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# Strategies for Improving Student Performance in an Online Introductory Computer Course

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the review committee have been made.

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Abstract

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MA, Nova University, 1990

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Doctoral Proposal Submitted in Partial Fulfillment

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## Abstract

The failure rate for students enrolled in the online sections of a gateway course, Introduction to Computers, was 15% higher than for students enrolled in the face-to-face sections at a rural community college in the southeastern United States. The computer course is required by all of the college's programs of study to obtain an associate degree. Failure to complete the gateway course increases attrition, time to graduate, and educational expenses. Guided by Bruner's constructivist theory, which maintains that students are active learners who construct their knowledge, the purpose of this qualitative study was to examine the perceptions of students and teachers that might explain the gap in performance in the online sections, and to use the results of this study to identify strategies to improve online student performance. This qualitative study incorporated semistructured interviews with a randomly selected sample of 8 online students who completed the course and with the 2 online instructors. Perceptions of the students and instructors were coded to identify and analyze emerging themes. The findings revealed that online students procrastinated and had difficulty completing assignments. Suggested strategies to meet challenges were better preparation for online learning and study skills including time management. This study included developing a 3-day professional development project to enhance online instructional techniques and learning strategies to promote student time management skills, grades, and course completion. This study and project promote positive social change by providing a deeper understanding of strategies that could improve student performance. The study findings will be beneficial to teachers, students, and course administrators.

# Strategies for Improving Final Grades in an Online Introduction to Computers Course

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# Dedication

This study is dedicated first and foremost to my Heavenly Father, His Son Jesus Christ, and the Holy Spirit, who made this possible. Special appreciation goes to my husband Lee, and daughters Denisha and Malia for their support. I further would like to extend my appreciation to my family, Terry and Lisa Little for prayers and in memorial to my mother, Mrs. Bettie Colson, who taught me that education was the key to helping others.

"For I know the thoughts that I think toward you, saith the LORD, thoughts of peace, and not of evil, to give you an expected end" (Jeremiah 29:11).

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## Introduction

Academic leaders view online learning as critical to the long-term strategic mission of their institutions and recognize the importance of online learning to their institutional growth (Bichsel, 2013). Increased enrollments in online learning initiatives have helped some institutions recover from the recession and can ensure future streams of revenue. The increased access to online learning benefits students and the institutions (Bichsel, 2013). According to the National Center for Education Statistics (NCES, 2014), 5.5 million students were enrolled in distance education courses 2013 compared to 3.9 million students in 2007 (NCES, 2008); this represents a nearly 30% increase in online enrollment.

NCES's Integrated Postsecondary Education Data System (IPEDS), which collects and disseminates data from all institutions of higher education in the United States, reported 71% of public degree-granting institutions have some distance offerings (IPEDS, 2014). Allen and Seaman (2016) reported that 2.9 million students enrolled in higher education were taking all of their courses at a distance, while another 3 million students were taking some courses at a distance. NCES (2015) reported 7.4 million undergraduate students took at least one online class during the 2011–2012 academic year.

Belfield and Jenkins (2014) noted that colleges could reduce staffing costs by increasing the number of adjunct faculty to teach online courses. Online courses are also

cheaper than brick and mortar delivery, reducing construction, building maintenance, and parking costs (Young, 2017).

At the study site, Crisfield Community College (CCC), which is a pseudonym for the college in this study, class data reports reviewed by the director of institutional effectiveness revealed students in the online Introduction to Computers course were failing at a higher rate than their seated counterparts. Due to a shortage of staff, and other priorities, exploring causes of this phenomenon were unable to be accomplished by the department. Crisfield Community College has experienced a 300% increase in online course offerings since 2009 (CCC Office of Institutional Effectiveness, 2013). In this study, I examined student and teacher perceptions of student challenges and suggestions for ways to improve student pass rates in online courses.

## The Local Problem

Gateway courses are defined as introductory science, technology, engineering or math courses that students need in order to complete graduation requirements for a program of study (Smith, Schroeder, Romero, & Dueer, 2012). At CCC, students enrolled in the online gateway course, Introduction to Computers, are failing 15% or more than students enrolled in the face-to-face course in the academic years ranging from 2010–2014 (CCC Office of Institutional Effectiveness, 2017). Despite the use of updated course materials in both online and face-to-face sections of the course, students in the online course sections still receive lower final grades than students in the face-to-face classroom (CCC Office of Institutional Effectiveness, 2017). According to the director of institutional effectiveness at CCC, although nine online sections were added to

Introduction to Computers in 2012, no research has been done at CCC to investigate why the average pass rates of students in the online course remain lower than students in the face-to-face sections of the course.

