

**THE IMPACT OF AN ONLINE ORIENTATION TO IMPROVE COMMUNITY
COLLEGE STUDENT RETENTION IN ONLINE COURSES: AN ACTION
RESEARCH STUDY**

by

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Abstract

In spite of the tremendous growth and an option which allows greater flexibility for students to pursue a higher education, certain barriers contribute to higher attrition rates and lower student performance in fully online courses. Poor or inefficient technology skills, a lack of student readiness, and misaligned course expectations are barriers that affect student success in online courses. It is critical that community college educators develop practices that seek to prepare students for the challenges of online learning with a goal of improving online student retention and performance. Current research suggests that an online orientation may increase student success and course completion. This quantitative study used collaborative action research to plan and implement an intervention targeting a group of online students in six online course sections who were asked to complete an online orientation to determine the orientation's impact at the research site. Student grades and retention metrics of the sample group who were asked to complete the online orientation were compared to the data from a control group who did not complete the orientation. Detailed descriptive analysis was completed on the end of course grades which revealed that the in-class retention rate from the research group who completed the online orientation was higher in comparison to the retention rate from the control group who did not complete the online orientation. Additionally, the analysis showed that the students in the research group achieved a higher overall grade point average (GPA) compared to the students in the control group. A *t* test analysis showed that the mean GPA of the research group was statistically significant at the $p < 0.05$ significance level and the mean retention rate of the research group was statistically significant at the $p < 0.10$ significance level.

Dedication

This dissertation is dedicated to my parents, Paul and Alice. Each dedicated over 30 years of service as Lutheran elementary school teachers and impacted the lives of thousands of children through their example and commitment to Christian education. You have always supported my dreams and I can ask for no greater gift.

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CHAPTER 1. INTRODUCTION

Introduction to the Problem

Community colleges have been asked to take a lead role in the resurgence of America by preparing students for jobs of the 21st-century (21st-Century Commission on the Future of Community Colleges, 2012). Currently, community colleges serve nearly half of the undergraduate students in the United States and are diverse institutions that support a variety of students (American Association of Community Colleges [AACC], 2012). These are students who attend college to pursue an associate degree in order to transfer to a four-year college or university, to upgrade job skills for a targeted job, or who attend to pursue a personal interest or hobby (AACC, 2012). A gateway to opportunity, community colleges are available to anyone who seeks a higher education and the promise of access is a critical value upon which the mission of community colleges is lived every day.

As community colleges heed the call to develop human potential, there is a growing demand for increasing student retention and program completion. The National Commission of the *Future of Higher Education* report in 2006 demanded public information about student performance including documentation of student learning outcomes that demonstrated the quality of the educational experience and provided proof of student success (U.S. Department of Education, 2006). There is demand for proven

accountability that expects documented learning, greater transparency of outcomes, evidence of quality, and completion (Barr & Tagg, 1995; Brint, 2008; Murray & Orr, 2011). Seat time and enrollment growth are no longer sufficient measures of learning or quality outcomes. As a result, access is no longer the sole measure of success for the nation's community colleges because of the charge to improve student success.

Identifying areas for improvement and building a strategy for improving student success is critical as students, parents, educators, policymakers, and accrediting agencies turn their attention in demanding evidence of student learning, retention and improved completion rates. Understandably, one way for colleges to improve student success is within the burgeoning popularity and growth of online courses. Any improvement in student retention and student performance within online courses addresses the issues of accountability and completion, and ultimately, supplies the pipeline which provides for the workforce needs within the United States.

Particularly for community colleges, it is difficult to define what success means because of a broad and very diverse group of learners with a vast range of educational goals (AACC, 2012). As mentioned, community colleges represent the most accessible entry point to higher education, especially for students of color and those from low income backgrounds (Smith-Jaggars & Bailey, 2010). For these students and all community college students, the ability to access higher education in order to pursue personal and academic goals has increased with the popularity of online classes (Allen & Seaman, 2011). Understandably, online learning, also known as eLearning, or distance education, has become critical in providing access for the many diverse individuals who attend community colleges.

The Sloan Consortium, which tracks online learning in higher education, confirmed that online learning continues to grow nationwide with enrollments of 6.1 million students during the fall of 2010, a 10% increase from the previous year (Allen & Seaman, 2011). Additionally, community colleges experienced significant growth in online learning, reporting an 8.2% increase in distance education enrollments from the fall of 2010 to the fall of 2011 compared to the previous year (Instructional Technology Council Report, 2012). Because of the recent recession and the resulting student enrollment explosion, many community college presidents cite student demand as the primary reason for increasing online course offerings (Crawley, 2012). Reflecting the escalating demand, online learning has become an important component of an institution's function and mission (Otte, 2007). The ability for students to access online courses and programs that meet educational and career goals seems certain as technology systems support the online learning environment and faculty become increasingly comfortable in using this delivery method for student learning (Aksal, 2011; Lewis, 2010; Stanford-Bowers, 2008). For students, online learning represents a convenient and flexible means to course and program completion.

In spite of the tremendous growth and an option which allows greater flexibility for students, student attrition in online courses is higher than in traditional face-to-face courses, and overall, student grades are lower in online courses in comparison to face-to-face courses (Dray, Lowenthal, Miskiewicz, Ruiz-Primo, Marczyński, 2011). Current research suggests that many students are not prepared for the rigors of online learning and that student services such as an online orientation may increase retention, student performance, and ultimately, course completion (Dray et al., 2011; Howell & Laws,

2004; Lorenzo, 2011; Otte, 2007; Smith-Jaggars & Bailey, 2010; Wang, 2006). Since a majority of colleges indicate that online learning is a critical part of their long-term strategy (Mayadas, Bourne & Bacsich, 2009), and since Allen & Seaman (2011) noted that online enrollments continue to grow substantially faster than other higher education enrollments, identifying an action plan to improve the success of online students and addressing the ongoing issues of accountability including retention and completion improvement in online learning are timely contributions to the field.

The selected intervention has the potential to influence the implementation of a mandatory online orientation locally for students who have never taken an online course; currently, taking an online orientation as a prerequisite for online classes is strictly voluntary and participation is inconsistent. Much of the current literature on an online orientation as an effective strategy centers on this intervention as one helpful tool to increase student success. However, there are limited studies which link an online orientation to improved student performance and student retention as measures of student success in community college online courses. As various stakeholders require evidence of student success and as the demand for online learning increases, the study is timely for leaders within community colleges to seek ways to improve online learning success for students.

Background, Context, and Theoretical Framework

Background

In spite of the tremendous growth and an option which allows greater flexibility for students to pursue a higher education, certain barriers contribute to higher attrition

rates and lower student performance in the online environment. Poor or inefficient technology skills, a lack of student readiness and misaligned course expectations are critical factors that affect student success in online courses (Carruth, Broussard, Waldmeier, Gauthier, & Mixon, 2010; Dray et al., 2011; Lorenzo, 2011). As a result, attrition in online courses is higher compared with traditional face-to-face courses, and overall, student success as measured by student grades and course retention rates is lower in online courses in comparison to the same face-to-face courses (Dray et al., 2011; Kelly & Schneider, 2012). With readily available technology and a demand for accessible and convenient learning opportunities, the ability to provide high quality online education is critical (Wang, 2006). It is important, therefore, that community college educators develop practices that seek to prepare students for the challenges of online learning with a goal of improving student readiness in order to enhance online student retention and performance (ITC, 2012).

Current research suggested that an online orientation may increase student success and course completion (Dray et al., 2011; Howell & Laws, 2004; Lorenzo, 2011; Otte, 2007; Smith-Jaggars & Bailey, 2010; Wang, 2006). Following that premise, this action research study investigated the effectiveness of a better practice in certain online courses at a community college. It sought to determine whether an online orientation improved student performance as reflected by A, B, and C grade attainment and in-course retention rates for online students in the targeted online courses. The proposed intervention invited students to complete an online orientation prior to the beginning of six fully online courses during an eight week short session in order to create an awareness and description of the behaviors and skills necessary for online learning success. The

proposed action plan compared two groups of students, one who completed the online orientation and the other who did not. Assessing the impact of the orientation on student success included an analysis of course grade attainment and in-course retention rates from those students who did not withdraw from a course.

Context

The research site is a large, urban, multi-campus community college and serves approximately 70,000 students a year. It has a reputation for being responsive to workforce development and community needs and has been described as an innovative college by local and national organizations. Led by a visionary President who expects creativity, relevancy, and innovation, the college leads the way in developing and implementing programs and services for students, business and industry, and the community.

Currently, the college is investigating and implementing change management initiatives as it responds to external shifts that hold colleges accountable for improving quality, completion, and student success (Grantham, 1999; Committee on Measures of Student Success, 2011). Addressing a need to improve graduation rates, a recent state report provided additional pressure to adapt to a different political and social environment to prove accountability and improve student learning and completion. Improving student success provided the impetus to implement programs and strategies to demonstrate accountability, and because of the influential external forces that demand quality and improved student success, there is movement towards increased collaboration and systems thinking among college units and departments.

Adapting to a different political and social environment and implementing a systems approach toward student success, the college chose to participate in an initiative called Achieving the Dream (ATD). A national community college initiative, the ATD process is structured to link various stakeholders across the college to adapt to a new expectation of proving accountability and increasing student success. Specifically, this change model seeks to improve student success by focusing on committed leadership, using evidence for data-informed decision making, promoting internal college collaboration, and implementing systemic institutional improvement. The college identified two focus areas within the ATD initiative. One was to improve student success in online learning and the other in developmental math. Lewis (2006) asserted that some online instructors approach their courses with the assumption that students enter online courses with the requisite skills necessary to complete the course. However, the data proves that online learning retention and student performance fall short when compared to traditional face-to-face courses, and as a result, the opportunity exists to identify practices to improve the success of online learning students (Howell & Laws, 2004).

Focusing on the barriers to student success in online courses, this action research study explored the impact of an online orientation on student performance and in-class retention. The action research stakeholder group assumed that student success could be improved in online courses if a student completed an online orientation focusing on the challenges, expectations and technology skills necessary for online learning success. In Table 1, a review of college course data showed that students in online sections received a higher percentage of D, F, I (incomplete), and W (withdrawal) grades compared to students in the same traditional face-to-face classes.

Table 1: Online Course Retention and Grades vs. Traditional Face-to-Face Courses, Fall 2009

	Total Enrollment	w/in term retention		A-C Grades		DFIW Grades	
		#	%	#	%	#	%
ACA 111-online	137	84	61.3	79	57.6	65	47.4
ACA 111-traditional	586	481	82.1	447	76.2	26	4.4
CIS 110-online	111	70	63.0	56	50.4	53	47.7
CIS 110-traditional	24	18	75.0	20	83.3	6	25.0
COM 110-online	25	22	88.0	22	88.0	3	12.0
COM110-traditional	23	14	60.8	14	60.8	9	39.1
ENG 111-online	99	75	75.7	70	70.7	24	24.2
ENG 111-traditional	225	195	86.6	186	82.6	17	7.5
ENG 114-online	25	19	76.0	19	76.0	6	24.0
ENG 114-traditional	218	169	77.5	166	76.1	57	26.1
ENG 231-online	67	43	64.1	47	70.1	27	40.2
ENG 231-traditional	23	19	82.6	17	73.9	7	30.4

Specifically, 69% of students who took the online courses received A, B and C grades compared to 31% of students who received D's, F's, I's and W's. For students who took the same course sections in a traditional face-to-face delivery format, 76% of the students received A, B, and C grades compared to the 24% who received D's, F's, I's and W's (as stated in the community college's 2009 student academic activity data file). Clearly there is a need for improvement in online course success and completion.

Theoretical Framework

Addressing the mission to provide learning opportunities for students and to provide the resources to address current issues within the college, the intervention for this proposed study combined retention and adult learning theory in combination with

collaborative action research and systems thinking. This framework provided the design for this intervention in order to determine the overall impact on student performance and retention in specific online courses. Though a popular option for students, many have enrolled in online courses without the knowledge and skill set needed to successfully manage and complete an online course (Bozarth, Chapman & LaMonica, 2004; Gaide, 2004). As a result, student grades and retention rates are lower in online courses compared to their traditional face-to-face counterparts (Fike & Fike, 2008; Stanford-Bowers, 2008). In response to the issue, this study sought to determine the impact on student performance and persistence (retention) by offering an online orientation as one student service to better prepare students for the online learning experience (Dray et al., 2011; Lorenzo, 2011; Smith-Jaggars & Bailey, 2010).

Influenced by an action research design, the basic tenants of retention and adult-learning theory provided a strong foundation for the implementation of this research study. By engaging critical stakeholders across the various units of the college, this proposed action research study also used the tenants of action research design to implement an intervention, a highly interactive and experiential online orientation, with a goal to improve what is currently happening, and to better prepare students for taking online courses. The potential benefit to the research site, to other community colleges, and to higher education overall, is a service and solution for seeking to improve student retention and performance in online learning through the ongoing participation and broad collaboration across different units of a college, and through this engagement, a means to implement services that considers a systems approach in the development of online student services.

One other hopeful aim of this study is that the stakeholders involved in this change initiative will be able to influence the college community about the value of self-organization or systems thinking as a response to a need for adaptation and reorganization. As the stakeholder group engaged in the steps of the action research cycle, thinking about the strategies employed for problem solving, reflecting upon the process to determine intervention effectiveness, and evaluating the results to determine the implications for future action were essential (Coghlan, 2007; Coghlan & Brannick, 2010). The overall intent was to propose meaningful change that is useful for the college.

Statement of the Problem

It is not known to what extent student performance and retention in online courses are impacted by preparing students for the demands of online learning by the completion of an online orientation. Addressing the current demand for accountability in higher education, the research site recently discovered lower student performance in online courses when compared to traditional face-to-face courses. Many students are simply not prepared for the demands of online learning and need to develop realistic expectations of the skills and work required in an online course (Scagnoli, 2001). Lower grades, along with higher withdrawal rates, resulted in lower retention rates compared to traditional face-to-face courses. Specifically, quantitative data indicates a seven percent reduction of A-C grade attainment in the highest demand online courses compared to the same traditional face-to-face courses. Additionally, qualitative data from student focus groups revealed the following barriers to student success in online courses including: 1) misaligned course expectations; 2) lack of technical ability with computers; 3) poor time

management and self-discipline; 4) minimal contact with the instructor; and 5) a lack of awareness about the demands of online learning (Alexander, 2010).

Purpose of the Study

The purpose of this action research study was to examine the impact of completing an online orientation on student retention and performance in online courses in order to improve student success in online learning. Assessing the impact of the orientation on student success included a quantitative analysis of course grade attainment and in-course retention from those students who did not withdraw from a course. Data from the sample were compared to data on retention rates and student performance information from the control group who did not complete an online orientation and who took the same online courses during the fall semester of 2009.

It was hypothesized that the proposed intervention had the potential to improve student success in online courses; specifically, improved student retention and increased student performance. Ultimately, each would contribute to student progression toward a degree or academic goal completion. In addition, the results of this action research study could serve as a model for online learning improvement at this and other community colleges in proving the value and effectiveness of an online orientation for improving student success, credential attainment, and an overall increase in fulltime equivalent (FTE) funding as students enroll in additional online learning opportunities. The overall intent is to impact organizational change at the research site by demonstrating a need to improve student success by requiring the completion of an online orientation for any student new to online learning.

