ORIENTATION PROGRAMS FOR ONLINE LEARNING IN COMMUNITY COLLEGES
AND THE IMPACT ON STUDENT SELF-EFFICACY

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Abstract

As colleges continue to grow virtual course offerings for students, an increasing number of institutions are seeking to impact readiness for online learning. Orientation programs for specifically intended for online learning are among the strategies many community colleges are employing to improve student self-efficacy for the skills and attributes needed for success in e-learning. Through a case study, this paper reviews 26 orientation programs specifically for online learning at community colleges in the United States.


Further, the paper examines the intent of the orientation programs to impact student self-efficacy, and reveals the perspective of participants in an orientation program their perception of the impact on their self-efficacy for online learning. The study finds that students report that participation in the online orientation resulted in a positive impact on their self-efficacy for virtual classes.
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Chapter 1: Introduction

**Statement of the Problem**

The promise of online learning expanding educational opportunity may be failing at community colleges across the United States. In 2009, the most recent year for which data is available, only 31 percent of the students who entered a two-year school had completed the desired degree or certificate program within three years, which is 150 percent of the normal time required (National Center for Education Statistics, 2013). As many of these schools cater to non-traditional students who often need scheduling accommodation to complete a program (Brewer & Yucedag-Ozcan, 2013), flexible distance learning programs may seem like an institutional solution to helping students matriculate. However, attrition rates remain 10 to 20 percent higher in online courses versus traditional courses (Angelino et al., 2007; Cho, 2012; Gilmore & Lyons 2012; Nash, 2005; Shena, et al., 2013), which exacerbates rather than solves the problem.

Attrition rates vary by institution and are not systematically reported. Depending on how the reported number is factored it likely includes students who withdrew, but may or may not also indicate the number who failed the course. But it is widely cited in the literature that rates continue to be high, with ranges reported from 30 – 40 percent higher in online courses (Hachey, Conway & Wladis, 2013; Tyler-Smith, 2006), which can be 20 percent higher than a traditional course.

In the Fall 2015 term, a new student will look over class options and note that the college offers many classes online. She may opt to enroll in one, need to enroll in one because required classes are already full, or be required by the school to take one. Many schools, and their state funders, are expanding e-learning programs under the impression they are a less expensive option for increasing enrollment. To then capitalize on their investment, schools are creating
requirements for a certain number of online programs during a college career, or limiting the number of seats in brick-and-mortar classes. Based on current attrition rates for online courses, she will be 20 percent more likely to drop out of that class. The reasons as are individual as the student; she may lack the self-discipline to keep up with the class schedule, she may lack the skills to learn in an online environment, or she may merely decide she does not like the isolating nature of online classes. The reasons are diverse, but college administrators need to identify and address the major causes of attrition in their online programs.

In the fall of 2012, 5,452,100 students enrolled in an online class at a Title IV Institution in the United States (National Center for Education Statistics, 2014). The National Center for Education Statistics defines a Title IV Institution as “an institution that has a written agreement with the Secretary of Education that allows the institution to participate in any of the Title IV federal student financial assistance programs (other than the State Student Incentive Grant (SSIG) and the National Early Intervention Scholarship and Partnership (NEISP) programs)”. (National Center for Education Statistics, 2015). Given the current trends in attrition for virtual courses, more than 1,000,000 likely didn’t finish one (this number is approximate because it is not currently reported on a national level). Attrition negatively impacts the institutional or state investment in virtual classes, may increase student time to graduation, and damages the chances for success of online courses as an industry if schools cannot gain enrollment to support a return on investment. Students taking at least one online course is now 32 percent of all students at the post-secondary level and growing annually (Seaman & Allen, 2010); retention is an area of concern that schools must begin to address if they intend to continue offering (and possibly requiring) more online classes.
Online education (also called virtual education, distance education, and e-learning) is growing rapidly (Allen & Seaman, 2010). In some years, the growth in online classes has outpaced growth in general post-secondary enrollment (Brewer & Yucedag-Ozcan, 2013). For some, virtual classes may become a sole option for certain higher education goals, be it a single class requirement or a full program that fits a student’s needs. In a decade of expansion, 64 percent of U.S. public institutions now offer some programs that can be fully completed online (Seaman & Allen, 2013).

Just as course development is not a simple translation of traditional curriculum and teaching into an electronic format, not all student learning styles and preferences are conducive to an online environment, leading some students to drop out. Consider a new online student with no previous exposure to virtual learning aside from conducting research for a term paper using the Internet. She has spent 13 years with structured class schedules and deadlines, having time built into her school day for completing assignments. She formed relationships with peers and learned from and alongside them, talking through those assignments and maybe working in groups. She was inspired by their work in art classes, and learned from the questions they asked the teacher. She raised her hand and got immediate feedback, help, encouragement, and reinforcement from her instructor. These elements of learning were reinforced by the after school interaction with the coach and teammates on her soccer team and the sponsor and other members of the honor society. And while she rolled her eyes at her parents asking her to go finish her homework, the trend of structure (or forced discipline) continued. Students accustomed to this structured educational schedule and a social learning environment may not have the personal time management skills, discipline, or high level of comfort for an asynchronous class that lacks social engagement with classmates and instructors (Nash, 2005).
Even her classmates who may have had exposure to online learning during their K-12 careers have likely had a different experience than they will face in the college setting. Post-secondary education in general requires more self-discipline and independent learning skills than high school courses. For many the college experience extends far beyond the classroom as well, with students experiencing the freedom of being away from parents and more controlling of their own life choices. College brings different responsibilities and opportunities, from obligations to a sorority, to making new friends, to keeping a part time job. These both enrich and complicate the new student transition to college. Adding in the new learning preferences that support success in virtual courses may be the proverbial straw that breaks the camel’s back.

Evidence is in the attrition rates in online programs, which range from 10 to 20 percent higher than in traditional classes (Angelino, Williams & Natyig, 2007; Cho, 2012; Hachey, Conway & Wladis, 2013; Gilmore & Lyons 2012; Nash, 2005; Shena, Chob, Tsaic, & Marrad, 2013; Tyler-Smith, 2006). This creates a problem for any school that values true student success in learning: how can administrators and faculty be sure that a student in an online class is as prepared to achieve the intended learning outcomes as if they were in a traditional class?

Combat Attrition with Orientations

Research supports use of an orientation approach specific for online learning as a way to address readiness and expectations for online learning (Brewer & Yucedag-Ozcan, 2013; Carruth, Broussard, Waldmeier, Gauthier, & Mixon, 2010; Gilmore and Lyons, 2012; Nash, 2005); some institutions have embraced this approach to enhance student success in learning. The increased development of orientation classes for online programs lend themselves to research comparing the effectiveness among students who took the course and those who did not. Results support the effectiveness of orientation courses in boosting student outcomes. However,
orientation courses and the content currently in use are not universal, nor are they based on the same research, if any research at all. Some are a static presentation, while others are interactive. Some are self-paced while others are instructor-led. Some may focus solely on the use of the education delivery platform the student will use to review course materials, get assignments, interact with the instructor and classmates, and demonstrate their acquisition of knowledge or skills as required in the class. Others include an exploration of other online resources available from the institution such as library and tutoring services. The diversity in existing programs creates a challenge for course developers and program designers to identify the best practices in orientation curriculum design and course content.

**Examining Current Practice**

The primary purpose of this study is to understand what content is currently being utilized in online learning orientation programs at community colleges across the country. The analysis includes a review of orientation for online learning content based in research, and an examination of content that is not necessarily grounded in current theory. The secondary purpose is to examine how students are impacted by participation in an orientation for online learning at one community college. This is measured by their self-efficacy for the skills and attributes they believe they need to be successful in e-learning.

**Significance of the Research Problem**

The new online student faced with the opportunity or the requirement for online courses is part of a significant area of growth for post-secondary institutions. The literature concerning online education starts in the 1990s and demonstrates the significant annual increase in both the amount of distance education available and enrollment (Allen & Seaman, 2011; Hoskins & Van Hooft, 2005; Kerr, Rynearson, & Kerr, 2006; Smith, 2005; Wan, Wang, & Haggerty, 2008).
Interest in increasing online education can be found at both the institutional and government levels among all parties concerned with producing college graduates while keeping budgets balanced. Yet an important question seems absent from the dialogue: Are students prepared to learn effectively in an online environment? (Blankenship & Atkinson, 2010).

As virtual education offerings expand, some schools are implementing requirements for students to earn credits online, while for some learners the choice is simply personal preference (Harrell, 2008). For students with certain physical disabilities, online education may be the most, or only, practical way to attain educational goals (Harrell, 2008). Yet all students who must enroll in an online class because of convenience, availability, or to fulfill a requirement are not necessarily suited to learning in that environment (Komarraju, Ramsey, & Rinella, 2013; Mupinga, Nora, & Yaw, 2006). Jacobs (2011) points out that no intellectual process is the best fit for all individuals and situations. While the research is not deep, studies comparing online and in-person courses find little difference in the content (Moody, 2004) and quality of the material delivered (Anitsal, Anitsal, Barger, Fidan, & Allen, 2010). The difference in student achievement, rather, is more so affected by the individual pupil characteristics (Anitsal, et al., 2010) such as self-discipline, preference for independent learning, and good time management.

The new online student should, of course, care about her personal educational endeavors. However, researchers recommend institutions also be concerned with the issue of student readiness as it relates to student success and persistence (Blankenship & Atkinson, 2010; Dray, Lowenthal, Miszkiwicz, Ruiz-Primo, & Markczynski, 2011; Gilmore & Lyons, 2012). Unprepared students who do not make adequate progress can harm graduation rates (Blankenship & Atkinson, 2010), not only delaying their own graduation, but also creating a domino effect by crowding students out of limited seats in the classes they must retake. As
institutions are supported in part by tuition and fees, and government support formulas are based on full-time equivalent (FTE), student retention is a vital issue (Komarraju et al., 2013). Additionally, in national report cards, attrition rates reflect poorly on perceptions of institutional quality (Moody, 2004).

**Improving Persistence**

According to the annual (ACT) report *The Condition of College and Career Readiness* (2012), more states are addressing readiness standards and goals for high school students. The report specifically acknowledges the need to identify any learning issues early in an academic career that can impact students’ long-term success. College admissions applications are intended to assess a student’s readiness for post-secondary learning. However, there is no evidence of schools employing a component related to online classes (Conley & French, 2013).

Currently many states are echoing President Barak Obama’s call for increasing student academic success as measured by matriculation rates (Jackson & Kurlaender, 2013; White House, 2012). Schools themselves may set goals for persistence rates as well, particularly in light of the increased costs associated with students who take more than four years to complete a bachelor’s degree. A state report from the University of California system noted that only 60 percent of the 2009 cohort of entering freshman was able to complete a bachelor degree within four years (University of California Regents, 2014). A lack of available seats in core classes is a contributing factor to a student’s challenge in satisfying the core course requirements. In 2013, the legislature attempted to address this issue through state law increasing the number of courses available through virtual instruction (Mai-Duc, 2013). Senate Bill (SB) 520 directed the three public higher education systems (The University of California system, the California State University system, and the California Community Colleges) to collaboratively identify and
create online courses for the 50 classes most susceptible to crowd-out. Typically, these are the classes required of all students to fulfill core requirements in English composition, science, arts and humanities, and mathematics. If the bill had passed, the new online student unable to find a seat in a traditional class might have been forced into online classes as the only option for maintaining her full-time status, critical for financial aid and other programs, as well as to continue her movement through school in order to complete programs on time. While well intentioned, this policy was ill conceived, especially in the criteria for the selection of courses to be migrated to an online format. Only selecting those most subject to crowd-out neglects the question of whether or not a class is fit for online instruction. Institutions would be better served by concentrating on classes that are most conducive to a virtual format (Xu & Jaggers, 2013). However, research in this area is not extensive and schools continue to experiment with different content online.

Ultimately, the SB 520 did not pass, but it did broaden the discussion of increasing online course offerings across all California higher education systems. The California Community College system started the Online Education Initiative (OEI), which is working to create a unified system of virtual education available to all students enrolled at any California public college. The explicit goal is to increase the number of students who achieve a terminal degree or transfer to a four-year school each year. The belief is that an increase in online courses will contribute to this goal. The collaborative is working to create a common learning platform, professional development and course standards, and learning modules for student preparedness. They are also considering the types of student support services instrumental in boosting student success.
As online classes become a mainstay in course catalogues, more and more students will need to succeed in the virtual environment to achieve a degree in a timely manner, which in turn helps colleges meet their graduation rate goals. Administrators mindful of promoting student success will emphasize the quality of the curriculum and the delivery system, but those efforts can be negated in a class of students unprepared to learn in the environment. An area that is available for intervention, but may be overlooked, is student readiness. As a student with sub-par reading skills will require remediation before entering a freshman composition class, so too may some students need to improve certain skills in preparation for e-learning success. These areas may include the use of a specific learning management system (LMS), online communication in asynchronous chat boards, and programs allowing group collaboration on a joint document.

An increasing body of research is examining the skills, attributes and characteristics needed to be successful in online learning. As some schools translate this research into orientation courses, the field now calls for an evaluation of these programs and their outcomes. In examining the content of existing orientation programs, this research reviews what research is being put into practice, what research is not being employed, and what areas are being included in orientation programs regardless of a lack of research support. This informs current practices in online learning orientations and provides an inventory for distance learning program directors to consider when developing or expanding their own introduction to online learning programs.

As an additional analysis, this study gathered some experiences of students in an orientation course and their self-efficacy for online learning. Collectively, this research identified options for administrators and faculty to employ in their schools. The researcher suggests any policy that states or accrediting agencies may wish to consider as online education programs continue to
expand. While the Middle States Commission on Higher Education (2011) calls for the use of orientations in its standards for online education programs, it does not elaborate on the details of a good orientation.

Many students entering post-secondary education are un- or under-prepared, both for the academic rigor and the workload demands (Bosco, 2012; Jackson & Kurlaender, 2013). This may be exacerbated in online learning (Komarraju, et al., 2013; Mupinga, et al., 2006), as it requires skills that are different from traditional learning. If, for example, the new online student is unfamiliar with collaboration tools, she may be a poor contributor to a group project, or may lag behind others because of the time needed to learn to use the program. If she is not comfortable navigating the Internet, she may only find resources for her anatomy class that show the position of all the bones, yet miss key information about how the muscular-skeletal system operates. And if she lacks time management skills, she may constantly be working to do the bare minimum under pressure of a deadline and miss the opportunity for in-depth learning.

**Identifying What Students Need**

While there has been some effort to develop tools to measure student readiness for online learning (McVay, 2000; Kerr et al., 2006), there is not significant literature identifying the number of schools using assessment tools or orientation programs. There is also no comprehensive review of what is included in existing orientations. Finally, it is unclear what, if anything, institutions are doing to work with students who are determined unprepared (or underprepared) to learn in the online environment. The new online student may merely struggle on her own, and be perceived as a poor student. But the issue may be a lack of skill for online learning as opposed to a general lack of ability to master the material.
As indicated, some believe that orientations can aid preparation through an impact on self-efficacy. Harrell (2008), for example, puts forth recommendations such as putting prospective students through exercises to provide the experience of an online class as an assessment and testing their technical capabilities. Building on the body of evidence that interventions improve retention, the question requiring attention is: how can schools best ensure student readiness? This study seeks to add to the body of work on current practices in online learning orientation course design.

**Why Attrition is Important**

Since 2002 the Babson Survey Research Group, with funding originally from the Alfred P. Foundation (continuing with the Sloan Consortium, or Sloan-C), has produced an annual report on trends in distance education in post-secondary institutions (Seaman & Allen, 2013). In the first report, less than 50 percent of the survey participants agreed that e-learning was critical to their long-term strategy. In 2012, that number was 69.1 percent. At the same time, the majority of the chief academic officers who participate in the study cite higher attrition rates for online courses as a barrier to the growth of their distance learning programs.

Blankenship and Atkinson (2010) recommend institutions also be concerned with the issue of student readiness for online learning, as the long-term solvency of their programs will require student success and satisfaction. Wan, Wang, and Haggerty (2008) found that not all conceived virtual programs have survived. Along with other researchers, they believe that it is not simply a matter of “if you build it they will come (and learn)” and many programs have not produced desired learning outcomes (Hoskins & Van Hooff, 2005; Wan et al., 2008). In describing virtual classes available, many institutional websites indicate that online and in-person
courses are identical in rigor, content, and learning. Attrition and class grade averages should follow similar patterns among the same class regardless of the delivery format.

Yorke (2004) recommends that institutions care about student retention from a financial standpoint. He noted research that showed that institutions with high retention rates possessed certain characteristics such as a focus on support early in new student’s college experience, supporting Tinto’s (1993) notion that academic integration is a key factor in helping students persist. Yorke also recommends that schools employ formative supportive and constructive assessment early in a student’s educational career.

**Online Learning is Different**

The lack of orientation programs or assessments used in post-secondary institutions offering online courses seems to indicate an assumption that students enroll in virtual courses are prepared to learn in the virtual environment. After all, the new online student had excellent grades, test scores, and academic achievements. However, the majority of formal education is delivered in the traditional lecture format; transitioning to an online format may be challenging for some (Wang, Shannon & Ross, 2013; Xu & Jaggers, 2013) and may lead to dropped classes or poor performance. Angelino, Williams, and Natyig (2007) assert that providing quality education and improving retention requires understanding both the student and his/her needs.

Certainly, the new online student is part of a generation raised on technology, so school officials may assume she has the ability to use any learning management system (LMS). However, Cho (2012) found in personal discussions with industry experts that trends in an increasing number of un- or underprepared students entering college were not diminishing in online education. The new online student is adept at using social media to share opinions about the government. The new online student is adept at using social media for personal reasons?
But even if she has shared opinions about the government, the action does not guarantee she can identify and vet online resources to make informed and defensible academic observations about the nature of political science, as might be required in a college government course. In other words, mere online activity does not equate to true learning. Additionally, attrition rates remain 10 to 20 percent higher in online courses (Angelino et al., 2007; Cho, 2012; Gilmore & Lyons 2012; Nash, 2005; Shena, et al., 2013), and some students are not finding that the experience meets their learning goals.

The virtual learning medium is very different, as are the skills necessary to succeed in it. For example, in a study of e-learning participants, Song, Singleton, Hill, and Koch (2003) found students indicated the need, and ability, to be more thoughtful about writing responses to class discussion. This requires good writing and online communication skills. Also, the asynchronous class structure common in many online classes means that responses to posted items for class discussion are not immediate, creating challenges for some students (Song, Singleton, Hill, & Koch, 2003). When response is desired from an instructor (or group collaborator), delays due to the asynchronous nature can cause stress among students, and also stop student progress on a current assignment. These are among the many issues an orientation may help students address prior to starting a virtual course. The field of online learning research has taken the first step in identifying the issues that impact attrition (lack of learning and technical skills, lack of comfort in the virtual learning environment, lack of student attributes for online learning success, such as a confidence for independent learning). The second step is translating those findings into the practice of an orientation course that impacts student readiness in these areas.

**Technical Readiness**
One issue that may be easily overlooked in modern life is the extent of a student’s experience with technology. During the K-12 school years, the new online student may have had both a well-equipped classroom at school and computers with Internet access in her home. But her peers from a low-income high school district may have had more limited time in the school computer lab, and little or no access to a computer after school. Even today there is an uneven playing field in exposure to technology (Carruth et al., 2010).

There is also a difference in individual adoption rates of new technology. Xu and Jaggers (2013) noted a growing body of research demonstrating mixed results when comparing outcomes in traditional versus online courses. They felt that the difference may not be in the quality or content of the classes themselves, and hypothesized that the variance lies instead in the student characteristics. In a study at one of the largest universities (40,000 students in online courses) they compared major subsets of students by gender, age and race, and found that not all student groups adapt to online learning with the same success. “Adaptability” was measured by comparing the performance of each group in traditional and online classes; ie, similar performance in both venues indicated high adaptability (Xu & Jaggers, 2013). Gaps in adaptability exist in the traditional classroom between females and males, and white and minorities. These discrepancies are increased in the online setting. The authors did acknowledge research suggesting that the digital divide may contribute to performance disparities between minorities and whites online. The students who exhibited the lowest adaptability to online classes were males, African American students, and those with low past academic performance.

The study also showed that older students adapted readily to online courses, yet their performance (grade) tended to be lower (Xu & Jaggers, 2013). This is significant because
“older” students are considered non-traditional – generally those who have jobs and are returning to school full or part time to change or advance their career path. In 2009, the U.S. Department of Education forecasted that between 2010 and 2018 growth in the student population of traditional age (18-24) would be nine percent, while among students 25 and older, the growth would be 20 percent (Brewer & Yucedag-Ozcan, 2013).

Non-traditional students currently make up a large portion of online enrollees, often due to their need for flexibility while balancing school with work and family obligations (Brewer & Yucedag-Ozcan, 2013; Poellhuber & Anderson, 2011). While many may have workforce experience, assuming that their jobs or their educational careers were full of advanced technologies could be a mistake (Carruth et al., 2010). For example, in their article about a new online orientation program for a graduate nursing program, Carruth, Broussard, Waldmeier, Gauthier, and Mixon (2010) note that the institutions involved in the project realized a need for ensuring the students entered the program possessing the technological skills needed to be successful. They specifically noted that nursing careers did not tend to utilize the types of technology required in the program, and therefore many students had a skills gap that needed to be addressed.

Adult learners also may diverge from the traditional college age student in levels of maturity, career motivation, and the learning styles (Krampe, L’Ecuyer, & Palmer, 2013). These traits may be positive (more discipline for hard work) or negative (lack of familiarity with navigating an online library resource). But this group may have different issues from a traditional-age online student, and if these issues are not addressed, the adult learner is more likely to leave the program in the first year (Brewer & Yucedag-Ozcan, 2013). Understanding
and addressing the various types of distance learners and their unique needs in an orientation can improve retention and bolster student success.

The research done by Xu and Jaggers (2013) on identifying groups that may be prone to skills deficiencies is illuminating, but must be considered with caution before singling out population subgroups in policies around online education. They make four recommendations based on their research: screening, scaffolding, implementing an early warning system for students at risk of failure or drop out, and making overall improvements to the online learning program. But they also quickly noted that there are downsides to some of these strategies. Screening, through a pre-assessment, for example, has risks; the question becomes what to do with the students who do not pass the assessment? Course developers could scaffold or incorporate online learning skills into the curriculum of online classes. This could present a challenge for retaining those students who are highly skilled in online learning and do not need the exercises, finding them remedial. Boredom may negatively impact their impression of online classes. Incorporating an “early warning” system would allow for interventions with students who are not adapting. This strategy does add cost for needed tutoring services to help struggling students. Finally, instructors can consider improvements in the course itself. This may be the most logical strategy, but is certainly also the most costly. Xu and Jaggers (2013) additionally recommend that schools reserve online classes for those subjects most conducive to the virtual environment, which at least means the outlay in course development may have a higher return on investment if it improves persistence. For example, an accounting class may make more sense than a chemistry class that should incorporate live, hands-on demonstrations of important concepts. Some institutions are choosing an upfront intervention prior to the start of classes,
offering orientations, both required and optional, to try to improve self-efficacy for online learning skills (Brewer & Yucedag-Ozcan, 2013).

**Student perceptions of online education**

Hanney and Newvine (2006) felt the body of research on student success in online education lacked information comparing the perceived quality in online versus traditional classes, specifically from the perception of students who had experience in both types of courses. The students reported that they spent more time, found the books and additional materials more useful, the classes more difficult and of higher quality in distance learning compared to traditional learning. The majority of students (57 percent) also felt they learned more in distance learning, and nearly 70 percent of the respondents said they preferred the online format (Hanney and Newvine, 2006). The authors did not, however, identify explicit measures of quality in online education.

The key to a successful transition may be the adaptability factor that Xu & Jaggers (2013) identified. Consider again the new online student that may be required to take an online course. If she runs into trouble and cannot get an immediate resolution due to the lag in communication in the asynchronous environment, she may fall behind and struggle in the course. This may color her perception of online learning, and significantly impact her desire to enroll in another course. Conversely, if she adapts quickly she will increase her chances of success in virtual classes, and she may at a minimum be more open to other classes, and at best seek out more online opportunities to complete her education.

**Summary**

Online education is a relatively new but rapidly growing segment in higher education. While the content and assignments are very similar to traditional courses, the attrition rate
remains higher than in brick-and-mortar classes. The technology used in the field is also changing at a rapid pace, as companies expand the capability of the LMSs. In April 2014, LMS industry media outlet *eLearning Industry* reported on what they believed would be the top 14 trends for the year (Pappas, 2014). Several of the innovations were targeted to the institutional back-end, easing content management. However, several areas would directly impact the student user, such as content adaptability for mobile devices, gamification, and scenario-based learning. The rapidly expanding field is still in relative infancy, and researchers are trying to keep pace with the emerging issues. At a time when post-secondary institutions are working to raise their graduation rates, online education may be a solution to class crowd-out, yet a contributing factor to poor persistence rates. It is incumbent upon institutions to identify the ways in which they can improve retention and student success. Researchers in the field are actively trying to study issues of why students drop out of virtual classes at higher rates, and how this issue can best be addressed. Current research recommends both orientations for online learning and support services specifically for virtual students, and this study looked at the former practice.

**Positionality Statement**

**My Background**

I am a Caucasian, middle-class daughter of a mother, father, and stepmother who all had long careers as K-12 public school teachers. My parents and three of my four siblings have advanced degrees, the fourth is in law school. Additionally, my mother earned an education specialist’s degree in her 40’s, my father an EdD in his 50’s, and my younger sister has recently completed her PhD. The importance of lifelong education has been passed down from parents to children in my family.
My parents were themselves children of working-class families who sought better lives; through their example of continued learning, my parents demonstrated that education was one great stepping-stone to personal and professional enhancement. As public-school teachers, my parents embraced the idea that education should be available to everyone. I have myself embraced the idea that education should be open to all as it is the way to achieve career goals, improve standard of living, and collectively support society.

Numerous Positionalities

My personal experience in policy regarding online education and in participating in online degree programs has fueled my desire to research this area more closely. I was a legislative aide in 1997 when the Florida Legislature approved the Florida Online High School, now the Florida Virtual School (FLVS). At the time, I was personally opposed to the school for reasons cited by other critics who testified before committees: how will the school ensure quality? How can they ensure no cheating is taking place? Will they only attract students who think it will be easier than a rigid school day? I, like many others, equated online education with diploma mills seeking money but not necessarily providing an appropriately rigorous education in return. Acknowledging my predisposition to mistrust online education providers, I must pay close attention to the tendency to stereotype the entire field, which Fennell and Arnott (2006) warn against.

My opinion toward online education was changed somewhat in 2002, when I was a federal lobbyist for several higher educational institutions who were interested in exploring online education programs. I attended a Congressional presentation on distance education that included the principal of the FLVS. While the she was not specifically addressing issues of quality or the potential for cheating, she talked about benefits that even the founders of the
school had not anticipated. The school was breaking down barriers to access, finding that the largest numbers of students were not enrolled in the FLVS full time, but rather taking elective or advanced classes that were not offered in their local district. Schools cannot justify an Advanced Placement language class for three qualifying students, but the FLVS could easily cater to such needs when pooling them with other students across the state. The school also enrolled a large number of children from military families stationed on bases with small schools. When I couched online education in the context of access to education, it appeared a more appropriate part of our larger educational system.

**Personal Experience**

At that time I became interested in pursuing a master’s degree in adult education. I found myself attracted to the flexibility of an online program without set class times, but remained concerned about the perception of online degrees from my current and potential employers. In my research on the existing programs, however, I found that several traditional (brick-and-mortar) accredited schools had started fully online programs, including Colorado State University, Penn State University, and Troy State University, and the accreditation gave me confidence in the programs. I trusted that the knowledge and skills I would gain would be comparable to a degree I would earn in a traditional manner attending classes’ in-person. In 2007, I completed a Master’s of Adult Education and Training degree from Colorado State University without ever having stepped a foot on campus. Fueled by my success in that program, I felt comfortable seeking another distance program for my doctorate and in 2012 started a hybrid online/in-person program through Northeastern University.

