; VanOra, 2012), which may be due, in part to overconfident, yet underprepared students enrolling into online courses with little to no advisement. Online learning's poor retention record has begun to draw the attention of administrators at many institutions of higher education, as well as from leaders in the federal government. Interest in student retention is nothing new. Tinto began his studies in the mid-1970s and continues today, with many following his lead. According to Meyer et al. (2009), Tinto's model of traditionally aged student engagement in academic and nonacademic activities may not be entirely appropriate for nontraditional, online students.

To gain a better understanding of why online courses have poorer retention than their F2F counterparts, student motivation must be taken into consideration. Motivation can be broadly categorized into two distinct variants; intrinsic motivation, which is primarily sourced from within one's own self, and extrinsic motivation, which is primarily sourced from outside of one's own self (Bassili, 2008; Hartnett, et al., 2011; Sansone, et al., 2011). Online students must necessarily possess high levels of intrinsic motivation (Hartnett, et al., 2011) but that does not preclude the duty of the instructor to also provide adequate extrinsic motivational factors (Mahle, 2011; Sansone, et al., 2011). Even the most self-motivated student will soon lose interest if the instructor cannot connect the classroom learning to the outside world (Sansone, et al., 2011).

The self-reported reasons that F2F students provide for withdrawal requests from a course mirror their online student counterparts' reasons for their withdrawal requests. VanOra (2012) reported that academically underprepared students contribute to the poor completion rate

and Lorenzetti (2005) referred to inadequate advising to prepare students for the uniqueness of the online learning environment as a contributing factor in student non-completion. The most substantial single factor for non-completion that students self-reported are an ambiguous category: *personal reasons* (VanOra, 2012; Meyer, et al., 2009). Lorenzetti (2005a) stated that frequently life circumstances prohibit course completion.

There are many strategies that an institution can adopt that have been shown to have some positive impact on student retention rates. Meyer et al. (2009) suggested that faculty response rates to student communication be as fast reasonably as possible. The adoption of a hybrid instructional model may also help with retaining students (Sharma, Banati, & Bedi, 2011). There is some evidence that orientations to college, in general, have improved student satisfaction ratings, which have resulted in improved student retention (Scagnoli, 2001; Tinto, 2006). Carnevale (2000) showed that the same results could be obtained with distance education students if the students are required to attend an orientation to online learning. Evidence is consistent with the idea that a F2F orientation to online learning positively affects student retention (Krampe, L'Ecuyer, & Palmer, 2013; Scagnoli, 2001), but Mamo et al. (2011) and Carnevale, (2000) argued that online students selected distance education for a reason, so an orientation should cater to that preference by being available in an online format. Vail (2013) emphasized that students new to the online learning environment must be provided the opportunity to become acclimated before they are thrust into it.

**What is Unknown.** Unanswered questions yet remain that the literature does not address.

- If the orientation is purely voluntary, will it be as effective at improving student retention rates as a mandatory orientation?

- Does technical competency make a difference in how well an orientation prepares a student for the online learning environment?
- How do demographic factors influence the effectiveness of different types of orientation? For example, do traditionally aged students have better success with an online orientation or with a F2F orientation?

### **The Significance of the Dissertation Research**

There is a plethora of research on how orientations to college in general positively affect both student satisfaction and completion rates. Few studies have been conducted targeting completion rates of students enrolled in distance education courses and online courses in particular. Instead, they have been narrowly focused on one specific online course or a single online program. This research study will:

- Span three academic years of participation in the online learning orientation.
- Examine a widely targeted online learning orientation environment rather than a course specific or program-specific orientation.
- Explore to what extent a predisposition to learning in an online learning environment is associated with higher student success and completion rates.

It is through these three focus points that this study will add to the existing body of literature investigating the association between orientations to online learning and student persistence and student success.

## CHAPTER 3

### METHODOLOGY

This chapter outlines the methodology that was used to evaluate the research data gathered for this dissertation study, the research methods employed, and a description of the location for the study and its participants. The chapter concludes with the procedure used in data collection and analysis followed by a summary.

The purpose of this ex-post facto study was to investigate the relationship between student completion of an orientation to online learning and student success factors such as grade point average and course completion rates. The research questions addressed by this study are as follows:

Q1. Is there an association between student completion of an online learning orientation and student success factors such as course completion and grade point average?

H<sub>0</sub>: Students who complete an online learning orientation will have higher success factors than students who do not complete an online learning orientation.

H<sub>1</sub>: There is no difference in the success factors between students who complete an online learning orientation and students who do not.

Q2. Is there a difference in student success factors between students who score well on the SmarterMeasure readiness assessment or students who score poorly and students who complete an online learning orientation or those who do not complete an online orientation?

The research questions are addressed through statistical analysis of collected archival data retrieved from the learning management system (LMS) on which the orientation was conducted.

Archival data was also collected from the institution's student database where course completion and final course grades are stored.

The SmarterMeasure readiness assessment was used to determine the population for the study to help eliminate selection bias introduced because students voluntarily take the online learning orientation. It could be argued that only the "best" students complete optional work. By using the SmarterMeasure readiness assessment, the researcher quantified the student's skill level with online learning.

### **Overview of Research Methodology**

The study was an ex-post facto investigation using data gathered from the OLO hosted in the LMS. On average there are 9,000 students enrolled in the OLO each semester. Participation in an OLO is voluntary thereby creating a selection bias of the students who elected to participate. A true experimental study is one possible approach to the research methodology. A group of randomly selected students could be selected and required to participate in an OLO, and their student success factors tracked and analyzed. While this is a very viable approach, it has a drawback of taking a very long time.