Research Questions

This study focused on the need to implement a student service to determine the impact on student success in online courses. The following research questions and hypotheses guided this quantitative action research study and each related to the stated research problem of determining the impact of an online orientation on student retention and performance.

R₁: How does completing an online orientation impact student success in an online course?

R_{1a}: How does the intervention improve grades?

R_{1b}: How does the intervention improve retention?

H₁: There is a statistically significant difference in student retention and grade attainment (student performance) between the sample group who took the online orientation and the control group that did not.

H₀: There is no statistical difference in student retention or performance between the sample group who took the online orientation and the control group that did not.

Rationale, Relevance, and Significance

Rationale

This action research study examined the impact of an online orientation on student retention and performance. Relevant and timely, this study is needed because the college identified online learning as a focus for improving student success in online courses and a collaborative team was formed in order to implement and analyze the

impact of the intervention. Understanding the current culture of accountability and the need to improve student success, there is commitment from college leaders to pursue and implement interventions that improve student online learning. To successfully execute this charge, the college must examine key issues like the improvement of online student success. This mirrors the sort of thinking and perspective required for identifying any problem and collecting data to provide evidence based solutions for problem-solving. Currently, the college culture is changing and a dynamic, transitional shift is emerging that provides for meaningful collaboration for problem-posing, problem-solving, and decision-making for needed change, or in this case, for building a strong case for implementing new strategies for improving online learning success.

In reviewing the literature, a number of researchers cited the need for an online orientation to improve the success rate of online students (Scagnoli, 2001; Hansen, Clark, McCleish & Hogan, 2009). Though a focus and rationale for this study, implementing an online orientation was cited as only one strategy for improving online learning success. Other factors such as improving the professional development for online faculty, and creating synchronous and asynchronous student engagement strategies were also mentioned as additional tools for improving online student success (Appana, 2008; Puzziferro & Shelton, 2009).

Relevance

Critical to leaders in a community college setting, the Internet as a widespread information infrastructure has changed the face of educational delivery, information dissemination, and interaction between individuals in higher education today (Leiner, Cerf, Clark, Kahn, Kleinrock, Lynch, Postel, Roberts & Wolff, 1997). As a result, a

majority of colleges and universities indicate that online learning is a critical part of their institution's long-term strategy, and that online enrollments continue to grow substantially faster than overall higher education enrollments (Allen & Seaman, 2011). According to Allen & Seaman (2011), "nearly thirty percent of higher education students now take at least one course online" (p. 4). Given the popularity of online courses, the ability to identify a plan in order to improve the success of online students and address the current issue of accountability in higher education is the value and relevance of this action research study.

To address the issue of accountability in higher education, the Kellogg Commission on the Future of State and Land Grant Universities in February of 1999 published an action plan to promote future dialog between higher education institutions and the public. Among the three suggestions from the Commission to ensure an institution's focus on principle stakeholder needs, two indicated that an engaged institution offers practical opportunities for students to prepare for their future in the world, and also offers the critical resources to address problems within the college community and within the larger community it serves (Grantham, 1999). As a result, this study is timely and relevant for leaders within a community college setting.

Significance

In addition to assessing the impact of an online orientation on student retention and grade performance in selected course sections, one other significant impact of this study is that completing the online orientation may better prepare students for the technology and time management demands for a satisfying and successful learner experience in an online environment. The literature confirmed that student attrition in

online learning is higher than in traditional face-to-face courses (Dietz-Uhler, Fisher & Han, 2007; Dray et al., 2011; Dupin-Bryant, 2004; Harrell & Bower, 2011; Hart, 2012; Lee & Choi, 2011; Liu, Gomez & Yen, 2009; Liu, Gomez, Khan & Yen, 2007; Lorenzetti, 2005; Lorenzo, 2011; Pittenger & Doering, 2010). If interventions such as these were not implemented, online course effectiveness and student success in online learning may not improve. Finally, students, the most important stakeholder, might reach program and goal completion sooner and advance to their next professional or academic milestone as a result of this research study.

Online learning is one delivery method of instruction within the various divisions at the college and identifying areas of improvement and building a strategy for improving student success in online learning is critical as a variety of stakeholders focus their attention in demanding evidence of student learning and success. Once again, the intervention has the potential to influence the implementation of a mandatory online orientation for students who have never taken an online course. Furthermore, the result of this research study will contribute to the scientific body of knowledge in the area of online learning student success in a community college setting.

Nature of the Study

This study followed a quantitative, non-experimental research design using sample and control groups in order to determine the impact of an online orientation on student retention and performance in a community college setting. Additionally, the proposed study used a collaborative action research method (Argyris & Schön, 1996) to plan and implement an intervention targeting a group of online students in six different

course sections who were asked to complete an online orientation. A non-experimental design is an empirical study used to estimate the causal impact of an intervention on its target population. In this case, students self-enrolled in the specific online course or courses. The quantitative data collected in this study were: 1) end of course student grades, and 2) student retention rates within each targeted course. A quantitative methodology was important to determine the impact of completing an online orientation on retention rates and grade attainment between the sample and control groups. This methodology was selected to examine the following research questions:

R₁: How does completing an online orientation impact student success in an online course?

R_{1a}: How does the intervention improve grades?

R_{1b}: How does the intervention improve retention?

The intervention, a four-module orientation, introduced personality attributes, technology skills and the navigation skills that may be helpful for success in an online learning environment (Appendix). After completing the online orientation, students could reflect on their readiness for taking an online course, analyze the advantages and disadvantages of online learning course delivery, and identify personal attributes, concepts, and skills needed to successfully complete an online course. Computer requirements along with internet and browser basics were also introduced through tutorials and simulations to address the navigation skills necessary for the learning management system interface.

Definition of Terms

There are a number of terms that are important for the purpose of guiding this study. As such, the following terms are operationally defined:

Action Research. Research that is conducted by practitioner researchers to study their own setting which enables researchers to find solutions to problems they encounter every day. A process of inquiry, action research is cyclical and involves identifying a problem, proposing a solution, implementing the solution, and assessing the outcome (Ravid, 2011; Stringer, 2007).

Adult Learning Theory. Based on Knowles' theory of adult learning, the basic tenants of adult learning theory include consideration that adults learn best when the topic is of immediate value, when learning is experiential, and that learning fits within busy time schedules (Crawley, 2012; McGrath, 2009).

Adult/Non-traditional student. A student enrolled in a course beyond the high school level or who has one of the following characteristics: delayed entrance, part-time, works fulltime, single parent, has dependents, acquired a GED, or may be financially independent (Puzziferro & Shelton, 2009).

Andragogy. Malcolm Knowles' theory of adult learning which is learner focused and expresses the needs of adult learners like knowing why something is important to learn before undertaking to learn it; that adults can build on previous knowledge and experience in relating new information and are self-directed (Cercone, 2008; Kenner & Weinerman, 2011; McGrath, 2009).

Asynchronous learning. A student centered approach to learning that emphasizes peer to peer interactions in an online course (Wu, Bieber & Hiltz, 2008). Students are

able to access the course and course materials at anytime or any place with an Internet connection (Mayadas, Bourne & Bacsich, 2009).

Attrition. The loss of enrolled students in a course. In this context, it is any student who enrolls in a course and does not persist in obtaining course credit with a grade of A, B, C, or D in the specified timeframe for the course (Ashby, Sadera & McNary, 2011).

Distance education. A teaching delivery method for students who are not physically present in a traditional classroom setting. There is a physical separation between the instructor and learner and an opportunity for two-way communication (Appana, 2008; Schlosser & Simonson, 2006).

E-Learning. The computer and other electronic supported transfer of knowledge and skills. Typically, it is any learning that utilizes a network (LAN, WAN or Internet) for delivery, interaction, or facilitation (Li & Irby, 2008).

Hybrid course. Synonymous with blended learning, a hybrid or blended course combines traditional face-to-face classroom and online learning environments in one course (Appana, 2008).

Learning management system (LMS). In this context, a software application that distributes online courses over the internet for meaningful collaboration between instructor and student, and peer interaction between students (Ellis, 2009). For this study, the LMS refers to Blackboard®.

Online course. Refers to a course for which all regularly scheduled classroom time is replaced by required activities completed at a distance and managed online. Online courses allow students to take courses from geographically remote locations with

no expectation to physically come to a campus. In this context, fully online means that one hundred percent of the course is located online (Li & Irby, 2008).

Online learning. Similar to eLearning. A learning environment where the supported transfer of knowledge, skills, and access to learning materials is done through the computer or other electronic network such as a LAN, WAN or the Internet (Appana, 2008; Li & Irby, 2008).

Online orientation. Similar to a college orientation in which students are given the tools and resources to survive at a college or university, an online orientation provides the tools and resources to equip students for succeeding in online courses by detailing the personal and technological skills required (Bozarth, Chapman & LaMonica, 2004).

Online community college student. Students who take an online course within a community college setting. Typically, adult learners enjoy the flexibility and convenience of online learning (Lorenzetti, 2005).

Retention. The number of enrolled students who complete a course receiving course credit. (Schlosser & Simonson, 2006). Retention is synonymous with persistence or course completion. For this study, retention includes students who received a grade of A, B, C, or D. Students receiving a grade of F, I, or W are considered non-completers.

Self-Organization. Self-organization occurs within a complex organization when the balance of a system is disturbed and the components of the system then adapt to a changing environment. It assumes interdependency among the components of a system and feedback loops for influential communication (Eoyang, 2009).

Stakeholders. Along with the researcher, stakeholders are critical to action research as their perspectives are integral to the research process. Collaboration with key stakeholders leads to effective solutions and action (Stringer, 2007).

Student learning outcomes. The knowledge, skills and abilities that students attain through a specific course, program, or educational experience (Barr & Tagg, 1995).

Student persistence. The degree to which a student continues in a course through course completion (Dietz-Uhler, Fisher & Han, 2008).

Synchronous learning. Refers to students who learn at the same time and in the same place usually requiring online groups or cohorts (Scagnoli, 2001). The uses of live chats or webinars within online courses are examples of live, real-time communication.

Systems Theory. Organizations may be viewed as systems in which planning, control, and structural systems are connected and interdependent. Critical in action research, systems thinking refers to viewing organizations as a whole (Coghlan & Brannick, 2010).

Assumptions, Limitations, and Delimitations

Assumptions

A key assumption from the stakeholders of this action research study was that student success could be improved in online courses from students who completed an online orientation focusing on the challenges, expectations, and technology knowledge necessary for online learning success. The online courses referred to in this action research study were entirely online. Hybrid courses were not included as a part of this study.

Other key assumptions of the study included:

1. Students who take the online orientation will persist and attain higher grades compared to those who do not take the orientation (Lorenzo, 2011; Miller, 2005).
2. Student success (increase in retention) can be improved in online courses by requiring an online orientation focusing on the challenges, expectations and technology knowledge necessary for online learning success (Smith-Jaggars, & Bailey, 2010).
3. Student assessment, requiring a student orientation, and providing 24/7 online support services are possible solutions for helping online learners to be as successful as their face-to-face counterparts (Lorenzo, 2011).
4. Factors such as pedagogy, online interaction, and student support improve and reinforce online student success and lead to change for improved practice in online delivery (Aksal, 2011; Dennis, Bunkowski & Eskey, 2007; Jackson, Jones, & Rodriguez, 2010; Smith-Jaggars & Bailey, 2010; Stanford-Bowers, 2008).
5. The research group is a representative sample of students taking online courses at the research site.
6. Organizational change will occur at the research site by demonstrating a need for improving student success by requiring the completion of an online orientation for any student new to online learning.

Limitations

The action research study was limited to online students at a large, urban community college, who enrolled in specific, fully online courses. The study was limited to six targeted courses during the spring 2013 semester. As such, the results of this study are specific to the research site and are not necessarily generalizable to other community colleges. However, other community colleges that provide online learning opportunities for students may use this study and approach to assist in the improvement of administrative and support services for online student success in their specific settings.

Second, the research or data collection timeframe may limit the study's credibility. Although this action research study provided an opportunity to examine the impact of an online orientation on student retention and performance in online courses, this is a time restrictive study established by the course calendar as well as the dissertation research timeline. Additional iterative cycles may be useful to better prove the impact of an online orientation on student success.

Third, the students in the sample and control groups could be systematically different. To minimize potential group differences, only students who enrolled in high demand general education courses were used in the study. Typically, the majority of students who enroll in these online courses are white (50%), female (65%), and nearly 50% of the students are 25 years or over as shown in Table 2 (as stated in the community college's 2009 student academic activity data file).

Table 2: Number and Percent of Online Students in Target Course by Demographic Variables, Fall 2009

Course	Gender				Age					
	Male		Female		Less than 20		20-24 Year Old		25 Years & Older	
	#	%	#	%	#	%	#	%	#	%
ACA 111	50	34.7	94	65.3	39	27.1	48	33.3	57	39.6
CIS 110	26	23.8	83	76.2	21	19.3	36	33.0	52	47.7
COM 110	12	48.0	13	52.0	4	16.0	6	24.0	15	60.0
ENG 111	30	29.7	71	70.3	21	20.8	38	37.6	42	41.6
ENG 114	9	36.0	16	64.0	2	8.0	10	40.0	13	52.0
ENG 231	21	28.4	53	71.6	8	10.8	30	40.5	36	48.7

Course	Race									
	White		Black		Hispanic/Latino		Asian		Other	
	#	%	#	%	#	%	#	%	#	%
ACA 111	54	37.5	75	52.1	8	5.5	2	1.4	5	3.5
CIS 110	53	48.6	41	37.6	9	8.2	1	1.0	5	4.6
COM 110	17	68.0	5	20.0	1	4.0	1	4.0	1	4.0
ENG 111	55	54.5	26	25.7	7	6.9	4	4.0	9	8.9
ENG 114	14	56.0	8	32.0	0	0.0	2	8.0	1	4.0
ENG 231	41	55.4	26	35.1	4	5.4	2	2.7	1	1.4

Because students self-enrolled into the targeted fully online courses, an element of random selection, the sample studied may be similar to the larger online community college population. However, the courses in the study differed by instructor and other course variables such as course structure, interaction and engagement, and attendance and grading policies.

Delimitations

Participation in this study is delimited to a) students at the research site; b) students enrolled in fully online courses; and c) students enrolled in targeted course

sections including ACA 111, CIS 110, COM 110, ENG 111, ENG 114, and ENG 231. Additionally, the study is delimited to the examination of student retention and performance after taking an online orientation. Students in other online course sections were not considered. Although many factors may contribute to the success of online learners, this study focused on the impact of completing an online orientation on student retention and performance. Furthermore, the study will not assess students' perceptions of completing the online orientation. The study focused solely on a quantitative methodology by assessing student retention and performance data.

Organization of the Remainder of the Study

This dissertation study is organized into five distinct chapters. Chapter 1 offered an introduction into the action research study and included the background, context, and theoretical framework of the study. Additionally, a statement of the problem was presented linking the nature of the study and the research questions. Definitions of terms were provided to guide understanding of the key concepts, and last, the study's rationale, relevance and significance, along with assumptions, limitations and delimitations were discussed and completed chapter one.

The organization of the remainder of the study includes a review and examination of the literature in Chapter 2. Chapter 3 describes the research methodology used in this study in order to respond to the problem and answer the research questions. Chapter 4 provides an explanation of the data collection and the analysis results, and Chapter 5 describes the conclusions, implications, relationship of findings to the literature review, and the recommendations of the study.