Kotsiantis, Patriarcheas, and Xenos (2010) indicated that with an increase in distance education enrollment, there is a growing interest in understanding factors that predict student performance. Morris and Finnegan (2009) reported a need to research student online performance. Moreover, Xu, and Jaggars (2013) found a negative relationship between final grades in online courses and persistence in taking future online courses. The authors also reported that online students performed worse overall in coursework than their seated counterparts.

More colleges are offering computer technology courses online. In a national study on online education, Allen and Seaman (2011) recorded an increase in enrollment in computer courses offered online. Examining and understanding how factors on the local level contribute to online students' low performance rates in the Introduction to Computers course resulted in the identification of strategies to improve student performance in the online version of the course.

## Rationale

### Evidence of the Problem at the Local Level

At CCC, in the online section of the Introduction to Computers, students have received lower final grades than those students in the face-to-face course. I designed this study to examine the student and teacher perceptions of the strategies to improve the gap in student performance in the online mode of delivery. The course is a graduation

requirement for all students in the college regardless of their program of study. The setting for the study was a rural community college in the southeastern United States. It is important to study this problem, because offering the course online makes the course more accessible to working students and those unable to attend a face-to-face class.

Due to the busy schedules of adult learners, many prefer online courses because they reduce the need to travel to and sit in brick-and mortar-classrooms. Consequently, it is essential that the college provide students at a distance with the same opportunities to achieve as students on campus. Further study of the problem is needed, because the Southern Association of Colleges and Schools (SACS), the accrediting body of higher education for the community college in this study, requires that distance education courses reflect the same educational outcomes and methodologies as face-to-face courses in course content and pedagogical function (SACS, 2013).

Distance learning course offerings at the college have increased by 300% since 2009 (CCC Learning Plan, 2012). The trend is even greater in the state system, in which there has been a 769% increase in online course offerings by community colleges since 1998 (CCC System Data Warehouse, 2013). Table 1 shows the percentage of students pass rates in the face-to-face and online sections of Introduction to Computers Science from Fall 2010 to Fall 2014. In Fall 2010, with a total enrollment of 135 students in seven course sections, 79% of students in the face-to-face course scored a C or better, while 63% of students in the online course, with a total of 205 students in nine course sections, scored a C or better in final grades (CCC Class Data Report, 2012). In Fall 2011, there was a further drop in student pass rates in both sections, with 77% of students in the face-

to-face course achieving a final grade of C or higher across seven course sections, compared to 61% of students in the online course across course sections achieving a final grade of C or higher (CCC Class Data Report, 2012). By 2012, only 52% of students in the online sections, 136 out 233 students, passed with a final course grade of C or better (CCC Class Data Report, 2012).

Table 1

*Students Fall-Semester Pass Rates in Introduction to Computers*

| | Year | | | | |
|---|---|---|---|---|---|
| Class type | 2010 | 2011 | 2012 | 2013 | 2014 |
| Seated | 79% | 77% | 71% | 70% | 75% |
| Online | 63% | 61% | 52% | 60% | 55% |
| Difference | -16% | -16% | -19% | -10% | -20% |

In the fall of 2013, 70% of 250 students in the face-to-face course passed with a C or better, while 60% of 228 students in the online course passed with a C or better (CCC Class Data Report, 2014) reflecting a difference in final grades. In the fall of 2014, 75% of 253 students in the face-to-face course passed with a C or better, while 55% of 200 students in the online course passed with a C or better (CCC Class Data Report, 2015).

The CCC Distance Learning Strategic Plan (2013-2018) concluded that distance education courses must provide learners the opportunity to develop lifelong skills for learning. According to the 2012-2013 Continuous Improvement Distance Learning Plan at CCC, online courses should effectively help students to achieve the skills, abilities, and

knowledge needed related to course outcomes (CCC, 2013) and that course outcomes in either learning modality are identical. It is important to provide students in online learning environments learning experiences that are reflective of those in face-to-face environments. The purpose of this study was to investigate student and teacher perceptions that might explain the gap in student performance in the online course, and to identify strategies to improve online student success.

**Evidence of the Problem from the Professional Literature**

Students are less likely to complete an online course with a passing grade than students in face-to-face courses, and online course pass rates were found to be 11 to 14% lower than face-to-face course pass rates (Johnson & Mejia, 2014). Other studies have also shown lower pass rates for online students (Alpert, Couch, & Harmon, 2015; Figlio, Rush, &Yin, 2013) compared to face-to-face students enrolled in an introductory course. Gregory and Lampley (2016) also noted that students in online courses fail at higher rates than those in face-to-face courses. Failure to pass an online course can also delay a student's progression in a program of study. Smart and Saxon (2016) found online students enrolled in a developmental English course receiving a final grade of D or F prevented students from entering into the regular college English course. These studies clearly indicate evidence of higher failure rates in online compared to seated courses.