Thus, an important element of my positionality is my status as a past and present student in an online program. I mirror what Carlton-Parsons (2008) identified as an important part of her
positionality when she acknowledged that she is part of the group she intended to study and had first-hand experience in what she considered to be the major issue central to her research. I studied an industry in which I participate, and in that regard see myself as the role of the Scholar-Practitioner (Briscoe, 2005), as I hope my work may influence improvements in student success in, and therefore the industry of, online education. Indeed, my very topic stems from my own surprise that upon applying for both the master’s and doctoral programs I was never asked to demonstrate that I understood differences between traditional and online education or that I was prepared to thrive in the virtual environment. I question what in my application gave either school confidence that I would earn the degree and, as an alumna, effectively represent the quality of their program.

I would hope as someone who shared the main characteristic with those being studied - participants in online educational courses - I would alleviate Briscoe’s (2005) first concern of positionality that those who are being observed may not speak or act openly around those who are not members of their group. Briscoe’s second concern, the ability to view a situation without preconceptions to avoid misinterpretation, may be a little more challenging given that I have many preconceptions of online education based on my experience with the FLVS and my online degree programs; both my participation in the program itself, and the conclusions of my literature review of research regarding quality in online education leave me predisposed to certain expectations about student readiness for online learning. However, I have not participated in any orientation programs for my own degrees, and thus do not have experience in the specific setting studied. I believe it ensured my ability to collect the student experience in these courses without a projection of my own experience.
My initial preconceptions about online education were balanced out by my own experiences in the master’s program, but then my concerns rose again through my own examination of current research. On review of the literature, I agreed with McGorry (2003), who wrote: “although the number of courses being delivered via the internet is increasing rapidly, our knowledge of what makes these courses effective learning experiences is limited” (p. 160). I have completed the master’s program and my doctoral coursework feeling I have personally gained a great deal of knowledge and am prepared to work in the field, yet find feelings of doubt about consistency in quality across the many growing e-learning programs in the United States. Certainly, my interest in this statement of problem stems from my own experience and probably a bit of a self-centered desire to ensure that the public perception of online education is a positive one. However, this bias is tempered by the knowledge that it is not merely perception that needs to be changed; quality online learning programs should lead to high quality learning outcomes for the students. According to Briscoe (2005, pp. 37-38) scholar practitioners should approach study participants as “coparticipants in an effort to learn about, make sense, and teach about their experiences,” which is an approach I embraced for this study.

Positionality Statement Conclusions

I feel I am a part of the field of online education due to my enrollment in distance education programs, and am seeking to find and disseminate best practices to improve the field. I feel my past bias against online education and subsequent change in opinion based on further information, coupled with my own experiences, was a positive addition, in that it serves as great motivation to find the best solutions to challenges and ultimately improve the industry as a whole.
Central Research Questions and Sub-questions

The overarching research question that guides this study is: What content is currently being offered in orientation programs for online learning at community colleges?

Sub questions addressed:

How does participation in an orientation course for online learning impact self-efficacy for the cognitive and technical skills that contribute to success in virtual classes?

How do different components of an orientation course for online learning have an impact on self-efficacy?

Theoretical Framework

Self-Efficacy Theory

Many children get advice in self-efficacy in their first readers when the “Little Engine That Could” instills them with the mantra: I think I can, I think I can. This is the basis for the Self-Efficacy Theory, pioneered by Albert Bandura (1986). Bandura’s theory of self-efficacy provides a framework to study the relationship between participation in an orientation course for online learning and the self-efficacy of college students in their first fully online course. This theoretical framework is prominent in the current literature on readiness for online learning, though most of the research involves a qualitative review of student self-report for self-efficacy for different skills and attributes for online learning. This study utilized the framework in a case study, creating a bridge to qualitative research, and providing context about the actions institutions are currently taking in an effort to improve self-efficacy for online learning, and how students can raise their self-efficacy. First, it examined what content currently utilized in
practice has an impact on self-efficacy, and second, it investigated how students perceive the impact after participation in an online orientation program.

The premise of Self-Efficacy Theory is that a feeling of control over a situation translates into confidence. If the new online student believes she can control her discipline to attend class, study the material, find resources if she encounters challenges, and be receptive to instruction, then she is confident that she will do well in college. In educational pursuits, confidence that one can complete tasks associated with learning (technical and cognitive) has an impact on outcomes (Kim, Park, & Cozart, 2014; Wang & Wu, 2008). Bandura’s (1986) early work in cognitive theories demonstrated the link between the feelings of control (confidence) over a situation and the ability to achieve the desired outcome. While investigating Social Learning Theory, he realized that in addition to information and social construction of learning, the internal belief that one could learn or accomplish a task contributes to learning success.

In the world of virtual education, self-efficacy is important for both knowledge acquisition (cognitive) and the technological skills (technical) needed to participate in the learning process through the Learning Management System (LMS). Are current orientation programs addressing both areas? An LMS is the web-based platform that includes tools utilized by an institution to deliver online education. It may house elements of the registration system, resources such as a library collection and information on course requirements, and the virtual classroom. Inside the classroom, which is limited to enrolled students, instructors can post required materials, presentations, and assignments. Generally there are spaces for peer-to-peer communication beyond mere email, such as a chat board or private links for group projects. There may be testing tools and different modes for sharing finished assignments.
Self-efficacy is a pillar of Cognitive Learning Theory, a theory commonly used in studies analyzing student readiness for online education. Other education researchers have applied Self-Efficacy Theory to various aspects of learning (Brewer & Yucedag-Ozcan, 2013; Kim, et al., 2014; Lee & Choi, 2011; McCoy, 2010; Shena, et al., 2013; Tsai, Chuang, Liang, & Tsai, 2011). With the increase in technology in the classroom and its impact on learning, Caprara (2008) applied the theory to a student’s confidence in adopting new technologies. Fletcher (2005) specifically looked at self-efficacy for skills in using technologies associated with online learning.

Two widely used LMS companies are Blackboard and Desire2Learn, but other companies are emerging, such as Canvas. There is also an open-source platform called Moodle in use, and some institutions create their own platform. Personal preferences for the systems may be due to familiarity or first use, as much as one person might prefer one online search engine instead of another. The diversity means there is not a universal system, and the new online student needs to build her own self-efficacy for the one she will be required to use at her institution.

This study builds on current work done in the field that has identified some of the skills that impact success in online learning. Several tools have been developed to measure student readiness for online learning (Dray, et al., 2011; Hung, Chou, Chen & Own, 2010; Kerr et al., 2006; McVay, 2000; Pillay, Irving & Tones, 2007). While the tools do not currently have a unified set of variables, these instruments can still be particularly valuable because, lacking objective measures, students may incorrectly estimate their own preparedness to successfully learn online (Millar & Tanner, 2011). Shown the skills that are needed, students may be better
able to determine for themselves if they are prepared for online learning, or identify any skills they need to improve.

Schools are considering the kind of resources and support services they can offer students who would like to address any skills gaps. Programs range from static online resources or online tutorials, to live tutoring or in-person classes.

In an online orientation, not only can the new online student become familiar with the technical aspects of the LMS, she can also come to understand the nuances of online learning. Many virtual courses that run consecutively with a regular school term may have a similar weekly assignment and deadline schedule, with larger projects scattered throughout the term. The new online student can gain an upfront understanding of the time commitment expected for reviewing materials, conducting ancillary research, participating in the classroom exchanges on the chat board, and completing assignments. She will gain an understanding of how to handle obstacles she encounters in classwork so that a question for the instructor need not halt her own progress while she waits for a response in the asynchronous environment. She can learn to appreciate the difference in approach to online communication, which students have reported takes more time and deliberation - and consequently, rewriting--than merely raising a hand to respond in a class discussion with the first thing that comes to mind (Song et al., 2013). Having a better understanding of the expectations in online education, the new online student can decide if she is technically and cognitively ready for virtual learning.

**Summary**

The Theory of Self-Efficacy is tied to one’s belief that they can accomplish a specific task. It is regularly used in educational research, and by extension in research on virtual learning. This study focuses on how orientation courses are working to impact self-efficacy for
online learning, and how a potential student is impacted by participation in an orientation course. The variables identified in the tools (ex. computer skills, online communication proficiency) can serve as a guide for orientation designers for creating course activities that most impact the self-efficacy for these skills. The growing body of research is identifying the technical skills and desired learner characteristics needed for success in online learning (Dray, et al., 2011), the next step will be to ensure the new online student “thinks she can” learn when enrolling in a virtual course.

**Conclusions**

Research demonstrates that success in online learning requires different skills and individual attributes from traditional learning. As institutions expand online education, they may want to concern themselves with student mastery of these skills and attributes. One way schools are addressing this issue is through the use of orientation programs to impact the self-efficacy of students for these skills and attributes. This study seeks to understand the aspects of orientation programs that impact online education. Chapter two begins with an examination of the literature on online learning skills and attributes, the relationship between self-efficacy and learning outcomes, and the use of orientations to impact self-efficacy. Chapter Three then outlines the proposed data analysis and case study that examine the student experience in orientation programs.
Chapter 2: Literature Review

This study focused on the facets of online learning that are improved by high self-efficacy and the activities in an orientation course for online learning that can impact student readiness. Therefore, this literature review examined the skills and attributes identified as contributing to online learning success, the importance of self-efficacy in learning, and the use of orientations to impact self-efficacy. Because online education is a relatively new industry, the body of work is not deep; studies into readiness for online education are also in limited quantity.

Conducting the Literature Review

Multiple organizations, from the U.S Department of Education to industry non-profit Sloan Consortium to individual institutions, have put forth definitions of distance education courses and as a result varying terms are used in the literature, making a search a challenge to ensure coverage. Klein (2004) noted two federal sources for official description in reviewing legal issues surrounding online education. Many researchers utilize the U.S. Copyright office definition of distance education as that in which the instructors and students are separated by time and space (Hannay & Newvine, 2006; Klein, 2004). The National Center for Education Statistics goes into more detail, including modes (video, audio, via computer) and time standards (synchronous and asynchronous). The United States Distance Learning Association (USDLA) defines distance Learning as “the acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of learning at a distance.”

Many interchangeable terms are used, but the modern understanding of distance education in the United States tends to denote online education (Klein, 2004). Only since the advent and proliferation of the Internet has distance education become synonymous with terms
such as online education, e-learning, virtual classes, flexible learning, multi-dimensional learning and internet-based learning. Ultimately, the term still refers to programs catering to an off-campus population (Hannay & Newvine, 2006) marked by separation in geography and time with information and communication technology facilitating the interaction.

The terms “online education,” “virtual learning,” and “e-learning” are used in this doctoral thesis, as this review does not include research into learning at a distance without an online component. This is juxtaposed against “traditional education,” the common educational delivery method in which students and instructors are face-to-face in a brick-and-mortar classroom. An unresolved issue with the terminology is there is no distinction in the literature of self-paced classes versus a more structured schedule, such as one with a traditional class term including specified weekly assignments and deadlines. Some studies were also conducted outside the traditional college setting but still cater to adult learners, such as an advanced nursing certificate. These studies are included as well.

Further complicating the issue of defining distance education are the various delivery methods. Distance education programs can be synchronous, asynchronous, fully online, self-paced, or hybrid courses with a mix of online, face-to-face, and video elements. These factors may have an impact on learning, but the literature often does not distinguish between the different methods, thus all class types are included.

This study reviewed three areas examined by researchers as aspects of readiness: attributes and skills, the impact of self-efficacy, and the use of orientations for online learning programs. This research can be viewed in a way in which one area builds on another. Early research sought to identify the skills and characteristics most linked to success in online learning. Some research measured aptitude for skills, and/or the presence or absence of certain
characteristics (such as through the Myers-Briggs Type Indicator® (MBTI®). Some researchers felt the framework of self-efficacy for these traits was most important, contending that these areas can be learned, and need not be inherent. Finally, research called for the use of orientations to facilitate learning the needed skills.

Some studies examined attributes or skills by demographic categories, and results are included here. However, an issue in comparing literature arises because studies do not necessarily have standardized age stratifications. However, this search focused on adult learning, studies conducted in the K-12 environment are excluded. Demographic findings are mixed and inconsistently measured, and therefore inconclusive and do not impact the direction of this study.

For the purposes of this dissertation, studies involving both graduate and undergraduate students are included; some studies do not make the distinction in the level of their student sample while others specifically mention including both. Most studies did not assess the level of experience with online classes, and those that did noted a mix among the participants. Researchers have reviewed the components of quality in online programs, but that is also outside the purview of this study. As with the measures for learning readiness in online education, researchers have not found universal agreement on measures of quality. The diversity of findings is likely due to the diversity of programs, the constant change in virtual education, and the previously mentioned challenges due to a lack of standard definitions. To be fair, given that students learn and teachers teach in so many different ways, defining the best practices remains subjective. Two students in the same class can have a different experience based on their own personal learning preferences, and they can arrive at divergent opinions on the quality of the class.
What was reviewed is the literature supporting the need to assess readiness, including factors that impact attrition and retention in e-learning. Further, this study provides an overview of the tools that have been created for the purpose of assessment, identifying those skills and attributes that are specific to virtual learning outcomes. Many of the studies stress the importance of self-efficacy for these skills and attributes, and the literature review discusses the connection between self-efficacy and online learning. Finally, this dissertation discusses the use of orientations to impact self-efficacy.

Summary

Online education does not have a universal concept or definition, and therefore the literature is wide-ranging and may not utilize universal terms. In addition, the relative newness of online learning in higher education translates into small numbers of published studies. Some aspects of online education research, such as quality measures, are not relevant to this study. This review focused on the attributes and skills identified in the literature are important for online learning success and the possibility of impacting student self-efficacy for those skills and attributes.

Importance of Assessing Readiness

No intellectual process is the best fit for all individuals and situations (Jacobs, 2011). The majority of formal education is delivered in the traditional lecture format and transitioning to an online format may be challenging for some (Xu & Jaggers, 2013). This could lead to poor student performance and a student may decide to drop the class or, worse, abandon school altogether. Wan et al. (2008) note that in order for programs to be effective, the courses must be structured for an e-learner’s psychological processes, termed virtual competence. In particular,
the study noted that students with more experience in seeking information online, communicating in a virtual setting, and engaging in social communication, had better outcomes and more enjoyment in online learning. Gaide (2004) listed ten best practices for retention of online students based on a study of graduate students at the University of Illinois Urbana-Champaign. Among the recommendations is that the student must fit well in the program, possessing attributes such as being self-directed and independent in their learning. Using the term “web literacy,” Sutherland-Smith (2002) noted that online learning requires that a student employ different comprehension skills compared to traditional learning.

So if the new online student is already comfortable with technology and can comfortably execute these skills, she is likely to be able to learn in an online course. The questions still remain: does she know she needs specific technical skills, does she have them, and if she doesn’t, how can she best acquire them? Last, but certainly not least: shouldn’t these questions be answered before the new online student is in her first virtual class? Harrell (2008) notes that some schools had minimum prerequisites for enrollment in online courses such as grade point average (GPA) or number of classes completed. But these are not true indicators of readiness. Pre-assessment for readiness is a key to student success (Harrell, 2008).

**Attrition and Retention**

The literature on attrition is important in that understanding the causes is a first step to combating the problem. In examining reasons that contribute to the high rates of attrition in online education, Moody (2004) found potential explanations in past literature included lack of ability to adjust to the self-paced course of study, courses being more rigorous than anticipated (students thought they’d get an ‘easy A’), a lack of background in the specific technologies employed, and the lack of teacher and student experience in learning in the medium. Schools
and teachers should identify and work to mitigate these challenges, identifying the factors and services that can help students’ successfully complete classes (Nash, 2005). Further, educational expectations must be properly set and communicated (Cho, 2012, Moody, 2004).

The literature further considers the actions program administrators can undertake to improve student retention. Nash (2005) noted that extensive research has been done on retention of students in traditional classes, but little had been conducted for online courses. In attempting to fill this gap in the research, Nash (2005) worked to identify the services that could help to improve retention. After reviewing the student characteristics identified in his research, Nash (2005) recommends orientation for online classes and the availability of tutors that can work with online learners. Based on his work, his college developed a course for online learning covering topics such as goal setting, time management, study and memory skills, and test-taking strategies. The college offers two optional one-credit courses for developing online learning skills.

Rovai (2002) offers four major strategies that may be used to decrease attrition in distance education courses: student integration and engagement, learner centered approaches, learning communities, and accessibility to online student services. These support Tinto’s (1993) concept that a student who feels connected to an institution is more likely to persist. This is a particular challenge for a student who may rarely or never visit the physical campus. A website can be extremely impersonal, regardless of splashy pictures and student testimonials. A school can help the new online student connect to the school through an orientation similar to one in-person students receive, facilitating connections to other students, ensuring availability of needed services such as counseling or librarian assistance, and helping students make personal
connections to the learning. If institutions invest in building the system, leaders may want to ensure that the courses include these components to improve retention in online classes.

**Importance of Readiness for E-Learning**

In studying adult online learners, Li-An, Kuo, and Lin (2010) sought to explain the relationship among quality of a virtual learning program, student readiness, e-learning competency, and learning outcomes. The factors involved in readiness included access to technology, technical skills for navigating and using the LMS, interpersonal skills and communication in a virtual environment, and the characteristic of self-motivation. E-learning competency refers to the ability to employ higher order thinking, self-direction and initiative, and the ability to collaborate virtually. They found that readiness and a student’s perception of program quality combined to positively impact e-learning competency, which in turn impacted learning outcomes.

Readiness can impact student performance, which in turn affects satisfaction, which affects attrition (Pillay et al., 2007). Poor experiences in online classes could lead to immediate attrition in classes, but also discourage future use (Pillay et al, 2007). As institutions look to making online classes a requirement, the system may push out students who never wanted to, or are not ready to, participate in classes in which they are not prepared to succeed. The literature in this area illuminates the importance of student readiness, and should be a call for institutions to take responsibility for student success in an online course.

**Summary**

Attrition is higher in online courses than in face-to-face classes, although content is generally very similar. There are multiple reasons that a student may drop from an online course, but one reason has been identified as a lack of readiness to learn in a virtual environment.
Researchers suggest that institutions can (and arguably should) impact this issue, and improve student retention.

**Measures of Readiness**

Academic readiness in general is difficult to accurately measure and define, but several researchers have worked to define the factors contributing to readiness specific to e-learning (Jackson & Kurlaender, 2013). There are three main areas of research in assessing online student readiness: characteristics of self-selectors, learner attributes, and technological skills (Dray et al., 2011). Current and past research may include one or both areas. Success in an online environment goes beyond the physical and technical requirements for accessing an online class. Learning takes an independent learner with characteristics of self-discipline, self-motivation, and sufficient time and resources devoted for absorbing and internalizing knowledge (Mupinga et al., 2006). How a student learns to utilize technology in education also affects their outcomes in the online environment (Ho et al., 2010). The more value they put on how technology can benefit the task, the better their outcomes in e-learning, specifically their skill development, goal achievement, and satisfaction. This can be impacted in part by quality and intuitive instructional technology employed by the institution, but the student also needs the requisite skills to adapt the technology and maximize its use. Ho et al. (2010) did find that neither the quality of the e-learning system nor the readiness of the student independently affected the learning outcomes; they were only predictors in combination. Hopefully the new online student is attending an excellent institution with a high quality program and a concern for student success.
Literature abounds on the differences in learning styles and preferences, and any class will be a mix of student approaches (Mupinga et al., 2006). This reality is reflected in the literature on readiness measures: different researchers have relied on different studies to identify those variables included in their assessment instrument. While there is not universal agreement on exact survey items, there are major areas of agreement. After some background on the development of assessment tools, the areas of agreement on student attributes and technical skills are discussed.

**Evolution of Readiness Assessments for Online Education**

Early work in addressing distance education programs is built on the Distance Education Student Progress (DESP) Inventory, which was developed in the 1990s by Kember, Lai, Murphy, Siaw and Yuen (1995). While this predated modern online education, the model called for consideration of student characteristics as a predictor of persistence in distance education. The four scales in the inventory are Emotional Encouragement, External Attribution, Academic Accommodation, and Academic Incompatibility (Kember, Lai, Murphy, Siaw & Yuen, 1995). The framework considered three questions that have been adapted for today’s research of online students: 1) Is open access to distance education appropriate, or should institutions be selective among their own students? 2) How is instructional design adjusted for distance learning? 3) What support services will maximize the chance for student success? Later work by Thompson (1999) validated the DESP inventory as a model for persistence when the outcome measure was GPA or classes failed. She noted the intention of Kember and colleagues’ work was not to develop a predictor of student success, which they acknowledged was subject to many other influences. Rather, they sought an understanding of student adaptability and progress (Thompson, 1999) as a way to inform instruction and policy.
In 2003, Kerr, Rynearson, and Kerr developed the Test of Online Learning Success (TOOLS) and later tested the validity of the instrument (Kerr et al., 2006). They felt many questions were left unexamined in contemporary research such as the attributes of successful online learners, which attributes most affected learning in the environment, what were the predictors of success for those students, and what specific capabilities did the students possess. In examining existing survey assessments they found the comparable issues were computer literacy, technology usage, communication skills, readiness, persistence, self-efficacy, learning skills, lifestyle, and other student characteristics. They combined the fifty most commonly assessed attributes to develop the TOOLS instrument, what they believed would be a comprehensive assessment for online learning readiness. In validating the instrument, they identified four key characteristics of successful online students: reading and writing skills, independent learning, motivation, and computer literacy. They verified that the TOOLS instrument can be used to identify student strengths and weaknesses in key attributes and create an assessment for use in readiness programs.

Another extensive readiness measurement tool developed and refined by Pillay, Irving and Tones (2007) is as referred to as the Tieritiary Students’ Readiness for Online Learning (TSROL). They built the instrument by consolidating the work of others into one tool. The authors felt that studies revealed student characteristics generally associated with achievement and student satisfaction and created an instrument to measure four sub-scales: technical skills, computer self-efficacy, learner preferences and attitudes towards computers (Pillay et al, 2007). The authors further felt the instrument could be administered mid-program to identify any students who may be at risk for non-completion. A unique feature of their instrument is that the
results of a pre-assessment and an interim assessment could be compared and utilized in course evaluation, potentially informing course design.

Using higher education in Australia, Smith et al. (2003) build on work by McVay (2000) to create a survey instrument to measure student readiness for online classes. McVay’s Survey is widely cited in the literature and research as a valid tool for assessing readiness to learn virtually. Many researchers have used it as a basis for the development of other tools, or the basis for validation studies (Dray et al., 2011). The items on McVay’s Survey explore a student’s ability to tap into their experience and previous learning, the ability to set learning goals, to identify resources and strategies to aid in their education, and to evaluate and monitor their learning. Smith et al. (2003) saw potential for McVay’s Survey to be used as a diagnostic tool in assessing new online students. They tested the validity of the tool and found that in addition to being useful in research, with some tweaking, it has the ability to be predictive of a student’s readiness to be successful in distance education courses.

Other researchers used the work of Smith and his colleagues to further build on McVay’s Survey. Blankenship and Atkinson (2010) applied the survey to American students with a specific interest in sampling urban and rural students for comparison. Both the studies by Blankenship and Atkinson (2010), and Smith et al. (2003) reinforce other research identifying two factors significant to success in online learning: comfort in an e-learning environment (skill) and the capacity for self-directed learning (attribute). Hung, Chou, Chen and Own (2010) agreed with the measures for self-directed learning and attitudes toward online learning as important indicators of student readiness, but felt others were needed. They constructed the Online Learning Readiness Scale (OLRS) by adding in three new measures to McVay’s items: motivation, comfort in online communication, and learner control. Learner control is described
as the ability to control aspects of the class such as content, pace, resources and learning style. This attribute may not apply to the increasing number of modern classes that are more prescriptive and less self-paced. Of note in the study is that more experienced, upper level students (juniors and seniors) scored higher on items such as self-directed learning and online communication self-efficacy. This may have implications for planners determining what classes should be offered online, and to what students. They also found (as others have) that gender does not tend to play a role in online readiness. Based on their findings, Hung et al. (2010) suggest that teacher interaction and direction is critical, and that teachers should stress time management (a skill which can be taught), and create activities that encourage social learning such as peer-to-peer communication on class content.

Dray, Lowenthal, Miszkiwicz, Ruiz-Primo, and Marczynski (2011) also borrowed from McVay’s Survey and others to develop a new instrument to measure both individual attributes and technological proficiency. Specifically, they had the goal to not only expand the measures to focus on information and communications technology (ICT) but, feeling that other instruments had not been subjected to rigorous validation, to also make a more reliable instrument. They offered new measures in four categories:

1. Basic technology skills such as using productivity software, email, and the internet for educational purposes;
2. Access to the necessary technology such as a computer and required peripherals, and reliable high-speed internet;
3. Nature and use of technology (more than posting to social media); and
4. Relationship with ICT, including comfort with and confidence in using.

Based on their findings, they feel tools need to not only identify the presence of student
characteristics and technical aptitude, but also self-efficacy for using technology. The instrument is intended to help students self-assess their own readiness for online learning. Institutions can also use results to craft online orientations and provide student services in high-need areas.

At a macro level of analysis it is possible to identify major categories of agreement among the tools as to the student attributes and skills most useful for student success in a virtual class. However, there is not significant literature identifying how many schools are using assessment tools and what, if anything, they are doing to work with students who are determined unprepared (or underprepared) to learn in the online environment. Dray et al. (2011) call for this to be a next step in the research: identify what is in use in practice, and determine its effectiveness. An increasing number of schools are offering orientation programs in an effort to address this, and a convenience sample from among these institutions forms the basis for this study.

**Student Attributes**

As researchers have noted, student achievement in online learning is impacted by student characteristics (Anitsal et al., 2010); college officials responsible for managing distance education programs echo this sentiment. According to an annual survey of Chief Academic Officers at post-secondary institutions in the U.S., nearly 89 percent of leaders feel the need for more self-discipline in online students is a barrier to program expansion (Seaman & Allen, 2013).

The various tools created to measure readiness are based in research on student traits and skills. The major constructs can be categorized as follows: self-efficacy for technology (differentiated from specific skills in using technology), confidence in participating in online communication, self-awareness as a learner (resourceful, motivated, disciplined), and higher-
level thinking skills. These elements are as important for learning as the technical skills and may be more difficult to measure or teach, but should not be disregarded.

Pillay et al. (2007) noted that many definitions of readiness entail time management and adaption to self-directed learning requirements, which are student attributes. Wan et al. (2008) note in their findings that technical competence tends to be self-reported by the students, and thus can be perceived as an attribute as opposed to a measureable technical skill. Computer self-efficacy (CSE) is a user’s self-confidence in technical skills (Pillay et al., 2007). Generally, learners who self-select into online learning have high CSE; this has a correlation to better grades (Pillay et al., 2007). It is for many of these measures in particular that the self-efficacy framework is a useful tool in research.