Archival data was available in the LMS on student completion of various components of the OLO. The first step of the OLO was the SmarterMeasure readiness assessment. It was possible to use the results of this assessment to create two sample groups for the study. The first group was students who earned a score of three or four on the Personal Attributes, Technical Competency and Technical Knowledge assessment sections. This was the control group. The SmarterMeasure assessment classified this group as ready to learn in an online environment. Students with a score of one or two in any of the three categories were in group 2 which was the treatment group. The SmarterMeasure assessment classified this group as less prepared to learn

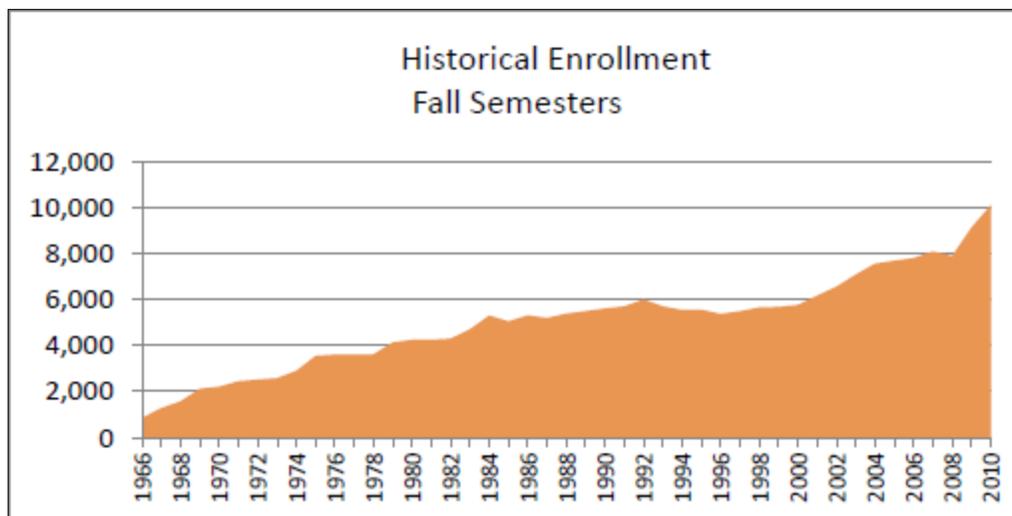
in an online environment. The OLO was designed to improve student ability in Personal Attributes, Technical Competency and Technical Knowledge areas. Through appropriate statistical analysis comparing the success factors of students from these two groups, the relationship between completing an OLO and improved success was examined.

Archival data was available from the 2014-2015, 2015-2016, and 2016-2017 academic years. Six semesters worth of data to compare added scope and validity to the study as compared to the more limited one class or one-semester scope of similar studies.

### **Setting**

The location for this study was a public mid-sized community college located in Waco, a city that is in the geographical center of Texas. Each year the college enrolls between eight and nine thousand unique students (Ilich, et al., 2013). According to the 2012-2013 College Factbook (Ilich, et al., 2013), female students (54%) out-numbered the males 5,569 to 2,988 (2.8:1 ratio), with the average age for all students being 25.3 years old. The 2012-2013 Fact Book (Ilich, et al., 2013) also stated that the racial and ethnic background of the student body shows that White, Non-Hispanic students hold a 58% majority with 4,965 students. The next most populous ethnicity are Hispanic students who are represented by 2,090 (24%) students, followed by 1,318 (15%) Black, Non-Hispanic students, and 184 (3%) students who are categorized as “Other.” During the fall 2013 semester, there were 1,345 traditional, F2F sections, and 338 online sections offered at MCC (Ilich, et al., 2013).

The college has had steady enrollment growth since its inception in 1968. The most recent five-year polling cycle from 2013 shows an 18% increase over the previous 5-year polling cycle to 9,302 students enrolled (Ilich, et al., 2013).



*Figure 1.* Historical Enrollment

In 2012, the college had 506 faculty members. Of that total, 222 (44%) were full-time instructors with the average age being 52 years old. The remaining 284 (56%) instructors were part-time with the average age being 45 years old (Ilich, et al., 2013). College faculty who hold master's degrees as their highest attained degree are in the majority at 61%, with 24% holding a bachelor's degrees or lower, and 15% holding a doctorate (Ilich, et al., 2013).

The orientation to online learning was designed as a seven-step, self-paced overview of both the LMS and the online learning environment at the college. The videos were produced by the LMS publisher. These were used to ensure high production values. The college online learning environment content was developed by experienced, in-house online faculty members to with the goal of providing authentic and helpful guidance to the students to prepare them for faculty expectations.

The participants were asked to first complete the SmarterMeasure readiness assessment. This assessment is a nationally validated multipoint assessment designed to help quantify a student's state of readiness to learn in an online environment. The assessment used a four-point scale ranging from 1 – Opportunity for Improvement to 4 – Strength. There were seven areas

assessed: Life Factors, Individual Attributes, Learning Styles, Reading Rate & Recall, Technical Competency, and Typing Speed Accuracy (Assessment overview, 2013).

### **Participants**

The participants for this study were all students who completed the SmarterMeasure readiness assessment for the fall or spring semesters of 2014 through 2017. The assessment measured student readiness to learn in an online environment through a web-based, five essential skills assessment (Assessment Overview, 2013). There are approximately 300 students each semester who complete the SmarterMeasure assessment. These students were the population for the study. The population was divided into two groups; those who passed the SmarterMeasure readiness assessment and those who did not. Passing the SmarterMeasure assessment was determined by the Personal Attributes, Technical Competency, and Technical Knowledge subsections of the assessment.

A full complement of course offerings in the college catalog is available as online courses. These include all of the most popular transfer credit courses from the Arts and Science division such as; English Composition I and II, Introduction to Philosophy, College Algebra, and Art Appreciation. There are many courses available from the Workforce division, too, such as; Medical Terminology, Principles of Management and Principles of Marketing (S. Abright, personal communication, April 15, 2014).

### **Variables**

This section will detail each of the variables found in the codebook which were used in the statistical analysis.

**Student identification number (ID).** Each student was provided a student ID by the college which was used to identify the members of the study while maintaining individual

privacy. These IDs were 7 digits long, created by the college systems, and have no connection to student Social Security Numbers.

Online learning orientation completion. The online orientation workshop is intended to provide a general overview of the Blackboard LMS, which is the online learning environment adopted by the college. The workshop covers navigation, the most commonly used tools, and some tips on how to succeed in an online course. Instructor expectations are described in general terms emphasizing that all instructors are different, and so are their expectations. Strategies on how to manage their time and where to obtain support on technical, academic, and library services are also made available to the students.

Orientation attendance is not required by college policy or academic advising; it is left up to student discretion whether or not to attend an orientation to online learning. Some instructors elect to provide bonus points to students who do attend an orientation, while others make orientation workshop attendance a requirement by including a participation assignment during the first week of the course.

For the purposes of this study, a value of OLO+ or OLO- was assigned to each student; an OLO+ value indicates that the student scored at least a 75% on the final assessment in the orientation, whereas a value of OLO- indicates that the student scored less than 75% on the final assessment in the orientation. The attendance records for each type of orientation were recorded and stored separately in an effort to minimize cross-contamination. It is possible that a student opted to participate in an orientation workshop more than once in the same semester or in different semesters.