## Definitions

*Crisfield Community College (CCC):* A pseudonym for the college in this study

*Delivery:* The layout, content, and activities within a course in which student and faculty feedback can be used to improve future course offerings and development (Abdous & Wu, 2008).

*Face-to-face course:* A face-to-face classroom in which direct contact, immediate feedback, and interaction occur between the student and instructor (Milheim, 2011).

*Gateway course:* Introductory courses that students must pass in order to complete graduation requirements for a program of study (Smith et al., 2012).

*Online course:* Any course that is offered exclusively over the Internet (Rukobo, Penfold, Adler, Larson, & Peterson, 2012).

## Significance

Students who fail the Introduction to Computers course are less likely to graduate on time, obtain employment, and more likely to increase student loan debt. Belfield et al., (2014), in exploring characteristics of early community college dropouts, noted a 61% failure rate in community college students enrolled in an online Introduction to Computer course. Students who fail gateway courses are more likely to drop out of college (Belfield et al., 2014). This study is significant for students, the college, the community, and business and industry stakeholders. For degree seeking students at CCC, the Introduction to Computers course is required in order to graduate from any program of study. Therefore, all students must successfully pass the course. The local college must provide students with technology skills sets in order to prepare them for the workforce. Wilson,

Scalise, Gochyyev (2015) and Levine- Goldberg (2014) concurred: teaching technology and technical skills to students must be one of the top goals in 21st century education.

The results of this study will provide a basis for recommended strategies to improve student pass rates in the Introduction to Computers course online. The local college may also benefit by developing strategies to support student pass rates in the online course: Students may obtain their degree earlier and incur less tuition cost; the college might increase revenue by increasing enrollment, retention, and graduation rates. Additionally, effective strategies could also result in an improved reputation for the college as a whole within the community. An increase in community college graduates can also meet the demand of job markets in the college service area.

In the local community, business and industry stakeholders seek qualified, degreed applicants for better employment opportunities. Farrugia and Sanger (2017) and Holt and Brockett (2012) noted 21st century employers seek and hire persons with computer literacy and technology skills. Education plays a role in family income, with college graduates earning higher income compared to non-college graduates (Pew Charitable Trust, 2013). With a technology-educated, qualified workforce, a local chamber of commerce and industrial recruiters can provide information needed to potential industries seeking to locate in the county service area. Economically, higher paying jobs provide a better quality of life for families, increases a demand and supply of goods in the local area, and provides a more stable tax base in the community as a whole, as a variety of industry, business, and services are offered.

## Research Questions

The guiding research question for this study was: What are student challenges and suggestions for improvement in online Introduction to Computers classes? Sub-questions for this study were:

1. What are teachers' perceptions of student challenges that contribute to lower pass rates in online classes?
2. What are teachers' suggestions for ways to improve student pass rates in online courses?
3. What are students' perceptions of student challenges that contribute to lower pass rates in online classes?
4. What are students' suggestions of ways to improve student pass rates in online courses?

## Review of the Literature

I accessed a variety of databases via the Walden University Library in my literature review. These sources included Education Complete, ERIC, Sage Premier, ProQuest Central, and Google Scholar. Key words or phrases used to locate literature relevant to the study included: *student achievement, community colleges, 2-year colleges, online learning, distance education, online versus face-to-face, web-based, student performance, final grades, seated, traditional face-to-face, online education,* and *eLearning.* The search was limited to sources from 2010-2018, except for seminal studies on the conceptual framework and online learning. I focused on student performance in online and face-to-face courses, growth in online education, online learning in rural

community college settings, and factors related to student pass rates in online learning. The literature review includes a variety of research that relate to the local problem.

Bowen, Chingos, Lack, and Nygren (2012) stated online learning deprives students of educational opportunities, and the quality of online courses lack value. According to the authors, more research is needed to study how students acquire knowledge and skills in online learning. Baran and Correia (2014) noted faculty that teach online were still uneasy about teaching and learning practices. Arkorful and Abaidoo (2015) reported that online learning is less effective than face-to-face learning, and the learning process is much easier in face-to-face instruction. Shea and Bidjerano (2014) concluded that distance or online undergraduate students have lower graduation rates than face-to-face students. In science, technology, engineering and math courses (STEM) Wladis, Hachey, and Conway (2013) noted higher attrition rates in online versus seated courses, thus identifying a need to identify factors that may impact STEM student pass rates in the online environment.