CHAPTER 2. LITERATURE REVIEW

Introduction to the Literature Review

For many community college students, enrolling in an online course provides a flexible and convenient option for pursuing a college education (Allen & Seaman, 2011; Liu, Gomez, Khan, & Yen, 2007; Lorenzetti, 2005). However, many students are simply not prepared for the rigors of online learning and need to develop the skills necessary for online learning success (Scagnoli, 2001). Current research suggests that an online orientation may increase student success and course completion (Dray et al., 2011; Dupin-Bryant, 2004; Howell & Laws, 2004; Lorenzo, 2011; Otte, 2007; Smith-Jaggars & Bailey, 2010; Wang, 2006). As online learning moves towards an increasingly viable and flexible option for course and program completion for community college students, so to must the student service model for increasing online learning success improve and change.

This chapter reviews the current literature, seeking relevant research that links the use of an online orientation as a viable strategy for increasing student retention and performance in online courses. A search of multiple online educational databases such as Academic Search Premier, Education Research Complete, ERIC, and ProQuest Educational Journals through the Capella University Library identified relevant and useful literature that informed this action research study. Using fundamental key word searches in abstracts, such as “online learning,” “distance education,” “persistence,” “attrition,” “student retention” and “attrition in online courses”, “barriers to online

learning success”, “student readiness” and “student success” in online learning, “student satisfaction and engagement” in the online learning process, and an “online orientation” as a strategy to improve online learning retention and performance provided additional insights and influenced the design of the study.

Exploring those identified concepts, this chapter begins with an overview of student retention and attrition theory in higher education generally, and in online courses specifically. Next, the chapter considers adult learning theory as a foundation for creating a meaningful online orientation as one strategy for impacting student retention and performance in online courses. Continuing to synthesize the literature, the chapter also examines the research in which specific barriers are identified and their impact on student success in online courses. Next, student engagement and student satisfaction are examined and their influence on retention and performance in online courses, and last, the chapter reviews multiple studies underscoring the merit of an online orientation as one strategy for improving online student success.

A review of the literature revealed that the implementation of an online orientation may be a helpful tool to increase student success, although the majority of the research studies concentrated on student attitudes and perceptions regarding the impact of an online orientation on student success rather than establishing a direct link to improved retention and performance in online courses (Ali & Leeds, 2009; Bozarth, Chapman & LaMonica, 2004; Gilmore & Lyons, 2012; Hansen, Clark, McCleish & Hogan, 2009; Kanuka & Juddev, 2006; LaPadula, 2003; Scagnoli, 2001; Wozniak, Pizzica & Mahony, 2012). In contrast, this study focused on community college students and the impact of an online orientation as a way to improve retention and performance in online courses,

and as a result, may provide direction to current leaders within a community college setting in seeking ways to improve online learning success for students.

Theoretical Framework

There are two underlying theories that serve as the foundation for this action research study. One is an examination of student retention theory and the importance of retention in impacting student success and institutional viability, and second, an explanation of adult learning theory and the foundational influence on relevant online orientation design. Included within the educational literature, both provide a lens through which student retention and performance is viewed within online courses.

Student Retention Theory

Retention, an important factor for the financial stability and academic program sustainability within higher education institutions, is a source of focus and concern for students, faculty, and administrators in both traditional and online courses within community colleges (Fike & Fike, 2008; Liu, Gomez, Khan, & Yen, 2007). Particularly in the online environment, many students do not complete their online courses and student retention within the course timeframe becomes an important issue (Smith-Jaggars & Bailey, 2010). Additionally, responding to a climate of accountability and completion, the concept of student retention and the impact on student success is a critical component to an institution's strategic plan for satisfying the demands of policymakers, parents, and students for improving course and program completion, overall graduation rates, and proving learning outcomes (Fike & Fike, 2008; Liu et al., 2007; Smith-Jaggars & Bailey, 2010). Finally, student retention within a course, program, or between terms is critical to

students as they pursue and reach personal and academic goals sooner in order to advance to their next professional or academic milestone.

A number of theories proposed by educational researchers discussed the factors that impact student retention or why college students choose to leave or stay. Research (Tinto, 1987, 1997; Tinto & Russo, 1994) contends that student interaction or integration is an important factor as students make decisions regarding persistence. Confirmed by Liu et al., (2007), the authors indicated that “the notion of integration argues that whether a student persists or drops out is strongly predicted by their degree of academic integration and social integration (p. 521). Hossler & Bean (1990) suggested there are four specific variable groups which influence student retention or attrition including a student’s background and demographic variables, psychological factors such as student motivation and coping strategies, a level of satisfaction with college academics and the college environment, and last, academic and institutional variables such as policies, support, and course availability. While a student’s ability to integrate socially and academically with the institution can be an important factor in a student’s decision to stay in school, for non-traditional students, many of whom attend community colleges, social integration may be less important while environmental factors such as work, family responsibilities, and a lack of finances become more important variables which influence a student’s decision to persist in college (Hossler & Bean, 1990).

Astin (1993) another retention theorist, proposed an input-environment outcome (I-E-O) model in which college outcomes are viewed as functions of both the input and environment elements. Specifically, inputs such as demographics, student background and experience, in addition to environmental factors or those experiences encountered

during college, determine the outcomes or outputs (degrees earned, knowledge attained, beliefs and values that exist after college) including student persistence in college. Furthermore, Astin's theory of involvement describes how students change or develop during the college experience and offers insight into developing student programs and services that provide for new academic and social opportunities for student development, engagement and student persistence (Fike & Fike, 2008).

While each of these theoretical models describe the interaction between students and the college or university and the attributes that influence retention, each are based on research regarding student retention in four year college or university settings (Fike & Fike, 2008). Though these theories may be relevant for all college students, it is important to note that community college students typically possess different characteristics compared to traditional college or university students (Fike & Fike, 2008). For example, community college students are typically older, and colleges enroll higher percentages of minority, underprepared, and part-time students who work while enrolled (AACC, 2012; Howell, Laws & Lindsay, 2004). Because these unique characteristics describe many community college students, each of these characteristics needs to be considered when addressing retention issues within these settings. Additionally, because most community college students work and have family responsibilities, the flexibility of online courses becomes an important option for many (Li & Irby, 2008). As a result, many community colleges have invested in online education and the topic of increasing student success, or student retention and performance in online courses, is fast becoming an important issue for community college leaders (Harrell & Bower, 2011; Lorenzetti, 2005; Pittenger & Doering, 2010; Stanford-Bowers, 2008).

While Tinto (1987, 1997) introduced a theoretical model of retention in traditional face-to-face courses, Kember (1995) provided a useful framework for understanding student persistence in online courses. Based on Tinto's student integration model that suggests that dropout is more likely among students who are unable to integrate into a college's social community or who lack sufficient commonality in the values or beliefs of the college community, Kember's model tends to ascribe a student's integration failure to external factors such as insufficient time, unexpected events, and distractions (Howell, Laws & Lindsay, 2004; Lee & Choi, 2011; Liu et al., 2007). As already noted, many community college students are part-time students who may be attracted to distance education. However, many students may find it difficult to integrate study requirements with conflicting demands from work, family and friends, and, as a result, may drop out of an online course (Lee & Choi, 2011; Lorenzetti, 2005). When considering how to improve the retention rates in online courses, there are many issues to consider and strategies to pursue (Dietz-Uhler, Fisher & Han, 2007), and this study focuses on one such strategy. An online orientation may begin to create the social and academic integration between a student and the institution, addressing the internal and external factors that may reduce student attrition, and also creating a lasting impression that the college is committed to their success (Hossler & Bean, 1990).

Adult Learning Theory

As already noted, community college students are typically older adults with other responsibilities such as jobs and families. Many are students who have lost jobs because of the recession of 2008; they are veterans returning to school from the battlefields of Afghanistan and Iraq, or adults who have completed a GED and are pursuing the next

academic goal (Kenner & Weinerman, 2011). For many of these students, online learning, eLearning or distance education courses become an attractive option because of the convenient, flexible nature of the course offerings. For example, the asynchronous component of the course fits conveniently into a busy adult's schedule as the courseroom can be accessed at anytime or in any place. In order to meet the needs of online adult learners in the development of relevant online student services, an understanding of adult learning theory principles is necessary.

Considered the pioneer of adult learning or andragogy, Knowles (1973), provided insight into the adult learner:

1. Adults need to know why they need to learn something before beginning to learn it.
2. Adults need to learn experientially and come to the learning activity with a different quality of experience from young people.
3. Adults approach learning as problem solving and are life and task centered in their orientation to learning.
4. Adults are self-directed and take responsibility for their own learning and actions.
5. Adults learn best when the topic is of immediate value.

Knowles identified life experience as an important component of andragogy, and for the adult learner, the ability to connect real-world, life experiences in a learning environment is critical (Aderinto, 2006; Cercone, 2008; Goddu, 2012; Kenner & Weinerman, 2011; McGrath, 2009; Ross, 2011).

As online learning continues to be a viable option for students, especially adult learners, the implication for community college leaders and educators is to know and

understand adult learning theory in order to provide a learning environment that enables students to have a sense of responsibility for what, why and how they learn, in other words, to design relevant and meaningful learning activities and online student services for practical and goal-oriented students—to get them where they want to be. An online orientation is one such relevant and meaningful student service.

Review of the Research Literature and Methodological Literature

Online learning or distance education programs have grown in popularity as a flexible option for course and program completion given the growth and sophistication of the Internet and the capability of the World Wide Web. While a popular and viable option for students, research suggests that online courses have higher dropout rates, and therefore, lower student persistence when compared to traditional face-to-face courses (Dray et al., 2011; Kelly & Schneider, 2012; Mitchell, 2010; Smith, 2006). Additionally, not all students who enroll in online courses are ready or prepared to be successful (Milligan & Buckenmeyer, 2008). In order to reduce the rate of student attrition in online courses, it is important for community college leaders to identify strategies that increase student retention and performance in online courses and programs. Though the focus of this study is implementing one such strategy, research studies have examined subjects such as student barriers, student engagement and satisfaction in online learning and their impact on critical variables such as faculty and peer interaction, and the establishment of effective student support strategies such as an online orientation. This review provides an overview of the current literature in these areas.

Student Barriers in Online Learning

The current literature on distance education supports the need for some sort of orientation for students taking an online course for the very first time in order to become familiar with the idiosyncrasies and expectations of online learning and to address a number of barriers which ultimately affect student retention and performance in online courses (Anderson, 2008; Dray et al., 2011; Howell & Laws, 2004; Lorenzo, 2011; Otte, 2007; Wang, 2006). According to Miller (2005), “Students new to distance learning, specifically an online learning environment, find themselves adjusting to a new educational environment supported by unfamiliar technologies” (p. 444). Gaide (2005) reported that an online orientation should include the technical aptitudes necessary for online learning to include student hardware, software, email, and word processing skills, the appropriate learning management system structure and functionality, and appropriate Internet skills in order to navigate and perform necessary Internet activities. A student barrier for online learning, poor technology skills, or a lack of computer confidence can cause student frustration and impede student success in an online environment (Carruth, Broussard, Waldmeier, Gauthier & Mixon, 2010; Jesnek, 2012; Milligan & Buckenmeyer, 2008).

Numerous studies have identified other barriers which influence a student’s decision to drop out of online courses. In addition to technological ineptitude, other barriers that impede student success in the online environment can include poor time management skills, poor online research skills, a lack of self-efficacy or self-confidence in the ability to complete tasks and reach goals, an inability to juggle work, family and school, interact socially online, and the possible administrative/instructor issues that

emerge (Ashby, Sadera & McNary, 2011; Bozarth, Chapman & LaMonica, 2004; Milligan & Buckenmeyer, 2008; Muilenburg & Berge, 2005; Mupinga, Nora & Yaw, 2006; Yukselturk & Bulut, 2007). Tello (2007) confirmed many of these same barriers, but categorized them into situational, institutional, and dispositional barriers. Situational barriers stem from a student's life situation and can include time management issues, and family and job responsibilities. Institutional barriers include instructor issues and institutional practices such as course prerequisites and requirements that impede participation. Dispositional barriers pertain to a student's attitudes and self-perception such as self-efficacy and social interactions. Each can impact a student's ability to persist in an online course.

In another study, Smith-Jaggars and Bailey (2010) confirmed that typical online courses have higher student withdrawal rates compared to face-to-face courses. Moreover, the authors added that the evidence of meeting learning outcomes in online courses applied only to well-prepared students or those students for which student barriers in online learning have been addressed. They argued that there is little evidence that online courses have increased access or academic success for low-income and academically unprepared students for online coursework, students for which many of the student barriers exist, such as a lack of high speed internet and limited computer availability at home. The authors suggested a better examination of factors such as pedagogy and student support services that improves and reinforces online student success which leads to change for improved practice in online delivery. Preparing the student for online course expectations and for what they face in an online environment can lead to better retention and performance of the online student (Anderson, 2008).

Student Engagement in Online Learning

Opening with a description of the current online environment for students and faculty, Lorenzo (2011) noted that engaging online learners is the most important issue to address in distance education within community colleges. In addition to student engagement as a factor that affects student retention, student readiness for online courses is cited as another important issue. Through a series of interviews with leaders and faculty at a number of community colleges, the author identified a number of possible solutions for getting online learners to be engaged and ready, and as a result, to be as successful as their face-to-face counterparts. The solutions included assessing students, requiring a student orientation, and providing 24/7 online support. Lorenzo (2011) concluded that these strategies enhanced student engagement, a key to student success in the online environment.

With a goal to increase retention and success rates, other research studies described student engagement as social interaction within an online environment that actively engaged learners to create collaborative learning (Aksal, 2011; Dennis, Bunkowski & Eskey, 2007). Muilenburg & Berge (2005) asserted “that social interaction is strongly related to online learning enjoyment, effectiveness of learning online, and the likelihood of taking another online class” (p. 45). Social interaction is critical for both students and faculty in order to promote student engagement in online learning (Aksal, 2011). A number of factors were cited as effective strategies to promote social interaction such as making participants comfortable with the technology, encouraging group members to question theory and practice, encouraging online discussions and ongoing faculty communication (faculty feedback), along with frequent faculty presence

in online courses (Aksal, 2011; Mupinga, Nora & Yaw, 2006). The challenge for community college administrators, faculty and staff is to find ways for increasing social interaction and engagement for online learners, which ultimately, increases student retention and performance (Lorenzo, 2011).

Student Satisfaction in Online Learning

Current research studies documented factors such as responsiveness of the instructor, a sense of community in the online class, and clarity of course design and organization that led to student satisfaction in online courses (Bair & Bair, 2011). Stanford-Bowers (2008) indicated that if online learners are satisfied with their online experience, they are more likely to persist in the course. Additionally, Schubert-Irastorza and Fabry (2011) proposed that student satisfaction with online courses is determined by three major components: instructor variables, technical issues, and interactivity. Specifically, they assumed (and their findings supported this) that the interaction variables important to student satisfaction included interaction between the instructor and student, between student and other students, and between student and the content of the course. Citing specific challenges like clarity of explanations (instructor-student interaction), provision of useful comments (instructor-student interaction), well-organized instruction (student-content interaction) and usefulness of the discussion board (student-student interaction), the authors cited three suggestions for increasing student satisfaction in online courses: organize and provide clear expectations, provide timely feedback, and be actively present. Numerous studies confirmed student satisfaction in online courses is directly affected by the number and type of interactions between faculty and the enrolled student, and that faculty expectations and feedback, along with low

levels of technical difficulty and quality feedback on assignments, led to reduced levels of dissatisfaction (Jackson, Jones & Rodriguez, 2010; Gahungu, Dereshiwsy & Moan, 2006; LaPrade, Marks, Gilpatrick, Smith & Beazley 2011; Lewis 2010; Walker & Kelly, 2007).