There are multiple reasons that students who may enroll in an online course because of convenience, availability, or to fulfill a requirement may not be ready to learn in a virtual world (Mupinga et al., 2006). Identifying these elements can an aid an online program administrator in designing interventions to help raise student readiness levels. It is important to note that college success requires more than traditional academic skills: certain social behaviors are needed as well (Jackson & Kurlaender, 2013). Online interaction requires specific social behaviors. For example, the new online student needs to learn how to read and comprehend chat board discussion without the context clues of voice inflection or facial expressions. Online socialization is also important for more than learning. One attribute of successful online students is a preference for independent learning (Nash, 2005), and this may present a challenge for those who feel their learning is enhanced by social interaction with classmates. Students who prefer social learning may not do well in online environments, where “feelings of isolation” is a frequently cited reason for dropping online classes (Nash, 2005).
Hoskins and Van Hooff (2005) found that higher use of an online class discussion board as a resource correlated with certain learning styles, such as constructivism, and can be a predictor of achievement. Students need to be able to interact in a way that they can collaborate in a virtual world (Cho, 2012). In online learning the social interactions are different than traditional classrooms and important both between a student and the instructor, and a student and his/her peers. Positive social connections improve motivation, cognitive processes and learning, which in turn improve self-efficacy for online learning (Kim et al., 2014). Thus, understanding a student’s social skills in a virtual environment can provide insight into a student’s potential performance (Moody, 2004). Institutions must then decide if and how to intervene. The new online student may feel disconnected from peers in the official class chat room. She may, however, find connections easier to make in a less formal forum, cut off from the teacher’s view. Having an avenue to improve her social connections may translate into improved class performance, under Tinto’s (1993) theory that social connectedness improves educational outcomes.

Ho et al. also examined online readiness (2010). Their research examines the relationships between e-learning system quality, e-learning readiness, e-learner competency, and learning outcomes. Using structural equation models Ho et al. (2010) show that the perceived quality of an online learning system and e-learning readiness are positively linked and important factors in helping students achieve their goals, increase skill development, and produce higher learning satisfaction.

Acknowledging that individual attitudes and preferences for technology will impact student learning, Hoskins and Van Hooff (2005) looked at the characteristics of students who self-selected into online classes. They noted that in previous literature gender and age had an
impact for preferences and online interaction, but they felt at the time the research lacked examination of motivation and ability (Hoskins & Van Hooff, 2005). Their study reviewed the characteristics and demographics of students who chose online classes. In addition, they examined their study habits, online class interaction, a self-assessment and academic achievement. The results found that a blend of characteristics and skills, specifically regarding effective use of chat boards, impacted student achievement. The chat boards replace the before, during, and after class discussions, which influence learning. If the new online student can engage in the dialogue of a chat board, she will likely learn more and feel more connected than a classmate that does not participate extensively on boards or has a difficult time fully understanding online comments.

Wojciechowski and Palmer (2005) examined thirteen characteristics of students in the same undergraduate business class offered in both a virtual and traditional manner. The findings supported previous research that had found the strongest predictor of success, measured by course grade, was past performance, whether online or in a traditional setting. By and large, a good student is a good student. The predictor with the second-highest correlation was that of participation in a class orientation. The orientation session provided expectations on assignments and social presence (interaction and personal connectedness) in the class, as well as information on the technical platform to be used. The remaining predictors for student success in online classes: standardized test scores, previous experience with online courses, persistence, and age (Wojciechowski & Palmer, 2005).

**Technical Skills**

The assessment tools also worked to identify the technical skills that contribute to improved student outcomes in virtual courses. The major categories can be identified as follows:
ability to use the LMS, ability to communicate online, ability to use technology to learn (find and vet resources, use technology such as word processing and presentation programs in assignments).

As acknowledged, many students are familiar with computer technology, and self-efficacy for those skills is a recurring theme in the literature. Anitsal, Anitsal, Barger, Fidan, and Allen (2010) employed a Five Factor Model of personality to analyze differences between online and on-ground students. They point out the obvious, successful online students are generally more technologically savvy. However, measuring technical skills is not straightforward because skills are not universal (Pillay et al., 2007). Experience with learning technologies impacts student performance (Harrington & Loffredo, 2009), but technical skills are not limited to proficiency in using a computer or the Internet. They must also include competence and comfort in the platforms specific to the course and the program design (Chiou, Ayub & Luan, 2010; Pillay et al, 2007).

As distance education is now largely conducted through online platforms called learning management systems (LMS), Chiou, Ayub, and Luan (2010) measured readiness as the technical capabilities for the platform specific to the course. They administered a survey to mathematics students assessing perceptions of Internet learning and the learning environment provided by the university. They asked about experience, interest, attitudes toward self-study, self-efficacy for computer skills, and perceptions of online learning versus traditional learning. They found that, in general, high ratings of self-efficacy translated into a positive perception of using an online portal for learning.

As the industry of online education continues to grow, more and more students will be exposed to virtual learning. It may be in small ways, on an individual assignment in the sixth
grade. Or it may be a full class coordinated through an LMS. With multiple companies developing LMS platforms, including Blackboard, Moodle, Canvas, and Desire2Learn, and some higher education institutions customizing these systems or developing their own, there will continue to be differences that students need to understand to effectively learn the LMS specific to their courses.

As with most any technology, there will also continue to be advances in the industry, creating more sophisticated systems that will make more learning challenges for students (Cho, 2012). In addition to back-end platform improvements, several areas would directly impact the student user, such as content adaptability for mobile devices, gamification, and scenario-based learning. While riding the bus, the new online student may be using her phone to play a team-game with classmates. They may be racing other teams to find a solution to a fictitious public health outbreak, competing with other teams and learning the application of public health theory along the way. If she cannot participate in the activity due to a lack of resources (a smartphone or tablet computer) or a lack of confidence for the technical skills necessary to learn the game application, she will be left out of virtual learning.

As research identifies key elements in what makes a quality virtual experience, the industry may agree on and adopt a more universal set of LMS functionalities. The differences will become as small and technical as the difference between using a Mac or a PC. eLearning Industry, which reports on educational technology, promoted the idea of a more open source model to allow schools to move across LMS vendors if it benefited their business model (Pappas, 2014). Whether or not that will come to fruition remains to be seen. At this time, the research can focus on the universal or generic technical skills required. Two schools may have different
systems for conducting searches in an online library, but students in each school should be able to show they can navigate the system effectively.

Technical skills are not necessarily indicative of achievement, but do contribute to a student’s anxiety and extent of use of technology in approaching class assignments. It is inappropriate to assume the same proficiency level among all students (McCoy, 2010). Access to technology is also important (Pillay et al, 2007). If technical skills are acquired through experience, then another area that impacts readiness is the digital divide. While shrinking, it remains an issue. Zickuhr and Smith (2012) examined differences in Internet usage between 2000 and 2009. Among the significant findings: one in five people living in the United States do not use the Internet. This group includes senior citizens (only 41 percent use the internet), those with limited English language skills, individuals without high school diplomas and those in households that live on less than $30,000 annually. Twenty-seven percent of disabled adults are also less likely to use the Internet. The study noted that the gap between ethnic groups was decreasing. The most significant change was between whites and non-Hispanic blacks. In 2000, the difference in the number of white adults and black adults that used the Internet was 14 percentage points. In 2009, the gap had shrunk to nine percent. Overall, Internet use is fairly even along gender lines. Men use the Internet in slightly higher numbers than women, but in both 2000 and 2009 the difference was five and four percentage points respectively (Zickuhr & Smith, 2012).

The issue of gaps in usage may stem from lack of access to the Internet. Four in ten Americans do not have high-speed broadband access in their homes (Xu & Jaggers, 2013; Zickuhr & Smith, 2012). Broadband affects Internet use; those with slower connections conduct fewer online activities (Zickuhr & Smith, 2012). Most Internet usage is limited to email and
conducting online searches. Broadband access is an area in which a gap remains wide between whites and non-whites. Less than 50 percent of non-white households reported having high-speed broadband in their homes in 2011. This adds to the ethical questions an institution must consider. If a school is going to require online learning, to what extent are they obligated to facilitate access? Can a school require students to have computer equipment and Internet access in the same way they require them to purchase textbooks? Is this expense figured into listed college costs? If a student cannot afford Internet access, can they be required to take an online course? These questions are outside the purview of this study but are an area for future research.

**Technical and Cognitive Skills Are Entwined**

Wan et al. (2008) felt the literature linking the quality of the information technology platform for a learning system to both student satisfaction and outcomes was too narrow. They believed that learning outcomes are affected by a combination of the technical system of delivery, the quality of instruction, learning preferences, and subject competency. They worked to understand how a student’s psychological processes affected their individual outcomes within a class. They also offered that in today’s world there will be very few students who have no experience with Internet connected technologies. But they distinguished the important question. It is not about how much experience individuals have with the online environment which impacts their ability to learn in it, it is how they interact with the online environment that affects learning outcomes. The new online student may be able to view her student loan payment schedule through her financial institution’s online application, but that does not mean she learns anything about government rules regulating the student loan industry. Acquiring this knowledge requires searching and vetting potentially multiple websites. She may talk to friends or instructors about
what she have found, or email someone at her bank. She is using the three activities Wan et al. (2008) identified as relating to the online experience: information seeking, communication, and socialization. Again, these areas mix with personal student attributes.

Online learning requires not just the use of technology, but the ability to use technology to learn. Sutherland-Smith (2002) sought to understand the different learning processes used in accessing information via the Web as opposed to a book. In identifying the skills needed for “Web Literacy” she found that student’s feel there exists several key differences between online and book reading. Book reading is more systematic and sequential, where reading on the Internet allows (and sometimes invites) the reader to move around through various resources. In a health sciences course the new online student may learn that tachycardia is an irregular heartbeat caused by cells that misfire signals for the heart to contract. She may want to remind herself about the normal pulse ranges by age group. In an online environment, this information would be easily found on another website that may have additional material about a normal pulse and other issues characterized by an irregular heartbeat. The new online student needs to use higher-level thinking to integrate all of the information, and circle back to her original reading. The potential for non-sequential exposure to information requires nonlinear thinking (Sutherland-Smith, 2002). Students must be able to research, vet and analyze information in a virtual form, discerning quality evidence from unsubstantiated materials. This combines proficiency in reading comprehension with technical navigation and analytical skills. Virtual forms of information include multimedia, which may be far more complex than the written word and require higher-order critical thinking skills than the same information in a book (Sutherland-Smith, 2002).
E-learning competency by itself does positively affect learning outcomes, (Ho et al., 2010; Wang, et al., 2013). A student with high competency will respond to online lectures and materials in the same way they would in a traditional classroom. However, this exists in situations where the course is high quality and the instructor is highly qualified; a highly skilled learner can still be thwarted by subpar instruction and poor pedagogy (Ho et al., 2010).

**Summary**

In the relative infancy of online education, many researchers have sought to develop assessment tools for measuring readiness for online education. These tools are based in research as to the attributes and technical skills that are most useful for academic success specific to virtual courses. The constructs are not universally agreed upon, but there are major categories, which can be identified under characteristics of self-selectors, learner attributes, and technological skills.

**Self-Efficacy**

**The Use of Self-Efficacy as a Measure**

There are two measurements used in assessment: aptitude and self-efficacy. Many researchers examining issues of readiness use self-efficacy as a framework or measure, perhaps because self-efficacy can impact aptitude. If the new online student believes she can cook for herself and knows there are resources that she can use to learn, she can teach herself to cook. Yorke (2004) offers influences on an individual decision for retention, and among them is self-belief (self-efficacy). With the increase in technology in the classroom and its impact on learning, Caprara (2008) applied the theory to a student’s confidence in adopting new technologies. Fletcher (2005) specifically looked at self-efficacy for skills in using technologies
associated with online learning. Kim, Park, and Cozart (2014) confirmed self-efficacy as a predictor of student outcomes in online mathematics courses. In reviewing the effectiveness of an online orientation program Cho (2012) utilized six types of self-efficacy to measure students’ readiness to take an online course. He included six areas of self-efficacy for (a) completing an online course, (b) interacting with classmates for academic purpose, (c) interacting with the instructor for academic purpose, (d) self-regulating online learning, (e) handling tools in an LMS such as Blackboard or Moodle, and (f) socially interacting with other classmates.

Self-efficacy is both the confidence that someone has the capability and persistence to accomplish a task (Bandura, 1988; Shena, et al., 2013). Low self-efficacy does not mean a person cannot accomplish a task, but their exertion and persistence are often affected. Thus, schools may be interested in working to increase self-efficacy in their online students.

Shena, Chob, Tsaic, and Marrad (2013) cite research (Schunk, 1991) noting that self-efficacy is most closely tied to academic achievement, more than any other cognitive or affective measure. Self-efficacy is context specific (Bandura, 1986; Shena, et al., 2013; Wang et al., 2013), and in online education those contexts are in technology, learning, and social interaction. Wang and Wu (2008) noted, for example, that students with higher self-efficacy provided more elaborate feedback in online courses, and used more advanced learning strategies compared with students with low self-efficacy. They set higher goals, and added their own learning preferences and information seeking skills to their learning approach. If she possesses high self-efficacy, the new online student will read assigned book chapters, but seek out ancillary information and work to connect the new information to knowledge she already has. Wang and Wu (2008) also noted their findings on feedback were reciprocal. Those students who got more positive feedback from instructors in the form of affirmations of correct responses significantly improved their academic
performance (Wang & Wu, 2008). The feedback need not be elaborate, but it’s important for it to be timely and positive. The new online student may know she got an A on her health sciences paper on irregular heartbeats, but additional positive feedback on her linking of tachycardia to consumption of alcohol will reinforce her advanced learning strategies, which will hopefully build her self-efficacy for subject matter that may be more difficult to learn.

**How to Impact Self-Efficacy**

Prior experiences can impact self-efficacy (Komarraju et al., 2013; McCoy, 2010; Shena et al., 2013) suggesting that an orientation program that boosts a student’s confidence for the tasks and academic qualities needed to succeed online can improve student success. If the new online student can use the orientation course to understand how to navigate the LMS, find resources, and appreciate the need to schedule the time needed for the coursework, she will enter an online class prepared to start on subject matter confident in her ability to use the technical components. Shena et al. (2013) sought to identify the dimensions of self-efficacy in online learning, the related variables, and the correlation between self-efficacy and student satisfaction with e-learning. After reviewing the literature, they developed a new instrument looking at six components of self-efficacy: for completing an online course, for interacting with classmates for learning activities, for interacting with an instructor, for self-regulation, for utilizing an LMS, and socializing with classmates. Self-efficacy for self-regulation was not determined to be a factor, though the authors speculate that may have been a flaw in the wording of the items. Based on their findings, the authors recommend providing an orientation specific to boosting self-efficacy for using the LMS.

**Summary**

The Theory of Self-Efficacy is used to explain how self-confidence or self-belief can
impact learning. It is therefore a useful lens for examining the characteristics and skills of students who are successful in virtual education environments. While traditional learning skills such as reading comprehension and memorization are needed for all educational pursuits, virtual education requires additional skills such as sharing documents online and navigating an LMS. As these skills may not have been developed before entering post-secondary education, self-efficacy can help predict whether or not a student will adapt to an online learning environment. Self-efficacy can also be impacted, and is therefore something educational institutions may want to consider addressing to bolster online student success.

**Orientations**

**Justification for Orientations**

Success in post-secondary education in general, and in online education specifically, is impacted by experiences prior to a student’s first day of classes (Jackson & Kurlaender, 2013; Wang et al., 2013; Wozniak, Pizzaca, & Mahony, 2012). Thus, it is this window of time to determine a student’s readiness for online learning and provides an opportunity for any interventions to help a student matriculate successfully. The college admissions process misses some aspects of being a student that some researchers believe are critical factors in persistence, such as the ability to set learning goals and practice the self-discipline to manage a college workload. In trying to make a case for expanding the factors considered in college admissions, Sommerfeld (2011) cites research noting that the usual measures of college acceptance (i.e. GPA, standardized test scores) do not predict persistence, or provide any evidence of non-academic factors that contribute to learning success at the higher education level. Among the
non-cognitive factors she identified as those to be considered in admissions is a measure of a student’s self-efficacy.

It is important to identify students who are likely to persist in post-secondary learning. Some researchers, such as Conley and French (2013), contend that the needed skills can be taught, thereby improving an underprepared student’s ability to persist. When the Benjamin Franklin Institute of Technology in Massachusetts sought to improve their persistence rates, they identified the need to ensure all students had the study skills useful for college learning and introduced freshman seminars for the purpose (Bosco, 2012). The seminars proved so popular with the students, a second term class was created. This was one element of their overall plans to improve persistence, but a consequence of the seminars was an increase in the median grade point average for the students. The full effort increased retention at the institution 3 percentage points in one school year, and reduced the number of students on academic suspension (Bosco, 2012).

Interventions at the beginning of a program are also recommended for virtual programs. Lee and Choi (2011) conducted a literature review on existing evidence regarding attrition rates specifically in post-secondary online education. They noted that among the suggestions endorsed by the research was the promotion of online student orientation (OSO) programs. Several other researchers have built on this recommendation, embracing the idea that characteristics of good students can be taught and should be considered in course design. For example, based on Nash’s (2005) research, Coastline Community College in California implemented programs to offer orientations and online tutoring specific for the e-learners. In addition to helping the students become familiar with the virtual environment, the class covered topics such as goal setting, time management, study and memory skills, and test-taking
strategies. Unlike attributes such as learning styles, online learning can be taught as a skill (Ho et al., 2010; Kerr et al., 2006). The new online student may be goal oriented and employ inquiry based learning strategies, but she may struggle to create and maintain an online catalogue with a variety of materials that best demonstrate her work for a portfolio system used at her school. Fortunately, hands on tutorials and assistance from classmates or instructors can help her learn this skill. Mupinga, Nora, and Yaw (2006) identified learning styles in online students, and linked those characteristics to curriculum to aid student development. Additionally, students may adopt skills and attributes through the class experience, improving out of need. Like a course in study skills, training can bridge gaps in technological skills. Schools should consider assessments for technical competency in this area and provide training to make up for shortfalls.

While limited, the literature supports the success of orientation programs. Gilmore and Lyons (2012) documented the implementation and evaluation of an orientation for a master’s nursing program, and found that attrition fell from twenty percent to less than two percent. The lack of literature exposes another gap in the knowledge of best practices: what is best to include in an online orientation? Wozniak et al. (2012) made a specific call for research on the student perspective, and this study considers that aspect of orientation programs.

In describing the creation and implementation of a new online program, Waugh, Demaria, and Trovinger (2011) discuss the identified issues that contributed to a 56 percent attrition rate in their first cohort. The sample was small (N=26) but information collected at separation mirror other findings in the literature. Among the reasons cited for leaving the program were the pace of the work and the misalignment of the program goals to student expectations. Other reasons offered included a lack of time management and outside forces that interfered with time management needed for persistence. There was also some indication that
students felt the program was too rigorous (Waugh, Demaria, & Trovinger, 2011), which continues to support the idea that for some students online equates to an easy A grade (Moody, 2004). However, Waugh et al. (2011) dispute this claim, noting the curriculum is equal to the equivalent in-person classes.

Waugh et al. (2011) speculate that the current perception of online education, perpetuated by some institutions in advertising as the ultimate in flexibility with “anytime, anywhere access,” contributes to misconceptions about programs. In a rush to enroll more students, some schools fail to accurately convey the technical skills and social attributes that, for many students, are new and need to be mastered to be successful. Students need to be independent learners, disciplined workers, have technological skills for research and completing assignments, be good communicators, and adapt quickly to new technologies. These requirements may come as a surprise to those harboring the perception that online learning will be “easier” than traditional courses (Moody, 2004). An orientation program can help create properly set expectations and allow students to determine if their lifestyles are conducive to program structure.

Because online learning is perceived as more self-learning, individual learning preferences impact student preference for online learning and outcomes (Pillay et al, 2007). While individual classes differ in their distinct make-up, they still differ greatly from the traditional format of a teacher giving a lecture or presentation, building on reading materials the student was assigned, and allowing for class discussion of the content. These elements may be recreated in the virtual environment, but they are not the same. Students cannot ask questions of the instructor during or immediately after a presentation, and the discussion on a chat board is not immediate as in a regular classroom. Additionally, most of the communication is written, eliminating the helpful context clues that accompany a verbal exchange. This may pose
significant challenges for students who are highly social learners. Aiding a student in identifying their learning style allows them to develop understanding of both the best learning environment and knowledge acquisition skills for their personal success (Pillay et al, 2007).

Ho et al. (2010) offered the strongest indicators of student readiness for online classes:

- Quality in the system, both the technical quality and the use of the system (equipment, teacher use, classroom structure, etc.)
- E-learning readiness, attitude toward using the online learning environment
- E-learning competency, knowledge in utilizing the system.

The second two variables can be impacted by an orientation.

**Experience Matters**

Orientation courses are offered both online and in-person, and literature on both is included in this review. Some researchers specifically recommend online delivery, as it simulates the online learning experience and activities that will be required in many classes (navigating the LMS, using chat boards, accessing resources, etc.) (Carruth et al., 2010). Wang, Shannon and Ross, (2013) point out that when a class of students enters the post-secondary level they bring different backgrounds and experience with them, even if they were exposed to online education previously. The teaching, LMS, and activities involved are not universal (Cho, 2012; Wang, et al., 2013), and therefore an orientation program specific to the LMS in use at the institution would be very beneficial. Past involvement with online learning also impacts learning styles; Wang, et al. (2013) found that the more experienced students used more effective learning strategies useful in the virtual setting such as pulling information from a variety of sources and relating new material to current knowledge.
An orientation in an online format also allows the student to work within the technology requirements for the classes, allowing for trouble-shooting and increased comfort with the skills before it matters in official course work. Additionally, the barriers that may cause a student to seek online education in the first place may prohibit their ability to attend an in-person orientation, making the online orientation most appropriate. Online education is increasing in popularity and as part of this trend more students are willing to enroll in institutions farther away; only 54 percent of students attend an institution within 100 miles of their homes (National Center for Education Statistics, 2014).

There are unanticipated benefits of offering an online orientation course. For example, the experience serves as a self-selection checkpoint, helping students determine if the fit with virtual education is appropriate (Carruth et al., 2010; Cho, 2012; Gilmore & Lyons, 2012). Students benefit from the opportunity to determine if they have the skills and meet the technical requirements – hardware and software – to engage in online learning (Crawley & Fetzner, 2013), and have the chance to resolve any issues that might arise (Wozniak, Pizzaca, & Mahony, 2012). Shena, et al. (2013) found that prior online experience correlated to self-efficacy in virtual learning, thus the mere experience of an online orientation may boost a student’s confidence. Additionally, a student who is more fully prepared to use the LMS will require less time during the term seeking technical assistance from the instructor or a help desk. Thus, students can concentrate on classwork, saved from the frustration of struggling with technology. Jones (2013) documented the implementation of an online orientation at a community college and found that technological problems were encountered; there was a disconnection between the software and equipment quality among students. For example, students with a slow processor or limited Internet broadband may have trouble viewing multi-media materials or connecting to a live,
virtual session with the instructor and/or other students. Google Hangouts, a popular virtual connection interface, will not work on older versions of some Internet browsers. Jones noted that the added benefit of the online orientation, taken on the student’s own computer, is that they can work out any technical issues (either their own knowledge gaps, or hardware and software requirements) before entering their classes, when the work counts for a grade and may be on a deadline. The orientation, in the online format, enhances comfort through the mere experience of working with the LMS.

Some students may also discover they have a preference for face-to-face classes. Nash (2005) notes that students who prefer social learning may not do well in online environments, where a feeling of isolation is a frequently cited reason for dropping online classes. This may be less of an issue for a student taking one online class simultaneously with other brick-and-mortar classes. But for students pursuing full online programs out of the need for flexibility, they may not realize how much they miss the camaraderie and stimulating immediate discussion that takes place on a campus.

**Orientation Course Content**

Cho (2012) noted that researchers recommended orientation programs for online students, but identified a gap in the literature about the development of effective online programs. This challenge is not limited to orientation courses. Shelton (2010) notes that unlike other industries with recognized benchmarks and certifications for quality assurance (such as Total Quality Management standards used in business), online education has yet to employ a standard instrument of measurement translating to a public stamp of approval. The field is young and the body of research is building, but standardized definitions and categories do not yet exist (Amrein-Beardsley, Foulger, & Toth, 2007). In reality, there are multiple organizations
that have published quality measures, but the industry lacks an authoritative body of research to identify a single set of standards. Thus, the research is wide, but not yet deep, lacking many studies that support others’ conclusions.

Among the quality measures are standards set by regional accrediting commissions. The standards include metrics at the institutional administrative level and as the integration of online learning plans into an organizations overall mission, academic oversight, and long-term plans (Middle State Commission on Higher Education, 2011). Standards call for online content to be comparable to the academic rigor of traditional courses, and for online courses to be routinely assessed for effectiveness. Among the nine standards is that the institution provides effective student and academic services to support students enrolled in online learning offerings. Specifically, the institution is called on to offer an orientation program (though no specifics as to the content of the program are offered).

The online education industry group Sloan-C offers Pillars of Quality that include Learning Effectiveness, Scale, Access, Faculty Satisfaction, and Student Satisfaction. The pillars are interrelated and collectively support student outcomes. Among the measurements for Student Satisfaction is the satisfaction with programs preparing them to effectively learn in the online environment (Moore, 2010). The report highlights effective orientations for online courses to boost readiness.

Among current research, following is content recommended for orientations:

- Overview/principles/nature of virtual learning (Carruth et al., 2010; Cho, 2012);
- Overview of the program and school information (resources) (Carruth et al., 2010; Gilmore and Lyons, 2012);
- Course expectations (Carruth et al., 2010; Gilmore and Lyons, 2012);
• General technical skills required such as word processing, (and an opportunity to test/improve them) (Carruth et al., 2010);

• Use of LMS (Carruth et al., 2010; Cho, 2012; Gilmore and Lyons, 2012); and

• Learning strategies/processes/motivations (Cho, 2012).

Summary

Existing orientations are offered both online (Jones, 2013; Nash, 2005) and face-to-face (Gilmore & Lyons, 2012), and there are advantages and disadvantages to each. Some classes are self-paced, while others are instructor led. These differences are not discussed here, only the benefits of orientations in general. As the use of orientations is a new and developing area of higher education and topic of research, these issues may be compared and a preferred method may emerge in new studies.

Community Colleges

Readiness at Non-Selective Schools

This study intends to examine orientation programs at multiple community colleges, and therefore it is important to consider the unique characteristics of these institutions, which seemingly makes assessment even more important. There are two main characteristics that impact the need for student assessments and possible interventions.

One is the general open door policy at community colleges. A selective institution is able to employ the application as a gatekeeper for readiness through minimum required qualifications. Community colleges do not generally have any restrictions for admission such as minimum grade point average or standardized test scores (Millar & Tanner, 2011). Additionally, many community colleges cater to non-traditional students, which is also a significant portion of the
online student population (Brewer & Yucedag-Ozcan, 2013; Poellhuber & Anderson, 2011). These students have unique characteristics and needs, which should be considered when crafting education programs and orientations.

The second reason, perhaps most critically, is that community colleges have higher attrition rates than four-year institutions (National Center for Education Statistics, 2014). In 2011 the retention rate at 2-year institutions in the U.S. was 59 percent (Institute of Education Sciences, 2013). Add on an additional 10 to 20 percent attrition in online classes, and these programs may be in real danger of losing students, some of whom may give up on higher education pursuits altogether. Non-selective colleges have the lowest retention rates, 61 percent compared with the national average of 79 percent (Institute of Education Sciences, 2013). Student demographics at community colleges tend to be more diverse than that of the student population at four-year institutions; in particular community colleges tend to have higher numbers of students at risk for dropping out. Citing Provavasnik and Planty (2008), Millar and Tanner (2011) report that while 42 percent of post-secondary students in the U.S. enrolled at a community college in 2008, nearly half of those did not register for a second semester. Those who were academically unprepared accounted for the highest rates of attrition (Millar & Tanner, 2011). This has required many colleges to invest heavily in remedial education for these students. While examining issues in persistence at broad access four-year institutions, Jackson and Kurlaender (2013) found that even at those schools less than one-third of incoming students were deemed ready for post-secondary learning. This is critical given the demonstrated link between readiness and outcomes (Jackson & Kurlaender, 2013).

Summary
Several researchers and institutions are exploring the effectiveness of orientation programs to improve student readiness for e-learning and, in turn, retention rates in online classes. Several studies have reviewed the development of orientation programs to document the elements that are used. As an emerging area the literature is not extensive, but shows promise in improving the skills and attributes needed for success in online learning.