**Course completion.** For the purposes of this study, course completion is defined as any student who finishes the course and earns any grade, including students who earn a failing grade

(Ali & Leeds, 2009). There is the possibility that students were enrolled in more than one online course during the semesters on which this study focused. This could have resulted in a student completing one course, but not another. As each course utilized a unique course identification number, it was possible to determine if a student completed one of their online courses but did not complete another. In such a case where the same student completed one course, but not another, both values were used in the statistical calculation. Beyond orientation participation, there are numerous issues which may have affected student completion rates. Examples of these issues are unrealistic student expectations, first time taking an online course, the amount of previous college experience a student had, and the student's computer efficacy (Gaide, 2004).

**SmarterMeasure readiness assessment.** The SmarterMeasure readiness assessment attempts to gauge the readiness of a student to learn efficiently in an online environment. It does so by providing a score in seven distinct component areas. As outlined on the SmarterMeasure Assessment Overview website (2013) these areas are:

- Individual attributes - motivation, procrastination, willingness to ask for help.
- Life factors - availability of time, support from family and employers, finances.
- Learning styles - based on the multiple intelligences model.
- Technical competency - skills with using technology.
- Technical knowledge - knowledge of technical terms.
- On-screen reading rate and recall.
- Typing speed and accuracy.

Students are presented with a color-keyed report that ranks their readiness in each of the seven component areas indicating how well prepared that student is to learn in an online environment. A score between 0% and 25% is keyed red and indicates a substantial opportunity for improvement. A score between 26% and 50% is keyed yellow and indicates an opportunity for improvement. A score between 51% and 75% is keyed green and indicates an area of minor

or moderate concern. A score between 76% and 100% is keyed blue and indicates an area of little or no concern.

The SmarterMeasure assessment components which are covered by the Online Learning Orientation content are: Individual attributes, Technical competency, and Technical knowledge. For the purposes of this study, students who earned an average score of 75% or higher in these areas were considered as passing. Students who scored less than 75% in these areas were considered as not passing.

### **Procedure for Data Collection**

There is a comprehensive database system to record information regarding every aspect of student enrollment and course management. The office of Institutional Research and Effectiveness (IR) is charged with conducting retrospective and proactive research activities on student performance and retention (McLennan Community College, 2013). The process of retrieving retrospective data pertinent to this study is referred to as *conducting a query*.

Once permission to conduct data queries for the study has been obtained from the colleges Institutional Review Board, any individual who requires data is free to submit a request to the Database Administrative Specialist who will then conduct the various database queries using the specific data parameters needed. Such requests are most commonly conducted via email communication.

The results of many commonly requested queries are pre-published or pre-configured on the IR website. These are referred to as Departmental and Institutional Dashboards. The dashboard data is freely available and instantly available via the IR website.

The Blackboard LMS automatically keeps a record of student activity within each course shell and maintains much of this data within the grade center. The grade center data for the 2012

fall semester through the 2017 spring semester has been archived and stored. This archival data can be accessed using a spreadsheet program such as Microsoft Excel.

Any data required for this study was obtained either from a Department or Institutional Dashboard report, from a customized query run by Database Administrative Specialist, or from the archive files exported from the Blackboard LMS. Any personally identifiable data was obscured using a numbering system. All reports produced by the LMS or delivered by IR were stored on a password protected, encrypted server.

### **Data Analysis**

Two separate analyses were used for research question one: *“Is there an association between student success factors of students who are ready to learn in an online environment and students who complete an online learning orientation or those who do not complete an online orientation?”* The first analysis was a chi-squared test of independence to determine if there was an association between a passing score in the online learning orientation and a passing grade in online classes for students who were determined by the SmarterMeasure readiness assessment as ready to learn in an online environment. The first variable used for this analysis was SmarterMeasure readiness assessment, which has two levels: pass or not pass. A grade of 75% or higher on the SmarterMeasure assessment constituted a pass which was coded as SM+. A grade less than 75% on the SmarterMeasure assessment constituted a not pass which was coded as SM-. The second variable used for this analysis was grade earned from the online learning orientation, which had two levels: pass and not pass. A grade of 73.33% or higher on the OLO assessment constituted a pass which was coded as OLO+. A grade less than 73.33% on the OLO assessment constituted a not pass which was coded as OLO-. The second analysis was a chi-squared test of independence. The first variable used for this analysis was the completion of the

online learning orientation, which had two levels: complete and not complete. The dependent variable used for this analysis was grade point average, which had two levels: pass and not pass. A grade of A, B, C, or CR constituted a pass. A grade of D, F, CR or I constituted a not pass. Two separate analyses were used for research question two: *“Is there an association between student success factors of students who are not ready to learn in an online environment and students who complete an online learning orientation or those who do not complete an online orientation?”*

### **Summary**

This study examined the association between completion of an online learning orientation and course completion rates, student GPA, and variability in those values associated with student readiness indicators provided by the SmarterMeasure assessment. The participating students were selected based on their enrollment in a fully online course between the fall or spring semesters of 2014 through 2017. Students were given the opportunity to voluntarily participate in an online learning orientation prior to the start of their online course. While some students were given bonus points by their instructors or required via a first-week assignment to complete the orientation, most students who attended a workshop did so voluntarily. The results of these analyses will be discussed in detail in Chapter 4.

## CHAPTER 4

### RESULTS

This chapter will detail the statistical analysis methods used to examine the data starting with how the raw data was organized and aggregated. The method used to code the data will be discussed which will be followed up with details regarding the statistical testing utilized in the analysis. A detailed discussion of the results of the statistical analysis will then be presented. The chapter will conclude with a brief summary linking the results to the purpose and problem statement of the study.

#### **Analysis Method**

**Data Organization.** The data for this study was sourced from three databases. The first database was the SmarterMeasure analytics assessment search database. This database is accessible online via administrative login. All student assessment completion reports can be accessed and downloaded by applying various filtering options. For this study, the assessment completion range filter was used to limit search results to students who completed the SmarterMeasure assessment during the targeted semesters. Reports were generated for the 2014 Fall, 2015 Spring, 2015 Fall, 2016 Spring, 2016 Fall and 2017 Spring semesters. They were saved in Microsoft Excel workbooks and stored online using Dropbox which is an encrypted and secure server.