Student satisfaction and engagement are closely related and illustrate the relationship between the learner and faculty, with other learners, and the course content (Wickersham & McGee, 2008). Wang (2006) asserted that student satisfaction reflects the effectiveness of the online experience and that the goal for “all students who complete an online course is to express satisfaction with course rigor and fairness, with professor and peer interaction, and with support services” (p. 268). As a result, consideration should be given to implement student support strategies such as an online orientation so that students know what to expect before they enroll in an online course, and to also boost student engagement and increase student satisfaction with the online experience.

Benefits of an Online Orientation

Historically, a student orientation was developed as a critical student support service to help students make a successful transition to a college or university environment and increase student retention (Scagnoli, 2001; Schofield & Sackville, 2010; Wozniak, Pizzica & Mahoney, 2012). The same can be said for an online orientation for a student who is enrolling in an online course for the very first time, in that, the online orientation can facilitate an introduction into the nuances of online learning with a goal of increasing student retention in online courses. A different set of skills is required in online courses when compared to traditional face-to-face courses and an online orientation can help fill the gaps in preparedness, improve student involvement, and

increase confidence for online students (Ali & Leeds, 2009; Carruth et al., 2010; LaPadula, 2003).

Current research studies in the educational literature are quick to identify the many benefits of an online orientation in helping students navigate online learning challenges in order to enhance student success. Given the high student attrition in online courses, an orientation may help improve student retention rates and student performance in online programs (Gilmore & Lyons, 2012). A focus of this study, the hypothesis is that an online orientation will increase student retention rates and performance as noted by grade attainment. Highlighted in the literature, the most frequently cited benefits of an online orientation included facilitating academic and social integration, introducing the required technology applications, increasing student confidence, and managing student expectations including study and self-management skills, and the time commitment needed to be successful.

Scagnoli (2001) underscored the fact that an orientation for online courses serves the same purpose as an orientation to college, in that, it can facilitate academic and social integration and increase overall student involvement. According to Ali & Leeds (2009), “some of the opportunities available at synchronous sessions are the ability to 1) make acquaintances and build friendships, 2) develop and create study groups, and 3) form project teams” (p. 2). These opportunities for social and academic integration, a feeling of connection, can be important to learners to form a collaborative learning environment for recurring group interactions in online courses and can eliminate a perceived isolation of the online environment (Ali & Leeds, 2009; Scagnoli, 2001; Wozniak et al., 2012). Scagnoli (2001) indicated that students who feel connected with other students, faculty,

and the campus community are more likely to complete the course or program and persist to graduation.

Another benefit of an online orientation is the opportunity to introduce the required technology applications necessary for the successful navigation and completion of an online course (Ali & Leeds, 2009; Bozarth et al., 2004; Gilmore & Lyons, 2012; Hansen et al., 2009; Wozniak et al., 2012). Gahungu et al., (2006) asserted that many students are not prepared in terms of the computer knowledge and experience necessary for their success in an online course. As a result, a lack of technological skills can cause frustration for students and reduce their drive for completing the course or academic program (Carruth et al., 2010). One solution, Miller (2005) proposed that an online orientation should familiarize students with the technological skills necessary for online success, which might increase learner satisfaction and lead to a greater commitment to course completion and online learning overall. Ultimately, an orientation provides a simulated experience of an online course which introduces and highlights the necessary computer skills needed for online course success, and as a result, reduces learner anxiety with technology issues (Carruth et al., 2010; Wozniak et al., 2012).

One of the fundamental benefits of an online orientation is the boost to student confidence in online learning methodology. Wozniak et al., (2012) noted the achievement of higher levels of student enjoyment and confidence as a result of orientation initiatives for online learners. According to LaPadula (2003),

Some students describe their initial experience with distance learning as frightening and intimidating. It takes time and energy to overcome the fear of failure and move toward the development of self-confidence in pursuing their educational goals. As students develop this sense of competence, they become more efficient and effective as learners. (p. 124)

One way to achieve confidence in online learning for students new to the delivery method is to encourage participation in the orientation and use of the tools included in the orientation so that they feel more confident before the class begins (Scagnoli, 2001). Carruth et al., (2010) not only spoke to the importance of an online orientation easing frustrations of an online course, but also to the benefit of transitioning students from confusion and angst to competence, confidence and ability within the online environment.

Finally, the most frequently cited benefit of an online orientation in the educational literature is the ability to influence and manage student expectations like study and self-management skills, and the time commitment needed to be successful in an online course. Scagnoli (2001) affirmed that students need to develop realistic expectations regarding the work required in an online course. Many students juggle classes, family and work obligations, and need to develop excellent time management skills or develop effective strategies to help them navigate the many demands on their time (Kanuka & Jugdev, 2006). In addition to adequate computer skills and a feeling of frustration if they do not possess the requisite computer skills, research indicates that students experience a feeling of frustration in adapting to a self-directed learning mode, and an online orientation can ease those frustrations in presenting a realistic picture of the online learning experience (Bozarth et al., 2004; Carruth et al., 2010; Miller, 2005).

Review of Research Regarding the Impact of an Online Orientation on Student Retention

Previous studies that address the impact of an online orientation on student success in an online course claim a positive impact, primarily for increasing the skills necessary for improving student retention in an online environment. Minimal debate exists within the literature that an online orientation aims to increase the technology skills needed to navigate the online learning management system, or that an effective orientation describes the expectations about what is required in an online course environment (Ali & Leeds, 2009; Bozarth et al., 2004; Carruth et al., 2010; Gilmore & Lyons, 2012; Wozniak et al., 2012). Furthermore, various studies cite the importance of the theoretical basis of this study, namely, that retention theory and the influence of adult learning theory provide the foundation for relevant interventions such as an online orientation (Ali & Leeds, 2009; Hansen et al., 2009; Harrell & Bower, 2011; Stanford-Bowers, 2008; Wozniak et al., 2012). Additionally, some of the studies engaged the methods and practice of action research to solve practical problems in various college settings, and as a result, provided a fitting foundation for this dissertation research design (Ali & Leeds, 2009; Ashby, Sadera & McNary, 2011; Clay, Rowland & Packard, 2008; Coghlan & Brannick, 2010; Harrell & Bower, 2011; Stanford-Bowers, 2008). Although the rudiments of these studies are germane to this specific action research study, there are methodological differences in specific design factors such as the research setting, sample size, and the timeline for the study.

While there are various research studies citing the benefits of an orientation program in preparing students for their online courses, most studies were initiated and

completed at four year colleges or universities, or graduate programs with very few studies focused on community colleges and the barriers that community college students face in an online environment. Therefore, a disproportionate amount of research exists regarding the impact of an online orientation on student retention and performance in a community college setting. Ashby and McNary (2011) asserted the need for additional research in this area because very little research exists on community college students taking online courses. In addition, Hornak, Akweks & Jeffs (2010) suggested that online services, such as an online orientation, will continue to evolve within community colleges which will lead to further assessment and study. Consequently, the proposed action research design and methodology seeks to build on related studies and interventions completed by Ali and Leeds (2009), Wozniak, Pizzica and Mahony (2012), and Carruth, Broussard, Waldmeier, Gauthier and Mixon (2010). Serving as a foundation to this research study, two out of the three studies either designed or implemented an online orientation to better prepare students for the rigors of online learning. With similar intent, one study specifically utilized a face-to-face orientation rather than an online orientation.

Between the studies, research design differences existed. For example, in two of the studies, qualitative methods were used including questionnaires and focus groups to gather data regarding orientation content and design, while one used a mixed method of quantitative and qualitative types using website statistics, and tracking data collection from the learning management system and researcher's journals to determine the link between an orientation and online readiness. Expanding the current research, action plan design, and useful information at the community college level, this dissertation study uses

a collaborative action research framework along with a quantitative methodology to measure the impact of taking an online orientation on student retention within a course and student performance as demonstrated by grade attainment.

Even though many of the related studies were completed at undergraduate and graduate universities, the sample size for each was less compared to that of this research study. With a potential of 330 students in six different course sections participating in this research study, the largest sample in the related studies was from Flinders University and the University of Sydney with 292 students in seven courses (Wozniak et al., 2012). In the other cited research studies, the range of students participating numbered 57 in 15 courses to 91 students participating in two courses.

During the literature review process, one additional discovery emerged regarding methodology and design issues, namely, the duration of the intervention phase of the studies. In all of the cited studies, a typical semester of 15 or 16 weeks was used as the timeline for the research phase, whereas, an eight week short session was used for this dissertation study. Though a shorter time frame in comparison, the eight week research duration will provide adequate data to determine the impact of an online orientation on retention and student performance and serve as a model for future iterative research cycles. It will also serve as a model for undertaking other action research studies for the college.

Critique of Previous Research

Although the related studies cited above described the importance of an online or face-to-face orientation in preparing students for the technological skills required for

online learning and other factors such as the personal discipline required for course completion and success, there were specific limitations to the various studies that influenced the scope of this research study.

In much of the literature, the emphasis of research and resulting outcomes discussed the factors which influenced student retention in online courses such as adequate computer and time management skills, institutional technical support, convenience and flexibility of the online course, and clearly stated course requirements or expectations (Stanford-Bowers, 2008). For example, in the study carried out at Kennesaw University (Ali & Leeds, 2009), 64 students in one specific class attended a face-to-face orientation to prepare them for their online course experience. The retention rate of students who attended the orientation was over 91% and the hypothesis that attending the orientation course would increase retention in the course could not be rejected. However, the study was limited to 64 students in one course taking a face-to-face orientation, and the ability to which the results are transferable to this research context is questionable because of the different research context and a related, but different intervention.

In a related study initiated by Wozniak, Pizzica and Mahony (2012), the study participants identified as graduate level students, and the researchers determined that an orientation to online courses or programs involved three distinct contact dimensions to include technological, interpersonal, and reflective practice that transitions students from a world of work and family to a world of academic study. Though the number of participants in the sample group and the overall number of courses targeted for the study were similar to this dissertation research study, given the graduate status of the

participants calls into question whether the outcomes can be applied to other contexts or settings other than graduate level institutions (Stringer, 2007).

Chapter 2 Summary

For the past three decades, educational research stressed the importance of improving student retention and the appropriate use of relevant adult learning theory to improve student learning and success within colleges and universities. Over time, effective retention strategies proved to be important in sustaining academic programs, and were a critical link for improving institutional accountability and overall student success. (Fike & Fike, 2008; Liu et al., 2007). The appropriate application of adult learning theory has been shown to influence the design of pertinent and meaningful learning activities and student services, in order to connect the adult learner to the present learning environment with past real-world life experience, and offer relevant academic activities to enhance student learning (Cercone, 2008; Goddu, 2012; Kenner & Weinerman, 2011). With an increase in demand for online course delivery, institutions are currently exploring strategies to increase student retention and performance in online courses (Allen & Seaman, 2011; Dray et al., 2011). As institutions respond to a climate of proving accountability and increasing student success, retention and adult learning theory provide a framework from which effective student services can be implemented.

Combining retention and adult learning theory, this action research study explores the impact of an online orientation on student retention and performance in online courses. Current academic research confirmed the premise that an online orientation may address and eliminate a number of barriers that students experience in an online learning

environment which can negatively affect student retention and performance in online courses (Anderson, 2008; Dray et al., 2011; Howell & Laws, 2004; Lorenzo, 2011; Otte, 2007; Wang, 2006). Furthermore, educational literature also confirmed that an online orientation may increase student engagement and satisfaction for online learners which leads to increased retention and student performance (Lorenzo, 2011).

The current literature also outlined the many benefits of an online orientation to include introducing the nuances and expectations of online learning, filling in the gaps to increase preparedness, and boosting student confidence in the online learning environment (Ali & Leeds, 2009; Carruth et al., 2010; LaPadula, 2003). Since student attrition is a significant issue in an online course, an online orientation may improve student retention, performance, and increase completion rates within a course (Gilmore & Lyons, 2012). Furthermore, an online orientation provides an opportunity to introduce the required technology applications and skills necessary for successful course navigation and completion (Ali & Leeds, 2009; Bozarth et al., 2004; Gilmore & Lyons, 2012; Hansen et al., 2009; Wozniak et al., 2012).

Research clearly identified a correlation between an orientation and the benefit to student readiness prior to taking an online course. However, the most recent studies are limited to qualitative studies emphasizing a student's perception of the value of an online or face-to-face orientation prior to taking an online course. Though research studies purport the benefits of implementing an online orientation, the findings of this action research dissertation study will add a needed quantitative methodology to the body of knowledge exploring the impact of an online orientation on student retention rates and

student performance as reflected by grade attainment, and thereby, inform the thinking and practices of this and other community colleges who offer distance education courses.

CHAPTER 3. METHODOLOGY

Introduction to Chapter 3

This chapter describes the research design and methodology used to determine the impact of an online orientation on student retention and performance in specific online courses. During the first short session of the 2013 spring semester, a non-experimental research study of six fully online, high demand courses was conducted at the research site with 330 community college students who enrolled in the targeted course sections. True to action research methodology, an intervention was planned and each of the students was invited to take a four-module, interactive online orientation prior to the beginning of their course. Student retention rates and student performance data, or persistence and grade attainment in the courses, were compared to a control group of students who took the same courses and who did not complete the online orientation during a previous semester. This study examined whether students who enrolled in the targeted, fully online course sections who completed the online orientation and finished the course, enjoyed better retention rates and higher grade attainment compared to students who took the same courses in a previous semester and did not complete the online orientation.

This section outlines the methodology adopted to carry out the study. First, the purpose of the research study is described in order to present the research topic and provide a foundation for the study. Second, the research questions and hypotheses are provided to guide the research methodology and eventual analysis of the data. Third, the

research design is described to provide specific details on the type of methodology used and the justification for the selected methodology. In addition to the research design, this chapter also includes information about the target population, sampling method, sources of data, and data analysis procedures. Finally, the chapter concludes with a discussion about internal and external validity, the expected findings, and the ethical issues surrounding this research study.

Purpose of the Proposed Study

The purpose of this action research study was to examine the impact of completing an online orientation on student retention and performance in online courses in order to improve student success in online learning. Assessing the impact of the orientation on student success included a quantitative analysis of course grades and in-course retention from those students who did not withdraw from a course. Data from the sample were compared to data on retention rates and student performance information from the control group who did not complete an online orientation and who took the same online courses during the fall semester of 2009.

It was hypothesized that the proposed intervention had the potential to improve student success in online courses, specifically, improved student retention and increased student performance. Ultimately, each would contribute to student progression toward a degree or academic goal completion. In addition, the results of this action research study could serve as a model for online learning improvement at this and other community colleges in proving the value and effectiveness of an online orientation for improving student success, credential attainment, and an overall increase in fulltime equivalent (FTE) funding as students enroll in additional online learning opportunities. The overall

intent is to impact organizational change at the research site by demonstrating a need to improve student success by requiring the completion of an online orientation for any student new to online learning.