**Conclusions**

This study explains how the activities in an orientation program for online learning impacts the self-efficacy for the skills and attributes students need for successful academic outcomes. The literature review examined the research into readiness assessments to understand the skills and attributes most associated with online learning. Often, researchers reviewed these factors through the lens of student self-efficacy, which appears to have a high correlation to student satisfaction and success. As this study focused on students in community college settings, the unique characteristics of the community college population are also mentioned.

As noted, many of the current research studies have employed quantitative methods in measuring skills and attributes for online learning. The skills and attributes are divined from research, and administered in questionnaires. There is a gap in the qualitative research in this area, and a further lack of the student perspective on the utility of the identified skills and attributes. This study seeks to contribute to filling that gap by analyzing the content of current orientation programs in comparison with existing research on student success. This study also seeks to provide a voice to the students, allowing them to tell administrators about their needs, if and how their needs are being met, and what they might desire in an effective readiness program.
Chapter 3 - Methodology

This section outlines the selected approach for this research project, as well as the processes used in identifying study sites and participants, conducting the study, storing and protecting the data, and analyzing and validating the data. This research seeks to understand how orientation programs geared for online learning are impacting student readiness for virtual education courses. The research consisted of two case studies: 1) a collective case study intended to make comparisons among existing orientation programs (Leedy & Ormrod, 2001) and 2) an illustrative case study exploring the experiences of students in an online orientation course that contribute to an increase in their self-efficacy in approaching e-learning. After adding to the body of research on measures in student readiness for virtual education, Dray et al. (2011) called for next steps to include changes in courses, program development, and support services, and the impact on student outcomes. This study seeks to start to answer that call by laying a baseline for current practice and student perceptions of current programs.

Research Questions

The following research question guided this study:

The overarching research question that guides this study is: What content is currently being offered in orientation programs for online learning at community colleges?

Sub questions address:

How does participation in an orientation course for online learning impact self-efficacy for the cognitive and technical skills that contribute to success in virtual classes?

How do different components of an orientation course for online learning have an impact on self-efficacy?

These questions were approached through a qualitative inquiry. As noted by Creswell
(2012), the qualitative nature allows a researcher to interpret this information with new descriptions and themes to inform the body of work. Through a collective case study (instrumental case studies reviewing one issue at two institutions), this study seeks an in-depth understanding of the learning processes of students in an online orientation program. The conclusions are intended to offer increased meaning for online program administrators.

**Research Approach**

This researcher is building on what Dray et al. (2011) called for as next steps in this field of research, observing what has been put into practice in existing orientation programs, and then examining the student experience in one such program. First, the results can serve as a point of reference for researchers and practitioners alike on current industry practices. Second, the student perspective can influence orientation design and improvement to increase the impact on participants.

After conducting an extensive literature review on the connection between self-efficacy and virtual learning, Tsai, Chuang, Liang, and Tsai (2011) noted a gap in the literature that mirrors the findings in Chapter 2 of this paper. While there are many instruments seeking to measure self-efficacy through surveys and questionnaires, the instruments are prescribed. As noted, these constructs are based in research, however the format limits the opportunity for new items from the perspective of the student to be uncovered (Tsai et al., 2011). They therefore recommend methodology that includes observations or interviews, which are the approaches selected here. This study reviewed the content of online orientation programs to discover what elements are included, and which of those elements are intended to impact self-efficacy in participants. This study also interviewed participants in an online orientation program about their experiences, and how their self-efficacy was impacted (or not) through the course.
This study fits into an interpretivist paradigm (Pontorotto, 2005) as the researcher is attempting to connect the lived experiences of the participants to the meaning it has for their self-efficacy. Their reality is constructed individually and subjectively, and is intricately linked to their environment. The interpretivist paradigm provides a lens to view the students’ perception of change in their confidence for online learning in the context of their specific experiences. Their perception is reality. Understanding their perception can direct the course designers to include those areas that improved self-confidence in students, and improve those areas that might have little or no impact. This approach is recommended by researchers such as Tsai, Chuang, Liang, and Tsai (2011), who called for an examination of the relationship between self-efficacy and student learning behaviors in an e-learning environment. They further recommended the use of qualitative approaches, as the field is dominated by quantitative studies based on surveys or questionnaires.

One reason this perception is so important is that self-efficacy may be impacted by class activities that are tied to a specific task on the class syllabus. Wang and Wu (2008) note that self-efficacy is impacted by several components, including vicarious experiences. So while the orientation courses will have deliberate curriculum intended to improve skills and impart knowledge, there are experiential activities that a student may feel impacted their learning. An interpretivist approach can help uncover these factors that course designers may want to consider. For example, the new online student may take part in an orientation activity that explains tools in the LMS for group projects. She may work in a group gaining an understanding of the functionality of the tool. But in the process, she may realize that holding all discussion in a chat board is slower than finding a system to conduct a group instant message or video chat for instantaneous conversation. This discovery may change the way she approaches group projects.
in a regular online class and help reduce her apprehension about collaborative assignments in a virtual environment. This revelation can be instructive for course designers.

According to Yin (1981), selection of a case study methodology is determined by the research question(s), the amount of control the researcher has over the event to be studied, and a focus on current issues. In this respect, the research questions seek to understand programs and experiences over which the researcher has no involvement or control, and are a matter of current practice in the field of higher education.

Sample selection. The content analysis of the online learning orientation programs were drawn from a sample of programs in which the researcher has no involvement. The student data for the case study was derived from interviews, allowing the participants to describe in their own voice the impacts they felt during the orientation. This is one method recommended by Tsai et al. (2011), along with observations. Direct observation was considered for this study, but was discarded for a few reasons. One: out of concern for the impact of a study on the learning process. The observations would be intrusive if the student was asked to explain what they were learning during a given activity. Two: the realization of impact may not be immediate, and may be the result of cumulative behavior that would be lost in a point-in-time observation. The new online student may start an orientation class deliberating at length over the wording of written posts, use of casual versus more academic prose, writing and re-writing out of concern for how others will interpret her words without context clues. But over the course of the orientation, she may adopt a writing style she feels comfortable is effectively communicating. While this may not be a specified learning outcome in the course syllabus, it is important to capture the internal process she went through to arrive at higher self-efficacy for communicating in an online
environment. Her reflection on this process will hopefully illuminate these types of student perceptions.

In addition to a case study, a quantitative study was considered, utilizing one of the existing assessment tools to specifically measure the improvement (or lack thereof) of self-efficacy on the participants in the two specific orientation classes selected for this study. However, this researcher agrees with Tsai et al. (2011) that a qualitative approach is needed in the literature. Prescribed surveys ask about specific skills and characteristics, and leave no room for the student perspective on what they believe is important for them to know to be successful in an online course, and then how they build their self-efficacy for virtual learning.

**Building on Previous Research**

Much current research into readiness for online education utilizes student surveys (Tsai, Chuang, Liang, and Tsai, 2011). Many employ a Likert scale measure to assess self-efficacy for various attributes linked to success in online learning, asking students to rate themselves in a range from not confident, not-very confident, somewhat confident, to highly confident for any measure. When administered in a pre- and post-course setting, the results can illuminate those activities in the class that achieved their intended outcome to improving self-efficacy. These can easily be applied to the orientation courses that researchers have recommended that schools employ to improve self-efficacy among online learners (Brewer & Yucedag-Ozcan, 2013; Nash, 2005). While pre- and post-assessments can measure overall changes in a student’s self-efficacy, the tools lack information as to how and why participation in orientation programs impacted the students. The data cannot describe *why* the new online student still lacks confidence for interacting with peers. Utilizing a more open-ended response study such as interviews adds the student perspective on what impacts their self-efficacy for online learning to the body of
knowledge (Tsai et al., 2008). Data in this area informs the design of both online orientation programs as well as the design of online courses.

In order to provide a voice to the student’s perception of the experience of increasing self-efficacy, a case study was used to examine the class and life experiences to which the students attribute their increase in self-confidence for online learning. Theorists promote case study as a methodology useful for examining a phenomenon in a bounded context to develop theoretical constructs (Nazari, 2010). This study sought to understand how student self-efficacy is impacted (phenomenon) by experiences in an orientation course (bounded case). The case study, which is built on grounded theory, is appropriate for studying a problem at hand in an effort to find a solution that impacts practice (Glaser & Strauss, 1967). Identifying the experiences that impact student confidence in online learning can inform the practice of course development. The results identify activities that worked, activities that did not achieve their intended learning outcome, unintended consequences of things students learn through mere participation that were outside the scope of the syllabus, and areas in which students still feel they have an unmet need. For example, the new online student may note her apprehension for group work with students she does not meet with in-person. An orientation may then find a way to incorporate a group assignment to help students gain experience in this area and raise their self-confidence for virtual interaction. A case study allows for the phenomenon to be studied in a real-life context, as opposed to deliberately trying to isolate the phenomenon from its context, which is important for understanding how class experiences are impacting student self-efficacy. Additionally, the case study methodology allows for examination of processes, dynamics and relationships (Eisenhardt, 1989; Nazari, 2010; Yin, 1981).
A case study is used in situations where context is part of the study and there are many variables for the number of observations to be made (Yin, 1981). This aspect makes other study designs unusable. Case studies can be used to build explanations. This study consists of “an accurate rendition of the facts of the case, some consideration of alternative explanations of these facts, and a conclusion based on the single explanation that appears most congruent with the facts” Yin, 1981). Case studies should be regarded the same as whole experiments, they are more than a single data point from a single observation. Case studies are also appropriate in areas where little research exists (Eisenhardt, 1989). This is the situation here – little attention has been paid to the student perception of an online orientation.

**Role of the Researcher**

In the first part of the study, the researcher participated in the orientation programs selected for inclusion. The researcher reviewed materials presented as part of the orientations, including static informational pages, Power Point presentations, videos and/or audio recordings, and any assessments. She participated in any interactive assessments. The researcher took notes on the content presented, and the format in which the material was presented. She included her own perspective on the experience, including unique features, information, or noticeable gaps in the information.

For the second part of the study, the role of the researcher was to conduct interviews to identify the skills and characteristics students believe they need to be successful in an online class, and elicit the student perspectives on the aspects of, and activities in, the online orientation program that impacted their self-confidence for those skills and characteristics. The researcher created a dialogue to help the participant construct a meaningful reality of their experience building self-efficacy. The methodology employed began with open-ended questions that
allowed the researcher to understand the socially constructed reality of the participant for context on the answers they provide in the specific subject area (Pontorotto, 2005).

**Protection of Human Subjects/Consent**

Human subjects were used in the second part of this study. Recruits were an overview of the study purpose, which was included in consent form (Appendix A). The consent form described the purpose of the study, what was expected of their participation (an hour-long video interview), and made clear that their other course work would not be impacted by their participation. The form provided information on the security of their privacy and the anonymity of their participation. Further, recruits were informed that participation was strictly voluntary, and they would be allowed to drop from the study after the interview if they wished. Volunteers were notified that while there is no risk or direct benefit to them for participation, they may experience personal enlightenment into their own learning skills and gaps.

**Privacy**

The consent form was used during the second part of this study, and stipulated that participants were assigned a number in research notes and transcripts, and pseudonyms were used in the paper to protect their anonymity. Participants were informed of the technical process to be used for conducting the interview and analyzing the information.

Privacy presents a singular risk, as the potential for participant identification could interfere with candid conversation due to fear of attribution for negative comments about an orientation course. As all comments, positive and negative, were important to the construction of full reality for each student, it was incumbent on the researcher to demonstrate excessive caution and security measures taken.

**Institutional Review Board (IRB) Approval**
IRB approval for this study was requested from both Northeastern University and the college from which these students were recruited. (Copy of IRB Approval in Appendix D.) IRB approval was obtained prior to initiating contact with prospective participants.

**Participant Selection**

For the first part of this study, a convenience sample was utilized to identify the sample. A web-based search engine was engaged with variations of the terms “community college online learning orientation” to create a selection of schools that offered programs. A preliminary review of the full sample was conducted to determine which institutions allowed for non-student access to the information included in an orientation. Three schools identified required contacting the institution for access to the orientation; all schools granted access to the researcher. The researcher was able to access and review orientation programs for online learning at 26 institutions (N=26).

Stratified purposeful sampling is a subgroup drawn from a population with specific characteristics inherent to the study (Patton, 1990). In the second part of this study, the population will be all first-time college students participating in an online orientation class. This is appropriate to this case study, as participation in the course is central to the research question. Other characteristics of the students (demographics, field of study, etc.) are not central to the findings of the study, and therefore was not be considered in the sampling frame. The researcher considered analysis by characteristic (ex. age or gender), had the analysis revealed significant differences to be noted.

Due to time limitations and other challenges, study participants were recruited from a single institution. A sample was drawn from a community college in Illinois that offers online courses. All students enrolling in virtual courses must complete an orientation before being
given access to their course. The stratified purposeful sample was drawn from students who have completed an orientation for online learning course in the most recent term. The universe of participants was all students enrolled in the any section of the course. The intended total number of participants from the institution was 24, however, actual participant follow-through resulted in a significantly lower sample (N=6).

**Recruitment and Access**

The orientation programs included in the study were found through a web-based search. Participants for the interview were recruited by email from a list of recent enrollees in the online orientation course. (Text of invitation in Appendix B.) Participation was voluntary; a small incentive (gift card) was offered as compensation for their time. Instructors and administrators were asked to encourage participation in the study. Interviews occurred at the start of the term, after students would have been required to complete the orientation.

**Data Collection**

The researcher reviewed 26 orientation programs for online learning. All programs were accessed from the researcher’s personal computer via the Internet. The researcher kept notes on content offered, delivery methods used, and personal perceptions of the experience.

The interview portion of the study consisted of semi-structured discussion scheduled to last an hour. Most occurred by an Internet-based phone call or video chat on the researchers personal computer. The questions were intended to achieve what Yin (1981) calls a “rich dialogue with the evidence” to uncover the lived experiences of the student participants. The procedure was recorded on the researcher’s personal computer, which is password protected.
Recordings were copied to a secure sever in the researcher’s home, separate from the personal computer.

**Types of Information**

The course materials review includes the course content, description of delivery methods, ancillary information included, any assessments required or offered, and any analysis offered on the assessments. The interviews collected individual experiences in the orientation class, and a self-assessment of readiness for online learning skills. (The interview protocol is included in Appendix C).

**Storage**

Data was stored on the researcher’s password protected computer. The data was backed up to a separate server in the researcher’s home. The server has a different password protected entry. Handwritten and printed materials were kept in a locked file drawer at the researcher’s home. Signed consent forms were in yet another locked location, along with a list of participant identifiers and their pseudonyms. (Copy of Consent Form in Appendix A.) Files with recorded interviews will be de-identified. Only de-identified data were shared with other researchers or dissertation committee members, if necessary. Data were entered in chart, and hand coded by the researcher. Files will be destroyed after 5 years.

**Coding**

For the review of the online programs, the notes for each online orientation program were kept in a chart by the researcher, with certain information required (name of institution and location, orientation content, whether the orientation was voluntary or mandatory, the structure/delivery method, whether or not it included an assessment, and if the assessment was reviewed by the institution). Otherwise the researcher was free to include all information she felt
was pertinent to the case study. The researcher conducted three rounds of coding the content information to determine the main, unique modules to classify all content.

For the student interviews, the list of participants was randomized, then assigned numbers. When coding the information participants were identified by number, which was matched to a pseudonym to be used in any written pieces. The list of participants and matched numbers are only in the researcher file. The list of numbers matched to pseudonyms is in a separate file. All materials are housed in a home office. The researcher’s dissertation committee, assigned through Northeastern University, may request access to the de-identified data. Once the dissertation was complete, the original names of the participants were erased from the files.

Data Trustworthiness, Quality and Verification

The researcher personally reviewed all content in the orientation programs included in the study, and personally participated in any interactive exercises available. All programs are publically available and can be externally reviewed.

The researcher personally transcribed the interviews. Validity checking started with a review of study participant characteristics. Skewed participant characteristics (ie, all females) would require a different approach to recruitment.

While Creswell (2013) recommends engaging in at least two validation strategies, this study employed three. First, the researcher’s bias was clarified for the researcher to be mindful of in study design. An open-ended questionnaire for the participant interviews helped protect against researcher bias in expectations of findings. Researcher bias as an online student will be divulged in the paper; no researcher opinions on readiness skills were included in the interviews or the paper. Additionally, a large number of study sites were selected, so any bias the
researcher has toward the appropriateness of content (both what is included and what is excluded) is eclipsed by the findings. For example, the researcher may feel orientations should include an assessment of critical thinking skills, but as no orientation measured this skill, the topic was not included in this study.

Second, the researcher employed peer review or debriefing (Creswell, 2013) beyond the dissertation committee. The major themes and subcategories identified were shared with college administrators (online learning administrators at multiple institutions) who work in online education for general agreement on findings. They were asked for their level of agreement with the main and sub-categories identified, and feedback on the analysis. Their expertise provides insight into the relevance of this information for the practice of online education administration.

Finally, member checking (Creswell, 2013) was employed. After results were compiled, they were shared with study participants for agreement or further clarification.

**Conclusion**

Based on the findings of the literature review and the recommendations of published researchers, this study employs a case study methodology consisting of content analysis and student interviews, intending to provide a voice to online orientation students. The focus of the content analysis was to determine what is being used in the practice of orientations for online learning, and to what extent practice reflects current research in the field. The focus of the interviews was how student self-efficacy for online learning in general and certain attributes and skills specifically, were impacted through their participation in an orientation course. The interviews were analyzed for themes and compared with the course materials to identify both the direct and indirect activities that impacted students. Further, students were asked to identify any
aspects they felt were missing in the course. Results were member-checked with participants and industry experts.
Chapter 4: Findings

Welcome New Students!

The new online student has decided to go to a community college for her first two years of post-secondary education. Her school is expanding the number of classes offered through distance learning, and she is thinking of taking one or two online classes, thinking it may give her more hours in the day to work at her job. She has a computer and has used the Internet for shopping, connecting with friends, and finding information for papers in high school, but she has never taken a course online. She is already asking herself: Is online learning right for me? This question directly addresses an overarching issue identified by Jacobs (2011) - the reality that not every individual will fit with the same intellectual processes.

The community college she decides to attend may or may not offer an orientation program to help the new online student make this decision. At schools that do offer an orientation, it is unclear what specific information or current research was utilized in the development of the online learning orientation programs. Community college orientation programs for online learning are extremely diverse in both the overall content and the delivery format. While each of the orientations in this study contains content reflecting recommendations in the literature, no two are alike in all of the topics they choose to cover. Each of the 26 orientation programs also utilize a variety of formats, there is clearly no standard. There is also a lack of universal agreement in several areas that might impact what kind of orientation programs colleges should offer, such as the number of hours per week students should allot for classwork per credit hour, or the proper expectation for interaction between student and instructor, or the truths of most important myths about online learning.
For schools that want to assess and/or impact student readiness, step one is the decision to develop an orientation program, something that is supported by many professionals who have studied online learning (Brewer & Yucedag-Ozcan, 2013; Carruth, Broussard, Waldmeier, Gauthier, & Mixon, 2010; Gilmore and Lyons, 2012; Nash, 2005). Step two is selecting content for the program, and determining what, if any, research would inform the content. Step three is designing the delivery of the content. Step four is analyzing the program for effectiveness. This study can help inform step two by reviewing content in use, and the participant perspective of the utility of the selected material.

This research study

This chapter reviews the sample of online learning orientation programs offered at 26 community colleges around the country, selected through a convenience sample. A convenience sample was used to identify sites that were readily available and meet the study criteria (Lewis-Beck, Bryman & Liao, 2004), in this case public two-year colleges that offered orientations specifically for distance education classes available through their websites.

Study websites

Some orientation programs for online learning were uncovered in the literature; for example, staff at Richland CC in Illinois had published an article about their efforts to develop their own orientation. Other sites identified colleges that offered virtual education, but either did not offer orientations, or did not allow access to the orientation for non-students. One institution, Front Range CC, granted access to the researcher as a guest participant. One site was uncovered while reviewing the websites of the 2013 Aspen Institute Award Winners. Santa Fe CC was the only awardee with an online orientation, and it was not launched until 2014.
The remaining sites were identified through online searches. An initial search for “distance education programs community colleges” identified many existing programs, but not necessarily many orientations. Using a combination of the terms - “online learning orientations at community colleges” - improved results, yielding several options. An initial list of 30 was reviewed, revealing 26 orientation programs that appeared to be accessible for a non-student.

The researcher started working through the orientations until no new content was being discovered. The final list of 26 is in Figure 1. The researcher reviewed all orientations and participated in any interactive activities. Note that some schools, such as Austin CC, require additional course-specific orientations that have to be completed during the first week of every online course, but it is described as an introduction to the specific class, similar to one a student might get on the first day of an in-person course. Those orientations are not included in this study, only general online learning programs. The orientations were completed between November 15 and December 15, 2014.

**Figure 1. Community College Orientation Programs**

<table>
<thead>
<tr>
<th>School/Location</th>
<th>LMS</th>
<th>Orientation is Mandatory/Voluntary</th>
<th>Assessment? (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin Community College</td>
<td>Blackboard</td>
<td>Voluntary information in general, each class has a separate mandatory orientation class</td>
<td>Quizzes at the end of each section in the tutorial</td>
</tr>
<tr>
<td>Institution</td>
<td>Platform</td>
<td>Access Type</td>
<td>Field Newsletter</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------</td>
<td>-------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Bevill State Community College</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>Yes</td>
</tr>
<tr>
<td>Alabama (5 counties)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemeketa Community College</td>
<td>eLearn</td>
<td>Voluntary</td>
<td>Yes, technical skills Yes, self-assessment</td>
</tr>
<tr>
<td>Outside Portland, OR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Piedmont Community College</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>Yes, one at beginning and quizzes at the end of each module</td>
</tr>
<tr>
<td>Charlotte, NC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Columbus State</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>Yes</td>
</tr>
<tr>
<td>Institution</td>
<td>Learning Management System</td>
<td>Availability</td>
<td>Adoption Method</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>-----------------------------</td>
<td>--------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Columbus, OH Community College</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>No</td>
</tr>
<tr>
<td>System of New Hampshire Community College</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>No</td>
</tr>
<tr>
<td>Durham Technical Community College</td>
<td>SAKAI</td>
<td>Voluntary</td>
<td>No</td>
</tr>
<tr>
<td>North Carolina</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresno, CA Community College</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>Yes</td>
</tr>
<tr>
<td>Fresno City College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batavia, NY Community College</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>Yes, Through the SUNY system</td>
</tr>
<tr>
<td>Germanna</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>Yes, SmarterMeasures test</td>
</tr>
<tr>
<td>Community College</td>
<td>Fredericksburg, VA</td>
<td></td>
<td></td>
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<tr>
<td>----------------------------------------</td>
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</tr>
<tr>
<td>Grand Rapids Community College</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>Yes</td>
</tr>
<tr>
<td>Grand Rapids, MI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indian Hills Community College</td>
<td>MyHills</td>
<td>Voluntary</td>
<td>Yes, quizzes throughout the orientation</td>
</tr>
<tr>
<td>Ottumwa, IA</td>
<td>(Driven by Blackboard)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monroe Community College</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>No</td>
</tr>
<tr>
<td>Bronx, NY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nashville State Community College</td>
<td>Desire2Learn</td>
<td>Mandatory – though it is unclear how they check to ensure it is done</td>
<td>Yes - Limited to 3 questions about level of comfort for computer skills</td>
</tr>
<tr>
<td>Nashville, TN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution</td>
<td>LMS</td>
<td>Adoption Model</td>
<td>Result</td>
</tr>
<tr>
<td>------------------------------------</td>
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</tr>
<tr>
<td>Onondaga Community College</td>
<td>Angel LMS (this is the SUNY Learning Network)</td>
<td>Voluntary</td>
<td>No</td>
</tr>
<tr>
<td>Piedmont Virginia Community College</td>
<td>Blackboard</td>
<td>Voluntary</td>
<td>No</td>
</tr>
<tr>
<td>Pikes Peak Community College</td>
<td>Desire2Learn</td>
<td>Voluntary</td>
<td>Yes</td>
</tr>
<tr>
<td>Portland Community College</td>
<td>Desire2Learn</td>
<td>Voluntary</td>
<td>No</td>
</tr>
<tr>
<td>Prince George’s</td>
<td>Blackboard</td>
<td>Voluntary general</td>
<td>Yes</td>
</tr>
<tr>
<td>Community College</td>
<td>Virginia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>orientation. Some courses require a specific in-person orientation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rend Lake College</td>
<td>Blackboard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ina, IL</td>
<td>Voluntary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richland Community College</td>
<td>Canvas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decatur, Ill</td>
<td>Mandatory</td>
<td></td>
<td></td>
</tr>
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<td>Riverland Community College</td>
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Quizzes at the end of each module, and a final wrap-up quiz.

Yes – Computer competency test, must score 80% to enroll online
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<td>Yes, pre-assessment only for the technical system (to ensure you can access the program) and post-orientation assessment on the content. Students must pass the second assessment to access their classes.</td>
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**Central Research Questions and Sub-questions**

The overarching research question that guides this study is: What content is currently being offered in orientation programs for online learning at community colleges?
Sub questions address:

How does content of an orientation course for online learning impact self-efficacy for the cognitive and technical skills that contribute to success in virtual classes?

How do different components of an orientation course for online learning have an impact on self-efficacy?

Findings on Content Used in Orientation Programs at Community Colleges

This study identifies 20 major content areas that are included in orientation programs for online learning at community colleges in the U.S. These major categories are selected either because they are specifically recommended in the research, or they appear with enough frequency and/or emphasis in the orientations analyzed for this study to warrant mention. Not all of these categories are mutually exclusive; “No Easy A” can certainly be included in Online Program Expectations. The separation is a result of the coding process, reflecting the emphasis placed on certain topics.

The content areas are compared with those recommended by the current body of research. This study also identified two content areas included in the orientations that are not specified in the research, but occur with enough frequency and emphasis that they are worth noting in these findings.

As a result of the literature review it was determined that current research recommends the following content areas for online orientation programs:

- Overview/principles/nature of virtual learning (Carruth et al., 2010; Cho, 2012);
- Overview of the program and school information (resources) (Carruth et al., 2010; Gilmore and Lyons, 2012);
- Course expectations (Carruth et al., 2010; Gilmore and Lyons, 2012);
• General technical skills required such as word processing, (and an opportunity to test/improve them) (Carruth et al., 2010);

• Connection to the institution (Tinto, 1993)

• Use of LMS (Carruth et al., 2010; Cho, 2012; Gilmore and Lyons, 2012); and

• Learning strategies/processes/motivations (Cho, 2012).

The online orientations reviewed for this study mirrored the research in the following content areas:

• Distance Learning (DL) Overview/principles/nature
  o Access – the technical equipment required for participating in online learning.
  o Time expectations - both the amount of time required for each online class and the personal time available to a student for his/her participation.
  o Communication – both the technical skills to use online communication (discussion boards, email, instant messaging) and the writing style to communicate (and understand others’ communications) effectively in a virtual environment. Ability to tolerate communication in an asynchronous environment.
  o No easy A – understand that online learning is as rigorous as face-to-face learning.
  o Research in a virtual environment – the ability to use the Internet and electronic resources (for example, through a library) to gather information relevant to learning goals.
Learning style – the ability to learn in a virtual environment, through reading and writing, independently of face-to-face interaction.

- Program and school information (resources)
  - School information – information specific to the online classes at the institution (orientation, online course offerings, resources for online students).
  - Connectedness – policies and programs available to help a distance student feel a part of the school community.

- Use of the LMS
- General technical skills required such as word processing, (and an opportunity to test/improve them)
- Learning strategies/processes/motivations/attributes
  - Proactive
  - Self-motivation and self-discipline
  - Independent learning
  - Self-efficacy
  - Time management
  - Flexible and adaptable

- Online program expectations
- Assessments

Additionally, programs included:
- Controlling the learning environment
- Netiquette
Note: The order of these items is arbitrary and does not reflect any hierarchical structure or flow to the presentation of content in any orientation.