The second database was the Blackboard grade book. Each semester a new course shell is created in Blackboard for the online learning orientation. Every student enrolled at the college that semester is enrolled into the online learning orientation. All work done for the seven steps of the orientation are contained within the Blackboard course shell. Step one requires students to submit an Adobe .pdf file of their SmarterMeasure assessment results. Step five of the

orientation is a completion quiz which assesses the student's knowledge of content presented in the orientation. A copy of the Blackboard for the 2014 Fall, 2015 Spring, 2015 Fall, 2016 Spring, 2016 Fall and 2017 Spring semesters' data were generated as a Microsoft Excel workbook. The Excel files were downloaded and saved to their own Dropbox folder.

The third database was the Colleague database maintained by the college which manages all aspects of student information. A Microsoft Excel workbook was generated for 2014 Fall, 2015 Spring, 2015 Fall, 2016 Spring, 2016 Fall and 2017 Spring semesters which contained the grade each student earned in an online class. The student list was matched to those students who had submitted a SmarterMeasure assessment report to the online learning orientation step one assignment. Random numbers were used in place of names to de-identify students in the report. The report files were stored directly in their own Dropbox folder.

**Data Aggregation.** Data for 1,433 sections which represents duplicated headcount of individual students who enrolled in more than one course were aggregated first by semester and then totaled. The SmarterMeasure raw reports were winnowed down by cross-referencing it with the list of students who had completed step one of the orientation to online learning, submission of SmarterMeasure assessment results. The Individual attributes, Technical competency, and Technical knowledge results were isolated and averaged together generating a single numerical score ranging from 0% to 100%. The Blackboard raw reports were winnowed down by sorting the results by step one submissions. Students who lacked a step one submission were eliminated. The remaining students were then sorted by the score earned in step five online learning orientation completion quiz. The College raw reports were sorted by final grades earned in online classes. There was a column for each possible grade: A, B, C, D, F, CR, NC, W. Students

with more than one online course were counted by course grade earned thus creating a duplicated headcount total. The data was sorted grade attained from highest to lowest.

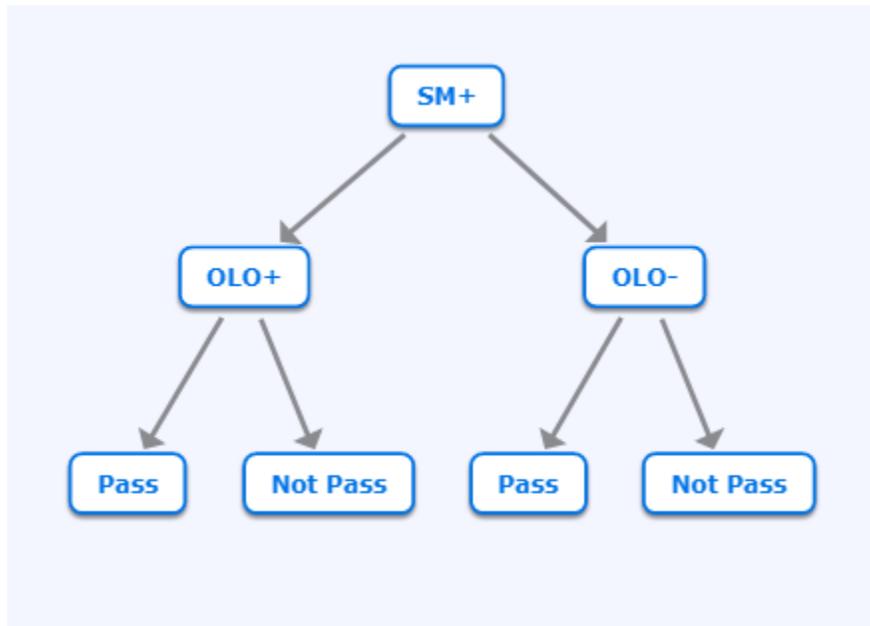
**Data Coding.** Students who submitted a SmarterMeasure assessment for step one of the online learning orientation were sorted into two groups based on the average score of the Individual attributes, Technical competency, and Technical knowledge sections of the assessment. Students with an average score greater than or equal to 75% were labeled as SmarterMeasure pass which was coded as SM+. Students with an average score less than 75% were labeled as SmarterMeasure not pass which was coded as SM-.

Students who completed step 5 Completion Quiz in the online learning orientation with a score greater than or equal to 73.33% were labeled as orientation pass which was coded as OLO+. Students who completed step 5 Completion Quiz in the online learning orientation with a score less than 73.33% were labeled as orientation no pass which was coded as OLO-.

In one worksheet the students were sorted by grades earned in an online class. Students who earned an A, B, C, or CR were labeled as course pass which was coded as PASS. Students who earned a D, F or NC were labeled as course not pass which was coded as NOT PASS. In a second worksheet, the students were again sorted by grades earned in an online class. Students who earned an A, B, C, CR, D, F or NC were labeled as course complete which was coded as COMPLETE. Students who earned an incomplete or were withdrawn from the course were labeled incomplete which was coded as NOT COMPLETE.

**Statistical Testing.** To answer research question one, “Is there an association between student success factors of students who are ready to learn in an online environment and students who complete an online learning orientation or those who do not complete an online orientation?” Two chi-squared tests for independence were conducted. The first test was

conducted on the group who scored greater than or equal to 75% on the SmarterMeasure assessment, SM+. The first variable used for the test was the score earned on the online learning orientation completion quiz, OLO+ and OLO-. The second variable used for the test was the grades earned in an online class, PASS or NOT PASS.



*Figure 2.* SmarterMeasure Pass – Course Grade

The second test was conducted on the group who scored less than 75% on the SmarterMeasure assessment, SM-. The first variable used for the test was the score earned on the online learning orientation completion quiz, OLO+ and OLO-. The second variable used for the test was the grades earned in an online class, PASS or NOT PASS.