Research Questions and Hypotheses

This study focused on the need to implement a student service to determine the impact on student success in online courses. The following research questions and hypotheses guided this quantitative action research study and each related to the stated research problem of lower retention rates and student grades in online courses compared to the same traditional face-to-face courses.

R₁: How does completing an online orientation impact student success in an online course?

R_{1a}: How does the intervention improve grades?

R_{1b}: How does the intervention improve retention?

H₁: There is a statistically significant difference in student retention or grade attainment (student performance) between the sample group who took the online orientation and the control group that did not.

H₀: There is no statistical difference in student retention or performance between the sample group who took the online orientation and the control group that did not.

Research Design

Utilizing a collaborative stakeholder group to address the specific research questions, this study used an action research science methodology. Within the action

science framework, the study followed a quantitative, non-experimental, causal-comparative research design to provide credible data for answering each of the research questions. Specifically, the research design allowed for the exploration of the causal impact of an online orientation (independent variable) on student retention and performance (dependent variables) in specific online courses. Two groups of students were compared in this action research study, one who enrolled in the selected online courses at the research site over an eight week short session during the spring semester of 2013, and a group who took the same courses during the fall 2009 semester. A quantitative methodology was useful to determine the impact of the online orientation on student performance, or grade attainment, and retention rates between those who took the online orientation (research group, spring 2013), and those who did not (control group, fall 2009).

Causal-comparative research design utilizes inferential statistics, or procedures that involve selecting a sample from a defined population and studying that sample in order to make inferences about the overall population (Ravid, 2011). As a result, the data from this quantitative, non-experimental design may be useful to yield useful knowledge about the impact of an online orientation on student retention and performance in other online courses in order to influence the formal use of this intervention at the research site and at other community colleges.

Based on the literature review, there were no empirical studies describing the impact of an online orientation on student retention and student performance in fully online courses in a community college setting. Though an online orientation served as an intervention, many of the research studies discovered during the literature review focused

on the relationship between the orientation and variables such as student satisfaction, student engagement, or the readiness level of students for taking an online course. For example, Kelso (2009) sought to determine if an online orientation impacted student satisfaction. Using a non-experimental research design, data was analyzed from a survey instrument using a chi-square, non-parametric method to determine the statistical significance of the responses. Linked to each of the research questions, the 35-question survey was designed to determine the impact of an online orientation on student satisfaction, student readiness and technology abilities, and whether students believed that an online orientation should be required for students who are new to the online environment. While the research study provides insightful information, the scope and focus are different in comparison to this research study.

In another study, a quantitative research design was used to examine the predictive relationships between social presence and course retention, as well as final grades for students enrolled in online courses at a community college (Liu et al., 2009). The independent variable was social presence, while the dependent variables included both course retention and final course grades. Using the Social Presence and Privacy Questionnaire, 353 students completed the survey and the chi-square test was used to evaluate the link between social presence in an online course with course retention and a student's final grade (Liu et al., 2009). The results of the analysis suggested that social presence is a predictor of course retention and final grades in the community college online environment. Though relevant, this study measured the impact of a different independent variable, namely, social presence on student retention and grades in a community college online environment.

Target Population, Sampling Method, and Related Procedures

Target Population

The population targeted for this study consisted of students who enrolled in selected fully online courses in a community college setting during the first short session of the 2013 spring semester. The targeted courses included ACA 111, CIS 110, COM 110, ENG 111, ENG 114, and ENG 231. The study sought to determine the impact of an online orientation on student retention and performance. Although the study focused on students in selected fully online courses in one community college, the results may be generalized to other fully online courses and community college settings if comparable in student population, demographic makeup, and in online course offerings. Additionally, the research study was specifically designed to address a gap in the research literature linking an online orientation to improved student retention and student performance in a community college setting.

Sampling Method

All students who enrolled in the specific online course sections at the research site during the first short session of the spring 2013 semester were invited to participate in the study and complete the online orientation prior to the beginning of their respective courses. Specifically, the sample included students who took fully online courses in: ACA 111, CIS 110, COM 110, ENG 111, ENG 114, and ENG 231. These courses represented a sample of the top 25 high demand, general education courses at the college with lower student retention rates and student grades compared to the same traditional face-to-face courses. Without prior knowledge of the impending study, students who met course pre- and co-requisites self-enrolled in one or more of the fully online sections,

similar to random selection. Since the purpose of this study sought to understand the impact of an online orientation on student retention and performance in online courses, a sample of students enrolled in six targeted high demand online courses was chosen to participate in the study.

Sample Size

At the beginning of the spring semester, the sample size numbered 330 students who enrolled in one of the fully online course sections and were invited to take the online orientation. Given the high demand for these particular course sections at the research site, this enrollment number is typical one semester to the next for these popular courses (as stated in the community college's 2011 student academic activity data file). From the sample of 330 students who were invited to complete the online orientation, 70.3% of the research group elected to participate in the study and completed the orientation.

Setting

The research site is a large, urban, multi-campus community college and serves approximately 70,000 students a year at six campus locations throughout the service area and through a robust online learning presence. The college has a reputation for being responsive to workforce development and community needs, and has been described as an innovative institution by local and national organizations. Currently, the college offers 611 online course sections on average in a typical fall or spring term. The focus of this study, six fully online, high demand courses, were selected to determine the impact of an online orientation on student retention and performance.

Recruitment

One week prior to the beginning of the course, each of the students who enrolled in the targeted online courses was contacted through an email letter to their student email address from a faculty program chair on behalf of the researcher. The email contained an Informed Consent Form (ICF) developed from Capella University Institutional Review Board protocols. The ICF included information about the purpose of the study, procedures to be followed, the researcher, benefits for participating in the study, and the duration of the study. A statement of confidentiality and an opt-out clause were included. The study was structured such that end of course grades and retention rates were compiled and shared with the researcher without identifiers by the Office of Institutional Effectiveness, Planning and Research at the research site.

Sources of Data

Data for the study were collected from two sources. The first source, student grades, were collected at the end of the course duration from the Office of Institutional Effectiveness, Planning and Research located at the research site. The second data source, also from the same office, included the retention rates of the sample group who completed the online orientation (intervention) prior to an eight week short session during the spring 2013 semester. These data were compared to the same data from the control group from the fall of 2009 who did not complete the orientation.

Data Collection

This research study underwent multiple approval processes by individuals within Capella University and the research site. Beginning with the Scientific Merit Review (SMR), approvals were granted by the researcher's mentor, the committee, and then by the School of Education. Once full approval of the SMR was provided, the study was granted an exempt review from the Institutional Review Board (IRB) at Capella because the data collected were typical course data such as grades and retention rates. The risk to student participants was minimal. Furthermore, approvals were given by the Vice President and Associate Vice President of Learning from the college. The college has an IRB and the appropriate form was submitted to obtain formal written approval from the college to conduct the study and permission was granted.

Data were collected during an eight week short session of the spring 2013 semester from students who took the fully online courses in one or more of the six targeted course sections. A quantitative, non-experimental design was used as the foundation for data analysis. Aggregated end of course grades by course as an unobtrusive measure (Gall, Gall & Borg, 2007) were collected to determine whether completion of the online orientation impacted student performance or an increase of A, B, or C grades. Second, aggregated student retention rates by course were collected to determine whether the completion of the online orientation impacted student retention within the course. Student retention percentages of the sample vs. the control group were compared and student grade data were collected at the end of the course in the form of A, B, C, D, F, W, and I letter grades in order to assess the impact of completing the online orientation on both student grades and student retention within the courses. Data (grade

attainment and retention rates) from the sample group were compared to the control group who did not complete the online orientation. To ensure student confidentiality, grade and retention data were collected from the Institutional Effectiveness, Planning and Research department at the end of the targeted online courses.

This study is grounded in the validity criteria and goals of action research and included the generation of new knowledge, achievement of action-oriented outcomes, the education of the researcher and stakeholders, results that benefited a local issue or problem, and a sound and appropriate research methodology (Herr & Anderson, 2005). As such, the study provided an opportunity for multiple perspectives and ongoing dialog with those familiar with the research setting and the emphasis of increasing student success in online learning, and therefore, provided dialogic and democratic validity to the study. Additionally, the design of the study allowed for the comparison of a group who completed the online orientation (the intervention) with a group who did not complete the intervention and allowed for outcome validity, or a determination whether the intervention led to an outcome of improving student success in online courses. Furthermore, the collection of grade and retention data and the subsequent analysis using accepted statistical methods enhanced the process validity of the study. Finally, addressing the transformative potential or catalytic validity of the study, the results of the study will be added to the current scholarly literature providing additional data for improving online learning success for students, and thereby, possibly creating a national or global potential for change beyond the research site.

A *t* test for independent samples was used to analyze the data and compare the means from the sample versus the control group who did not complete an online

orientation from a previous semester. The data will be used to determine if the online orientation intervention was successful in increasing student performance and retention in the selected online courses.

Operationalization of Variables

As a construct, this study sought to measure student success within certain, fully online courses in order to address accountability and student success improvement within a community college. Specifically, the study investigated the impact of completing an online orientation on student retention and student performance as indicated by grade attainment. To that end, a quantitative, non-experimental design was used with an independent variable (completing the online orientation), and two dependent variables (student retention and grades) to determine if the specific intervention impacted certain outcomes. To understand if change occurred, student retention and grade data were collected at the end of the course period by the Office of Institutional Effectiveness, Planning & Research at the research site.

As dependent variables within this study, student retention and grades, and the impact on each when the independent variable or intervention was completed by the research group, were examined. An improvement in student persistence and student grades within the targeted online courses may indicate that the independent variable, the completion of an online orientation, impacted the dependent variables to improve student success within the targeted online courses. Therefore, it may be postulated that any improvement in student retention and student grades as a result of completing an online orientation, validates two assertions found within the literature:

1. An online orientation may increase student success and course completion (Dray et al., 2011; Howell & Laws, 2004; Lorenzo, 2011; Otte, 2007; Smith-Jaggars & Bailey, 2010).
2. Improving online programs results in improved learning, access, student satisfaction, faculty satisfaction, and cost effectiveness (Wang, 2006).

Data Analysis Procedures

Specific steps were taken to analyze the two identified data sources of the research study, namely, student retention and grade attainment from those who participated in the study. First, retention rates were analyzed to determine whether more students who completed the intervention were retained within each targeted course section compared to the control group who did not complete the orientation. Second, grade attainment was analyzed to determine whether more students, who once again completed the intervention, achieved more A, B, and C grades and a higher grade point average compared to the control group. Statistical analysis was performed using data analysis applications in Microsoft® Excel 2010.

In analyzing the data, an examination of the number of students who completed a course, and the number of students who enrolled and later withdrew before the end of course were sorted into four categories:

S: The total number of students who completed the course and received a final grade of A, B, or C. Represents successful grade attainment and course completion.

T: The total number of students who completed the course and received a final grade of D. Represents unsuccessful course completion.

U: The total number of students who completed the course and received a final grade of F, and I (Incomplete). Represents a lack of student persistence in the course.

W: The total number of students who enrolled in a course and withdrew from a class receiving a final grade of W (withdrawal). Represents a lack of student persistence in the course.

To determine the impact of completing the online orientation (intervention) on student retention and grade attainment for the research group, and to evaluate the same variables for the control group who did not complete the online orientation, the data was analyzed using the following equations (Lee, 2012). The dependent variable R represents the student retention rate in the course, and for the other dependent variable, G represents A, B, and C grade attainment upon course completion.

$$R = \frac{S + T}{S + T + U + W} \qquad G = \frac{S}{S + T + U + W}$$

In choosing a statistical test to analyze data for this study, a *t* test was considered appropriate in causal-comparative design when the means from two groups were compared (Ravid, 2011). In particular, a *t* test for independent samples was used to address each research question and is typically used when the two groups being compared are independent of each other. In this case, the test was conducted to compare the mean retention rates and grade attainment of the research and control groups. The retention rates were calculated separately for the research and control groups. Similarly,

the mean assigned grades from each group were calculated separately. In order to determine whether the results from this causal-comparative design were statistically significant between the two groups and because the alternate hypothesis (research hypothesis) is a directional hypothesis that predicts that the group completing the online orientation would have higher retention rates and more A, B, and C grades compared to the control group who did not complete the orientation, a one-tailed t test for independent samples was done. Descriptive statistical analysis was completed on the collected data to confirm that the data were normally distributed and that the variances were approximately the same, both necessary for a valid t test. In a t test for independent samples, there are a few assumptions underlying this test, namely that the groups are independent of each other, a person may only appear in one group, and the population variances of the two groups are approximately the same, or the assumption of the homogeneity of variances (Ravid, 2011). The null hypothesis stated that there is no significant difference between the means of the two groups and this study is designed to test the null hypothesis and to decide whether it is plausible (Ravid, 2011).

The rationale for the data analysis procedures employed in the study was based on several factors: 1) the research design used two independent groups of participants, students who completed an intervention and students who did not; 2) the design measured the impact of the intervention on student retention and student performance by comparing both groups at the end of the course; 3) the sample size of the students who enrolled in the targeted online courses in the spring of 2013 ($n=330$) and who completed the online orientation represented 70% of the total population; and 4) the sample size was large enough to satisfy the presumption of normality (Ravid, 2011).

As is the convention, the traditional $p < 0.05$ alpha level of significance in addition to the less rigorous $p < 0.10$ were applied to the data. This was done to decide whether to reject the null hypothesis. An observed significance level of less than .05 is statistically significant at the 5% level and the likelihood of getting any large difference between the two groups purely by chance is less than 5 percent, and therefore, rendering the null hypothesis untrue (Ravid, 2011). In testing for the assumption of the homogeneity of the variances between the research and control groups, the significance level of .05 was also used in an F test in order to test for the quality of variances.

Limitations of the Research Design

Certain research design limitations were present in this study. First, the research site is a large, urban community college with a student population that includes first generation college students, minority and low income students, and some students who need remediation in order to be able to take college courses. The study was limited to students who enrolled in specific, fully online courses, and the results are specific to the research site and may not be generalizable to other community colleges or university settings. However, it allows people who were not part of the study to make judgments about the similarity to their own situation so that the outcomes can be applied (Stringer, 2007). Second, the study targeted six of 25 high demand, fully online, general education courses at the research site and the students participating in the study could be systematically different from those who took the other fully online courses not selected for this study. Once again, the results of the study may not be generalizable to the students who took the other 19 online courses that were not targeted for this study.

Finally, the research site possesses a fairly robust technology infrastructure for the development, implementation, and management of online courses. The availability of eLearning and help desk teams, for example, affords the college the ability to implement online student services like an online orientation. Replicating this study in a college lacking capacity for these kinds of services may produce results that may not be relevant and conflict with the outcomes of this study.

Internal Validity

Great care was given to achieve internal validity in this study through the control of extraneous variables and to ensure that the only obvious difference between the research and control groups was the intervention (Ravid, 2011). Internal validity was also enhanced by the adherence to research and Institutional Review Board protocols, specifically for directing student contact, data collection, data processing, and information sharing with student participants and the stakeholder group. Important to maintaining the study's internal validity, the Office of Institutional Effectiveness, Research and Planning was used for data collection and processing and preserved the privacy and confidentiality of both student participants and the data.