As seen in Figure 2, no one orientation contains all 20 content areas. The closest is Chemeketa CC, which includes 14. The CC System of New Hampshire, Prince George’s County CC and Rend Lake CC each feature 13 of the content areas, though not the same ones. Three institutions only utilize three content areas. Nashville State CC and Rockingham CC each limit their orientations to content on access, the LMS, and an assessment. Riverland CC does not include an assessment, but provided content on general school information.

The most used content area is on the use of the LMS, found on 18 orientations. (Schools that linked or referred students to an external site for an LMS tutorial were not included in this count.) Discussion of the issue of access and an assessment are the next two most used content areas, each featured on 17 orientation programs. The two content areas least discussed (only 3 each) are Tinto’s idea of connectedness and the need for flexibility and adaptability.
**Figure 2.** Included content by orientation program.

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General Distance Learning Principles

Gaining Access

One issue addressed in 17 of the 26 orientations can be a non-starter for some students. Before the new online student can enroll in an online class, she needs to know she can maintain access, which will require a minimum of a reliable computer and Internet service at her disposal. School orientations describe the technical requirements for hardware and software required for participation. While most post-secondary students need a computer for any classwork, it is obviously essential for a virtual class and may necessitate additional peripherals such as a web camera and audio equipment to join interactive activities intended to replace student interaction in a brick-and-mortar classroom.

It is also important for students to note that their internet connection must meet certain standards, as antiquated dial-up connections do not have bandwidth capacity to run some of the programs required for virtual courses. This information cannot be taken for granted since four in ten Americans still do not have high-speed broadband access in their homes (Xu & Jaggers, 2013; Zickuhr & Smith, 2012). This information is especially important for schools courting distance education students located in other countries, where telecommunications networks may not meet U.S. standards.

Students should also ensure that their access is reliable and consistent. Many assessments, such as Fresno City College, ask participants if they have a back-up plan in the event their Internet service is interrupted or their computer crashes the night that a major project is due. Onondaga CC also reminds students to back-up their work frequently because of the potential for computer problems.
Time Expectations

One expectation mentioned in nearly half of the orientations (12) is the necessary time commitment. Several programs point out that online courses take at least as much time as traditional classes; most suggest that it takes more time in a virtual setting. Students may mistakenly think that the lack of a scheduled three-hour class meeting time each week equates to three less hours needed for work. Schools offer specifics in an attempt to counteract this misconception. Fourteen of the orientations provide a recommended range of time the new online student should expect to commit to a typical class on a weekly basis. These recommendations are not universal, though the most recommended amount was between six and nine hours per week for a three-credit course. The greatest range was between four and 15 hours per week, and this range also included both the lowest and highest amount of time recommended. Other recommendations include five to nine hours per week, eight to 10, and nine to 12, all based on single, three-credit classes.

To perform all class-related activities for each three-credit course, the CC System of New Hampshire recommends five to nine hours of time commitment weekly, while Central Piedmont CC advises eight to 10. Indian Hills CC and Wake Technical CC offer nine and 12, respectively. Rend Lake has the widest range, recommending between four and 15 hours per week. Chemeketa CC, Portland CC, Prince Georges CC, and Richland CC each recommend six to nine hours per week. Portland CC and Prince Georges CC also recommended logging into a class through the LMS at least three times per week to view class materials, keep current with the syllabus and any announcements, turn in assignments, review and respond to email, and participate in class discussion boards.
Grand Rapids CC compares the time requirement to a face-to-face course, noting that that
typical student would spend three hours in a lecture, and an additional six hours studying and
completing assignments outside of class every week. They translate this into three to four hours
of study time per credit hour, or nine to 12 hours for a common three-credit class. They also
recommend that students log in daily. Gennessee CC also recommends three logins per week,
while Onondaga CC felt three to four times was adequate so long as each session is one to two
hours online each time. Some programs recommend students log in every day. The CC System
of New Hampshire offers “Students who login to their course every day often find a rewarding,
interactive, and rich learning environment.”

Several caveats account for the ranges in time in any one recommendation, starting with
the realization that not every student reads or writes at the same speed. Certainly there will also
be variations in the amount of work required each week. Part of the increased overall workload
in an e-learning course is due to the amount of reading required, and also the number of papers
or other extensive writing that may be required. This will vary among classes, but in general
online courses substitute papers for quizzes and tests that are more difficult to administer in
virtual classes.

**Communication**

Eleven orientations worked to prepare participants for class communication. Discussion
boards included on the LMS pages for each course are intended to replicate the in-person
discussion in a classroom, and are expected to be a significant part of the learning process.
Participation is both encouraged in the orientations and required for class. The orientation at
Germanna CC warns students that many classes are “graded for class participation by your use of
the Discussion Board.” Discussions on the course chat board will also drive the amount of time
online or number of log-ins a student will have in a given week. The new online student may find one week a particularly interesting conversation on the chat boards that causes her to give much thought to long responses and log back in several times waiting for others to respond, and then in turn responding to new posts. This kind of dialogue is a large part of online learning and students are encouraged to interact as much as possible to stimulate the exchange of ideas and social learning.

**Communication time delay.** The research on online learning success notes that student expectations should be appropriately established, and online communications is a prime example of a situation that students new to virtual education may not fully understand or anticipate. They need to understand the nature of the asynchronous learning environment and its impact on communication. Just as the new online student will find various times in the week to be online or monitor emails, she must accept the same of her classmates, the instructor, and any other staff she reaches out to for help, such as a librarian or academic counselor. Online education touts flexibility among the advantages, and one must remember that it extends that benefit to all participants. Some instructors may make a commitment to have responses to questions or emails in a certain time period, but this does not appear to be standard among any institutions (at least it is not made obvious in their orientation programs). Grand Rapids CC is direct on this point: “It is also important to remember that you do not get instantaneous feedback in online courses like you do in a face-to-face course. Your faculty member should communicate with you their turnaround time for emails and grading assignments.” Onondaga CC is also explicit: “instructors are not online 24/7. Expect to hear responses from instructors in 2-4 days.”

It is also important to remember that the flexibility of online education occurs mainly in days and weeks, ie, you can do your work at any time of any day within a given week. The vast
majority of online programs have regular deadlines and weekly requirements (such as participation requirements on a class discussion board); virtual learning does not equate to independent study. The advice to students is that time should be set aside on a regular basis; work cannot all be completed in one sitting before the end of the term.

The caveat about the time commitment intersects with the recommendation (some might say requirement) for the new online student to practice solid time management and work ahead. In addition to the recommended weekly time allotments, some orientations, such as Piedmont Virginia CC and Pikes Peak CC, remind participants that the workload in online courses is as much if not more than in traditional classes. If the new online student has a question that stops her work from progressing, or a technical problem that is hampering her ability to, for example, upload a document, it would be far better if she had worked ahead and had time to resolve the issue before her deadline. Using the voice of experience, a current Piedmont Virginia CC student offers this advice: “Like any class, discipline yourself to do a little bit every day or every other day to keep up because there are not reminders like in a traditional class.”

**Delayed gratification.** The need to understand the asynchronous nature of virtual classes also impacts the self-selection process for online learning. Central Piedmont CC informs students “online does not mean instantaneous.” Most students spend the first 13 years of education in a traditional setting where feedback is immediate and social learning occurs daily. If the new online student lacks the patience or temperament to be able to wait for feedback from peers and the instructor, online learning may not be for her. She must also be resourceful on occasions when a challenge impedes her progress. If she has a two-hour window scheduled for schoolwork, but encounters a problem 10 minutes into the session, the rest of the time could be wasted if she cannot get an immediate answer or does not have other school activities to tackle.
Asynchronous communication creates another challenge that the new online student should be made aware of before entering classes. The bulk of interaction with the instructor and classmates will be through written communication. In a traditional classroom verbal communication is accompanied by context clues that are absent from the written word (even emoticons, if they were appropriate, cannot overcome this issue). Further, context clues work two ways. Not only can the listener gather additional information and clarification from voice inflection, facial expressions, and body gestures, the speaker can read clues from the listeners to determine if the message is understood and interpreted in the intended way.

The incoming freshmen should be reminded of these caveats regularly to avoid misunderstandings with classmates and the instructor if possible. This should also drive her attempt to be as clear as possible in all communication with peers (this is discussed later in the section on Netiquette). An important feature of online classes, as mentioned in a few of the orientation programs, is that respondents have time to write, contemplate, and edit their responses, a luxury not afforded to the in-person student who gets into a classroom debate. One orientation highly recommends taking advantage of this benefit when in an online course.

No Easy A

Another popular myth uncovered in research that is directly addressed in seven orientation programs is the misconception that online courses are easier than traditional classes (Moody, 2004). The CC System of New Hampshire tries to set the record straight, telling students “online courses are not ‘easier’ than those held on campus. Many students note that while online learning may require more time and commitment than a course held on campus, their learning experiences are positive and worth the investment.” Rockingham CC offers similar warning: “online courses are not for everyone. There is often a misconception that online
classes are easier than a traditional class, but this is far from the truth. In fact, students often find they spend more time actively working in an online class.”

First and foremost, the new online student should expect classes to be just as rigorous and demanding — as well as rewarding — as traditional courses. But as mentioned, due to the increased need for reading and self-learning, virtual classes present additional work. As with any post-secondary student, online programs expect that their students can read at the college level. However, it may be especially important that students have above average skills for reading comprehension since, unlike a face-to-face course, e-learning courses require students to read all of the materials and information that a teacher would communicate verbally.

**Research in the Virtual Environment**

Only five of the orientations warn the new online student to expect to do significant research in online courses, and recommend that she is comfortable with that responsibility. Genesee CC informs students that online learning is “using computer technology to supplement textbook information . . . (and) link to the world of applied information via the Internet.” Three colleges, Chemeketa CC, Indian Hills CC, Portland CC, explicitly make students aware that this is an important skill, noting “a student should have solid research skills, including effectively using the Internet.” They also point out that e-learning requires more energy than classroom learning.

It is very important that students are comfortable in this type of research because gathering information online differs from book research in that it may not be linear. This study started with searches into the utility of orientations for student success. Online articles about student success often reference the Theory of Self-Efficacy, and an interesting link may lead to an article about the importance of self-efficacy for successful individuals, which in turn may lead
to a tool for measuring self-efficacy, and then to Seven Habits of Highly Effective People. All very interesting information, but high-level critical thinking is needed to link these concepts and comfort with the Internet is helpful for finding the way back to the original article.

In addition to basic navigation of the extensive information available on the web, instructors expect that students can vet the websites to distinguish quality information from bad. Indian Hills CC reminds online students “Wikipedia articles and websites accessed on the general Internet via Google search are not acceptable as sources for college research papers.”

Learn with Style

As noted in the literature review, Wan et al. (2008) note that in order for programs to be effective, the courses must be in synch with an e-learner’s psychological processes. Sutherland-Smith (2002) noted that online learning requires that a student employ different comprehension skills compared to traditional learning. In various ways, 15 orientation programs try to help a participant understand the caveats of learning preferences that do well in an online environment. Indian Hills CC tries to prepare students to take more control of their education, and to understand their individual learning preferences noting, “For some, the biggest transition they have to make in college has to do with understanding how to approach their learning.” Durham Tech CC’s website echoes this sentiment: “Students taking online classes have a greater responsibility for their own success than students in traditional classroom settings.” Because online learning is perceived as more self-learning, individual learning styles impact student preference for online learning and outcomes (Pillay et al, 2007).

Several orientations try to help the new online student understand her personal learning style; Indian Hills tells students the most important part of learning is knowing yourself. It offers an assessment, “Is Online Learning Right for Me?,” which provides feedback to help answer the
question. One of the questions posed asks the participant to choose their preferred approach to classwork - 1) high interaction, listening and talking through concepts, having instructors reminders about due dates, or 2) working through materials independently, work ahead and need little interaction, preference for instructor to be a guide and not always checking up on students, just responding when help is requested. Selecting the latter approach is greeted with this analysis: “Great! Successful online students are self-motivated and take ownership of their learning. Although there are opportunities to interact with instructors and fellow students online and they are always welcome to ask for help, online students must be able to confidently and competently work through materials on their own and keep up with course schedules. If you need hands-on attention from your instructors, then face-to-face may be a better fit.” Selecting the former gives the same content, with the recommendation that you may be better suited for face-to-face classes.

Some orientations are less direct and specific, merely stating that online participants should have high self-efficacy for independent learning. Some are adamant about this point, and expect that students who prefer highly interactive, social learning will not select online courses. For all the warnings in most orientations, Onondaga CC also notes “some learners find the online venue meets their learning style better than face-to-face courses.”

The next question in the Indian Hills CC assessment asks about an approach to reading instructions, with recommends for or against online learning depending on the selection of a preference for detailed instructions and the ability to follow instructions versus a proclivity to not read closely and just wing it when starting an assignment. There are also questions about self-efficacy for reading for comprehension (do you understand it or need verbal explanation) and expressing concepts in writing. The expectation is that the new online student will understand
her learning preferences and, given knowledge about the online learning environment, will make an informed decision about pursuing virtual courses.

Chemeketa CC Online is adamant about its message about learning style. On one page they reiterate three times: “learning is best for those who learn by reading and writing; if you learn better by hearing lectures or making presentations, an on-campus class might be a better fit.”

**School Information**

“Online learning is a convenient option for the pursuit of your educational goals. However, in order to successfully complete an online course, you must be prepared for online learning and be willing to take personal responsibility for mastering online course content,” according to Wake Technical CC. Fourteen schools include a general introduction to their virtual education programs as part of the orientation. The new online student will learn what classes or programs are offered through distance delivery (or how to identify them in the course catalogue). Schools that offer the ability to take full programs online include extensive information about applying for school, registering for classes each term, applying for financial aid, connecting to services for students with disabilities, reaching academic advisors, and getting a student ID card.

**Online Resources.** Most schools also include information on resources, both academic and technology. All schools provide information technology (IT) support, and provide contact information for a help desk and/or static pages of information to aid in trouble shooting problems. Schools also offer information on where to find the software required for classes and possibly free online tutorials for commercial software products (for example, Microsoft
There may also be links to the school bookstore and other vendors for required class materials. Some resources are not internal to the institution, such as a help page specific to the LMS hosted on the platform company’s website. There may also be tip pages for students to refer back to for self-help on using the LMS, generally needed software programs (ex. Microsoft Word), or practical study skills.

Academic services are more varied and limited among institutions, but may include academic counselors to help with course selection, tutoring, learning centers, or links to static information in areas such as study skills or writing assistance. Some institutions host general chat boards for online students to connect with and get answers from other current students.

While not exclusively for distance learners, any school that offers virtual education provides student access to certain services at a distance, especially a library collection. As mentioned, virtual students generally do more reading and independent research than traditional students, making library access a vital part of the program. An orientation program can mirror a physical library tour, showing students how the library is arranged, how to most efficiently locate needed materials, how to expand searches for additional materials, how to work with a research librarian, and how to request files that may not be readily available in the online collection. Additionally, in the digital age many institutions belong to inter-library loan programs, vastly expanding access to additional resources. For example, students enrolling at Germanna CC are shown how to access the Virtual Library of Virginia, which is available to all students in the Virginia Community College System, which provides interlibrary loans as well as round-the-clock access to electronic resources at 39 Virginia state institutions of higher education.

**Get oriented to virtual education.** Grand Rapids CC offers Steps for Online Success; “Step 1: Be sure to review the readiness tips (on this website), login and learn how to use
Blackboard, and access your campus student email.” If the school has an orientation, there is an expectation that the student will have reviewed the material, or participated in the class (if it is in-person or synchronous).

**Connection to Campus**

Distance learning programs may offer individual classes or full programs online. In the case of full programs, there is no way to know how much, if at all, the new online student may ever visit a physical campus. This presents an additional challenge for colleges concerned with student success. In 1993, Tinto promoted the concept that a feeling of connectedness to the institution is an important component of student success. His work applies to college success in general, but should not be ignored when dealing with students who are separated from campus by time, distance, and a lack of regular personal interaction.

While most orientations include a “tour” of the online program (school website and LMS), one school also includes a virtual tour of the physical campus (for example, Prince George’s CC), whether or not a student needs to ever set foot on campus to enroll in a purely distance education program. Three colleges in this study also provide links to student life pages. For example, Austin CC specifically mentions among the orientation learning goals how to “Utilize Distance Learning student help to connect to the ACC community and services.” The page explains where to find information about organizations, volunteer opportunities, student life events, and performances at the school that new online student might engage to enhance her college experience. Specifically including this information in an orientation not only lets students know where they can find out about campus events, but it also conveys that they are explicitly invited to participate if it is convenient.
Some online programs do include on-campus requirements, such as an in-person orientation, the need for a proctored test, or lab work needed for hands-on skills (for example, in science or nursing programs). The new online student may also visit campus for registration or bookstore purchases. One orientation offers advice from one of the instructors (delivered with the voice of experience, discussed later in orientation delivery), who specifically recommends making connections to reduce the feelings of isolation sometimes experienced in virtual classes. This attempts to combat Nash’s (2005) finding that “feeling of isolation” is a frequently cited reason for dropping an online class. Indian Hills CC addresses this in their orientation, warning students about psychological distance, which they define as “the sense of disconnect that students can feel from their instructors and fellow students because of not being physically present with them.” They make students aware of this possibility, and recommend they seek brick-and-mortar classes if they prefer to learn through personal interaction. Prince George’s CC also advises students to seek online classes only if they enjoy the challenge of learning on their own.

There are ways to overcome the solitude of virtual education. One piece of advice is that if the new online student is visiting the physical campus for any reason, she should try to find the time to have a face-to-face meeting with her instructor, even if it is just for an introduction. The other tip is that she should connect with other students in the class. This is supported in the research as an important component for motivation, cognitive processes and learning (Kim et al., 2014). Interaction on a more personal level can stimulate the social learning that regularly takes place in face-to-face classes.
Use of the LMS

For virtual learners, the institution’s website and the education delivery platform are the main connection between the student and the school and courses. All information the new online student needs is housed on those web pages, so it will be extremely important that she knows how to navigate both sites. Seventeen schools in this study include specific information about the Learning Management System (LMS) in their orientation. Four orientations, such as Nashville State CC, focus exclusively on the LMS. Schools that do not include the LMS as part of their formal orientation include a mention of where to find an orientation or tutorials on the platform company website (for example, the Blackboard LMS). Some schools offered optional face-to-face sessions specific to the LMS as well. Understanding how to use all of the features of the LMS, and getting answers to any questions ahead of time, will be extremely important as the new online student faces a deadline or a timed test during the term.

Orientations present information on accessing the system (logging in and locating the appropriate classes); the location of informational pages on the site, especially where to find announcements from the institution; how to use the navigation buttons on each page; how to post to chat boards and communicate with peers; how to share documents and turn in assignments; and use of the email. Without regular in-person contact with the instructor, the new online student also needs to know how to utilize the sections of the LMS that allow her to monitor her progress, both grades in an individual class and for required classes in a fully online program.

Experience with learning technologies impacts student performance (Harrington & Loffredo, 2009), but technical skills are not limited to proficiency in using a computer or the Internet. They must also include competence and comfort in the platforms specific to the course and the program design (Chiou, Ayub & Luan, 2010; Pillay et al, 2007). To address this issue,
some orientations offer an opportunity to use a mock class in the LMS. Central Piedmont CC offers an optional in-person training session for hands-on experience using the LMS. Students will learn how to take a quiz, submit assignments, and post in discussion boards, and other skills. They note that by “completing a training session prior to taking an online course, you will be better prepared and ready to concentrate on the course content.” Pikes Peak CC also offers an optional mini-course as part of their online orientation, which provides the same content, but without the instructor interaction. Wake Tech CC offers a preview of the course LMS in their orientation, allowing students to see a mock class.

The LMS is unique. While it seems obvious that online learning requires technical computer skills, the new online student needs to know more specifics about those skills and tools before she selects an online course. There are a variety of course delivery platforms for institutions to employ, so even if the new online student has taken an online class previously, she may encounter an unfamiliar system at the college. Components of the LMS orientation are discussed later in this paper.

In addition to the LMS, institutions expect students to be able to use the school’s designated email system, as it is the main source of communication for both class and general information. As with the LMS, there are various services with major and nuanced differences, and students are expected to know the required system. There may be differences in how the email is displayed (emails may listed individually by date and time, or chains may be displayed together under a single initial line that is expanded to show all messages in the thread), or mailbox capacity, or the amount of time discarded emails are archived. Students will also be expected to know how to find school deadlines for registration and financial aid applications, as
well as how to access those systems. Waiting until a term has started to address any issues will translate into a late start in any course and a lot of catch up work for the student.

**Technical Skills**

In the orientation, the new online student will be told what technical skills she will need for virtual education. This includes LMS-specific skills: navigating the platform, accessing needed information for classes, posting in the discussion boards, communicating via the email system (including adding or accessing attached documents), downloading needed software programs and tools, sharing documents with classmates, turning in assignments, and taking quizzes or tests. She will also be told which productivity software she should be proficient using, including word processing, spreadsheets, and presentation programs. The Internet will also play a major role in online learning, providing the portal to the LMS, support services, and information resources through electronic libraries and other web-based resources. She should be skilled at locating needed information, preferably in an efficient manner.

Sixteen schools mention technical skills in their orientations, and a few orientations advise the new online student that not only should she have high self-efficacy for utilizing technology, she should also be confident that she can learn using technology. They also note that some of the technology, especially tools that may be subject specific, may be new to her, and encourage her to have a willingness to adopt new technology.

**Learning Strategies**

Many of the online learning skills offered in the orientations mirror general skills needed by any successful college student. Orientations ask the participants to consider their study
habits, their organizational skills, their effectiveness at managing time, elevated critical thinking
skill and research skills, and a preference for active learning. Active learning has many
definitions and has different meanings to different people, but in this context the definition that
applies is a learning method that engages the learner in the learning process (Bonwell & Eison,
1991), as opposed to listening to a lecture, for example.

Some learning skills are especially needed in online learning. The new online student
will have to be deliberate in her actions to foster interaction with peers and the instructor. She
will need to employ good online communication skills to both understand her peers and be sure
she is understood by them (discussed in the section on Netiquette). Quality writing skills are in
demand for more than just class papers in an online course. Writing may be the only interaction
with classmates, and is where intelligence and personality come through, where trust and
respectful relationships are built. This is particularly important when it comes to working on
group projects, generating thought provoking and stimulating dialogue on the discussion boards,
and exchanging ideas as a basis for social learning. In describing a successful online student, the
CC System of New Hampshire calls on students to engage with other learners: “Students who
engage in an online discussion with classmates and their faculty tend to learn more than those
who do not. Students are encouraged to interact with classmates as much as possible.”

As noted, reading skill is crucial to succeeding in a virtual class. Given the increased
amount a student should expect, it is very helpful to like reading and be able to do it for long
stretches; a student who cannot read at a college level more than 30 minutes at a time is going to
have a choppy daily schedule filled with many mini work sessions to accomplish the
recommended nine hours of weekly class work. In addition to assigned readings, the new online
student will also need to read and comprehend the instructions for weekly assignments, lecture
materials, chat board discussions, announcements, and any additional materials she gathers for completing coursework.

While an engaging discussion board can help build relationships, and some schools do make other efforts to connect students to the institution, all programs still remind orientation participants that online learning is largely an independent activity. Those choosing virtual education should be comfortable working in isolation and being an independent learner. This applies not only to studying, but also to solving problems encountered during the class process.

**Characteristics of a successful online student.** Student achievement in online learning is impacted by student characteristics (Anitsal et al., 2010). All orientation programs that go beyond the LMS have some content identifying qualities of a successful online student. The list of attributes is not universal, though several characteristics make it on to most all of the lists. They are presented in different manners, as questions posed in assessments, static tip lists, or recommendations from current students and instructors (considered the voices of experience).

This is a key area in which Bandura’s Theory of Self-Efficacy comes into play, as the new online student is presented with these attributes but must decide for herself whether or not they apply to her, to what degree they apply, or, if she can improve any of the areas in which she feels deficient. In presenting a list of characteristics for the new online student to consider, the orientations use language such as “comfort with, belief in, and confidence for” possessing the traits.

The traits included in most of the orientation programs align with the research findings on successful distance education students. The three most-oft cited attributes are that successful students are proactive, self-disciplined, and self-motivated.

**Take Control**
Fifteen orientations advise the participants to take control of their learning. Beville State CC points out “students must assume greater responsibility for learning in a Web-based course, which may actually make a course more challenging for students.” Explicitly or implicitly, most every orientation calls on online learners to be proactive about their learning, advising the new online student to take personal responsibility for her own learning. They recommend that she review the syllabus for each class regularly, be organized from the first day of classes, attend class and campus events, track her progress both in classes and through her full college program. It is important to review course requirements closely as some colleges, like Pikes Peak CC, note that deadlines and textbooks may differ from the same in-person class. They further instruct her to participate regularly in class activities (via the discussion boards), to schedule and devote time to class and to the learning experience. They remind her to take responsibility for mastering the course content, as well as the skills needed for online learning.

These recommendations are certainly universal for any student, but may be heightened in the isolation of the virtual environment. A weekly class lecture provides structure absent in online classes. In a brick-and-mortar classroom, the teacher may refer to pending assignments or a classmate may ask a question about homework that reminds the rest of the class about upcoming work. This information can be overlooked on the LMS.

Some of the recommendations are more directed to virtual learners. The new online student is advised to take the orientation for the LMS. Some orientations, one using the “voice of experience” of a current instructor, recommend that the new online student reach out to her online instructors personally and introduce themselves. This can make it easier to comply with another recommendation, that the proactive student get comfortable addressing problems at a distance, and speak up to their instructors or use other resources as soon as questions or
challenges arise. This correlates to the need for online students to understand aspects of the virtual classroom, where a teacher cannot read the mood of a class or student to understand when an important concept or instruction is not being understood. Chemeketa CC notes “the instructor cannot see students and will not know if you are confused, bored, or frustrated unless you are willing to talk to her/him about it.” (Prince George’s CC uses similar language.) Distance education students are urged to be assertive in order to make their needs known.

**Motivated to be Disciplined**

Two terms used liberally in 12 orientations are self-discipline and self-motivation. But despite the prolific use, neither is clearly defined and in some cases seems to be used interchangeably. Certainly the concepts cross each other and work together; the new online student can draw on her motivation to channel her discipline, and can be disciplined enough to motivate herself when she is lacking enthusiasm for a particular task. Which term she applies is open to interpretation and irrelevant so long as the ultimate message is conveyed: Online classes are convenient and flexible but successful students have to be disciplined enough to make time to study and participate so they do not fall behind. Orientations warn students who have a tendency to procrastinate that they may want to seek structured face-to-face classes.

Channeling one’s inner motivation and discipline crosses into controlling one’s learning environment, which is discussed later in this chapter. When the orientations present these two attributes for the participant to consider, they are once again employing Bandura’s theory of self-efficacy. Is the new online student confident in her ability to be disciplined and motivated to succeed? These attributes impact most everything she needs to be: organized, persistent, flexible and adaptable (to address challenges, new technologies), patient (for the process, and for adaptability), and a good time manager.
Declare Independence

Ten orientation programs counsel the new online student to expect to be an independent learner and “accept critical thinking and decision making as part of the learning process” (Rend Lake College). Chemekta CC specifically points out that e-learning requires learning by reading and writing and if students prefer to learn through teacher presentations they should up for face-to-face classes. This sentiment is echoed in the Portland CC orientation: “students who learn best in a lecture format should stick with in-person classes. Online learners are active learners who take charge of their own learning, and are visual learners who learn through reading and writing.”