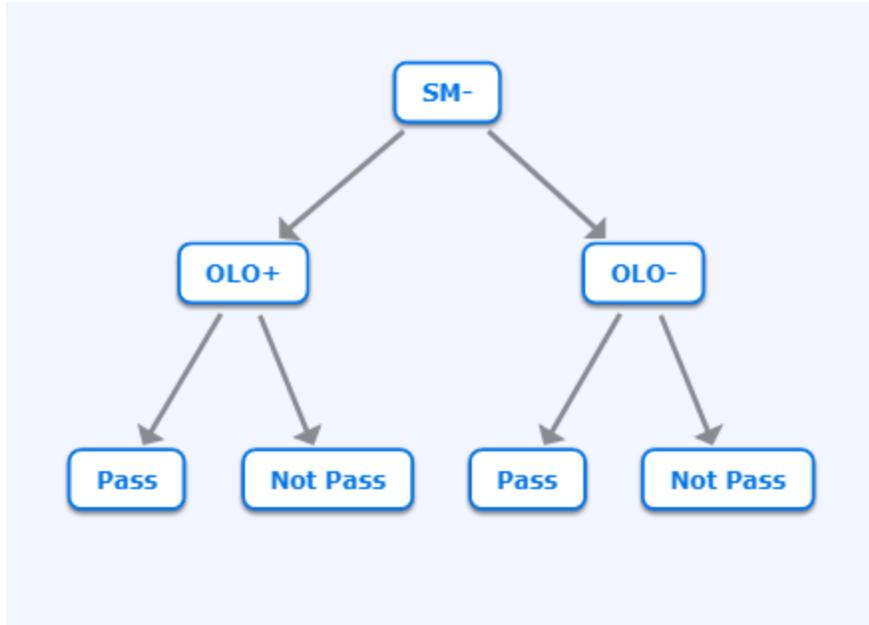
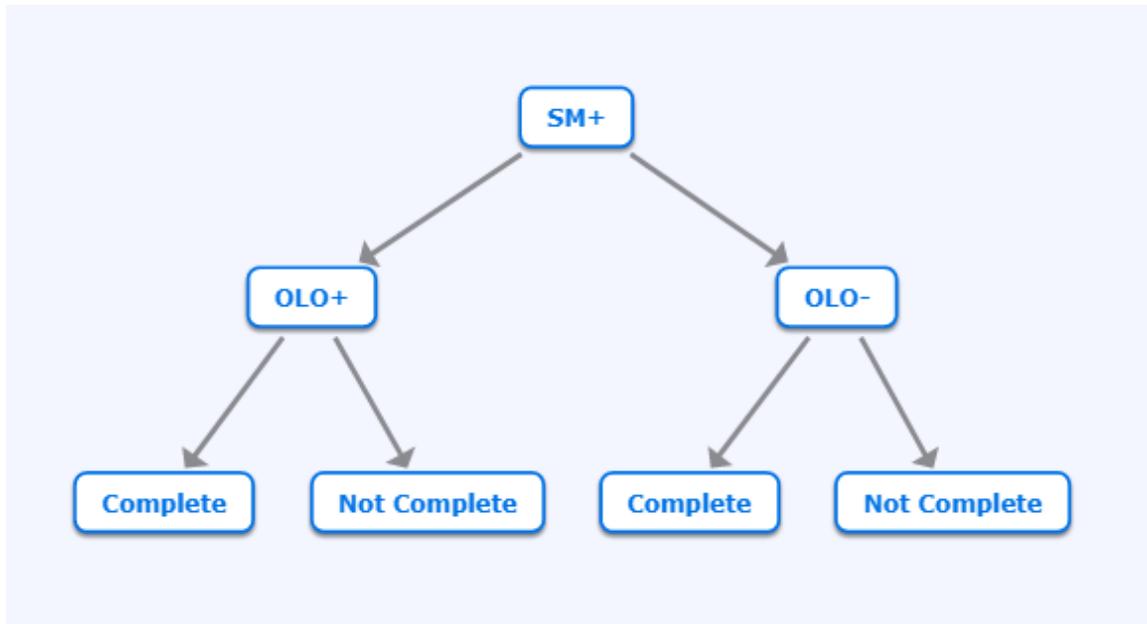


Figure 3. SmarterMeasure not Pass – Course Grade

To answer research question two, *“Is there an association between student success factors of students who are not ready to learn in an online environment and students who complete an online learning orientation or those who do not complete an online orientation?”*

Two chi-squared tests for independence were conducted. The first test was conducted on the group who scored greater than or equal to 75% on the SmarterMeasure assessment, SM+. The first variable used for the test was the score earned on the online learning orientation completion quiz, OLO+ and OLO-. The second variable used for the test was the course completion rate earned in an online class, COMPLETE or NOT COMPLETE.



*Figure 4.* SmarterMeasure Pass – Course Completion

The second test was conducted on the group who scored less than 75% on the SmarterMeasure assessment, SM-. The first variable used for the test was score earned on the online learning orientation completion quiz, OLO+ and OLO-. The second variable used for the test was the course completion rate earned in an online class, COMPLETE or NOT COMPLETE.

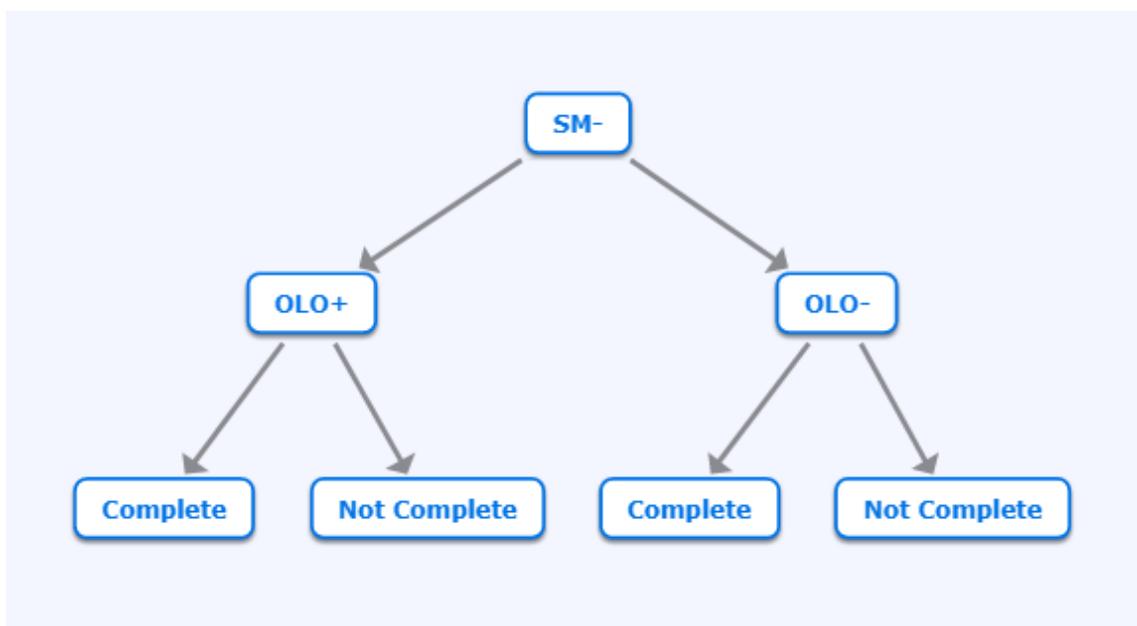


Figure 5. SmarterMeasure Not Pass – Course Completion

### Presentation of Results

The first analysis conducted was a chi-square test for independence. The group consisted of the students who assessed as ready to learn online by the SmarterMeasure assessment. The first independent variable was passing or not passing the OLO. The second independent variable was course grade point average represented by two groups, passing or not passing.