A primary threat to internal validity, differential selection refers to instances when the groups being compared differ from each other on some specific characteristic before the study begins (Ravid, 2011). To minimize this threat to internal validity, the students in both research and control groups enrolled in one of the six targeted online courses. Additionally, for both groups, student demographics were compared to ensure similar student characteristics between the two groups.

One other threat to internal validity, maturation refers to intellectual or mental change (skill level improvement) experienced by the participants during the study (Ravid, 2011). In particular, maturation is a threat in studies that last for a longer period of time as opposed to a shorter study duration. In order to minimize this extraneous variable, the duration of study for both the research and control groups was an eight week short session, rather than an eight week research group compared to a typical 16-week semester for a control group. With great intent, the research study duration was the same for both groups in order to maintain the integrity of internal validity.

External Validity

Threats to external validity may limit the extent to which a study's results can be generalized or applied to other populations who have not participated in the study (Ravid, 2011). Ravid (2011) asserted that potential problems may arise if the research and control groups are comprised of volunteers, who may not be representative of the general population. Given this specific concern, this study engaged random selection to select participants for both the research and control groups. Student were not recruited and self-enrolled in the targeted online classes without any prior knowledge of the impending research study. As a result of randomly selecting participants to the groups, the groups that were formed were considered similar to each other, especially because the group size was not too small (Ravid, 2011). Furthermore, the composition of the control group was comprised of similar students who had already completed the course in a previous semester. Eliminating a threat to external validity called the John Henry Effect, it was impossible for control group members to perceive themselves to be in competition with

the research group, and thus altering the true impact of the intervention, simply because the control group had already completed the course (Ravid, 2011).

Although this research study did not seek to generalize its results to all higher education institutions who offer fully online courses, generalization may be possible within the research site, to other community college students who enroll in similar online courses, and to other community colleges in a similar setting with a capacity for implementing fully online courses, and for designing student services with an intention to improve online learning success.

Expected Findings

Building upon the research literature that links an online orientation to increased student satisfaction, engagement, and an ability to confront online barriers that impede student success in distance education courses, this study sought to examine the impact of completing an online orientation on student retention and performance in online courses in order to improve student success in online learning.

For students who completed the online orientation, a major expectation of this study was to produce evidence of higher student retention rates within the targeted online courses and higher grade attainment (A, B, and C grades) compared to students who did not complete the orientation. It is expected that there will be a statistically significant difference in the retention rates and mean final grades between the research and control groups at the $p < 0.05$ or $p < 0.10$ significance levels. This result would support the hypothesis of the study, in that, completion of an online orientation does improve student

retention and grade attainment in online courses, and can be used as an effective student service to improve student success in online courses at community colleges.

Ethical Issues

A concern for research ethics is paramount as the rights of those who participate in the study should be protected throughout the process. Participants need to be informed of the study, need to provide their consent to participate, and should be given an opportunity to withdraw from the study after it has started. Additionally, participant privacy and confidentiality should be honored throughout the process (Ravid, 2001). Special precautions were taken to ensure privacy and confidentiality. Furthermore, participants were given an opportunity to ask questions prior to the beginning of the study so that each could make an informed decision regarding their participation.

Researcher's Position Statement

Conflict of interest assessment.

To guard against any potential conflict of interest, a number of safeguards were implemented prior to the study. First, in compliance with the policies that govern the protection of human participants, all research studies with students at the college must be approved by the Institutional Review Board (IRB) at the research site with additional proof of IRB approval from Capella University prior to any data collection. Additionally, students self-enrolled into the targeted online courses without any knowledge of the research study. After enrolling in one of the targeted online courses, the students were invited to participate and were informed about the study, its purpose, duration and benefit

for anyone who chose to complete the online orientation prior to the beginning of their online course.

By electing to complete the online orientation, a participant signified their consent to participate, though the consent was not documented via a signed form as the research presented no more than minimal risk of harm to subjects and involved no procedures for which written consent is normally required outside of the research context. Participants were informed that their participation was voluntary and their course performance would not be affected in any way because of participating or not participating. To remove any other implication of conflict of interest or risk, all student identifiers were removed from the retention data and end of course grades, and retention statistics were collected, summarized, and shared by the Office of Institutional Effectiveness, Planning and Research.

Position statement.

This action research study was designed as an insider study in collaboration with critical stakeholders. Faculty and administrators, to include individuals from the Learning and Educational Support Services units, along with research experts from Institutional Planning and Research served as stakeholders throughout the inquiry. As an administrator at the college and a member of the online learning stakeholder group in the research, the collaborative team was formed in order to implement the intervention to confront an issue, or in this case, a lack of online student success. In searching the literature, a number of researchers cited the need for an online orientation to improve the success rate of online students (Dray et al., 2011; Lorenzo, 2011; Smith-Jaggars & Bailey, 2010). However, this was cited as one strategy for online learning improvement,

and other factors were also mentioned in tandem for improving online student success such as improving faculty development for online faculty, and implementing additional tools for creating synchronous and asynchronous student engagement strategies (Appana, 2008; Puzziferro & Shelton, 2009). An initial positive bias about the online orientation and the impact on student success was formed. However, it was crucial to set this bias aside throughout the study's duration.

Ethical Issues in the Study

As described, a number of safeguards were implemented to protect the privacy and confidentiality of any one of the student participants who elected to participate in this research study. As a voluntary study, no student faced coercion or undue risk by participating. In fact, the research presented no more than minimal risk of harm to subjects and involved no procedures for which written consent is normally required outside of the research context. All participants received detailed information outlining the purpose, process, risks and benefits of the study to enable an informed decision regarding participation.

Confidentiality and participant anonymity were identified as critical to the protection of human participants and to the success of the study. End of semester grades and retention rates were collected, summarized and shared by the college's institutional research department in a summary report. Grade and retention data were reported anonymously, and at no time did the researcher or action research stakeholder group possess any student identifiers. The data disposal plan included the storage of all raw data in a college-secure server for seven years. After that, the information will be purged

from the server. Typical for educational institutions, grade information is kept for future student access to personal records.

Participant involvement in the study was not outside typical student activity in an online course setting. The data that were collected and analyzed included routine course and retention assessment with no participant identifiers which allowed for no more than minimal risk for both the research and control groups. The research group was invited to take the online orientation, and as already outlined, was provided all of the safeguards to ensure minimal risk and participant confidentiality. The control group did not participate in the intervention and data from this group were collected from existing student records.

Chapter 3 Summary

This chapter described the research design and methodology used to determine the impact of an online orientation on student retention and student performance in specific online courses. This study used an action research science methodology which utilized a collaborative stakeholder group to address the specific research questions.

Within the action science framework, the study followed a quantitative, non-experimental, causal-comparative research design to provide credible data for answering each of the research questions, namely, to explore the causal impact of an online orientation (independent variable) on student retention and performance (dependent variables) in specific online courses. Student retention percentages of the sample vs. the control group were compared and student grade data were collected at the end of the course in the form of A, B, C, D, F, W, and I letter grades in order to assess the impact of taking the online orientation on both student grades and student retention within the

courses. Data from the sample group were compared to the control group who did not complete the online orientation.

In order to determine whether the results from this causal-comparative design were statistically significant between the two groups, and because the alternate hypothesis (research hypothesis) was a directional hypothesis that predicted that the group completing the online orientation would have higher retention rates and more A, B, and C grades compared to the control group who did not complete the orientation, a one-tailed *t* test for independent samples was done. The test was conducted to compare the mean retention rates and grade point averages of the research and control groups. Next, Chapter 4 presents the analysis and results of the data collected in this study.

CHAPTER 4. DATA ANALYSIS AND RESULTS

Introduction

This chapter presents the data analysis and interpretation of the research results. Both are presented to answer the following research questions and hypotheses:

R₁: How does completing an online orientation impact student success in an online course?

R_{1a}: How does the intervention improve grades?

R_{1b}: How does the intervention improve retention?

H₁: There is a statistically significant difference in student retention and grade attainment (student performance) between the sample group who took the online orientation and the control group that did not.

H₀: There is no statistical difference in student retention or performance between the sample group who took the online orientation and the control group that did not.

The purpose of this action research study was to examine the impact of completing an online orientation on student retention and performance in selected online courses in order to improve student success in online learning. The study followed a quantitative, non-experimental, causal-comparative research design to provide credible data for answering each of the questions and to address the two hypotheses. Parametric statistical

analysis was completed to compare the mean retention rates and grade point averages for both the research and control groups by using data analysis software in Microsoft® Excel 2010.

Within the six fully online, high demand courses, 330 students were invited to complete a four-module, interactive online orientation prior to the beginning of their spring 2013 short session course. From the sample of the 330 students, 70.3% of the research group completed the online orientation. Aggregate student retention rates and student grade data were compared between the research group and the control group who took the same courses in a previous semester who did not complete the online orientation. A *t* test for independent samples was used to compare the mean retention rates and the mean grade point averages from each group.

The next section of this chapter begins with a demographic description of the sample. Next, the chapter provides a summary of the descriptive statistics used in describing the variables of the study, and the last section of the chapter presents the detailed data analysis and the results which were used to respond to the research questions and hypotheses.

Description of the Sample

All students who enrolled in the specific online course sections targeted for this study during the first short session of the spring 2013 semester were invited to participate and complete the intervention. From the 330 students in the research group who enrolled in the targeted online courses and were invited to participate in the study, 70.3% of the students actually signified their willingness to participate by completing the online

orientation prior to the beginning of their respective courses. Without prior knowledge of the impending study and similar to random selection, students who met course pre-and co-requisites self-enrolled in one or more of the fully online sections to meet personal academic goals and were not recruited in any way. In a previous semester, 478 students enrolled in the same courses during the fall of 2009 and did not complete the online orientation. The demographic data of the students who participated in the study and data from college records of those who completed the same courses in 2009 are provided in Table 3. Both groups showed similar demographic characteristics even though the enrollment in the targeted course sections was higher in the 2009 control group in comparison to the total enrollment of the research group in 2013.

Table 3. Demographic Data of Study Participants

Variable	Students who Enrolled Spring 2013 Research group (n=330)		Students who Enrolled Fall 2009 Control group (n=478)	
	#	%	#	%
	Male	80	24.2	148
Female	250	75.8	330	69.0
Age less than 20	34	10.4	95	19.9
Age 20-24	121	36.6	168	35.1
Age 25 and older	175	53.0	215	45.0
African American	138	41.8	181	37.8
Asian/Pacific Islander	21	6.4	12	2.5
Hispanic	25	7.7	29	6.1
White	115	35.0	234	49.0
Other/Unidentified	30	9.1	22	4.6

Female students constituted a higher percentage in the research group compared to the control group with 75.8% and 69% respectively. Both groups showed similar

composition within the age and ethnicity categories with the majority of students in both the research and control groups identified as African American, Hispanic, and Caucasian (84.2% and 92.9% respectively). Most of the students in both groups, or 53.0% in the research group and 45% in the control group, identified themselves in the age bracket 25 and older, and the next highest percentage of students identified themselves in the 20-24 group at 36.6% of the total sample for the research group and 35.1% for the control group.

Assessing the impact of the orientation on student success included a quantitative analysis of course grades and in-course retention from those students who did not withdraw from a course and were invited to complete the online orientation. The sample included students who took fully online courses in six course sections which represented a sample of the top 25 high demand, general education courses at the college with lower student retention rates and student grades compared to the same traditional face-to-face courses.

Summary of the Results

Final grades from each of the targeted course sections were used to determine the overall retention rates and grade attainment and were sorted into four categories. For this study, retention included students who received a grade of A, B, C, or D and received college credit for the course. Students receiving a grade of F, I, or W were considered non-completers who did not persist in the course. The first category represented students who successfully completed the course and received a final grade of A, B, or C. The second category represented the students who completed the course unsuccessfully, but received course credit with a final grade of D. Representing category three were those

students who completed the course and received a final grade of F and I (Incomplete). The last category represented the students who initially enrolled in a course and withdrew from a class receiving a final grade of W (Withdrawal). Both categories three and four represent a lack of student persistence in the course. Table 4 shows the final grade comparisons between the research and control groups and Table 5 presents the comparison of A, B, and C grades attained by course between the research and control groups.

The statistics in both Tables 4 and 5 indicated that, overall, the research group, 70.3% of whom took the online orientation prior to the eight week short session, attained a higher percentage of A, B, and C grades at 70% compared to the control group at 61.3% who took the same courses and did not complete the orientation. Both groups showed that more students successfully completed a course with A, B, and C grades compared to other assigned grades. However, fewer students in the research group received a grade of D (2.7%) compared to the control group (6.1%). Also, 27.3%, or fewer students in the research group, received F, I, or W grades compared to 32.6% who received the same grades in the control group. Furthermore, Table 5 showed the detail of A, B, and C grades by course for both the research and control groups.

Table 4. Final Grades from Research and Control Groups

Grades	Research Group (n=330)		Control Group (n=478)	
	#	%	#	%
A, B, and C	231	70.0	293	61.3
D	9	2.7	29	6.0
F and I	52	15.8	110	23.0
W	38	11.5	46	9.6
Total	330	100	478	100

Table 5. Percentages of A,B,C Grades Attained by Course

Course	Research Group (n=330)		Control Group (n=478)	
	A, B, C		A, B, C	
	#	%	#	%
ACA 111	65	19.7	79	16.5
CIS 110	28	8.4	56	11.8
COM 110	41	12.4	22	4.6
ENG 111	52	15.8	70	14.6
ENG 114	24	7.3	47	9.8
ENG 231	21	6.4	47	9.8
Total	231	70.0	293	61.3

This preliminary analysis shows that 70% of students in the research group, most of whom completed the orientation, completed the courses successfully with A, B, and C grades compared to 61.3% in the control group, and that the research group also had a higher retention rate of 72.7% compared to 67.3% for the control group (Figure 1).

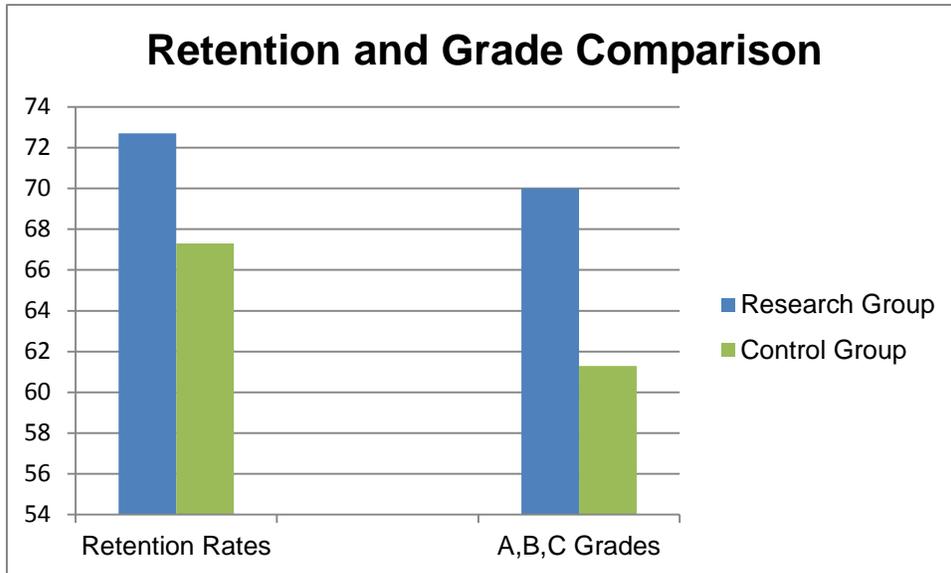


Figure 1. Retention and Grade Comparison from Research and Control Groups

The descriptive statistics displayed in Tables 6 and 7 confirmed the retention and grade attainment or grade point average between the two groups. After the eight week short session courses, the mean retention rate for the research group was 72.7 compared to the mean retention rate of 67.3 for the control group (Table 6). The analysis also showed a difference between the two groups with respect to the overall grade point average (GPA). Specifically, the research group showed a mean GPA of 2.43 and for the control group, a GPA of 2.02 (Table 7).