Most are also quick to clarify that independent learning should not be confused with independent study. Classes will have structure and deadlines, and may involve group projects and occasional times for synchronous communication. But even when group work is involved, there is a good deal of online learning that takes place at a physical distance. This aspect of online education is important for two reasons. One, as Nash (2005) found in his research, a feeling of isolation is a common reason for student attrition. To properly set expectations, students should be aware of this aspect of virtual education.

Two, students must be prepared to shift their learning style based on a traditional pedagogy to this new approach. Learners must be prepared to conduct most all learning activities by themselves, and to mine different resources to find answers to their questions. In its assessment on learning preferences, Fresno City College asks an orientation participant to ponder their ending to this statement: “when an instructor hands out instructions to an assignment, I prefer…” If the student answers, “…having the instructions explained to me,” they may be directed toward classroom learning. This is a matter of learning and of practicality, since waiting
on an answer from an instructor, IT help desk, or classmate can be delayed in the typically asynchronous communication environment of virtual education. Some orientations specifically note that students who perform better with regular in-person interaction with instructors and peers (social learners) may not do well in an online environment.

Independent thinking is also important, particularly when conducting research and identifying resources to supplement learning. The Onondaga CC orientation provided the voice of experience from one student who put a positive spin on this aspect of virtual learning, noting that the format allowed for more in-depth learning. Rather than reading one book and taking notes from lectures, online students are expected to supplement class materials through research, identification of other resources, and the shared experiences with classmates on the discussion boards.

Orientations promote the use of critical thinking and decision making as part of the learning process, differentiating from rote learning that can be inspired by the traditional lecture format of college classes. In a traditional classroom, the professor is the expert, providing the books and lectures with material to be considered as authoritative. Self-learning requires a student to have the intellectual capacity to seek out information, vet the source, ingest the information (seeking supporting material where needed for clarity), and then internalize the knowledge. This takes time, self-motivation and discipline, and resources (Mupinga et al. 2006).

**Self-Efficacy**

**We believe in you…** Grand Rapids CC offers encouragement to prospective students: “We know you can succeed and we are here to help you get ready for online learning.” At 10 of the schools in this study, new online students are encouraged to succeed in online education. This directly addresses Bandura’s (1986) assertion that students who believe they can
accomplish learning goals are more likely to do so. Some programs use static messages to embolden orientation participants, reminding the new online student that she is in control of her destiny. Some go farther, promoting success through their tips page, reinforcing the connection between disciplined study habits and goal attainment. One points out that participation in the orientation itself is putting her on the path to success.

...so believe in yourself! Grand Rapids CC extols students to “believe you can do it! Have confidence in yourself, your academic ability, and expect to be successful!” Without referencing Bandura or using such academic terms as the Theory of Self-Efficacy, several of the orientations told the new online student to apply the principal: believe. She is encouraged, first and foremost, to believe in herself and her academic abilities. They also remind her of the support services available to help her succeed. She should believe she possess the attributes of a successful student, discussed earlier in this chapter.

Further, they expect her to believe in online learning. Rend Lake College asks her to “feel that high quality learning can take place without going to a traditional classroom.” While this may be a brand new venture for some students, orientations ask them to have faith that the system is good and the process can work for them. They should trust that sufficient resources are available to provide a high-quality educational opportunity, and be certain that the institution and the instructors are going to provide a positive experience. The new online student should be confident that she could be an independent learner in a virtual environment and acquire the knowledge she seeks.

Time Management

Teachers and peers are not online 24/7. Part of being an independent learner is having the self-discipline for appropriate time management. In reviewing student attrition an online
program, Waugh et al. (2011) found a lack of this self-discipline to be a reason given for student’s dropping a program, along with outside forces that interfered with time management needed for persistence. The recommended amount of time a student should devote to each course varies a little by institution (see section on expectations), but all agree that the ability to manage that time is critical to being a successful online student. While any instructor may advise all college students to work ahead regardless of the class delivery method (distance learning versus face-to-face), distance learners have an additional reason to heed this advice. Distance learning is technology dependent and most anyone who has ever used technology knows that it can fail (and usually at the worst possible moment). A technical problem with a computer or internet connection is not a viable excuse for late work, and therefore allowing more than adequate time for assignments provides crucially needed time to utilize a back-up plan if one is required.

Another unique aspect of distance learning that is impacted by time is the lack of specified class times. Indian Hills CC advises students to avoid the “Out of Sight, Out of Mind” trap where online students ignore their classwork for days at a time. While the class does not meet three days a week from 7 p.m. to 8 p.m. for lectures and tests, that same amount of time, if not more, is needed for the virtual activities that replace the in-classroom experience: reviewing class materials and lecture presentation, participating in discussions and turning in assignments. Then students will have the usual outside class activities: completing exercises, conducting research, reading textbooks, and general studying. Students who need the rigor of the scheduled class times may find themselves with many late nights trying to catch up on nine hours in one sitting. It is recommended that the new online student create her own schedule and stick to it as if required to be in a face-to-face class.
Other aspects of time are important to consider as well (and are discussed in the section on expectations – amount of time needed, and that the time you have to devote is conducive to studying). For example, several orientations advise that online learning requires significantly more reading than face-to-face courses. Gennessee CC asks the new online student if she is comfortable reading for more than 30 minutes at a time? If she is not, the recommended nine hours a week for each course is going to be a significant challenge to reach if divided into 18 different sittings. Additionally, the recommended time guidelines are generalized. Beville State CC notes “the amount of time involved will depend to some extent on the speed of your Internet connection and your own reading, writing, and typing skills.”

In an orientation featuring a voice of experience, a former online student emphasizes the need to not procrastinate. Another orientation tries to be more encouraging, offering that students who login to their course every day often find a rewarding, interactive, and rich learning environment. The supporting claim borrows from past online students: “students note that while online learning may require more time and commitment than a course held on campus, their learning experiences are positive and worth the investment.”

**Flex and Adapt**

As advertised, online courses offer flexibility in educational pursuits; they also demand flexibility on the part of the learner according to three orientations in this study. The new online student will be asked to be flexible in her time when interacting with instructors, classmates, and institutional representatives in the asynchronous environment. The lag time in responses when she is facing challenges will require her to be flexible in her approach to problem solving, as she may need to be more self-reliant in finding creative solutions so as to not impede her progress in schoolwork.
The new online student must also be flexible in her approach to learning, accepting that virtual education invites the new online student to be open to new activities (for example, reading a lecture instead of listening to it). Genesse CC asks her to “be willing to use new modes of communication and learning,” adapting to not only to new learning strategies, but also to innovative technology. First, there may be unfamiliar technologies included in the LMS she must learn. But secondly there may also be regular advances in technology that she must adopt. Chemeketa CC reminds potential students “learning online is an adventure that will expose you to some entirely new—and not always comfortable—experiences. The ability to be flexible and remain open minded is critical to having a positive experience as you move into uncharted territory.”

**Online Program Expectations**

Fourteen of the 26 college orientation programs outline the expectations they hold for online learners.

**Self-select into online learning.** Nearly half the schools (12) posed the explicit question (with some minor difference in vernacular) to prospective students in their orientations: “Is online learning right for me?” They invite students to consider multiple aspects of online learning and whether or not the student believes they will be successful in a virtual course. Most offered the information as static statements, though a few presented the question through an interactive assessment, with analysis at the end of the assessment. Early research into online education identified a disconnect between student expectations and the reality of virtual education courses, and this is considered one of the main reasons for high attrition rates in online programs. Several programs seek to address this disparity head on, properly setting expectations as recommended
by Cho (2012) and Moody (2004). The presentations are different, with some choosing the answer Frequently Asked Questions (FAQs), compare and contrast online learning with traditional classes, offering advantages and disadvantages to each delivery system, listing myth’s versus reality, embedding the knowledge in the analysis on an assessment, or directly listing expectations.

At one point or another in the orientations most hint at what Rend Lake College contends, “online learning is a very different environment than that of the traditional classroom. With that in mind, online learning is not for everyone.” Some schools that offer assessments are explicit about their recommendation against e-learning for some participants, while other orientations leave it up to the individual to arrive at that conclusion for themselves.

Some orientations take self-selection recommendation one step further, advising students to consider which classes they should consider taking in a virtual environment. Onondaga CC urges students to identify subjects that are most challenging for them and take those courses on campus.

**Technical requirements.** Many expectations are technical in nature, such as ability to begin at the start date of classes. Some of these seem obvious, such as the expectation that a student will have regular access to a computer and a high-speed Internet connection. However, the number of orientations that felt the need to include this information betrays the fact that many students do need this explicitly spelled out for them. In dispelling the myths often associated with online learning, Monroe CC made students aware that computers were not supplied for distance students. (Though Pikes Peak CC and Richland CC both make students aware of campus computer labs that can be used for classes.) Columbus State CC specifically recommends a
computer that is less than three years old. Clearly there are misconceptions that need to be addressed.

As noted previously, it is expected that students will be able to access online classes, and have or secure all of the ancillary hardware or software needed. Several schools also remind students that individual classes may have unique requirements, and they should review any obligations before enrolling in a particular course. One school, Richland CC, also has the unique characteristic of including course access through tablet or phone in its orientation.

Institutions also included in orientations the expectation that students know their own computers, especially the technical specifications for participating in virtual education such as Internet Service Provider (ISP) requirements and supported Internet browsers. Participants will also be expected to effectively use productivity programs, and other software that enable viewing of online content. Rend Lake CC lists seven required programs for online course participation: Microsoft Word (or compatible program), Microsoft PowerPoint (or compatible program), Internet access software capable of support JavaScript, email software, RealPlayer, QuickTime, and ShockWave. In some cases, students will be expected to download or install new software on their computers. Group projects may use file-sharing websites, and require navigating compatibility issues among the member’s operating systems or software versions. Some classes may require the use of audio or visual equipment to be working on a student’s computer, and possibly recording equipment. Students should know how to store and organize files on their computers, and share digital files in various manners. One of the most important messages conveyed in this section of the orientations was to have a back-up plan in the case of potential computer or Internet problems.
Reading and writing and…. Both Portland CC and Chemeketa CC use the same verbiage in a few areas, including expressing the expectation that students will do a great deal of reading and writing. They contend that successful online students “are visual learners able to learn easily from reading and writing. If you learn best by hearing the instructor, you may want to consider an on-campus class.” They both recommend that students with weaknesses in these areas get remedial help or consider classroom learning. Onondaga CC is also explicit that “reading is the key to online learning.” Students are expected to read at the college level, and warned that online courses require significantly more reading than in-person classes.

Once students have read the instructions, lectures and reading materials, they must then demonstrate a grasp of that knowledge in class discussions and written assignments. The CC System of New Hampshire warns “in online courses, most of the communication is written; therefore, it is critical that students feel comfortable expressing their ideas in writing.”

Most orientations note the school policy against plagiarism (which any academic institution will have). But Indian Hills CC makes a specific point of the subject, noting that the increased amount of writing and internet research may make it extra tempting to copy and paste for writing assignments. They note that although the professor may not know your face, they get to know your writing style and will have a good idea when the words do not belong to the student. Additionally, there are modern tools at their disposal to help identify lifted words. Many schools employ anti-plagiarism software, which enables teachers to identify unoriginal content in submitted assignments.

Assessments

Ironically, much of the research into readiness for online learning was conducted in the development, analysis, or improvement of assessment tools (McVay, 2000; Kerr et al., 2006).
Seventeen institutions included in this study have an assessment, however, not one used any of the specific tools offered in the literature. They did, however, borrow components of the tools, if not the exact language.

The assessments in this study are widely diverse, ranging from three questions on technical skills to quizzes following each module in the orientation. Below is a sample of the diversity:

- **Austin CC** offers two independent assessments, one in learning preferences, and one in technical skills. Both are based on self-reported measures of efficacy. Both assessments are scored, with an analysis providing a recommendation: scoring in the top third means you are probably ready for distance learning. If you score in the middle third, they recommend that you “think very carefully about signing up for a Distance Learning class…. realize that you may need to adjust your learning strategies to maximize your potential for success.” And in the lower third, the system recommends the participant consider sticking with face-to-face classes. Participants receive a certificate of completion.

- **Austin CC** and Durham Tech CC both require students to take an orientation specific to each course they enroll in. The course specific orientation introduces the professor, the syllabus, and course-specific requirements such as additional software needed.

- **Chemeketa CC** has a technical skills quiz, but it is not interactive. The student merely answers each question yes or no, and then reads an explanation of why their answer might be important.

- **Pikes Peak** links participants to an 11-question assessment from the Colorado Community College Online system. A score is provided, along with a recommendation
for or against online participation, with caveats if needed (for example: you scored low on questions about time management and need to be informed about expectations).

- Central Piedmont CC opens the orientation with a self-assessment, and then recommends that the participant pay particular attention to the modules in the areas with a low score. Students then have additional assessments at the end of each module.

- Fresno City College has 2 assessments, one on learning preferences (limited feedback) and one on technical skills (specific reasoning for each correct answer).

- Indian Hills CC offers an optional assessment, acknowledging that “some students learn better in a face-to-face classroom. We want to help you figure that out before you spend the time and effort registering for an online course.” In the middle of one orientation presentation titled “Is Online Learning Right for Me?” participants enter an interactive quiz. They let students know that the assessment is not viewed, but say that “there are no right or wrong answers, but your selections and the feedback you receive will help you identify areas that may need your attention before signing up for an online course.” Each question provides feedback based on the answer selected – great, attention may be needed, or online may not be for you. “It doesn’t mean you wouldn’t do well in an online course, just that some adjustments may be necessary to avoid your being frustrated.” It further states that if you get a response that you may not want to consider online learning, the participant needs to decide for themselves if the issue is something they believe they can address, or their success in online learning may be hindered. It also notes that if you get numerous responses that online may not be right for you, you might want to consider it a sign that you should stick to in-person classes.
• Genesee CC and Monroe CC are part of State University of New York (SUNY) system, which has an assessment called SMART Measure. The scored assessment measures Life Factors, Individual Attributes, Learning Styles, and Technical Competence. The results indicate learning preferences, words per minute and accuracy in keyboarding, a comparison to SMART Measure average scores, and interpretation of scores. The section on Life Factors is a unique aspect of the SMART Measure. Other assessments include a question or two about personal commitment to educational goals and time availability as part of a larger evaluation, but SMART Measure further asked pointed questions about support from family and employers, finances, health (and its impact on the ability to attend school), and past academic performance.

• Germanna CC uses an assessment called SmarterMeasure (not to be confused with SMART Measure). Students are directed to complete this as Step 1. Step 2 is the orientation content. Upon completion, users receive a score report intended to help them understand strengths and opportunities for improvement. The analysis includes resources to help in areas of weakness. A unique feature of SmarterMeasure is a section to test on-screen reading and recall.

• Nashville State CC, whose orientation is limited to the use of the LMS and technical skills, has an assessment limited to 3 questions about comfort with computer skills.

• Pikes Peak CC has an Online Readiness Survey that is scored, and the participant receives a recommendation for or against participation in an online class.

• The CC System of New Hampshire invites participants to take an assessment, but it consists of questions with an explanation of why the answer is important, not an analysis. For example, it poses the question: “Do you feel like you can obtain quality education
without a face-to-face instructor?” and follows with the answer: “Some people prefer interacting face-to-face.”

- Wayne County CC District has a 3-question pre-orientation assessment intended to ensure you have the proper technical connection as the orientation only provides instruction on the LMS. Once the orientation has been completed, there is a 15-question assessment to ensure you acquired the appropriate knowledge from the orientation. The orientation must be completed and the assessment passed to access classes.

**Study Findings Beyond the Research Recommendations**

Much of what is included in the findings of this study mirrors what past research recommends for student success: properly set expectations, command of technical and learning skills, personal characteristics, and the ability to use the LMS. Two significant areas included in orientations emerged in this study that expanded on past research, however. They build on other areas in the orientation, but more than a summary they are meant to refine and reinforce key points to improve the educational experience.

The first is the recommendation to online students that they control their learning environment. This is included in 11 orientation programs. Even beyond the physical classroom an institution can immerse an in-person student in an environment conducive to learning. They will provide both private locations for quiet study and communal areas for lively group discourse and activities. The spaces can be comfortable and laced with messages promoting student success. On campus a student can seek out needed resources beyond books, such as a computer or science lab. And at many campuses, both academic and technical help is available at all hours of the day. While communal, some space may be designed to limit distractions while other areas
provide welcome diversions with social clubs and special events, some of which may not be purely academic. In these spaces students can find the support networks they need to thrive in their educational pursuits.

But for the online student, even the best institution is limited to providing a high quality LMS, learning materials, quality instructors, and support services, the latter two offering limited access. The remainder of the physical, intellectual, and emotional environment is at the discretion of the student. While on one hand this enables the new online student to customize the learning space, there are also elements that may be beyond her control, or factors she does not realize she should consider when establishing her home school. Ho et al. (2010) found that a quality e-learning system impacts learning outcomes when combined with a highly prepared student, so these items are important to address.

The second content area included in the orientations is referred to as Netiquette. Related to communication, this newly created term reflects the need to differentiate between traditional communication and interaction in the virtual environment. While not precise rules, Netiquette outlines the differences between what is expected in the online environment and both in-person classes and interaction on social media. The message moves beyond “be a good communicator” to helping a student improve interactions through the many electronic avenues which connect them with classmates, instructors and support services: chat boards, email, live chats, and online portals specific to the educational environment such as a class-only group on a social media platform.

As the research seems to be currently lacking in these areas, the content may be based on experience or common sense. However, these two areas appear with enough frequency and with
sufficient specific content to become their own sections in an orientation program, and therefore be examined as unique sections in this study. (And warrant further research!)

**Control of the learning environment**

While online education (and several ads for programs) tout “anytime, anywhere” education, not everyone should don pajamas and curl up in bed at 11 p.m. on a Sunday night, then expect to have an effective learning experience. Many may find that environment far more conducive to sleeping, and learning by osmosis has yet to be perfected. Orientation programs remind participants that they will be in control of their learning journey, and make some recommendations to help ensure success.

In sections on controlling the learning environment students are encouraged to pull some elements from traditional settings to implement in their surroundings. As in-person classes are set in a designated schedule, schools recommend to the new online student that she try to establish a routine at home for engaging in classwork. This not only helps with time management, but can also be valuable in communicating to others that these hours are not ‘free time.’ Grand Rapids CC suggests “the key is to have a dedicated time set aside for your course work and to minimize obstacles that hinder you from studying and participating.” Richland CC joins other schools in acknowledging that the flexibility afforded by online education means the specific time of day (or night) dedicated for work will vary by student, “but it should be a time that your mind is clear and ready to concentrate!

Just as an in-person student can be out of contact while in a lecture hall, the new online student should communicate to those in her life that this time is dedicated to schoolwork and should be free of distractions and unnecessary interruptions. Orientations also recommend having a dedicated physical space for study. Not only should this put needed school materials in
close proximity, it should be another sign to others that schoolwork is occurring and should not be disturbed.

For the new online student, it is important that other people in her life understand and support her dedication to her education, and that they respect her needs throughout the education journey. In a time management guide, Genessee CC reminds students “No one can control your time but you.” If Monday night is a dedicated study time, family and friends should know that get-togethers for Monday Night Football games are off the agenda until the degree is obtained.

The new online student also needs to be realistic when establishing designated school time. Many non-traditional students seek out the flexibility of online education because of extracurricular time commitments such as family and careers (Brewer & Yucedag-Ozcan, 2013; Poellhuber & Anderson, 2011). This may leave someone with limited evening hours to dedicate to class work. This may be acceptable for some, but if the new online student has daily obligations that are over at 8 p.m. and her body is telling her it is time to sleep at 9:30 p.m., she has to consider her available study time. Her time allotment needs to be both sufficient to the work load and at a time when she is alert and engaged in, let’s be realistic, sometimes boring material. Commitment to learning goals can help make a 26-page paper on Manet easier to get through.

As part of their orientations, Genessee CC and Grand Rapids CC both provide time management exercises. Each provides a worksheet (called “How to Spend Your 168 Hours a Week Wisely” at Genessee CC) designed to help prospective students determine their schedule and availability. After filling in major regular commitments (work, commuting, class, parenting commitments) and life activities (showering, meals, shopping, housework) students are faced with the time slots available for studying, and told to review them for both adequate time, and
appropriateness of time in the schedule. The exercise can help the new online student visualize her week, and what her life will become during the term. No other orientations had similar activities, most merely recommended the number of hours needed weekly for each course.

As touched upon in the sections on learning skills, the new online student should also attempt to understand her learning style, and whether or not it works well in an online environment. She also needs to recognize the differences between her learning preferences and each of the ones she can be successful with.

Some seeming obstacles to online learning can be overcome by adequate motivation. Motivation impacts multiple areas of online learning. First, there is the motivation to take an online class. A student may be motivated by the need for flexibility or to fill a college requirement for online course credits. Aside from learning preference, distance education may be the best, or only, option for some students. A student seeking further education for career advancement, who wants to attend while keeping up with a career, may need the time flexibility. The desire to get ahead in their work place can provide positive motivation for dedicating themselves to the online class. Self-motivation is also needed to succeed in education, even when it means saying no to weekly outings for Monday Night Football with friends. It means channeling the discipline to manage one’s time and engage in important class activities.

A critical step in controlling the learning environment is ensuring adequate access to both a computer and needed technology (software and hardware), and reliable high-speed Internet access. While there may be a computer lab on campus (or at a local library or community center) offering the necessary equipment, hours and access may not coincide with a student’s needs. Pikes Peak CC and Richland CC do notify students that on-campus labs can be utilized for online classes. Columbus State CC also reminds students to consider the cost of these items,
as equipment needs to be maintained, replaced, or upgraded on a regular basis, and additional software for specific classes may need to be purchased. Additionally, the broadband demands for downloading class materials or streaming presentations require a certain level of Internet service that can be more expensive than basic service. These costs may be offset to a degree by the savings gained by the lack of a commute to campus, but should still be weighed in the decision to enroll in an online class.

As mentioned, online education demands an independent learning style. However, when a challenge arises, students at a distance need to be ready to take initiative to find solutions. The new online student can stare blankly at her computer screen when she does not grasp a concept included in a lecture. The professor will have no idea this is occurring. Particularly in classes where concepts build on one another, the new online student should not move on and hope the idea makes sense at a later date. She should feel comfortable reaching out to the instructor or respected classmate for assistance to ensure she is gaining the knowledge she needs for the learning objective. Similarly, if she has trouble viewing materials the instructor has included in the LMS as part of weekly course work, she should not assume that she will learn what she needs from the book or a lecture. She should reach out to the IT help desk or other resource as soon as possible to resolve the issue.

**Girls just wanna have fun.** There are a few outliers among the lists of expectations. One institution expects students to have “enthusiasm to complete the course.” Central Piedmont CC and Onondaga CC specifically encourage students to have fun in the classes, and allow personality to come through in the interactions on the chat boards. One institution, Chemeketa CC, advises students that they should expect more personalized feedback from their instructors, while a few others remind participants that the asynchronous nature of virtual education will
mean less interaction with instructors. These may be due to institutional guidance to instructors on an appropriate amount of teacher-student interaction, and certainly this will vary from teacher to teacher.

**Netiquette**

The age of digital communication has revolutionized, and complicated, communication. In professional and personal lives alike, email, text messages, instant messaging and document sharing has different mores from face-to-face communication, and requires different etiquette. Try as they might, emoticons do not replace context clues and “LOL” does not distinguish the full-throated, head-back laugh from a simple chuckle. As with any social norm, these rules are not hard and fast, but rather general guidelines hoping to ease communication and preempt misunderstandings that can occur when interpreting the written word. In the Onondaga CC orientation a faculty member provides the voice of experience, noting that students shouldn’t treat writing like a text or instant message; “the writing in a class forum is more formal.”

Netiquette provides some helpful parameters for virtual discourse.

In their research on virtual students Song et al. (2003) found most indicated the need, and ability, to be more thoughtful about writing responses to class discussion. This is good advice since Germanna CC reminds students “once you hit the 'Submit' button, you cannot change your comment; and it's there until your instructor removes it.”

An over-arching guideline the new online student should keep in mind when approaching any virtual communication is that both she and the individual(s) on the other end are human beings with feelings and emotions. Being faceless does not mean emotionless, nor does it make anyone anonymous. She should treat others as she would if they were standing in the same room. In theory, she shares with them the same learning goals. Communication should start and
end by assuming good intentions and a helpful nature. Writers should always be mindful of their words, and consider potential alternate interpretations to what they write. Readers should assume that the writer is trying to be helpful, and consider alternate interpretations if the initial reading seems offensive. Before jumping to any conclusions, readers should ask for clarification if someone seems to be harsh or worse.

They should also, however, expect discourse and not shy away from engaging in the exchange of ideas. Portland CC notes that students in online classes should “be willing to share your ideas, carefully consider your responses to others, and be prepared to have your ideas challenged occasionally.”

Some orientations presented recommendations by various communication type. In written communication, writers should focus on what is important, keeping the writing concise, but expressive enough to make the point in the absence of context clues. Be limited, but specific, in the use of stylized text such as bolding and all caps, which have certain connotations (something is important, or the speaker is yelling). Writers should avoid the use of emoticons, and adhere to grammar and style requirements one might disregard when messaging in a strictly social situation. And before any written communication is sent or posted online, re-read and edit as necessary.

The CC System of New Hampshire includes very specific recommendations such as when communicating via email with classmates or instructors regarding college matters, authors should start with a greeting and title, be clear and concise, and have a subject that describes the purpose. Also, when sending or replying, double check the recipient list to be sure it is correct. Writers should never distribute or forward anything they do not have permission to share (and should remember that anything they share electronically can be forwarded to unintended
recipients). Finally, received emails should be acknowledged and, when appropriate, responded to without 48 hours.

Some classes may offer an opportunity for a live chat between two or more participants. Students should familiarize themselves with the tool before they try to communicate for the first time. If the system offers the ability for audio, users should mute their microphone when they are not speaking in order to avoid feedback. Knowing how to do this ahead of time is both courteous to other participants and avoids delays in starting a chat session.

The lens of Self-Efficacy: Is the use of an orientation important?

As noted by researchers in online education, self-efficacy is important for both knowledge acquisition (cognitive) and the technological skills (technical) needed to participate in the learning process through an LMS (Shena et al., 2013; Wang, et al., 2013). Are current orientation programs addressing both areas? It is within the discussion of technical and learning skills that the application of the Theory of Self-Efficacy pioneered by Bandura (1993) is appropriate. Self-efficacy is both the confidence that someone has the capability and persistence to accomplish a task (Bandura, 1988; Shena, et al., 2013), and a concept that can be an important predictor for online learning success (Kim et al., 2014). While some of the technical skills can be measured (for example, Gennesee CC’s orientation includes a typing test), these sections of the orientation mostly ask the new online student to consider her self-confidence to meet the list of requirements. As some of these skills may be new to her, she must also assess her confidence that she can learn additional skills or improve in areas of deficiency. The orientations use words like comfort, belief, and confidence, while leading the student through a self-assessment for these skills.
Grand Rapids CC wants to know about a student’s self-perception, and asks participants to rate their level of agreement with this statement: “I think of myself as a good student.” Several orientations ask the new online student what she believes about herself and, importantly, about online education. Does she believe she can learn through reading and writing (as opposed to seeing and hearing a lecture)? Does she believe that online education is as rigorous as traditional learning programs? Does she believe she can adapt to new technologies and an unfamiliar learning environment? Does she believe that once she starts the class (or overall program), she will finish? If she can answer yes to these questions, then she embodies Bandura’s secret to student success – believing that you can succeed.

It is also important for schools to note that online skills can be taught (Ho et al., 2010; Kerr et al., 2006). Use of the LMS is the one of the few skills taught in any of the orientation programs in this study. For example, Chemeketa CC offers three voluntary eLearn tutorials in their orientation in general navigation of the LMS, using email and message systems, and the class discussion board.