Although online course offerings and programs can be attributed to increased enrollment and revenues for community colleges and 4-year institutions, student pass rates in online learning must be researched to identify challenges and maintain continuous improvement in online learning. Helms's (2014) study of students in a psychology course required to be completed by psychology majors offered online and face-to-face, noted students in the face-to-face courses had higher pass rates than students online. Additionally, 46% of the online students in Helm's study would have had to retake the course for it to count toward the psychology major compared to 16% of the

face-to-face students. Atchley, Wingenbach, and Akers (2013) and Emerson and Mackay (2011) noted differences in performance and completion of online and face-to-face students in courses and coursework, concluding that face-to-face students out perform their online counterparts. These and other studies establish the need to further research lower student performance in the online mode of course delivery.

**Conceptual Framework**

The conceptual framework for this study was Bruner's constructivist theory. Bruner believed close support should be offered to students as they developed skills, knowledge, and expertise in their coursework (Bruner, 1966). Furthermore, the constructivist teacher, by offering appropriate task and opportunities for dialogue, guides the focus of student attention, thus directing their learning (Bruner, 1986). As students integrate learning with the teacher, peers, and course materials, construction of knowledge occurs.

Bruner's constructive theory was an appropriate framework for this study because the learning environment and student success are connected by perceptions, interactions, and experiences. The process of applying Bruner's theory within the conceptual framework was discovered by obtaining the perceptions of students and teachers as it relates to challenges, tasks and opportunities in the online course. Therefore, using Bruner's constructive theory as a framework for this study is appropriate. Bruner (1971) also formulated a process of discovery learning. Bruner suggested that regardless of the mode of instruction, learning must be socially and personally relevant to students. In this study, I addressed student perceptions of online learning that entails information that will

be relevant for students who enroll in the online Introduction to Computer Course in the future. How students construct their knowledge will also be a factor for implications of performance in the online course.

As an instructor of online students, I find students who are engaged socially through instructor and peer interactions during the semester are more successful than those who are not. Building multiple learning opportunities for students provides a framework toward successful student achievement.

I discovered student and faculty perceptions of challenges in the Introduction to Computers course, and strategies that can be used to increase students' pass rates in the course. Using semi structured interviews allowed me to collect data that can be used to gain a deeper understanding and insight into the local problem.

The following presentation of literature reflects recent growth in online education, factors that influence students to take classes online, student perceptions of online learning, faculty perceptions of online learning, performance differences by modality, and differences between rural and other types of community colleges.

**Review of the Broader Problem**

This section includes six categories based on the problem that was studied. The categories include: (a) recent growth in higher education, (b) factors that influence students to take classes online, (c) student perceptions of online learning, (d) faculty perceptions of online learning, (e) performance differences by modality, and (f) differences in performance in rural community colleges online. I conducted a review of the literature for each category that provided further evidence for this study

**Recent growth of online education.** Higher education has experienced an upsurge in online course offerings from 2008-2013 due to increased online course offerings and the busy schedules of adults (Allen & Seaman, 2013). Due to budget constraints, colleges have been asked to do more with less. Societal demands of work, families, and schedules have attracted students to online learning (Allen & Seaman, 2010). These modes of coursework offer flexibility and convenience for the busy adult. This research in online education lead to a review of the literature that reflects varying results when comparing student performance in face-to-face and online courses. Xu and Jaggers (2013) reported in 2008 that 66% of all postsecondary institutions offered courses online, compared to 97% of 2-year colleges offering online courses. The study further indicated that student failure rates in math and English courses were significantly higher in online sections of the courses. Allen and Seaman (2010) reported that as the economy decreases, student enrollment in online courses increases. According to the report, almost two-thirds of the institutions of higher education surveyed reported enrollment in online courses was greater than the previous year for both profit and nonprofit institutions.

Although online learning provides additional revenue for community colleges and increases enrollment, community college presidents noted a decrease in budgets can be problematic, increasing the teaching workload of faculty, without hiring additional faculty to support the increase in enrollment (Ashburn, 2009). As competition has become prevalent in the job market, competition has also become prevalent in the marketing mechanism of online learning. Moloney and Oakley (2010) found in a study of online learning that two tiers—national and local—were in competition of marketing

online course offerings and programs. For example, the University of Massachusetts at Lowell initially began online course offerings in 1996. Three years after the course offerings began, online student enrollment increased by 50 to 100%, generating revenue of $8,000,000 for the institution (Moloney & Oakley, 2010). The program was also credited with meeting a critical need for the workforce of the institutions' service area.

Allen and Seaman (2014) reported that online education is becoming more important in the United States. In this study, 70.8% of academic leaders stated that online learning is crucial to an institutions' long-term strategy compared to 48.8% of leaders' beliefs in online education's importance to an institution in 2002. Furthermore, an increase in online education occurred in 4-year public institutions by 124,824 students at a 7.2% growth rate, and private non-for-profit institutions by 86,811 or 12.7% in 2014 (Allen & Seaman, 2014).