Table 2

#### *SmarterMeasure+ Course Pass Rate*

	Pass	Did Not Pass	Marginal Row Totals
OLO+	750 (739.55) [0.15]	180 (190.45) [0.57]	930
OLO-	248 (258.45) [0.42]	77 ( 66.55) [1.64]	325
Marginal Column Totals	998	257	1255 (Grand Total)

Note. The chi-square statistic is 2.7824. The p-value is .095305. The result is *not* significant at  $p < .05$

These results suggest that among students who are ready to learn in an online environment, there is no significant relationship between student grades and whether or not the student passed an OLO. This may be a result of high student competence with the online learning

interface or a result of a high level of student comfort with online tools. With students who score  $\geq 75\%$  on the SmarterMeasure assessment, their raw skill with technology may more than compensate for the loss of content from skipping an OLO. The course design of the online courses at this college may be well suited to the students, thus making an orientation to the environment an unnecessary hurdle.

The second analysis conducted was a chi-square test for independence. The group consisted of the students who assessed as not ready to learn online by the SmarterMeasure assessment. The first independent variable was passing or not passing the OLO. The second independent variable was course grade point average represented by two groups, passing or not passing.

Table 3

*SmarterMeasure- Course Pass Rate*

	Completed	Did Not Complete	Marginal Row Totals
OLO+	92 ( 87.33) [0.25]	24 (28.67) [0.76]	116
OLO-	42 (46.67) [0.47]	20 (15.33) [1.43]	62
Marginal Column Totals	134	44	178 (Grand Total)

Note. The chi-square statistic is 2.9058. The p-value is .088264. The result is *not* significant at  $p < .05$ .

These results suggest that among students who are not ready to learn in an online environment, there is no significant relationship between student grades and whether or not the student passed an OLO. This result may have been influenced by the much smaller sample size as compared to analysis one. The sample size of students who were not yet ready to learn online was 14.2% as large as the sample size of students who were ready to learn online. This small sample size may have impacted the confidence of the test results. With students who score  $< 75\%$  on the SmarterMeasure assessment, their raw skill with technology may be too weak for an OLO to overcome. There are many possible reasons why a student may not pass an online course

which has little or nothing to do with technical efficacy. If a non-technical reason were the cause of these students' non-passing grades, neither the SmarterMeasure assessment nor the OLO would have helped them.

The third analysis conducted was a chi-square test for independence. The group consisted of the students who assessed as ready to learn online by the SmarterMeasure assessment. The first independent variable was passing or not passing the OLO. The second independent variable was course completion rate.

Table 4

*SmarterMeasure+ Course Completion Rate*

	Completed	Did Not Complete	Marginal Row Totals
OLO+	930 (935.84) [0.04]	152 (146.16) [0.23]	1082
OLO-	325 (319.16) [0.11]	44 (49.84) [0.69]	369
Marginal Column Totals	1255	196	1451 (Grand Total)

Note. The chi-square statistic is 1.0624. The p-value is .302659. The result is *not* significant at  $p < .05$ .

These results suggest that, among students who are ready to learn in an online environment, there is no significant difference in course completion or course non-completion between students who passed an OLO and students who did not pass an OLO. This may also be a result of high student competence with the online learning interface or a result of a high level of student comfort with online tools. With students who score  $\geq 75\%$  on the SmarterMeasure assessment, their raw skill with technology may more than compensate for the loss of content from skipping an OLO. The course design of the online courses at this college may be well suited to the students, thus making an orientation to the environment an unnecessary hurdle.

The fourth analysis conducted was a chi-square test for independence. The group consisted of the students who assessed as not ready to learn online by the SmarterMeasure

assessment. The first independent variable was passing or not passing the OLO. The second independent variable was course completion rate.

Table 5

*SmarterMeasure- Course Completion Rate*

	Completed	Did Not Complete	Marginal Row Totals
OLO+	116 (112.66) [0.1]	34 (37.34) [0.3]	150
OLO-	62 (65.34) [0.17]	25 (21.66) [0.52]	87
Marginal Column Totals	178	59	237 (Grand Total)

Note. The chi-square statistic is 1.0847. The p-value is .297645. The result is *not* significant at  $p < .05$ .

These results suggest that, among students who are not ready to learn in an online environment, there is no significant difference in course completion or course non-completion between students who passed an OLO and students who did not pass an OLO. This result may have been influenced by the much smaller sample size as compared to analysis one. The sample size of students who were not yet ready to learn online was 16.3% as large as the sample size of students who were ready to learn online. This small sample size may have impacted the confidence of the test results. With students who score  $< 75\%$  on the SmarterMeasure assessment, their raw skill with technology may be too weak for an OLO to overcome. There are many possible reasons why a student may not complete an online course that have little or nothing to do with technical efficacy. If a non-technical reason were the cause of these students non-completion, neither the SmarterMeasure assessment nor the OLO would have helped them.

### Summary

The purpose of this study was to discern if a relationship exists between student completion of an online learning orientation and student success factors such as course grade point average and course completion rates. Historical data was used to conduct four chi-square tests of independence to investigate the possibility of an association. Student enrollment in online

courses from three years spanning six consecutive semesters beginning fall semester 2014 and ending spring semester 2017 were limited using the results of the SmarterMeasure assessment of readiness to learn in an online environment. This assessment score was used because its completion and submission is the first step of the OLO and it provided a group of students whose efficacy with online technology was known. Using students who had completed and submitted the SmarterMeasure assessment to the OLO help alleviate any issues stemming from the fact that all student participants in an OLO were volunteers calling into question how representative was the sample group of the general student body. It also allowed two sub-groups to be identified based on a valid assessment of readiness to learn online which provided the opportunity to gauge general readiness to learn online compared to training to learn in a specific online environment.

The problem statement of this study is that online student factors such as grades and course completion are unacceptably low. The researcher attempted to discover if there is an association between OLO completion and student success factors. The results of the study indicate that while more students earned passing grades and achieved higher completion rates, the association between them and OLO completion was not significant. This discovery helps narrow down the number of variables college administrators have to consider to improve online student success.