A few schools offer resources for some skills, or recommend utilizing tutoring services for some technical or college-level reading skill. For example, Richland CC offers tutoring services, while Austin CC offers both tutoring and learning labs, including “MyReadingLab” for help with college-level skills. But participants who feel their self-efficacy for other characteristics is low (for example, independent learning), need to find their own resources for improving.

Ask a direct question: Is online learning right for me?
When first considering a virtual class, the new online student may have an overriding question in her mind: Is online learning right for me? To discover the answer, she needs to first be informed about the realities of online learning before she can determine her own self-efficacy for the skills and attributes she will need to develop to be successful. While some of the general information and exercises may lead the new online student to consider her own readiness, half of the orientation programs reviewed were pointed in getting to the heart of the issue and inviting participants to answer for themselves whether or not distance learning was a good choice for their education. Multiple sites asked “Are you ready for online learning?” Rend Lake CC posed the question in a different way, “What makes a successful online student?” A few schools utilize a self-assessment to help illuminate “if online learning is right for you,” and some go a step further to provide analysis and a recommendation for or against online participation.

Some programs merely offered descriptive expectations and recommendations, or a list of considerations a student should weigh. Monroe CC notes what makes a successful online student: “What types of students are successful? Individually motivated and self-disciplined, possess time management and organizational skills, excellent reading and writing skills, technical ability.” They then list expectations such as class participation, use of technology, online interaction, good communication, and time management. It appears they assume that once a student has read this information, they will opt in or out of online classes.

Some programs include an assessment. Some are merely informational, while others may score the quiz and offer an analysis of areas of strengths and weaknesses; some even provide an explicit determination that perhaps the face-to-face experience is the best path for some students. This is discussed in more detail in the section Assessments.
Not all schools saw the answer to the question as completely black or white. Reflecting what Conley and French (2013) contend in their research, the Indian Hills CC orientation specifically encourages participants to “Keep in mind, no matter what your results in this exercise, students can improve their results in nearly every area being addressed, some by simply taking a more active role in their learning….” Some attributes may be challenging to teach, but can certainly be encouraged. Building a student’s self-efficacy for self-motivation and self-discipline may help them succeed in a virtual course. Technical skills useful for online learning can be improved with coaching and practice, but no orientation actually undertakes the task of teaching most skills. Rather, many seem to stop at making students aware of what they should know, leaving it to the student to work on areas in need of improvement. Chemeketa CC warns students who do not read and write well to “get remedial help or consider classroom learning” but does not provide writing skills as part of the orientation. One could say that this is a precursor to the need for independent learning that is indicative of online classes. But whether or not it is a deliberate reason for the explicit omission of skills lessons from an orientation is unclear.

Many of these areas of content identified in this study are in line with recommendations for being a good college student overall. However, some of these areas are even more important in an online environment (for example, good reading skills). Because they are included in the orientations for online learning, they are highlighted in these findings.

**And the answer is…** After understanding all of these expectations, and maybe participating in a scored assessment, the new online student should be better equipped to make an informed answer to the question: Is online learning right for me? She should end the orientation process feeling confident that she can meet the technical specifications, and that she
possesses high self-efficacy for the technical skills and attributes she needs to succeed. As virtual education offerings continue to expand, schools may adopt the idea that it is incumbent on students who self-select an online course to be prepared. But the orientations included in this study represent the desire of schools to arm students with information to help them make this decision, which researchers have noted is a key to student success (Carruth et al., 2010; Cho, 2012; Gilmore & Lyons, 2012). Some schools created their own full orientations, while others relied on a link to a general orientation program for the LMS (such as Blackboard) and did not provide other content areas. Fourteen of the schools specifically talk about student success, and offer orientations as evidence that they legitimately care about positively impacting student performance. It is expected the participants will be realistic after reading this information and only proceed in enrolling in a virtual course or program if they have high self-efficacy for effectively learn in that environment.

**Orientation Delivery**

If the new online student is at one of the 26 community colleges included in this study, an orientation is offered. At 21 of the schools, participation would be voluntary. Most are static pages of information, while four use video modules, and four intersperse videos with static pages. Some, like Central Piedmont CC and Piedmont Virginia CC, provide modules combining slides and video with a specific flow to guide the user through all content. Others, such as Monroe Community College, provide a list of links to different modules and resources, with no specific order provided. The challenge for participants in these orientations is to ensure they went through all links and reviewed all sub-content before returning to a main page to find additional links to pursue.
One of the schools, Riverland CC, offers an online video of the in-person orientation they offer (the content is the same, but there is no opportunity to ask questions); Prince Georges County CC also offers online and in-person orientation sessions. In addition to the online orientation, Central Piedmont CC offers an in-person session that is specific to the LMS. Fresno CC offers a multi-session, face-to-face course during the term for minimal credit (one credit, compared with the standard three-credit class).

No one school includes every content area identified in this study, though the amount of content offered varies drastically among orientations. The orientations at Santa Fe CC, Riverland CC, Rockingham CC, and Wayne County CC District only cover the technical aspects of their respective LMS platforms. In additional to its general orientation for online learning, Central Piedmont CC offers a 2-hour in-person training course specifically for the LMS.

An in-person orientation option is helpful because personal contact can overcome individual differences, as even today there is an uneven playing field in exposure to technology (Carruth et al., 2010). Grand Rapids CC and Central Piedmont CC offer additional in-person orientations specific to use of the LMS. Riverland CC offers their orientation in-person and online, which is a recording of the in-person presentation (it is not interactive). Prince George’s CC also offers their program online and in-person. Students at Fresno City College can earn college credit for an orientation offered as a 9-week, 1-unit class.

The orientations at Germanna CC, Pikes Peak CC, Portland CC, and Wake Technical CC include a practice course available to review the functionality of the LMS. Most schools included overview modules on the use of the LMS, or provided links to tutorials provided by the commercial educational platform company (for example, Blackboard).
When presenting content, some schools utilized current instructors and experienced students as “Voices of Experience” in providing advice. Onondaga CC offers three student views, and one from an instructor. Piedmont Virginia CC offers sage advice from former students. Among the words of wisdom: "you must be mentally and emotionally ready to learn. This class is time consuming and you must be willing to put forth the effort to learn a lot of information. This class is not a joke." The orientation at Indian Hills CC has some static pages, but includes a 30-minute presentation narrated from the professor’s perspective. The video is accompanied by a pre-populated sheet for taking notes on each section.

**Conclusions**

Whether or not the new online student would determine she had high self-efficacy for online learning would depend largely on the institution she attends. Community college orientation programs for online learning are extremely diverse. The content is not universal, and the format is not standard. Further study is needed for comparisons on relative effectiveness.

While disparate on which content is included, the orientations do reflect pieces of the body of research on successful online students. However, few, if any, present *all* of the skills and attributes reflected in the literature, designers pick and choose what they feel is most important. Some add additional content on controlling the learning environment and online communications (Netiquette) that are not based in research, but the frequency of use suggests that schools are responding to an internally identified need for the information. Additionally, the use of assessments, and measures included, is not uniform among orientations. None of the specific tools presented in the literature is utilized. Institutions design their own, which vary from static questions and answers (to stimulate introspection for the student) to fully interactive questionnaires that result in a recommendation for or against online enrollment.
The Student Voice

Student Response to Orientations

The second part of this study sought to provide some student perspective on participation in an orientation for online learning. Two community colleges were approached for permission to interview students who had participated in their orientations. Only one granted permission, Richland CC. At the start of the term, all students who had recently (within the past 2 months) completed the orientation were recruited for 30-minute interviews on their experiences in the orientation. At the time of the interviews they were all engaged in at least one online course.

There was initial interest from 15 students, but only six completed the interviews. The results are therefore not statistically significant due to the small sample size (N=6), but the comments remain worth sharing.

Richland CC has a mandatory orientation all students must take before they are able to access their virtual classes. The program includes 10 modules, each of which has a short checkpoint quiz that must be completed. The 10 modules are:

1. Getting Started
2. Technical requirements for using Canvas (LMS)
3. Are you ready for online learning?
4. Canvas (LMS) Basics
5. Navigating Canvas
6. Communicating in Canvas (LMS)
7. Working in Canvas (LMS)
8. Grades
10. Wrap-Up

Participants

The participants were 4 women and 2 men. The names of the participants have been changed for privacy. They are: Alexis, Brock, Emily, Jenna, Marlinda, and Richard. One had taken a hybrid course that had an online component prior to enrolling at Richland, the rest were in their first virtual course. Five students are in their 20s, and Jenna is over 40.

Difference Between Online and Traditional Education

All students were asked their opinion about the differences between online and traditional learning; the answers were diverse. The two differences noted by multiple participants were the asynchronous nature of online learning and interaction with classmates and the instructor. The four females all noted the challenges created by the lag time in communication.

Regarding the challenges of asynchronous communication, Marlinda said “there is sort of a wall there…I can’t ask them (instructors) things I would in class.” Alexis noted both the delay in communication with instructors and classmates. “Like if I have a question, they (instructors) have up to 2 days to answer me, and so it’s a lot different from being in a class where you can just raise your hand and ask and…the networking opportunities aren’t the same. They try to get us to interact with each other, but it is just not the same as in person.” Jenna’s lament about the interaction was very personal. She pointed out that, as a very shy person, she benefitted in a face-to-face class when other students asked questions or got into a discussion about things she was too reserved to do herself. “Online I have to be more proactive in my own education and with the questions I need answered,” she said.
Two differences between online and traditional education concerned the use of the LMS. Alexis thought having all class information at her fingertips made it easier to stay organized. Richard felt the LMS connected him to more resources.

Other differences noted by the participants are the time requirements for e-learning, the independent nature of the classes, the need for good time management, and the self-paced nature of the virtual courses. Emily was also emphatic in the biggest difference in the delivery methods, “online is way harder.”

**Online Learning Needs**

Participants were also asked what personal characteristics and skills they felt they would need for online learning. Their responses were rather universal and matched findings in the literature about successful online students – self-discipline, time management, independent learning skills, organizational and computer skills. Marlinda also specifically mentioned the need for solid reading skills, something she was slightly concerned with for herself, and the ability to avoid distractions.

**Learning Styles**

Richland’s orientation did not specifically address learning preferences, but during the interviews, participants talked about their preferences and online learning. Two of them specifically mentioned the need to be an independent learner in a virtual course, and without using the specific term Richard noted that you have to teach yourself in online classes. Emily pointed out that someone considering online had better be a confident person. Marlinda felt underprepared in this area. “I did not realize how much my personal abilities to learn certain topics would have an effect (on my success in online learning).”
Two participants noted that they were visual learners, which Richard said made him apprehensive about taking online courses. Both students said there are certain courses, like science, that they would not take online. Richland’s orientation did not advise students to consider their learning preferences or course subjects when selecting virtual classes, unlike Onondaga CC, which recommends that students take personally challenging courses in a brick-and-mortar setting.

**Opinion of the Orientation**

Overall, the study participants found the Richland orientation for online learning to be effective in the content that was offered. However, most would have preferred additional content, and different delivery. Alexis felt the orientation was very thorough and Jenna said “the skills they taught were important…what is needed to complete the program.” Brock concurred, “everything that I know about doing stuff online (for school) I got from the orientation.”

Most specifically praised the information provided about available resources and where to find help if needed, which three mentioned that had already had to do in the term. “That’s the big thing, who to contact if you need help,” Alexis said. “That kind of addresses everything.”

Jenna commented positively about the delivery. “It was good that it was online, it made sense.” Though she also noted that she had to have someone show her how to start the program. Alexis also credited the format for teaching her the needed technical skills since she was able to practice each of the tasks she would need for navigating the LMS and participating in class. This is an important aspect, as Alexis, Emily, Jenna, Marlinda, and Richard all revealed that experience specifically impacted their ability to perform the tasks needed in online classes.

The most common negative comment was that the orientation was repetitive. “The orientation was long and boring because we did the same thing three or four times,” said Jenna.
One participant, however, found this to be positive, as she feels one of her learning challenges is an inadequate memory. “Things that are repetitive, that’s a good way for me to remember things,” said Alexis.

Another common criticism was that the orientation is boring and tedious. Richard wished it had more humor and felt more personal. “I wish it was not so long and tedious,” Jenna said. “But it’s like eating vegetables, you have to do it.”

Only one participant, Brock, felt the orientation was complete; the others identified several areas they wish had been explicitly included in the orientation content.

**Left to be Desired**

There were several areas of content that study participants wished had been included in the orientation. Four of them specifically wanted lessons in time management. Jenna did appreciate the lessons about the calendar, which can help with time management, but still wanted more help with becoming a good time manager. After the orientation Richard reached out to tutors available to online learners and got them to help him with his time management.

They all wanted more than just the LMS. Marlinda wished the orientation had conveyed the reality of working on her own. “It did not prepare me for how isolating it was, that came as a surprise.” Alexis appreciated that her technical skills were improved by the orientation. “They were all impacted by the orientation,” she said, but “did I learn discipline in orientation? No.”

There were also a few very specific requests. Jenna and Marlinda wanted a lesson in how to communicate with their instructors; Marlinda feels she was “unprepared for how hands off they were going to be.” Alexis said she still felt ill equipped for the workload, specifically the amount of reading and posting on the discussion boards. She also wanted a specific lesson in
uploading a Power Point presentation. Emily thought they should add instruction in using video chat features.

**Impact of the Orientation**

Study participants were asked about their self-efficacy in general, specifically for online learning prior to the orientation, and specifically for online learning after completing the orientation. Participants were offered a four-point Likert Scale for response (Not at all confident, Not very confident, Somewhat confident, or Very confident). Figure 2 shows the results.

*Figure 2. Self-Efficacy (SE) of Participants*

<table>
<thead>
<tr>
<th>Name</th>
<th>General SE</th>
<th>SE for online learning prior to orientation</th>
<th>SE for online learning after completing the orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexis DNA</td>
<td>Somewhat Confident</td>
<td>Somewhat Confident</td>
<td>Somewhat Confident</td>
</tr>
<tr>
<td>Brock</td>
<td>Somewhat Confident</td>
<td>Very Confident</td>
<td>Very Confident</td>
</tr>
<tr>
<td>Emily</td>
<td>Somewhat Confident</td>
<td>Very Confident</td>
<td>Very Confident</td>
</tr>
<tr>
<td>Jenna</td>
<td>Somewhat Confident</td>
<td>Somewhat Confident</td>
<td>Very Confident</td>
</tr>
<tr>
<td>Marlinda</td>
<td>Somewhat Confident</td>
<td>Somewhat Confident</td>
<td>Very Confident</td>
</tr>
<tr>
<td>Richard</td>
<td>Very Confident</td>
<td>Not very confident</td>
<td>Very Confident</td>
</tr>
</tbody>
</table>
The students, who self-selected into online courses, rated themselves as confident people in general, and had positive self-efficacy for online learning. Two respondents had positive movement in their self-efficacy for online learning after participating in the orientation. This supports the literature in the area, which recommends orientations to achieve this outcome (Brewer & Yucedag-Ozcan, 2013).

Jenna had specifically noted her need for computer skills, so it makes sense that a technical orientation would have a positive impact on her self-efficacy. Richard had also mentioned that he had apprehension about enrolling in virtual courses because of his learning style. It is positive that the experience with the orientation gave him confidence that he could succeed.

Richard was not the only student who gained some perspective on their learning style as a result of the orientation. On completion, Brock realized he could learn from a computer as well as in a classroom.

Alexis reported feeling somewhat confident for online learning both before and after the orientation, noting that she was still unsure about her self-discipline. She also concluded that experience matters, “it’s just not the same until you are doing it live.” Marlinda agreed, “I needed to be tested in a class setting.”

**Summary**

Much of the literature notes that students need both technical skills and certain attributes to be successful in online education. The Richland CC orientation focused heavily on technical skills, which were appreciated by the participants. However, they were mostly dissatisfied with the lack of attention to attributes or characteristics, and the learning skills and habits that would help them to be good virtual students. Their requests for content mirror what is in the literature
as important for students to know – how to be self-disciplined, have good time management, and communicate effectively in an asynchronous environment.

**Conclusion**

**How are the Research Questions Addressed?**

Research question: *What content is currently being offered in orientation programs for online learning at community colleges?* This study finds that all of the main recommendations emanating from the research are covered in some form in orientation programs for online learning at community colleges. No one orientation uses each and every recommendation, and the content is very diverse in wording, presentation, and emphasis.

Sub questions:

*How does content of an orientation course for online learning impact self-efficacy for the cognitive and technical skills that contribute to success in virtual classes?*

Whether or not a student’s self-efficacy would be impacted by any of the orientations in this study would be very individual. Many of the orientations reviewed for this study do seem to attempt to measure and/or improve self-efficacy, though primarily through an invitation to the participant and answer some questions and think introspectively about their own attributes (for example, an assessment question on comfort communicating online). Only a few minimally attempt to encourage student attributes (ie, believe in yourself, believe you can learn online), but more provide an opportunity to build confidence for use of the LMS through tutorials and practice activities.

Ultimately, the majority of programs – regardless of the extent of the content – apply a buyer beware approach to orientations. Participants may rate their own self-efficacy and make a
decision based on their feelings of confidence for online learning, but they may not have that confidence impacted by any of these orientations. Institutions have provided the information they feel a student should need to make an informed decision; if the student chooses to proceed, whether or not they were really ready for online learning is up to the individual.

How do different components of an orientation course for online learning have an impact on self-efficacy?

The second phase of this study made an attempt to address this question, though the small sample is inadequate to truly inform the question. The data does seem to indicate that results are extremely individual. While most participants felt they were somewhat confident for online learning prior to the orientation, their reaction to the program was diverse. Some were bored, perhaps because they really were fully prepared, while others found that the exercises gave them new knowledge and improved skills they felt were valuable. This section would need to be repeated with a larger sample.

Therefore, overall, this study is not able to answer all of the research questions, but does inform practice by highlighting the types of options in use in the field, and shedding some insight into student perception of online orientations.
Chapter 5: Discussion

**Significance of this research**

In a national effort to help more students complete post-secondary degrees and in a timely manner, institutions of higher education are working on ways to expand access to courses and promote student success. One significant strategy for improving access is the expansion of e-learning courses catering to both traditional students and those who have constraints such as time or distance that prohibit a brick-and-mortar educational path. As the number of students enrolled in online education courses continues to grow (Brewer & Yucedag-Ozcan, 2013; Seaman & Allen, 2013), the issue of attrition will become a greater concern, as it remains higher than in traditional face-to-face classes (Angelino et al., 2007; Cho, 2012; Gilmore & Lyons 2012; Nash, 2005; Shena, et al., 2013). This is the problem of practice that inspired this research study.

Fortunately, there is activity within both individual institutions and larger educational systems (such as the California Community Colleges and SUNY) to try to address some of the causes of attrition. There are multiple reasons students may not succeed in virtual education, but two are intertwined and stand out as able to be impacted: readiness and expectations. Properly set expectations include the technical aspects of online learning (for example, navigating the LMS), institution- and class-specific requirements and rules (for example, a minimum number of discussion board posts per week), and an understanding of how virtual learning differs from traditional education (for example, the effects of asynchronous communication). Readiness goes beyond being adequately prepared for college-level education and involves the learning skills needed for online education (for example, conducting internet-based research) and the student attributes helpful for success (for example, being proactive in the face of challenges).
**Literature Review**

Current literature includes three major messages that are a part of this study. One, attributes and skills of successful online students have been identified. Two, there is evidence to suggest that orientations can positively impact student achievement. Three, student performance can be tied to high self-efficacy for learning skills and attributes. The question that arises: are these three areas adequately adopted in orientation programs in an effort to boost student success?

**Theoretical Framework**

The Theory of Self-Efficacy is a useful framework for this study for two reasons. One, self-efficacy can be improved, and thus has the potential to be impacted by an orientation. Two, it is already used in the literature to analyze factors of student success and readiness, and therefore creates a bridge between current literature and this study.

**Case Study**

The use of a case study was appropriate as it helped develop the picture of what is currently being used in practice for orientations for online learning, and then some (albeit limited) insight on how students perceive one example of an orientation. As self-efficacy is a self-perception, a case study also allowed for the voice of the student to express in their own terms if they perceived a change in their self-confidence for the skills included in the orientation.

Another methodology considered for this study was the use of surveys administered to the program designers who developed the orientations. Such an instrument could have asked about design and content decisions, and the use of any research to inform those decisions. This methodology was discarded as an option for a few reasons. One, there was a logistic concern in that some orientations may have been a group effort, which may pose a challenge to getting
distinct answers, particularly if there was disagreement on the design team for some elements.

Two, this method ignores the student voice, which this study deliberately seeks to provide in order to fill a perceived gap in current literature. Three, this study design allows for the researcher to assume the role of a student in approaching participation in the orientations. In this manner, the researcher is interpreting the impact of the content presented. It is possible that the user interpretation is in contrast to the intended meaning of the orientation designers. Therefore, is the appropriate to have an outside perspective (the researchers) interpreting the content to parallel the student voice. Course designers may have intended to have a certain impact, but the user perspective of impact drives the findings in this study.

**Study Sites**

The use of community colleges is particularly salient for two reasons. One, most have an open enrollment policy. While more selective institutions may be able to make the case that a student qualified for admission to their schools will be able to adapt to any learning environment, the open acceptance policy at community colleges means they may have a more stratified student body, including many who lack college-level skills and start school requiring remedial classes. Two, community colleges enroll a significant amount of non-traditional students who, among other characteristics, are generally older than the 18-22 age group of most new college undergraduates. This is significant because although online learning is finding its way into more K-12 systems, many of these students may have completed high school long before the Internet connected into classrooms. Additionally, they often have many obligations outside of school such as full-time careers and families. It is arguable that these students are more unprepared for online learning, and therefore have an increased need for an orientation to promote readiness.

**Content Reflects the Research**
When reviewing orientation content for major themes, the orientations reflect the research and beyond, expanding into a few areas of importance not previously identified in the literature. When reviewed individually and compared, however, the detail of the content in each of the 26 orientation programs is disparate and far from universal. No school used all 20 topics, and schools that covered the same topics seldom covered them in the same way. Even within the same topics area, two different schools may have employed extremely different approaches and emphasis. To address the issue of time management, for example, most orientations at least mention the need for it, but only two, Genessee CC and Grand Rapids CC, actually provide a full exercise to help students gain a genuine understanding of their current schedule and time available for course activities.

Make Them Believe

The degree to which a student’s self-efficacy might be impacted by these orientations is not conclusive and variant among the individual orientations. All of the students who participated in the second part of this study reported being a somewhat confident or very confident person in general. Additionally, all but one of them was either somewhat confident or very confident for online learning prior to the orientation. Initially, this could make the case that adequate self-confidence is already present in students who register for virtual courses. However, all but one study participant reported an improvement in their self-confidence for online learning as a result of their participation in the orientation. Even the one student who initially reported being not very confident for online learning moved to being very confident after being in the orientation. There is value, even if for some students it is small because they already had high levels of readiness. Just as a coach gives a pep talk before every game, there is value in boosting student self-confidence before they engage in learning activities.
Does the content impact self-efficacy?

Shena et al. (2013) sought to identify the dimensions of self-efficacy in online learning, the related variables, and the correlation between self-efficacy and student satisfaction with e-learning. After reviewing the literature, they developed a new instrument looking at six components of self-efficacy: for completing an online course, for interacting with classmates for learning activities, for interacting with an instructor, for self-regulation, for utilizing an LMS, and socializing with classmates. To some degree all of these are promoted and encouraged in the orientations included in this study, though no one orientation is exhaustive.

Practice with the LMS Helps

For many students, the LMS will be a new tool. It may have several elements that are familiar in concept for people who have used an Internet-based email or instant messaging. But there may be nuances that need to be discovered. Conducting the orientation through the LMS provides hands-on training and all of the content areas can be included and discovered through the LMS navigation exercise. In the second part of this study, only one participant had every used an online education platform prior to the orientation, and each of them appreciated the orientation to the new system they would be using.

Disconnect Between the Assessments and the Content

The assessments utilized among the orientations in this study are extremely diverse: some are short as three questions (Nashville State CC) while others contained multiple modules with analysis of the answers (for example, the Smart Measure assessment used by SUNY-affiliated schools).

For many, the assessment provides a path to a direct answer to the question “am I prepared for online learning? The differences in the measures employed across the orientations
in this study are similar to the content in the programs themselves. Some schools seem to use the content presented in the assessment merely as the point of information. For example, some institutions may ask a participant if they have regular computer access and leave it to the student to translate that information into the need for regular computer access for participation in online courses. But when the Wayne County CC district orientation asks a participant if they have regular access to the Internet, a current version of an Internet browser program, and web-based email, they specifically tell students who answer “no” to any of those questions that they should stick with in-person classes.

As noted, many of the assessments measure self-reported comfort or confidence for certain skills or attributes. Throughout its assessment, Indian Hills CC uses language like “are you comfortable, are you able, how do you approach...?” The questions posed include “which best describes your reading ability?” to which a student can reply that they don’t really enjoy it, are comfortable with it, and really enjoy reading and read quickly. Pikes Peak CC also asks students for a self-assessment of their reading and writing skills. Neither of these orientations prevent a student from enrolling in online classes if they answers suggest a low self-efficacy for needed skills; they merely make a recommendation. But if assessments are going to measure self-efficacy, orientations and other support services directed at student success should work to boost a student’s confidence.

What’s Missing from Orientations

**Cost.** As cost is a major factor for many individuals considering a college degree, it may be important to acknowledge that online learning may have specific components not considered in a general college cost calculation. There may be an assumption that most modern college students require a computer and Internet access, and therefore this is not an additional cost.
However, some programs may have video chat components that require a web camera. Further, a communication course may also require a screen recording program, and editing software. Yes, most modern laptops have built in web cameras, but one the students who participated in this study specifically mentioned her usual computer was an older model given to her some years ago; she had to borrow a computer for the video interview.

Among the institutions in this study, only Columbus State CC broaches the issue of cost as a consideration during the orientation. Schools that offer full programs online, and therefore may attract students who are geographically a great distance from the physical campus, should also make students aware of costs such as travel to campus (if there is an in-person requirement during the duration of the full program) or potential costs associated with taking a proctored test at a location near the student. Schools that require this often have agreements with various organizations, which may charge a fee. For example, Colorado State University allowed distance education students in the greater-DC area to have proctored tests at Northern Virginia Community College (NOVA), which requires participants to pay a fee for the service.

Skills lessons. Many skills are needed to participate in e-learning courses, and mastery of these skills will aid in student success. While most schools offered an overview or interaction with the LMS, few offered activities for other skills, such as reading for comprehension, word processing, basic computer skills, or internet navigation. Some schools noted that the skills were needed, and/or asked about a student’s self-efficacy in an assessment. A few offered links to resources, or recommended the student seek tutoring or a skills class. As noted, both Indian Hills CC and Pikes Peak CC ask about self-efficacy for reading in their respective assessments, yet neither provides any content in their orientations to help a student build confidence.

Making skills lessons an explicit part of the orientation can have a direct impact on a
student’s self-efficacy, or reveal areas for which the student should seek in-person assistance. These areas may also be included in an assessment; the Smart Measure and SMARTERMEASURE include a skills test for typing.

**Discussion of Methods of Delivery**

The delivery of online orientations is very diverse, the most basic being content arranged in a few static pages of information that a student can navigate in any order, which could result in a student getting lost or missing elements. Some schools offer more elaborate modules that guide participants through the material, and some go a step farther to include videos. A few institutions (and some not included in this study, such as Coastline CC) offer one-time voluntary or for-credit instructor-led courses. Some schools whose primary orientation is online offer additional face-to-face activities, either workshops or one-on-one assistance. These additional classes would seem to indicate that the online orientations may be sufficient for some students, but not all.

At a basic level, this research demonstrates an advantage of a more structured orientation. Organized modules, whether video or static pages, move students ensuring all content is covered. Clicking through links and pages with no clear path may work for some students. However, some may waste considerable time retracing steps to find all the content they need, and others may unwittingly miss content depending on the order they click through the pages.