Community colleges must strategize ways for students to be successful in online learning environments. Liu, Gomez, and Yen (2009) contended that it is important for community colleges to develop efficient processes for online students to recognize, create, or acquire the necessary tools to pass an online course. Park and Choi (2009) in a study of persistence in online learning, concluded that significant differences in views of student contentment, gratification, and importance of course achievement are major factors in whether a learner remains in an online program. Additionally, the researchers stated that persistence in online courses occurs when students can use knowledge gained from the course, which in turn further motivates and satisfies students.

Jenkins (2011) noted that campus leaders at 2-year colleges are anxious to embrace online learning, noting it as "innovative," and is partially driven by a political view point of enrolling as many students as possible to take as many as online classes as possible. Regardless of the driving mechanism, an increase in online learning has occurred, which calls for further research of the phenomena of online learning.

**Factors that influence students to take classes online.** Convenience and flexibility are factors that contribute to students' enrolling in online courses (Aslanian & Clinefelter, 2013). Additionally, the authors found that 3.5 million students were currently pursuing a degree online, with the number projected to increase to 5 million students by 2020. Postsecondary institutions must acknowledge the needs of this group of learners due to the significant increase in the online student population.

Jaggars (2014) noted factors that influence students to enroll in online courses include suitability for learning styles, interpersonal interaction preferences, flexibility, and convenience for busy schedules. Additionally, students who live a long distance from campus expressed that online courses enable them to work in the comfort of their home and stay home during adverse weather conditions.

In a study on student perceptions of e-learning, Tubaishat and Lansari (2011) indicated that students experienced greater diversity than in face-to-face classes. Additionally, 78% of students surveyed thought that e-learning contributed to their learning experience and made it easier for them to learn (Tubaishat & Lansari, 2011). The Noel-Levitz National Online Learners Priorities Report (2014) listed convenience, flexible pacing, and work schedules as the top three factors in online student enrollment.

Harris and Martin (2012) reported work, family commitments, and distance from campus were factors that motivated students to take at least one online class.

**Student perceptions of online learning.** Gaytan (2015), in a study comparing faculty and student perceptions in online education, noted that students perceived increased online faculty presence in online courses as the single most important factor in retaining online students, with student-instructor interactions as the second most important factor. Another study by Luck and Rossi (2015) affirmed that online students perceive distance to be greatest when academic staff and students do not communicate, and without interaction, learners express a feeling of loneliness and isolation. Students perceive they are disconnected more in online than face-to-face courses, felt isolated, and experienced a decreased sense of community (Otter et al., 2013). In the online learning environment, isolation affects student learning, which could result in course failure or withdrawal rates.

Lowenthal, Bauer, and Chen (2015) utilized surveys to capture perceptions of online students and found positive perceptions of online instructors or instruction was rated lower than face-to-face instruction overall. Results of a 2012 study by the Bill and Melinda Gates Foundation found that student feedback promoted student achievement, which further indicated the need to research perceptions of students in online courses. Students' perceptions of positive psychosocial learning environments can lead to greater persistence and motivation to enroll in more online courses.

**Barriers to students' online success.** To promote success in online learning, barriers students face must be resolved. Bacow, Bowen, Guthrie, Lack, and Long (2012)

concurred in a study of barriers to adopting online learning systems that minimal data can be found that compares face-to-face to online learning outcomes. The study further stated that at some institutions online courses often fill up faster than face-to-face courses. A 2013 study of trends in eLearning at community colleges listed assessing online and student learning and performance as one of the barriers to online learning in this type of educational setting (Lokken & Mullins, 2014).

Regardless of the mode of delivery, students are less successful in online courses. Fetzner (2013) listed getting behind in coursework, personal problems, and the combination of work and family obligations as the top three reasons students were unsuccessful in online courses. Hart (2012) complied eight factors as to why students discontinued their online studies., which and concluded factors related with persistence need to be improved in order to apply evidence-based interventions in the phenomena characterized by the behavior, attitudes, and skills for a student to successfully complete an online course.

**Faculty perceptions of online learning.** Online learning is not perceived well by faculty who tend to not be involved in online courses (Lloyd, Byrne, & McCoy, 2012). Lloyd et al., (2012) found barriers perceived by online faculty as interpersonal, institutional, technological, and financial, which in turn, caused faculty to deter teaching online. Otter et al., (2013) concurred in a study of faculty perceptions in online and face-to-face courses, that faculty who teach online are more accessible to students than faculty that teach face-to-face courses, and that it takes more time for professors to teach online

than in face-to-face courses. Faculty strongly disagreed that better instructors teach face-to-face rather than online courses (Otter et al., 2013).