## CHAPTER 5

### CONCLUSION

Online education is the most recent iteration of distance education delivery methodologies. Starting in the 1990s, computer-mediated instruction increased the reliance on technological solutions and access to equipment, which began with multimedia-based instruction and was then supplemented with Internet-based learning management programs such as Blackboard, WebCT (Lease & Brown, 2009), Desire2Learn and Moodle. Physically isolated students and students with challenging schedules who cannot otherwise participate in a traditional F2F course may enroll in an online course and achieve a high level of interactivity via email, discussion forums, instant messaging, and computer video conferencing (Parrott, 1995; Sumner, 2000; Lease & Brown, 2009). As stated in the Distance Education Enrollment Report (Allen & Seaman, 2016), there are more than six million students, or 30% of all higher education students, enrolled in a distance education course. While overall campus enrollment has declined on average 2.7%, distance education enrollment has increased by 5% (Allen & Seaman, 2016).

It is within the context of slowing F2F enrollment and growing online enrollment that student course completion and success as measured by course grade point average that concern over poor online student success is considered. Doherty (2006), Aragon and Johnson (2008), Meyer, et al. (2009) and Bawa (2016) all agree that online student completion continues to be a serious problem. It is that problem, students in online courses have unacceptably low course completion that this study seeks to address.

There are many variables and factors which contribute to online student success and course completion. Bawa (2016) lists the following as broad categories which may influence students' ability to be successful in their online courses, misconception about workload, social

and familial responsibilities, motivational concerns (Mahle, 2011; Hodges, 2004), technological skills and efficacy (Bekele, 2010), the design of the course itself (Aragon & Johnson, 2009), reduced use of the learning technology tools by the faculty, and a failure of the institution to properly train the faculty. Liu et al. (2007) state that students who need support must be identified early and provided swift remedial training and on-going support. Tinto (1997) states that students need to feel connected to the college beyond classroom work, interpersonal connections through extra-curricular activity involvement are crucial to student success. Clayton et al. (2010) report that 30% of online students would prefer a F2F class, but they enrolled in an online section out of pure necessity. Harrell (2008), Koehnke (2013), Scagnoli (2001), and Vaill (2013) agree that an orientation to online learning and the online learning environment is a vital step to help ensure student success and completion.

Using historical data spanning three academic years, 2014-2015, 2015-2016, and 2016-2017, this study attempted to determine if there was an association between an online learning orientation and student success factors. The study group was comprised of students who completed and submitted the SmarterMeasure readiness assessment. Adkins (2012) stated that the SmarterMeasure readiness assessment was a valid predictor of student success in online courses. The students who participated in the OLO did so voluntarily, so the SmarterMeasure assessment was used to create two sample groups, students who passed the SmarterMeasure assessment scoring an average of  $\geq 75\%$  and students who did not pass scoring an average of  $< 75\%$ . Three components of the five available components of the assessment were used to generate the passing score, Life Factors, Technical Competency and Technical Knowledge. These three components were used because they aligned with the content presented in the OLO. The reason for using sample groups which possessed a known level of readiness to learn in the

online environment was that it would mitigate the argument that selection bias introduced by an entirely voluntary study group.

The data were sorted first by achievement on the SmarterMeasure assessment, then by achievement in the OLO and then by the achievement of grades or completion in an online course.

### **Interpretation of Findings**

Four chi-square tests for independence were conducted on the data collected to determine if there was an association between any combination of SmarterMeasure score and OLO score. The first two tests were used to investigate student pass rate as defined by a course final grade of A, B, C or CR. Grades of D, F, or NC were used to create the second test group. Scores of Incomplete or Withdrawal were discarded as non-grades. The number of passing grades earned by students who passed both the SmarterMeasure assessment and the OLO was higher than by students who did not pass both. The number of passing grades earned by students who passed the SmarterMeasure but not the OLO was higher than the number of passing grades earned by students who failed the SmarterMeasure but passed the OLO. While the descriptive analysis implies that the OLO is associated with the passing rate, statistical analysis implies that the association is not significant.

The second two tests were used to investigate student course completion rate as defined by a course final grade of A, B, C, D, NC or CR. Withdrawals were used to create the second test group and were discarded as non-completers. The number of course completions earned by students who passed both the SmarterMeasure assessment and the OLO was higher than by students who did not pass both. The number of course completions earned by students who passed the SmarterMeasure but not the OLO was higher than the number of course completions

earned by students who failed the SmarterMeasure but passed the OLO. While the descriptive analysis implies that the OLO is associated with the course completion rate, statistical analysis implies that the association is not significant by an even higher margin than the results in the first two tests.

### **Implications**

Studies on student grades, persistence or retention by Kalinski (2015), Koehnke (2013), Krajewski (2015), Lassonde (2014), Ratliff (2013), and Vaill (2013) all found that one type or another of an orientation was associated with higher grades and completion rates in online courses. The results of this study align with the study conducted by Todd (2008), which concluded that there was no significant association between completion of an OLO and online student grades or completion rates. The reasons that these two studies arrived at results which conflict with the generally accepted findings may lie in the much larger sample size of each. Most studies' sample sizes range from 27 (Kalinski, 2015) to 851 (Ratliff, 2013). The study conducted by Todd (2008) used a sample size of 9,805 spanning a single academic year. This study used a sample size of 1,433 spanning three academic years. It is possible that smaller total sample sizes or fewer semesters included in the study resulted in incorrect association calculations.

Because this study was conducted using historical data of students who voluntarily participated in the OLO, the assumption could be made that these students are more highly motivated and that higher motivation would lead them to persevere against the challenges of the online learning environment. The SmarterMeasure assessment was leveraged in an attempt to sift out students known to be ready to learn online from students known to be not ready. While that

does provide a baseline from which knowledge gained from an OLO could be estimated, the possibility of higher motivation as a factor remains.

Students are more technologically savvy now than in the recent past. This is evidenced by the students' high level of technology adoption (Moore, 2015). They use technology more and expect their instructors to incorporate more technology into their instructional approaches. The SmarterMeasure pass: the not-pass ratio of 1255:178 represents a 86% pass rate. Such a high pass rate suggests that the students are as equally skilled with technology as their desire to see it utilized more fully in their courses. Students with such a competent grasp of technology may have little need for an OLO with content primarily targeted at navigating and using the learning management system (LMS) at a fundamental level.

### **Recommendations for Action**

This study sought to determine if an association exists between OLO completion and student success on online courses. The results indicate that no significant association exists which begs the questions, "Is a mandatory OLO worth the institutional effort to create and maintain?" and "Is it worth students' time to participate in an OLO?" To better prepare students for the online learning environment via an OLO is well-intentioned but the students do not require such an orientation in order to succeed. They are adept with technology and can learn the interface on their own.