Table 6. Descriptive Statistics of Retention Rates

<i>Research Group</i>		<i>Control Group</i>	
Mean	0.727273	Mean	0.67364
Standard Error	0.024554	Standard Error	0.021469
Median	1	Median	1
Mode	1	Mode	1
Standard Deviation	0.446038	Standard Deviation	0.469372
Sample Variance	0.19895	Sample Variance	0.22031
Kurtosis	-0.95461	Kurtosis	-1.45406
Skewness	-1.02529	Skewness	-0.74299
Range	1	Range	1
Minimum	0	Minimum	0
Maximum	1	Maximum	1
Sum	240	Sum	322
Count	330	Count	478
Confidence Level(95.0%)	0.048302	Confidence Level(95.0%)	0.042185

Table 7. Descriptive Statistics of Grade Attainment (GPA)

<i>Research Group</i>		<i>Control Group</i>	
Mean	2.439394	Mean	2.025105
Standard Error	0.091616	Standard Error	0.074565
Median	3	Median	2
Mode	4	Mode	0
Standard Deviation	1.664293	Standard Deviation	1.63023
Sample Variance	2.769872	Sample Variance	2.657649
Kurtosis	-1.39772	Kurtosis	-1.59706
Skewness	-0.53616	Skewness	-0.11345
Range	4	Range	4
Minimum	0	Minimum	0
Maximum	4	Maximum	4
Sum	805	Sum	968
Count	330	Count	478
Confidence Level(95.0%)	0.180228	Confidence Level(95.0%)	0.146516

Detailed Analysis

This section presents the data and the analysis of that data in order to answer the research questions and test the alternative and null hypotheses of the study. Framed by the research questions and hypotheses, the presentation of the data is organized to answer the following:

R₁: How does completing an online orientation impact student success in an online course?

R_{1a}: How does the intervention improve grades?

R_{1b}: How does the intervention improve retention?

H₁: There is a statistically significant difference in student retention and grade attainment (student performance) between the sample group who took the online orientation and the control group that did not.

H₀: There is no statistical difference in student retention or performance between the sample group who took the online orientation and the control group that did not.

Within the action science framework, the study followed a quantitative, non-experimental, causal-comparative research design to provide credible data for answering each of the questions. Specifically, the research design allowed for the exploration of the causal impact of an online orientation (independent variable) on both student retention and performance (dependent variables) in specific online courses. Causal-comparative research design utilizes inferential statistics, or procedures that involved selecting a sample from a defined population and studying that sample in order to make inferences about the overall population (Ravid, 2011).

In choosing a statistical test to analyze the data for this study, a *t* test was considered appropriate in causal-comparative design when the means from two groups were compared (Ravid, 2011). In particular, a *t* test for independent samples was used to address each research question and the test was conducted to compare the mean retention rates and GPA of the research and control groups. In order to determine whether the results from this causal-comparative design were statistically significant between the two groups and because the alternate hypothesis (research hypothesis) is a directional hypothesis that predicts that the group completing the online orientation would have higher retention rates and a higher GPA compared to the control group who did not complete the orientation, a one-tailed *t* test for independent samples was done. Additionally a two sample F test for analysis of variances was completed on the collected data to confirm that the data were normally distributed and that the variances were approximately the same, both necessary for a valid *t* test.

In order to determine if the mean retention rate of 72.7 for the research group was statistically significant compared to the mean retention rate of 67.3 for the control group, a two-sample, one-tailed *t* test assuming equal variances was conducted on this retention data. Initially, an F test was performed to ensure equal variances. Based on the F Stat and F Critical scores (0.903046 vs. 0.845017) and the fact that the F Stat > F Critical, the analysis concluded that the variances between the two groups was not statistically significant and the *t* test assuming equal variances was performed.

The analysis in Table 8 revealed the higher mean retention rate of the research group at 72.7 was not statistically significant at the $p < 0.05$ significance level. Specifically, the test showed a *p* value of 0.051842. Additionally, the *t* Stat of 1.62909

was less than the t Critical one-tail stat of 1.646746 which also indicated that the means were not statistically significant. In Table 9, the less stringent $p < 0.10$ significance level was applied to the retention data. The analysis showed that the t Stat of 1.64438 was greater than the t Critical one-tail stat of 1.28271 which denotes that the means were statistically significant given a p value of 0.050263, less than the $p < 0.10$ significance level. As a result, the null hypothesis could be rejected because of the statistical significance regarding student retention rates between the sample group who completed the online orientation and the control group who did not. Furthermore, the alternate hypothesis regarding student retention between the two groups could not be rejected because the retention results of students who completed the online orientation were, again, statistically significant compared to the control group who did not complete the orientation.

Table 8: Statistical Analysis of Mean Retention Rate at $p < 0.05$

	<i>Research Group</i>	<i>Control Group</i>
Mean	0.727272727	0.67364
Variance	0.198949986	0.22031
Observations	330	478
Pooled Variance	0.211591081	
Hypothesized Mean Difference	0	
df	806	
t Stat	1.629090028	
P(T<=t) one-tail	0.051842355	
t Critical one-tail	1.646746347	
P(T<=t) two-tail	0.103684711	
t Critical two-tail	1.962911599	

Note. t test assuming equal variances at the $p < 0.05$ level

Table 9: Statistical Analysis of Mean Retention Rate at $p < 0.10$

	<i>Research</i>	<i>Control</i>
Mean	0.727272727	0.67364
Variance	0.198949986	0.22031
Observations	330	478
Hypothesized Mean Difference	0	
df	730	
t Stat	1.644382934	
P(T<=t) one-tail	0.050263832	
t Critical one-tail	1.282712343	
P(T<=t) two-tail	0.100527664	
t Critical two-tail	1.64694365	

Note. *t* test assuming equal variances at the $p < 0.10$ level

Similarly, in order to determine if the mean GPA of 2.43 for the research group was statistically different compared to the mean GPA of 2.02 for the control group, a two-sample, one-tailed *t* test assuming unequal variances was conducted on these GPA data. Initially, an F test was performed to ensure equal variances. Based on the F Stat and F Critical scores (1.042226 vs. 1.179904) and given the fact that the F Stat < F Critical, the analysis concluded that the difference in variance between the two sets of data was statistically significant. As a result, the *t* test assuming unequal variances was performed.

The analysis in Table 10 revealed that the higher GPA of the research group at 2.43 was statistically significant at the $p < 0.05$ significance level because of the analyzed *p* value of 0.000241. This is less than the alpha 0.05. Additionally, the *t* Stat of 3.507215 was greater than the critical *t* value of 1.64704 for a one-tailed test so it can be stated with 95% certainty that the mean GPA increased as a result of completing the online

orientation. Based on this specific variable analysis, the null hypothesis could be rejected and, conversely, the alternative hypothesis could not be rejected, in that, there is a significant difference in grade attainment (student performance) between the sample group who took the online orientation and the control group that did not.

Additionally, the result from the more stringent two-tailed test is the same. The t Stat of 3.507215 is greater than the critical t value for the two-tailed test at 1.963368. This indicates once again, that it can be stated with 95% certainty, that there has been a change in the mean between the research and control groups because of completing the online orientation. Additionally, the p value of 0.000482 calculated for the two-tailed test is less than the alpha of 0.05.

Table 10: Statistical Analysis of Mean GPA at $p < 0.05$

	<i>Research Group</i>	<i>Control Group</i>
Mean	2.439394	2.025104603
Variance	2.769872	2.65764936
Observations	330	478
Hypothesized Mean Difference	0	
df	698	
t Stat	3.507215	
P(T<=t) one-tail	0.000241	
t Critical one-tail	1.64704	
P(T<=t) two-tail	0.000482	
t Critical two-tail	1.963368	

Note. t Test assuming unequal variances at $p < 0.05$ level

Chapter 4 Summary

This research study examined the impact of an online orientation on retention and student grades in six, targeted, fully online general education courses in a community college setting. Assessing the impact of the orientation on student success included an analysis of course grades used to determine the overall retention rates and grade point averages (GPAs) between the research group who was invited to complete the online orientation and the control group who was not. Initially, the demographic data from each group was presented and analyzed to ensure that both groups showed similar demographic characteristics even though the enrollment in the course sections was higher in the control group in comparison to the research group.

Detailed descriptive analysis was completed on the end of course grades which revealed the retention rates and overall GPA between the two groups. Specifically, the analysis showed that the retention rate of 72.7 from the research group who completed the online orientation was higher when compared to the retention rate of 67.3 from the control group. Additionally, the analysis showed that students in the research group attained more A, B, and C grades in comparison, and as a result, achieved a higher overall GPA compared to the control group (2.43 vs. 2.02).

After completing the descriptive analysis, a *t* test analysis was performed separately on both the retention rates and GPAs from both groups using a one-tailed *t* test with equal variance on the retention data and a one-tailed *t* test with unequal variance on the GPA data. The determination to use a *t* test with equal variance on one data set and a *t* test with unequal variance on the other was made after conducting a two sample F test for variances. While both the mean retention rates and GPA were higher for the research

group (72.7 and 2.43 respectively) compared to the mean retention rates and GPA for the control group (67.3 and 2.02 respectively), the difference was only statistically significant for the grade point average between the groups at the $p < 0.05$ significance level. As a result, the null hypothesis could be rejected based on grade attainment or student performance, while the alternate hypothesis could not be rejected. Conversely, although the retention data analysis was very close with a p value of 0.05184, the null hypothesis could not be rejected relative to the retention rates simply because the p value was slightly above the $p < 0.05$ significance level. Additionally, the alternate hypothesis which stated that there would be a statistical difference between the retention rates between the two groups could, in fact, be rejected based on the t test analysis. However, after applying the less stringent $p < 0.10$ significance level to the mean retention data, the analysis showed that the difference between the means was statistically significant given a p value of 0.050263. Therefore, the null hypothesis could be rejected while the alternate hypothesis could not be rejected at the $p < 0.10$ level.

Chapter 5 will evaluate these findings, summarize the conclusions and recommendations for future research, and share the implications derived from the data analysis on the impact of an online orientation on student retention and performance in fully online courses in a community college setting.

CHAPTER 5. CONCLUSIONS AND DISCUSSION

Introduction

Improving student success in the nation's community colleges is currently a critical focus for college leaders as students, parents, educators, policymakers, and accrediting agencies demand evidence of student learning, retention, and improved completion rates. Though a critical factor upon which community colleges describe and live their mission, access is no longer the sole measure of success for the nation's community colleges because other factors such as documented learning and evidence of quality outcomes including student retention and student performance have emerged as current standard bearers for measuring the effectiveness of a college's performance (Barr & Tagg, 1995; Brint, 2008; Murray & Orr, 2011). Understandably, one way for colleges to improve student success is within the abundance of online course offerings which are fast becoming critical to an institution's mission and a popular option for community college students (Otte, 2007).

For many community college students, the ability to access a college education has increased given the popularity and growth of online courses (Allen & Seaman, 2011). Although online learning represents a convenient and flexible means to course and program completion, student attrition in online courses is higher and overall student grades are lower compared to traditional face-to-face courses (Dray et al., 2011). Chapter 1 of this dissertation provided the introduction and background information for this action

research study in order to establish a context for the focus on student retention and performance within specific online courses and to effectively frame this study. Within a specific community college environment and within specific, targeted online courses, this action research study examined the impact of completing an online orientation on student retention and performance in order to improve student success in online learning.

Completing an online orientation has been shown to increase student retention, performance and course completion (Dray et al., 2011; Howell & Laws, 2004; Lorenzo, 2011; Otte, 2007; Smith-Jaggars & Bailey, 2010; Wang, 2006). Similar to a college orientation in helping students make a successful transition to a college environment, an online orientation can facilitate an introduction to the uniqueness of online courses, introduce the technological skills necessary for success, and boost student confidence in online learning methodology (Carruth et al., 2010; Miller, 2005; Wozniak et al., 2012).

While a number of research studies cited the benefits of an orientation in preparing students for the rigors of online learning, very few focused on community colleges and the barriers that community college students face in an online environment. Most studies were completed at four year colleges or universities, were qualitative in scope, and focused on the link between an orientation and online readiness, or a student's perception of the value of an orientation in preparing them for the rigors of online learning. Consequently, this action research study sought to build on related studies and address a gap in the educational literature using a collaborative action research framework along with a quantitative methodology to measure the impact of an online orientation on student retention and performance. To frame that focus, Chapter 2 provided a synthesized review of the current research literature highlighting the

importance of retention and adult learning theories on effective student service interventions such as an online orientation, and the need for additional research on the impact of that intervention in a community college setting. Relevant studies were examined in order to provide a current view of what is known about the impact of an online orientation on the improvement of student success in online learning which also provided a framework for the research design of this study.

In order to determine the impact of an online orientation on student retention and student performance in online courses, students who enrolled in six specific, high demand, general education courses were asked to complete an online orientation prior to the beginning of the courses (research group). The mean retention rates and grade point averages (GPAs) from the research group were compared to students who enrolled in the same courses in a previous semester who did not complete the online orientation (control group) in order to effectively answer the research questions: *How does completing an online orientation impact student success in an online course? How does the intervention improve grades? How does the intervention improve retention?* Chapter 3 described the research design and methodology used to determine the impact of an online orientation on student retention and grades and to answer the specific research questions and to test the null hypothesis, namely: *There is no statistical difference in student retention or performance between the sample group who took the online orientation and the control group that did not.*

Chapter 4 presented the data analysis and evaluation of the research results using a quantitative, non-experimental, causal-comparative research design in order to provide credible data for answering the research questions and for testing the alternative and null

hypotheses. Parametric statistical analysis was completed to compare the mean retention rates and GPAs for both the research and control groups. The chapter began with a demographic description of the sample along with a summary of the descriptive statistics used in describing the variables of the study, and closed with a detailed data analysis complete with results which were used to respond to the research questions and hypotheses.

Last, the following sections in Chapter 5 provide a summary of the study results presented in Chapter 4 relative to the literature synthesized in Chapter 2 in order to respond to the research questions and stated hypotheses. This chapter also presents the limitations and conclusions of the study, recommendations for future research, and the implications for ongoing practice.

Summary and Discussion of the Results

Summary of the Results

This study investigated the impact of an online orientation on student retention and performance in targeted, fully online courses in a community college setting. Descriptive statistics and *t* tests were conducted to address the following research questions and the alternate and null hypotheses:

R₁: How does completing an online orientation impact student success in an online course?

R_{1a}: How does the intervention improve grades?

R_{1b}: How does the intervention improve retention?