Madaus (2013), in examining perceptions of online faculty, found online planning and student interaction were the biggest challenge for instructors. Furthermore, the lack of non-verbal feedback from students and monitoring student understanding of the course material were also noted (Madaus, 2013). Transitioning from teaching face-to-face to online also has challenges. Faculty new to online teaching found developing an online course was more time intensive, and lacked compensation in terms of money, release time, and decreased teaching loads (Chiasson, Terras, & Smart, 2015). Comparatively, Betts (2014) posited non-distance faculty hesitate to teach online because of: (a) limited time and resources, (b) absence of support, (c) extra job responsibilities, (d) time-consuming, and (e) the anticipated online course development project falling through. Concerns about the quality of courses, students, faculty workload and equipment also inhibit faculty from teaching online (Betts & Heaston, 2015).

**Performance differences by modality.** Two-year and 4-year educational institutions are aware that differences occur in face-to-face and online modes of learning. According to a 2009 study from the U.S. Department of Education, in a review research on the topic from 1998-2008, students in online coursework performed better than those in face-to-face coursework (U.S. Department of Education, 2009). Wilson and Allen (2010) recorded a 65% variance in grade point averages with online students reflecting successful completion in an online management course more than students in face-to-face sections of the course.

In a comparison study of math course offerings in a face-to-face and online environment, Ashby, Sadera, and McNary (2011) found 59% of students in the face-to-face environment passed the course, with 65% of students in the online environment passing the course. Jaggars and Xu (2010) indicated the completion of student pass rates in English and developmental math course reflected an 85% pass rate in the face-to-face section, compared to a 74% student pass rate in the online course setting. Both studies indicated that varying degrees of student performance in different settings warrant further investigation.

Seemingly, there are factors that affect student's pass rates. A 2006 study by Friday, Friday-Stroud, Green and Hill (2006) showed that students in face-to-face business management and organization courses performed better than students enrolled in online sections of the course. During research for this study, women fared better in online business management courses than men in student performance, which thus leads to more study in this area (Friday et al., 2006).

Allen and Seaman (2010) reported that a slowdown in economic growth results in fewer employment opportunities and increases student enrollment in online courses. According to the report, almost two-thirds of the institutions of higher education surveyed reported enrollment in online courses was greater than the previous year for both profit and nonprofit institutions. Although online learning provides additional revenue for community colleges, in a 2009 survey of community college presidents, budget challenges also occur, which results in non-hiring of much needed faculty to cover enrollment increase. This in turn, causes an additional work load on existing faculty

(Ashburn, 2009). A regional study conducted by the Community College Research Center (2013) examined failure rates in online and face-to-face courses. The study indicated a 25% failure rate for students in the online math course, compared to a 12% failure rate in the face-to-face course (Jaggars, Edgecombe, & Stacey, 2013). Indicators of student failure rates in the "gatekeeper" English Composition course showed a 19% failure rate in the online course section, compared with a 10% failure rate in the face-to-face section. Research in this study also found that students in online sections courses were 3% to 6 % less likely to earn a C or better than students in face-to-face sections of a course (Jaggars et al., 2013).

Jaggars and Xu (2013), in a study on online student outcomes, reported that community college students in online courses performed worse than students in face-to-face courses. In some areas, online students do fare better than their seated counterparts. According to the results of a United States Department of Education (2009) meta-analysis of 1,000 online learning studies, students in online sections of courses scored higher than students in face-to-face sections.

Helms (2014) reported that 46% of the online students failed an Introduction to Psychology course compared to 16% of face-to-face students. In a national study on online education, Allen and Seaman (2011) recorded an increase in enrollment in computer courses offered online. Additionally, survey results from the study indicated that 9.8% of institutions stated online courses were inferior to face-to-face courses, while a 49.4% indicated that the courses were the same. Allen and Seaman (2013) in a national study that researched 10 years of online learning found a differing opinion amongst

institutions in comparing online learning outcomes to those in other course modalities. Academic officers were confident that online course learning outcomes were inferior to somewhat inferior in a survey conducted for this study from the years of 2003 through 2011 to those compared to face-to-face courses. The results of the study report a change of opinion amongst academic officers surveyed in 2012 (Allen & Seaman, 2013), with indicators of online course learning outcomes of inferior to somewhat inferior of 23.0 percent in 2013. Additionally, academic leaders acknowledged that online learning may not be suitable for all students (Allen & Seaman, 2012).

**Differences in performance in rural community colleges online.** Community colleges in rural areas support the cultural, intellectual, and diverse social practices in a community (Miller & Kissinger, 2007). Additionally, the authors concurred: poverty, lack of economic opportunities, and obtaining degrees in higher education are problems in rural areas. The United States Department of Agriculture (2007) defined a rural area as an unincorporated place with fewer than 2,500 inhabitants. Although rural areas share some common characteristics, information in various rural geographic locations can vary.