While there may not be a significant association between OLO completion and student success, an OLO does more than merely orient students to the LMS. An OLO can be leveraged as a just-in-time support device. Students can search the content within the OLO to answer questions at odd hours during the semester. An OLO can also become an outlet for building a community of practice fostering engagement outside of the classroom similar to what Tinto

(1997) suggests. Rather than eliminate an OLO based on the findings of this study, colleges should continue to offer an OLO as an option for those students who do need it to learn how to navigate within the system and to provide support and a community of practice for all online learners.

### **Recommendations for Further Study**

In order to further explore the value of an OLO and its place in the formula for improving student experience and success in online courses, an actual experimental study is in order. Using a random sample of students each semester, over the span of three years, future research could more definitively determine if an association between OLO completion and student success exists for all students.

This study focused on an OLO that was delivered asynchronously online. Students who have the greatest need for orientation may be too intimidated to attempt to learn how to use the LMS via the LMS. Developing a traditional F2F version of the OLO may draw those most at risk students to participate. Keeping the need for an OLO in mind, requiring all students who fail to pass the SmarterMeasure readiness assessment and then compare their grades and completion rates to previous students who failed the SmarterMeasure assessment but did not attempt the OLO may also reveal an unexamined niche of students in need.

### **Conclusion**

The results of this study showed that students who voluntarily participated in an OLO might not need to participate at all. Through high levels of technical competence or through high levels of motivation and self-discipline, the students have similar grades and completion rates regardless of the grade earned in the OLO. The OLO serves many purposes, with orientation to the learning environment is just one. An OLO provides just-in-time support, it fosters student-to-

student communication and opens discussion via discussion forums which generates a type of community of practice engaging students with each other outside of a classroom. While most students may not need an orientation, many students do. An OLO can provide that for the most technologically-challenged student.

Institutions which already offer an OLO should consider keeping them. Institutions which do not currently offer an OLO may consider building one, if not for the pure instructional value of base orientation, at least for the other benefits it offers. Institutions that currently have a mandatory OLO might consider making it optional or conditional. A useful condition might be low scores on the SmarterMeasure readiness assessment or poor performance in previous online courses.

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## Appendix A

### Online Support and Orientation Workshop Syllabus

#### Read Announcements

#### Bb Orientation section

- Complete: SmarterMeasure assessment
- Complete: Technical Proficiency module
- Complete: MCC Learning Culture module
- Complete: Readiness Survey

#### Academic Support section

- Complete: Where to Go to Get Help module
- Complete: Center for Academic Excellence - Writing Help module
- Complete: Smarthinking – Writing Help Online module
- Link out to MCC Workshops

#### Technical Support section

- Complete: Support module

#### Library Support section

- Complete: Library module

#### Discussion Board section

- Post to the Practice forum
- Familiarize yourself with General Help forum
- Familiarize yourself with the Student Lounge forum

## Appendix B

## Online Orientation Assessment

- 1) The SmarterMeasure readiness assessment is...
- |   |   |
|---|---|
| completely optional and for personal information only.                | 0 |
| optional but some instructors may require it as part of their course. | 1 |
| required by the college to take online classes.                       | 0 |
- 2) Global Navigation in the upper-right of the screen provides easy access to the user menu, My Blackboard menu, and the logout button.
- |       |   |
|-------|---|
| True  | 1 |
| False | 0 |
- 3) Clicking the arrow next to the house icon in the upper-left of a course shell allows you to
- |  |   |
|--|---|
| Jump to the announcements area in another course | 0 |
| Jump to the same area in another course          | 1 |
| Return to the Blackboard login screen            | 0 |
- 4) What do you do when you have completed a test in Blackboard?
- |   |   |
|---|---|
| Click on the Save button after each question                      | 0 |
| Click on the Save all Answers button at the bottom of the page    | 0 |
| Click on the Save and Submit button at the bottom of the page     | 1 |
| Click on the Email to Instructor button at the bottom of the page | 0 |

5) Where might you find course assignments for submission in your online course?

- |  |   |
|--|---|
| In the Announcements   | 0 |
| In the Assignments area  | 0 |
| In the Blackboard calendar   | 0 |
| They could be anywhere. Your instructor will let you know where they are located | 1 |

6) Where in Blackboard can you access your grades?

- |  |   |
|--|---|
| The My Grades link on the My Institution page      | 0 |
| The My Grades link in Blackboard global navigation | 0 |
| The My Grades link from the course menu            | 0 |
| The My Grades link from the Tools menu             | 0 |
| All of the above                                   | 1 |
| None of the above                                  | 0 |

7) How do you start to interact in a Blackboard discussion forum?

- |   |   |
|---|---|
| Always click the Create Thread button   | 0 |
| Always click a thread title and Reply to one or more posts  | 0 |
| Click the Create Thread button if it exists, but sometimes an instructor will lock that option from students, in which case click a thread title and Reply to one or more posts | 1 |

8) Where will recipients of email sent using the Blackboard Send Email tool receive their email?

- |   |   |
|---|---|
| The most used email address by that student           | 0 |
| The email address the sender specifies in the To: box | 0 |

The email address that is registered in Blackboard	1
9) Blackboard Messages is exactly the same as Email.	
True	0
False	1
10) What is the advantage of Blackboard Messages vs Email	
You have to read/send them from within the Blackboard course shell	0
Eliminates the problem of incorrect or out-of-date email addresses	1
Since Messages doesn't allow attachments, it's a more secure method of communication compared to email.	0
11) What is displayed in the Blackboard Calendar?	
College events such as concerts and sporting events	0
For all courses you are enrolled in	0
Personal events which you create yourself with the "plus sign"	1
Movie times and dates for local theaters	0
12) Select the personal information items you can choose to make public via the Privacy Options settings.	
Name	0
Email address	1
Address	1
Work information	1

Additional contact information (home or cell phone numbers)	1
13) What is a Blackboard avatar	
A Na'vi-human hybrid, operated by a genetically matched human	0
A large button at the bottom of every screen which brings you straight to your personal information setting screen	0
A photo or other digital image that represents a user throughout Blackboard	1
14) Testing in MCC online courses can vary widely based on instructor preferences and course content.	
True	1
False	0
15) Paraphrasing the work of another without full and clear acknowledgement could be considered plagiarism.	
True	1
False	0