H₁: There is a statistically significant difference in student retention and grade attainment (student performance) between the sample group who took the online orientation and the control group that did not.

H₀: There is no statistical difference in student retention or performance between the sample group who took the online orientation and the control group that did not.

The results presented in Chapter 4 (Figure 1) indicated that the students in the research group, 70.3% of whom took the online orientation, completed the courses successfully with 70% of the students attaining grades of A, B, and C compared to 61.3% in the control group who did not complete the online orientation. Additionally the research group demonstrated a higher retention rate of 72.2% compared to 67.3% for the control group. These descriptive statistics illustrated that the research group enjoyed an 8.7% increase of A, B, and C grades and a 4.9% increase in retention within the six courses compared to the control group. In order to determine the statistical significance of the mean retention and grade point average between the two groups, a one-tailed *t* test for independent samples was conducted to explore the causal impact of an online orientation (independent variable) on student retention and grade performance (dependent variables) in the specific online courses.

Prior to performing the one-tailed *t* test on both the retention and grade data, a two sample F test for analysis of variances was completed to confirm that the data were normally distributed and that the variances were approximately the same. Based on the results of the F test, a *t* test assuming equal variances was performed on the retention data and a *t* test assuming unequal variances was conducted on the grade point average data.

Although the mean retention rate was 4.9% higher for the research group, the t test results indicated that this difference was not statistically significant at the $p < 0.05$ significance level (Table 8) given a p value of 0.051842. However, after performing a t test with the less stringent $p < 0.10$ (Table 9), the results indicated that the difference was, in fact, statistically significant at that significance level, and as a result, the null hypothesis could be rejected, and the alternate hypothesis regarding student retention between the two groups could not be rejected because the mean retention results of the students who completed the online orientation were statistically significant compared to the control group who did not complete the orientation. This result suggests that there is a statistically significant difference in student retention rates between the student group who completed the online orientation and the control group who did not.

Similarly, a two-sample, one-tailed t test assuming unequal variances was conducted on the mean GPA data of both the research and control groups. Descriptive statistics indicated that the mean GPA for the research group was 2.43, with a mean GPA of 2.02 for the control group. The analysis revealed that the higher GPA of the research group was statistically significant at the $p < 0.05$ significance level with a p value of 0.0000241 (Table 10). Based on the results of this statistical analysis, it can be stated with 95% certainty, that there was a change in the mean GPA between the research and control groups because of completing the online orientation. As a result, the null hypothesis could be rejected and, conversely, the alternative hypothesis could not be rejected because of the significant difference in grade attainment between the sample group who took the online orientation and the control group who did not.

Discussion of the Results

From the beginning, a key assumption from the stakeholders involved in this research study was that student success could be improved in online courses from students who completed an online orientation focusing on the challenges, expectations, and technology knowledge necessary for online learning success. Both the descriptive statistics and the data analysis indicated that student success did improve for the group who completed the online orientation in comparison to the group who did not complete the orientation for the same courses. Additionally, the other assumptions of this research study provided a basis for addressing the research questions in this study:

1. *Students who take the online orientation will persist and attain higher grades compared to those who do not take the orientation (Lorenzo, 2011; Miller, 2005).* The descriptive statistics and data analysis demonstrated that the students in the research group who, in large part, completed the online orientation, achieved a higher GPA compared to the control group (2.43 vs. 2.02) and that the difference in mean GPA's between the two groups was statistically significant. Additionally, the research group attained a higher percentage of A, B, and C grades at 70% compared to the control group at 61.3%. The data analysis also showed that students in the research group received fewer D, F, I, and W grades. As a result, it can be stated that more students in the research group completed their respective courses successfully in comparison to students in the control group.

2. *Student success (increase in retention) can be improved in online courses by requiring an online orientation focusing on the challenges, expectations and technology knowledge necessary for online learning success (Smith-Jaggars & Bailey, 2010).* After

the eight week short session courses, the mean retention rate for the research group was 72.7 compared to the mean retention rate of 67.3 for the control group. The difference between the two means of retention rates was shown to be significant at the $p < 0.10$ significance level. As mentioned, the analysis also showed a difference between the two groups with respect to the overall grade point average. The research group showed a mean GPA of 2.43 compared to a mean GPA of 2.02 for the control group.

3. *Student assessment, requiring a student orientation, and providing 24/7 online support services are possible solutions for helping online learners to be as successful as their face-to-face counterparts (Lorenzo, 2011).* Benchmark data prior to the beginning of this study revealed that student retention and grades were lower in the selected online courses in comparison to the same face-to-face courses. A review of college course data showed that students in online sections received a higher percentage of D, F, I (Incomplete), and W (Withdrawal) grades compared to students in the same traditional face-to-face courses. Specifically, 69% of the students who selected the fully online courses received A, B, and C grades compared to 76% of the students who took the same course sections in a traditional face-to-face delivery format. Additionally, 31% of the same online students received D, F, I, and W grades compared to 24% of the students who took the face-to-face courses. The data analysis demonstrated the positive impact of an online orientation on both student retention and performance (grades) and clearly showed that the intervention was a solution for helping online learners to be as successful as their face-to-face counterparts.

4. *Factors such as pedagogy, online interaction, and student support improve and reinforce online student success and lead to change for improved practice in online*

delivery (Aksal, 2011; Dennis, Bunkowski & Eskey, 2007; Jackson, Jones & Rodriguez, 2010; Smith-Jaggars & Bailey, 2010; Stanford-Bowers, 2008). The Internet as a widespread information infrastructure has changed the face of educational delivery, information dissemination, and interaction between individuals in higher education today (Leiner et al., 1997). As a result, and for many community colleges, online learning is a critical part of the institution's long-term strategy. Given the growth and popularity of online courses, the ability to identify a plan in order to improve the success of online students, and at the same time, address the current issues of accountability and student success in higher education, is the value and relevance of this action research study, and will lead to change for improved practice in online delivery.

Discussion of the Results in Relation to the Literature

For many community college students, enrolling in an online course provides a flexible and convenient option for pursuing a college education (Allen & Seaman, 2011; Liu et al., 2007; Lorenzetti, 2005). However, many students are simply not prepared for the rigors of online learning and need to develop the skills necessary for online learning success (Scagnoli, 2001). Current research suggests that online courses have higher dropout rates, and therefore, lower student persistence when compared to traditional face-to-face courses (Dray et al., 2011; Kelly & Schneider, 2012; Mitchell, 2010; Smith 2006). Furthermore, the current educational literature also suggests that an online orientation may increase student success and course completion (Dray et al., 2011; Dupin-Bryant, 2004; Howell & Laws, 2004; Lorenzo, 2011; Otte, 2007; Smith-Jaggars & Bailey, 2010; Wang, 2006).

The results of this study supported the findings in the educational literature, in that, the online orientation did impact in-class retention rates and grades for those students in the research group who completed the online orientation. Both the mean retention rates and the mean grade point average of the research group who completed the online orientation were higher compared to the control group who did not complete the orientation. Additionally, the results from the research were consistent with many of the cited benefits of an online orientation in helping students navigate online learning challenges in order to enhance student success, such as facilitating academic and social integration, introducing the required technology applications, increasing student confidence, and managing student expectations including study and self-management skills and the time commitment needed to be successful (Ali & Leeds, 2009; Bozarth et al., 2004; Carruth et al., 2010; Gilmore & Lyons, 2012; Miller, 2005; Scagnoli, 2001; Wozniak et al., 2012). Last, since student attrition is a significant issue in an online course, the results of this study supported the notion that an online orientation may improve student retention, performance, and increase completion rates within a course (Gilmore & Lyons, 2012).

Current research clearly indentified a correlation between an orientation and the benefit to student readiness prior to taking an online course. Though research studies purport the benefits of implementing an online orientation, the findings of this research study added a needed quantitative methodology to the body of knowledge in order to inform the thinking and practice of this and other community colleges who offer distance education courses.

Limitations

Although this study provided useful data and subsequent statistical analysis on the impact of an online orientation on student retention and performance, some limitations existed and should be considered in future iterations of the action research cycle and include factors such as the research site, the timeline of the study, the students in the sample and control groups, and the type of courses utilized for this study. Further investigation into each of these factors would allow for nuanced changes and variations shaping new studies or future iterations of this research cycle that maximizes student success in online learning at the community college level.

The action research study was limited to online students at a large, urban community college, who enrolled in specific, fully online courses. The study was limited to targeted courses during the spring 2013 semester. Therefore, the results of this study were specific to the research site and were not necessarily generalizable to other community colleges. However, other community colleges that provide online learning opportunities for students may use this study and approach to assist in the improvement of administrative and support services for online student success in their specific settings.

The research or data collection timeframe was limited to an eight week short session. Although this action research study provided an opportunity to examine the impact of an online orientation on student retention and performance in online courses, this was a time restrictive study established by the course calendar as well as the dissertation research timeline. The results of this study suggested that student retention and performance improved as a result of completing an online orientation prior to taking an online course. Additional iterative cycles utilizing a full 16 week semester would be

useful to determine if the results between an eight week and 16 week semester were similar and whether differences in the length of the term impacted the outcomes of a study.

The students in the sample and control groups could be systematically different. To minimize potential group differences, only students who enrolled in high demand general education courses were used in the study. The majority of students who enrolled in these online courses were African American and white (77%), female (75%), and 50% of the students were 25 years or over. Additionally, students in both the research and control groups were not eliminated from the study if they had taken an online course at the research site or another institution prior to the research timeframe. It would have been ideal to conduct the study with students who had never taken an online course in order to understand whether familiarity with taking an online course affected the outcome of the study.

Finally, this study was confined to six, high demand, fully online general education courses which may limit the inference of the results to non-general education courses. It would be helpful to conduct the study in pre-major or technical courses in order to understand if the type of the online course would affect the outcome of the study. Six of the 25 high demand, general education courses were selected because of the greater potential for impacting student retention and performance at the research site.

Implication of the Results for Practice

Following the review of the literature and the subsequent results of this action research study, it is clear that completing an online orientation prior to taking an online

course increased student retention and performance in fully online, general education courses. The most frequently cited benefit of an online orientation in the educational literature was the ability to influence and manage student expectations like study and self-management skills, and the time commitment needed to be successful in an online course. Many students juggle classes, family and work obligations, and need to develop excellent time management skills or develop effective strategies to help them navigate the many demands on their time (Kanuka & Jugdev, 2006).

In addition to adequate computer skills and a feeling of frustration if they do not possess the requisite computer skills, the literature also indicated that students experience a feeling of frustration in adapting to a self-directed learning mode, and an online orientation can ease those frustrations in presenting a realistic picture of the online learning experience (Bozarth et al., 2004; Carruth et al., 2010; Miller, 2005). This study supports previous studies claiming a positive impact for increasing the skills necessary for improving student retention in an online environment, and therefore, an online orientation should be required of any student who has enrolled in and never completed an online course. The outcome of this study demonstrated a significant impact in improved student retention and performance as a result of completing an online orientation prior to taking a fully online course, and based on the results of the data analysis and the findings from the literature review, the following recommendations for practice are made:

1. Community colleges that offer online learning opportunities for students should design and implement a comprehensive online orientation program with the following components: a pre-assessment skills test, personal

attributes, expectations, technology and navigation skills necessary for online learning success.

2. Community colleges that offer online learning opportunities for students should consider making the online orientation program mandatory for students who have never completed an online course. The orientation should be completed prior to taking an online course.
3. Computer systems should be modified in order to scale the implementation of the mandatory online orientation in an automated, simple, and effective way for potential online students. Ideally, students new to online learning would not be allowed to register for an online course without first completing the orientation.

Recommendations for Further Research

This action research study focused on one independent variable and its impact on two dependent variables in specific, fully online courses in a community college setting. The results of the study demonstrated the significant impact on retention rates and grade point averages of community college students who completed an online orientation prior to beginning their specific online course. In-class retention rates and the overall grade point average of the research group who were asked to complete the online orientation were higher when compared to the control group who did not complete the orientation. The methodology and results of this study contributes to the scholarly research with a focus on one effective intervention for improving the online learning success of students who enroll in online courses. In part, the limitations identified earlier provide an

opportunity to expand the scope of research in order to provide greater insight into the impact of an online orientation and other possible interventions that could positively impact student success in online courses. As a result, the following recommendations are presented for additional insight:

1. Repeat the study with the same or different fully online, high demand, general education courses with students who have never enrolled or taken a fully online course.
2. Conduct a similar study with fully online pre-major or technical courses and compare the results from that study to this study to determine the impact of an online orientation in technical vs. general education courses.
3. Conduct a study to determine the relationship between an online orientation, faculty development for online teaching, and student engagement strategies like a synchronous tool and the impact on student retention and grades in fully online courses.
4. Repeat the study with the same or different fully online courses with expanded dependent variables separating the results by specific variables such as race, gender, or age group.
5. Determine how student and faculty expectations for online courses potentially contribute to higher attrition rates for online courses.
6. Conduct a similar study over a full 16-week semester and compare the results with the eight week short session used in this study.

Each of these recommendations for future study would provide additional insight and a unique perspective to community college educators so that they, in turn, could provide the resources and support required to further improve student success in online learning.

Conclusion

The intent of this action research study was to determine the impact of an online orientation on student retention and performance in specific, fully online courses in a community college setting in order to improve student success in online learning. Any improvement in student retention, student performance, and course completion certainly addresses the current hot button issues of accountability and student success in higher education, and ultimately leads to course, program and educational goal completion for the students who enroll in online courses.

The results of the study revealed that the completion of an online orientation did improve both retention rates and the overall grade point average of the research group who were asked to complete the online orientation compared to the control group who did not. Additionally, the differences in both the mean retention rate and the grade point average of the research group compared to the control group were found to be statistically significant after completing the statistical analysis. As a result, the findings of this study suggest that the design and implementation of an online orientation should be considered as a valid student support strategy within community colleges to improve student retention and performance in online courses. As suggested, further inquiry and analysis should be pursued in order to enhance and augment this study for the purpose of

discovering additional tools, resources, and support needed for improving student success in an online learning environment.

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APPENDIX. ONLINE ORIENTATON MODULES

Module 1 Welcome to eLearning	Module 2 Computer Basics	Module 3 Building Blocks to Success	Module 4 Blackboard LMS
Video Introduction	Welcome	Welcome	Welcome
Welcome to eLearning	Navigation	Interaction	Navigating with Bb
What is eLearning	Computer Tips	Communication	Bread Crumbs Trail
Advantages & Responsibilities	Hardware	Virtual Voices	Course Menus
The eLearning Experience	Software	Online Netiquette	Environment
eLearning Success Tips	Internet Overview	Library Services	Types of Content
Core4	Student Email	Disability Services	Bb Content Items
	Browser Overview	ITS for Students	Bb Folders
	What's a Browser	Student Services	Links to Websites
	Navigating	Financial Aid	Bb Course Links
	Refreshing	Advising	Bb Learning Modules
	Links	Career Services	Announcements
	Tabbing	Getting Involved	Communicating
	Bookmarking	Self-Assessment	Discussion Boards
	Searching		Best Practices
	Wrap-Up		Collaborating Online
			Blogs
			Creating a Blog Entry
			Wikis
			Creating a Wiki
		Journals	
		Journals in Bb	
		Working in Groups	

Groups in Bb

Assignments

Video Tutorial

Bb Grade Center

SafeAssign

Online Testing

EVA Activity