MacBrayne (1995) predicted an increase in distance education for rural community colleges due to advances in technology, computers, and telephone communication. Although there has been an increase in Internet usage nationwide, Cejda (2007) noted that fewer rural residents use the Internet than urban residents, citing factors such as age, demographics, income levels, and educational attainment contributing to the differences in Internet usage.

According to a 2012 American Community Survey conducted by the United States Department of Agriculture Economic Research Service, increasingly educated rural areas still lag behind urban areas in educational attainment, even among young adults. The study further cited that adults who live in rural areas attain a lower salary than their counterparts who reside in metro areas. College completion rates and income of families in rural areas were also suggested to contribute to the lack of enrollment in higher education in rural areas (Kusmin 2013).

Beasley and Holly (2013) noted that although online education expands curriculum and choice for rural students, many lack access to high-speed Internet services. In the same instance, low-income rural households are less likely to have a personal computer and broadband Internet, making access to online classes difficult (Beasley & Holly, 2013). Cejda (2007) asserted 86% of rural community colleges offer distance learning programs, however; all students do not have access to the technology needed to complete an online course. Despite these obstacles, rural community colleges are the fastest growing community colleges in the United States, comprising 64 percent of community colleges as a whole in the country (Nelson, 2010).

## Implications

At the local study site, students taking the course, Introduction to Computers, in face-to-face classes outperform those in online sections (CCC Class Data Report, 2012). Higher failure rates in this gateway course increase the time to graduate because the course is required by all degree programs in the college. The findings of this study may lead to the identification of strategies that could increase student pass rates in the online

sections of the course. Research results may also identify professional development strategies for faculty that could improve student success in the online sections of the course. The local professional development deliverable derived from this study could possibly be used at state and national conferences for college faculty. Findings may also help increase student retention, persistence, and satisfaction in the online version of the course. Finally, other academic areas may also utilize the findings to support success in online and face-to-face classes.

## Summary

Comparatively low pass rates in the Introduction to Computers course, which is required for all students, have been verified numerically and noticed by instructors and administration at a local rural community college. The literature indicates that the issue evident in this course has implications that extend beyond just Introduction to Computers, as failure in online courses can result in increased college costs, delayed student graduation, and higher attrition rates.

In Section 1, I introduced the local problem, the problem at the national level, the purpose of the study, the conceptual framework, and the review of the literature. In section 2, I will describe the methodology, research design and approach of the study. In section 3 of this study, I will indicate perceptions, challenges, and possible strategies to the local problem. In section 4 of this study, I analyze the findings, summarize conclusions, and provide implications for further research.

Section 2: The Methodology

## Introduction

At CCC, students in the online Introduction to Computers course fail at a higher rate than students in the face-to-face course. I developed the guiding research question to examine student challenges and suggestions for improvement in online Introduction to Computers classes. In this section, I discuss the justification of the research design, participant selection, data collection methods, data analysis, and methods to ensure protection of the study participants. I also discuss credibility, assumptions, and limitations of the study. Qualitative researchers study social phenomenon, and the feelings and perceptions of participants (Lodico, Spaudling, & Voegtle, 2010). Qualitative researchers also want to know how learning experiences and knowledge connect, and how participants express those experiences (Merriam, 2009).

## Qualitative Research Design and Approach

### Research Design

I used a qualitative research design approach to examine: (a) perceptions of online students in the Introduction to Computers course, and (b) faculty perceptions who teach the course online. Several researchers have concluded this design guides the researcher by his or her interest in the phenomenon, developing a clearer understanding of the department, person or institution involved (Hamilton & Corbett-Whittlier, 2013; Mills, Durepos, & Wiebe, 2010). Stake (1995) noted this approach involves collecting intricate data in the natural setting. By exploring the problem, the researcher learns more about the

uniqueness, breath, and depth of the problem instead of building theory (Mills et al., 2010).

A qualitative research study can be used to explore common perceptions, knowledge, and experiences of individuals (Atkins & Wallace, 2012; Farquhar, 2012), and can also be used when the researcher analyzes a phenomenon of events, people, periods, researching the how and why of an occurrence (Thomas & Myers, 2015). The experiences of students enrolled in the Introduction to Computers course aligned with their perceptions and knowledge of the course.