One peer reviewer for the findings in this study works for an institution that offers an orientation limited to instruction on using the LMS. While admitting that the content identified in this study was useful for students to know, she offered that the 10 years of experience in the Wake Tech CC orientation demonstrated that having that information would not dissuade any student from signing up for virtual courses, other reasons would take precedence. This may,
however, make the case for the importance of including information above and beyond the LMS. If a student can only meet their educational goals through online courses and are going to enroll regardless, they should at least be well aware of the expectations and the kinds of skills they will need in a distance education program.

**Experience matters.** There is much discussion in modern pedagogy about aligning the coursework to the real world. Throughout the field of education there is a movement toward skills-based learning, moving away from lectures and toward inquiry-based, hands-on lessons. Therefore, an orientation should relate directly to what the students will need to do online and offline to achieve learning objectives. An interactive LMS based orientation would allow hands on experience when reading announcements (content), read and post a discussion, download and upload a document, and take a quiz (assessment).

For example, the orientation could be offered through the LMS, and begin with basic instruction in navigating the site for a mock class. The participant could be asked to go to sections for announcements and course material to read content on technical skills and learning preferences. The student could go to the chat boards and read (and respond) to a discussion about tips for student success (such as learning strategies). The student could be asked to download and complete a short writing exercise that also measures reading comprehension. After reviewing all content, the student could take an assessment in the area for tests. This would aid in the practical experience of the LMS while delivering all the content to promote self-efficacy.

The mode of delivery does have an impact, but as the student voice indicated, the results may be as diverse as the students themselves. Some participants found the delivery of the Richland CC orientation to be repetitive and boring, while one student found that aspect
particularly useful. One student specifically mentioned that he would have preferred more personalized instruction. This may not be realistic in an online delivery, but perhaps schools should consider optional one-on-one or small group tutoring either in-person or online to help students who need a more personal experience.

Policy Recommendations

Acknowledging that individual attitudes and preferences for technology will impact student learning, Hoskins and Van Hooff (2005) looked at the characteristics of students who self-selected into online classes. Not all students will possess these attributes, which could be determined by an assessment instrument. Therefore, there are multiple policy questions for college administrators to consider. If not all students are equally likely to do well in a virtual course, should colleges be able to require online participation? If they will require certain courses be completed online, what support services and accommodations are they responsible for making? Should an assessment be required for all students to determine readiness for online learning, with those who do not pass barred from participation? Should the orientations be mandatory, and include certain content to impact readiness?

State policy makers, who provide a significant amount of an institution’s funding, (especially for community colleges) should also be interested in insuring students are ready to succeed. They may either mandate that schools provide orientations and assessments, or provide financial support for the development and administration of these activities.

As noted in the background for this study, California is just one state that has considered a coordinated expansion of distance education programs across public institutions. As schools can enroll more students to fill these additional seats, some students may get pushed into online courses, and some institutions may decide to require that a student fulfill a certain number of
credits through an e-learning course. This adds to the ethical questions an institution should consider before implementing these requirements. If a school is going to mandate online learning, to what extent are they obligated to facilitate access? Can a school require students to own computer equipment and purchase Internet access in the same way they require them to obtain textbooks? Is this expense figured into listed college costs, or is it a hidden fee?

There is considerable accusation toward for-profit schools that they take a student’s money in return for a degree without actually providing them the requisite education and skills needed for a job. Can the same argument be made toward online learning? Are schools taking a student’s money without ensuring that they are prepared to succeed in the class and obtain the knowledge that should be provided?

Educational leaders, both at an institution and at the state level, should consider the issue of readiness for online learning. Socially, it is an appropriate action for colleges concerned with student success. But beyond that, if the investment in an orientation program can significantly reduce attrition levels, the financial return on investment will be realized through an increase in full-time student equivalent counts.

**Future Research**

Given the wide disparity in the current orientations in use, there is ample space for research on the impact of precise content and delivery methods. Potential questions include:

1. What is the impact of orientation programs on student self-efficacy for online learning, and on learning outcomes in virtual courses? The orientation designs observed in this study are quite diverse. There is space for research on the comparative effectiveness of different content or program delivery on student outcomes.
2. What is the difference in impact between face-to-face and online orientations? Research into comparative effectiveness between the delivery methods would inform practice. On one hand, face-to-face sessions may be better for answering questions and trouble-shooting technology problems. However, online delivery may best given that it is the same medium as the course, as it provides an environment that most closely resembles the class environment, i.e., separated from an instructor or peers by time and location.

3. Does participation in an orientation for online learning influence self-selection into virtual courses? If an institution is interested in expansion of their distance learning programs, it would be helpful to know if an orientation program promotes enrollment.

4. What activities best impact self-efficacy for online learning? Given the diversity in both content and delivery methods in existing orientation programs, there is space to investigate individual content modules for comparative effectiveness.

**Conclusion**

Overall, there appears to be a growing interest in impacting student readiness, which will improve educational outcomes and student satisfaction, which in turn improves student persistence, and can ultimately positively impact the finances of an institution. The current field of research provides solid recommendations for impacting student readiness, and this study helps illuminate the building blocks of a high quality orientation to determine who is prepared, and possibly help those who are not ready to improve their self-efficacy for online learning success.
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Appendix A – Participant Consent Form
Informed Consent for participation in Online Learning Orientation case study

Investigator/Practitioner: ___Jennifer Scheitler________

**Purpose:** You are being asked to participate in a case study. This study will gather information which will help online learning program directors better understand how participation in an online orientation program impacts the skills useful for online learning. You are being asked to participate because your experience may be of help to others.

This form explains the purpose, procedures, benefits, risks, and precautions of the case study. Please ask any questions you might have after reading the form.

**Participation:** If you decide to participate in this study, I will be interviewing you on your experience in the online orientation. There are no right or wrong responses; I am solely interested in your perceptions, both positive and negative. I will disguise all identifiable information by assigning you a participant number, which will be linked to a pseudonym in all written information. These identifiers will be stored in separate locations; I will work to ensure that your story cannot be traced back to you. Instructors at (COLLEGE) will not be informed of your decision to participate or not, and your inclusion in the study will not impact your participation in any online courses at (COLLEGE).

**Risks of participation:** The only risk of participation is the possible identification of you and the information you provide. As mentioned above, security measures will be taken to ensure that only the primary researcher (myself) has access to the link between your name and the participant number you are assigned. The number will later be linked to a pseudonym, and this information will be kept separately from the list of participants. Any information shared with other researchers will be de-identified.

**Benefits of participation:** There is no specific benefit for your participation to you. However, in the process of reflecting on your experience you may realize some self-awareness of your skills for online learning, including any you may feel you need to improve. Overall, the benefit of
participation will help course designers with orientation courses, which may improve student learning in virtual education classes.

**Voluntary participation:** Your participation in the case study is completely voluntary. You are free to refuse to participate in the case study at any time. Your decision to not participate is completely ok and will bring no negative consequences to you and will not affect your course work or grade. You can change your mind in the future and decide at any point to not participate in the study, even after an interview session.

**Cost and Compensation:** There is no cost to you in participating in the case study. You will be offered a $10 gift card for your participation.

**Confidentiality:** All of the information you provide is confidential. Identifying characteristics about you will be changed so that no one reading the case study will be able to identify you. All notes for the case study will be stored with a confidential id number in my locked files. Any publication of the case study will not identify you. There will be no identifying information released about you, so all of your responses will be entirely confidential and anonymous. The description of you used for the case study will be shared with you to be sure it protects your identity. The description may include features such as your gender or age, generally grouped with other study participants. Identifying characteristics will be changed if you request.

**Contact Person:** If you have questions or concerns about the interviews, you can contact me at 310-339-1991, or scheitler.j@husky.neu.edu.

**CASE STUDY VOLUNTEER'S STATEMENT:**

I have been given a chance to ask questions about this case study. These questions have been answered to my satisfaction. I may contact Jennifer Scheitler if I have any more questions about taking part in this case study.
I understand that my participation in this research project is voluntary. I know that I may quit the case study at any time without harming my future involvement with (COLLEGE) or losing any benefits to which I might be entitled.

By signing this form, I have not waived any of my legal rights.

I have read and understand the above information. I agree to participate in this case study. I understand that I will be given a copy of this signed and dated form for my own records.

__________________________________    ______________
Study Participant (signature)      Date

__________________________________
Print Participant’s Name

__________________________________    ______________
Person who explained this study (signature)    Date
Appendix B - Participant Invitation
Participant Invitation Email

Subject: Your online experiences needed for important research study

Dear Online Student,

My name is AJ Scheitler and I am a doctoral student at Northeastern University. Like you, I have been enrolled in virtual classes in my college career. Given my experiences I am very interested in student readiness for online learning, and what colleges are doing to impact student preparedness. As a participant in an online orientation program, you have a unique experience that can inform research in this area.

As my dissertation research project I would like to interview you about your experience with the orientation, your perceptions of the activities included, and your feelings about your own readiness to learn online. There are no right or wrong responses; I am solely interested in your perceptions, both positive and negative. All participation will be kept in strict confidence. Instructors at (COLLEGE) will not be informed of your decision to participate or not, and your inclusion in the study will not impact your participation in any online courses at (COLLEGE).

Risks: The only risk of participation is the identification of you and the information you provide. However, approved security measures are in place to protect against any identification. All information in my dissertation or shared with other researchers will be de-identified.

Benefits: There is no specific benefit for your participation. However, in the process of reflecting on your experience you may realize some self-awareness of your skills for online learning, including any you may feel you need to improve.

Interviews will take place through the computer via video or audio chat. Interviews will take no more than one hour. They will be scheduled at your convenience between (DATE) and (DATE). In appreciation of your time, I would like to offer you a $10 Amazon gift card.

If you have any questions, I can be reached at scheitler.j@husky.neu.edu.

I greatly appreciate your consideration.

AJ Scheitler
Appendix C – Interview Protocol
Interview Protocol

The semi-structured interviews will be guided by the following questions, however the researcher will add questions to explore themes brought up by the participants that are relevant to the research questions. The framework will be focus on self-efficacy for skills and attributes useful for online learning.

**Opening**

Hello! Thank you for agreeing to participate in this study about your experience in the orientation for online learning. This study seeks to gather information which will help online learning program directors better understand how participation in an online orientation program impacts the skills useful for online learning. You are participating because your experience may be of help to others.

As a reminder, your participation is strictly voluntary, and you may elect to withdraw from this study at any time, now, during or after the interview. Your identity will be kept confidential. I will do this by disguising all identifiable information and assigning you a participant number which will be linked to a pseudonym in all written information. Instructors at (COLLEGE) will not be informed of your decision to participate or not, and your inclusion in the study will not impact your participation in any online courses at (COLLEGE).

Do you have any questions?

Feel free to ask questions at any time, even if it means interrupting.

I am going to start a video recording now. This video is exclusively for me, I will not be sharing it with anyone else. Any information shared through my dissertation or any subsequent publishing will be de—identified.

For approximately the next hour, we will be talking about your experience in the online orientation. There are no right or wrong responses; I am solely interested in your perceptions, both positive and negative. I have a few questions to get the conversation started, but I want to hear about anything you feel is important to share about your experience or stands out in your memory.

**Interview Questions**

1. Prior to this orientation course, have you participated in an online educational course?

1a. If yes, what was the course? When did you take it?

2. Do you feel that there are differences in online versus traditional learning? If so, what do you feel they are?
3. In general, would you rate yourself as a very confident person, a somewhat confident person, a person with little confidence, or a person with no self-confidence?

4. This study is interested in self-efficacy for online learning. Self-efficacy is self-confidence - your personal belief in your own ability to do or achieve something. I would like you to think for a minute about the time before you started online education. How would you characterize your self-efficacy for online learning in general? Would you say you were (read list and have student select one):
   - Not at all confident?
   - Not very confident?
   - Somewhat confident?
   - Very confident?

5. Prior to starting the orientation course, what skills did you feel you would need to be successful in an online learning course? (if necessary prompt with examples: using the chat board, online research, using the learning portal)

6. And what personal characteristics did you feel you would need to be a good student in a virtual class? (if necessary prompt with examples: good time management, independent learner, expressive in online communication)

So now I would like you to think specifically about the orientation course. I realize your experiences online will blend with other activities outside the orientation, but please try to focus on those activities that you were asked to do in the course, OK?

7. I’d like you to tell me about the assignments and activities you did in the orientation course. Briefly explain the activity, and what it taught you. (Prompt with an example from the syllabus if necessary.)

   If necessary, use prompts:
   - And what did you learn to do because of that assignment?
   - Did you have homework? On what?
   - Did you have tests or quizzes? On what?

5a. For each activity mentioned (as appropriate):
   - Had you ever done this activity before the orientation?
     o If yes, how confident were you that you could perform this activity?
• Not at all confident?
• Not very confident?
• Somewhat confident?
• Very confident?
- Was this something you knew before the orientation that you would need to do?
- How important do you feel this skill will be for you?
- After the orientation course, how confident would you say you are to perform this activity?
  o Not at all confident?
  o Somewhat confident?
  o Very confident?
- If you are not ‘very confident’, is there something you felt the orientation could have done to improve your self-efficacy?

5b. What is another activity you did in the orientation? (REPEAT 5a-5b AS NECESSARY)

8. Were any of the skills taught in the class unexpected? (ones you did not realize or think you would need?) Which ones?

9. After participating in the orientation, what characteristics do you feel you have to be successful in online learning?

10. Which of these characteristics do you feel were impacted by the orientation?

  9a. In what ways were these characteristics impacted?

11. Are there skills or characteristics that you feel are important for online learning that you felt the orientation was missing or did not do very well?

12. After completing the orientation how would you rate your self-efficacy for online learning overall? Would you say you were (read list and have student select one):

Not at all confident?

Somewhat confident?

Very confident?

13. What did you learn about yourself and your learning style through taking this orientation?
14. What else do you feel I should know about the orientation program?

15. Do you have any questions for me at this point?

Wrap-Up

This concludes the interview. Thank you very much for your time today. After I have completed my interviews, I will be compiling the information on my findings, and will share them with you for comment. I will use the email address you supplied. I anticipate this would happen in January 2014. You may comment or not, but you will have the opportunity to share your thoughts on the findings one more time. You may also contact me at any time if you change your mind about your participation, or if you have any questions. Again I appreciate your time. I will now be ending the recording.
Appendix D – IRB Application
APPLICATION FOR APPROVAL FOR USE OF HUMAN PARTICIPANTS IN RESEARCH

Before completing this application, please read the Application Instructions and Policies and Procedures for Human Research Protections to understand the responsibilities for which you are accountable as an investigator in conducting research with human participants. The document, Application Instructions, provides additional assistance in preparing this submission. Incomplete applications will be returned to the investigator. You may complete this application online and save it as a Word document.

If this research is related to a grant, contract proposal or dissertation, a copy of the full grant/contract proposal/dissertation must accompany this application.

Please carefully edit and proof read before submitting the application. Applications that are not filled out completely and/or have any missing or incorrect information will be returned to the Principal Investigator.

REQUcTED TRAINING FOR RESEARCH INVOLVING HUMAN SUBJECTS

Under the direction of the Office of the Vice Provost for Research, Northeastern University is now requiring completion of the NIH Office of Extramural Research training for all human subject research, regardless of whether or not investigators have received funding to support their project.

The online course titled "Protecting Human Research Participants" can be accessed at the following url: http://phrp.nihtraining.com/users/login.php. This requirement will be effective as of November 15, 2008 for all new protocols.

Principal Investigators, student researchers and key personnel (participants who contribute substantively to the scientific development or execution of a project) must include a copy of their certificate of completion for this web-based tutorial with the protocol submission.

☐ Certificate(s) Attached
☐ Certificate(s) submitted previously – on file with the NU’s Office of Human Subject Research Protection

A. Investigator Information

Principal Investigator (PI cannot be a student)  Dr. Lynda Beltz

Investigator is: NU Faculty X  NU Staff ________ Other ________

College: Choose an item: College of Professional Studies

Department/Program  Education

Address College of Professional Studies, 360 Huntington, 42 BV, Boston, MA  02115

Office Phone ______________  Email lbeltz@neu.edu
Is this student research? YES ___ NO _____ If yes, please provide the following information:
Student Name _____ Jennifer Scheitler _____ Anticipated graduation date June 2015
Undergrad ___ MA/MS ___ PhD ___ AuD ___ EdD ___ DLP ___ Other Degree Type ___
College: Choose an item. College of Professional Studies
Department/Program  Education____
Full Mailing Address  2131 Colby Ave, Los Angeles, CA, 90025 __________________________
Telephone  310-339-1991___ Primary Email scheitler.j@husky.neu.edu
Cell phone  310-339-1991 secondary Email __________________________

B. Protocol Information
Title Assessing the impact of online orientation activities on self-efficacy for online learning in community college students.

Projected # subjects _24___
Approx. begin date of project August 15, 2014 ___ Approx. end date December 20, 2014 ___

It is the policy of Northeastern University that no activity involving human subjects be undertaken until those activities have been reviewed and approved by the University's Institutional Review Board (IRB).

• Anticipated funding source for project (or none) _____ None
Has/will this proposal been/be submitted through:
  • NU's Office of Research Administration and Finance (RAF) ______
  • Provost ______
  • Corp & Foundations ______

C. Will Participants Be:          Yes  No  |  Does the Project Involve:        Yes  No
Children (<18)                   ______  X  |  Blood Removal?  ______  X
Northeastern University Students? ______  X  |  Investigational drug/device? ______  X
Institutionalized persons? ______  X  |  Audiotapes/videotapes? ______  X
Prisoners?                      ______  X  |
Cognitively Impaired Persons? ______  X  |
Non or Limited English Speaking Persons? ______  X  |
People Living outside the USA? ______  X  |
Pregnant Women/Fetuses? X
Other? (Please provide detail)

Please answer each of the following questions using non-technical language. Missing or incomplete answers will delay your review while we request the information.

D. What are the goals of this research? Please state your research question(s) and related hypotheses.

This study seeks to understand how students are impacted by participation in an orientation for online learning. The overarching research question that guides this study is: How does participation in an orientation course for online learning impact self-efficacy for the cognitive and technical skills that contribute to success in virtual classes?

The subquestions will address:
How do different components of an online orientation course for online learning have on self-efficacy?
How do cognitive and technical skills learning in an online orientation course contribute to self-efficacy?

E. Provide a brief summary of the purpose of the research in non-technical language.

The purpose of this research is to identify the activities in an online orientation course that impact the self-confidence of students to succeed in online learning. The intention is to help course designers create orientation courses that will have the most impact on student self-efficacy for the skills identified in the research as most useful for online learning success.

F. Identify study personnel on this project. Include name, credentials, role, and organization affiliation.

Jennifer Scheitler, student, Northeastern University Doctoral Program in Higher Education, lead researcher, employed at the University of California, Los Angeles. Ms. Scheitler will conduct the interviews, transcribing, data coding, analysis, and report writing.
Dr. Lynda Beltz, professor, Northeastern University. Dr. Beltz will serve as an advisor on all aspects of the project.

G. Identify other organizations or institutions that are involved. Attach current Institutional Review Board (IRB) approvals or letters of permission as necessary.

Richland Community College, Decatur, Illinois
Coastline Community College, Fountain Valley, California

H. Recruitment Procedures

Describe the participants you intend to recruit. Provide all inclusion and exclusion criteria. Include age range, number of subjects, gender, ethnicity/race, socio-economic level, literacy level and health (as applicable) and reasons for exempting any groups. Describe how/when/by whom inclusion/exclusion criteria will be determined.

In this study, the population will be all first-time college students participating in an online orientation class. Other characteristics of the students (demographics, field of study, etc.) are not central to the impact the findings of the study, and therefore will not be considered in the sampling frame. The researcher reserves the right to conduct analysis by characteristic (ex. age or gender) if analysis reveals significant differences to be noted.

Study participants will be recruited from multiple institutions. A sample will be drawn from a community college in California (School A) that offers the majority of their courses in an online format, and offers an optional elective course in online learning. Another sample will be drawn from a community college in Illinois (School B) that offers online courses. All students enrolling in online courses must complete an orientation before being given access to their course. The purposeful sample will be drawn from students who have completed an orientation for online learning course in the most recent term. The universe of participants will all students enrolled in the any section of the course. The total number of participants from each institution will be 24. (NA = 12, NB = 12).

Describe the procedures that you will use to recruit these participants. Be specific. How will potential subjects be identified? Who will ask for participation? If you intend to recruit using letters, posters, fliers, ads, website, email etc., copies must be included as attachments for stamped approval. Include scripts for intended telephone recruitment.

Participants will be recruited by email from a list of recent enrollees in the online orientation course. (Text of invitation in Appendix X.) Participation will be voluntary. Instructors will be asked to encourage participation in the study. (Text of request in Appendix X.)

What remuneration, if any, is offered?

All students will be offered a $10 gift certificate for participation.

I. Consent Process

Describe the process of obtaining informed consent*. Be specific. How will the project and the participants’ role be presented to potential participants? By whom? When? Where? Having the participant read and sign a consent statement is done only after the researcher provides a detailed oral explanation and answers all questions. Please attach a copy of informed consent statements that you intend to use, if applicable. Click here for
If your study population includes non-English speaking people, translations of consent information are necessary. Describe how information will be translated and by whom. You may wait until the consent is approved in English before having it translated.

The initial invitation email will include a copy of the informed consent form, along with a description of the study and the process for their participation. The invitation will be sent from the online program administrator on the completion of the orientation course. The students will be provided contact information to make any inquiries and sign-up to participate. The participant will be contacted for scheduling, and given an expanded explanation of the study and an opportunity to ask questions. An interview will be tentatively scheduled and confirmed once the signed consent form is received. The interviews will only be offered in English, so no translations will be required.

If your population includes children, prisoners, people with limited mental capacity, language barriers, problems with reading or understanding, or other issues that may make them vulnerable or limit their ability to understand and provide consent, describe special procedures that you will institute to obtain consent appropriately. If participants are potentially decisionally impaired, how will you determine competency?

N/A

*If incomplete disclosure during the initial consent process is essential to carrying out the proposed research, please provide a detailed description of the debriefing process. Be specific. When will full disclosure of the research goals be presented to subjects (e.g., immediately after the subject has completed the research task(s) or held off until the completion of the study’s data collection)? By whom? Please attach a copy of the written debriefing statement that will be given to subjects.

N/A

J. Study Procedures

Provide a detailed description of all activities the participant will be asked to do and what will be done to the participants. Include the location, number of sessions, time for each session, and total time period anticipated for each participant, including long term follow up.

The study will consist of semi-structured interviews scheduled to last an hour. Interviews will be conducted by video chat with screen capture software (ie, Camtasia) recording the sessions. The procedure will be recorded on the researcher’s personal computer, which is password protected.
Who will conduct the experimental procedures, questionnaires, etc? Where will this be done? Attach copies of all questionnaires, interview questions, tests, survey instruments, links to online surveys, etc.

The student researcher will personally conduct all study interviews. The interviews will be conducted via video conference and recorded on the researchers computer.

K. Risks

Identify possible risks to the participant as a result of the research. Consider possible psychological harm, loss of confidentiality, financial, social, or legal damages as well as physical risks. What is the seriousness of these risks and what is the likelihood that they may occur?

Volunteers will be notified that while there is no significant risk or direct benefit to them for participation, they may experience personal enlightenment into their own learning skills and gaps. There is a small risk that the student may feel that they are unprepared for online learning, or may realize they have significant self-efficacy for online learning.

Describe in detail the safeguards that will be implemented to minimize risks. What follow-up procedures are in place if harm occurs? What special precautions will be instituted for vulnerable populations?

Any risk of self-enlightenment due to participation in the study is unlikely to be communicated to the researcher. If, however, a participant does communicate any feelings of unpreparedness to the researchers, she will recommend they seek additional assistance from the head of the online learning program at their institution to address the areas in which they feel they remain unprepared.

L. Confidentiality

Describe in detail the procedures that will be used to maintain anonymity or confidentiality during collection and entry of data. Who will have access to data? How will the data be used, now and in the future?

The list of participants will be randomized, then assigned numbers. When coding the information participants will be identified by number, which will be matched to a pseudonym to be used in any written pieces. The list of participants and matched numbers will only be in the researcher file. The list of numbers matched to pseudonyms will be in a separate file. All materials will be housed in a home office. The researcher’s dissertation committee may request
access to the de-identified data. Once the dissertation is complete, the original names of the participants will be erased from the files.

How and where will data be stored? When will data, including audiotapes and videotapes, be destroyed? If data is to be retained, explain why. Will identifiers or links to identification be destroyed? When? Signed consent documents must be retained for 3 years following the end of the study. Where and how will they be maintained?

Data will be stored on the researcher’s password protected computer. Handwritten and printed materials will be kept in a locked file drawer at the researcher’s home. Signed consent forms will be in yet another locked location, along with a list of participant identifiers and their pseudonyms. (Copy of Consent Form in Appendix X.) Files with recorded interviews will be de-identified. Only de-identified data will be shared with other researchers or dissertation committee members, as necessary. Data will be entered in an Excel file, then uploaded to a TBD data analysis program. Files will be destroyed after 5 years.

M. If your research is HIPAA-protected, please complete the following;
   Individual Access to PHI

   Describe the procedure that will be used for allowing individuals to access their PHI or, alternatively, advising them that they must wait until the end of the study to review their PHI.

   N/A

N. Benefits

   What benefits can the participant reasonably expect from his/her involvement in the research? If none, state that. What are potential benefits to others?

   There are no direct benefits for participants; however, they may experience self-enlightenment on their own and either feel a higher sense of self-efficacy for online learning, or identify areas in which they still feel un- or under-prepared. Program administrators can benefit from the information gained in this study as to what activities have an impact (positive or negative) on students in an orientation program. Results can inform course design. Future students in an orientation program will benefit from improved course design.

O. Attachments

   Identify attachments that have been included and those that are not applicable (n/a).
Copy of fliers, ads, posters, emails, web pages, letters for recruitment *
Scripts of intended telephone conversations*
Copies of IRB approvals or letters of permission from other sites
Informed Consent Form(s)* (see our templates for examples)
Debriefing Statement*
Copies of all instruments, surveys, focus group or interview questions, tests, etc.
Signed Assurance of Principal Investigator Form (required)
NIH Human Subject Training Certificate(s) (required if not already on file at HSRP)
*(Approved forms must be stamped by the IRB before use)

P. Health Care Provision During Study

Please check the applicable line:

__X__ I have read the description of HIPAA “health care” within Section 4 of the Policies & Procedures for Human Research Protection. I am not a HIPAA-covered health care provider and no health care will be provided in connection with this study.

_____ I am a HIPAA-covered health care provider or I will provide health care in connection with this study as described in Section 4 of the Policies & Procedures for Human Research Protection. This health care is described above under “Study Procedures,” and the Informed Consent and Health Information Use and Disclosure Authorization form will be used with all prospective study participants.

If you have any questions about whether you are a HIPAA-covered health care provider, please contact Nan C. Regina, Director, Human Subject Research Protection at n.regina@neu.edu or (617) 373-4588.

Completed applications should be submitted to Nan C. Regina, Director, Human Subject Research Protection with the exception of applications from faculty and students of the College of Professional Studies, which should be submitted to Kate Skophammer, IRB Coordinator for CPS.

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<th>Nan C. Regina, Director</th>
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<tr>
<td>Northeastern Univ., Human Subject Research Protection</td>
<td>Kate Skophammer, IRB Coordinator</td>
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<tr>
<td>360 Huntington Ave., Mailstop: 960 Renaissance Park</td>
<td>Northeastern Univ., College of Professional Studies</td>
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<td>Boston, MA 02115-5000</td>
<td>Phone: 617.390.3450; <a href="mailto:k.skophammer@neu.edu">k.skophammer@neu.edu</a></td>
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The application and accompanying materials may be sent as email attachments or in hard copy. A signed Assurance of Principal Investigator Form may be sent as a scan, via fax or in hard copy.