The qualitative study approach of Creswell (2012), Merriam and Tisdell (2016), and Yin (2014) supports a realistic account of phenomena within a group of individuals. In this study, I examined student and faculty perceptions of student performance in the online Introduction to Computers course. Data collection consisted of interviewing students and faculty. My study had 10 participants, which included online students and faculty who teach the course online. In qualitative research, a sample size is determined when studies of similar interest are reviewed by another researcher, and that sampling sizes are based upon the purpose and phenomenon of a study (Marshall, Cardon, Poddar, & Fontenot, 2013). Another aspect of qualitative research data collection is saturation. Saturation is significant in qualitative studies because it is the point when no new or relevant data collection information arises with respect to newly constructed theory (Nelson, 2017). Urquart (2013) and Givens (2016) noted that saturation occurs when the researcher has found that no new codes or themes emerge from data collection encompassing the quality and amount of information collected. In my study, saturation

occurred when similar responses were found among participants' answers to interview questions, and no additional data were obtained.

I reviewed other qualitative studies related to student performance in online learning to determine my target sample size for this study. Participants I chose were directly relevant to the study and representative of the population, thereby decreasing the number of participants I needed to efficiently reach saturation (Malterud, Siersma, & Guassora, 2015). Using a qualitative research study enabled me to address the research questions and gain an understanding of students' experiences; students who have completed the Introductions to Computer course online, and faculty who teach the course online.

**Selection of Qualitative Research Design**

I selected the qualitative research design for my study based on the local problem and guiding research questions. First, qualitative research offers rich information when investigating an unexplored phenomenon and provides actual words from subjects involved in a particular event utilizing open-ended questions (Guest, Namey, & Mitchell, 2013; Hanley, Lennie, & West, 2013). Secondly, qualitative research provides a deeper understanding of an occurrence in which the researcher obtains knowledge of the research design that finalizes the study (Pernecky, 2016). Lastly, qualitative research interprets actions, events, and their relationships (Brinkmann, 2012). Furthermore, by selecting the qualitative design for this study, I was able to research student and faculty experiences in the online Introduction to Computers course, and discover themes related to students who take the course online.

There are several approaches in qualitative research that I considered using but ultimately determined they were not suited to my needs. These approaches included grounded theory, ethnography, and phenomenological designs. Additionally, quantitative and mixed methods designs were also considered, but did not meet my needs.

**Grounded theory.** In a grounded theory approach, the researcher develops a new theory based on informed data used in the study (Creswell, 2009). I reviewed the perceptions of students who have completed the course online, and teachers who have taught the course online instead of creating a new theory. A grounded theory approach was unsuitable for this study.

**Ethnography.** In the ethnography approach, a researcher studies the culture, community, and its influences on particular events (Bloomberg & Volpe, 2012). Ethnography involves the research as a central figure (Coghlan & Brydon-Miller, 2014). Therefore, I concluded that this design was not appropriate.

**Phenomenological approach.** A phenomenological approach asserts a foundation of the experience encompassed in intense human experiences such as love, anger, and betrayal (Merriam, 2009). Additionally, Merriam (2009) explained that previous assumptions about an occurrence are out of the way, removing intrusion from seeing the elements or structure of the phenomenon. Based on these attributes, this approach was not suited for this project study.

**Quantitative and mixed method designs.** I also considered quantitative and mixed-method designs, but decided they were not well-suited for my design because quantitative research employs the use of numbers within statistical data to reach a

conclusion that disaffirms or affirms hypotheses; this separates the researcher from the context of the problem (McCusker & Gunaydin, 2015). Mixed methods research design criteria include both quantitative and qualitative methods at the same time and compensate for the weakness of one approach with another (Venkatesch, Brown, & Bala, 2013). Neither quantitative nor mixed designs were suited for this study because there is no basis for statistical hypotheses testing. Qualitative data generated for this study provided a basis for future statistical analysis used in both quantitative and mixed designs.

## Pilot Study

To test the trustworthiness and appropriateness of the research questions, I conducted a pilot study. I compared the student answers with the questions to alleviate biases, and to make sure students interpreted questions correctly. I gained approval from Walden University's Institutional Review Board (IRB) and CCC's Institutional Review Board (IRB), to conduct the pilot study, which allowed time for me to make adjustments that were needed prior to the start of the actual study. Doody and Doody (2015) noted a pilot study helps a researcher further investigate how data analysis and data collection are used in an actual study.

Participants in the pilot study were not selected for the actual study. All students who completed the pilot study concerning the Introduction to Computers course online were asked the same interview questions. All faculty that teach the course online were asked the same interview questions. Additionally, a pilot study also allowed me time to

review the interview questions and revise those questions if needed to assure that too much or too little data is collected in the actual study.

## Participants

The participants in my study consisted of online students in the Introduction to Computers course and instructors. Figure 1 shows the participant organization. Participants included students who completed the course online, and faculty who teach the course online with 3 or more years of teaching experience.

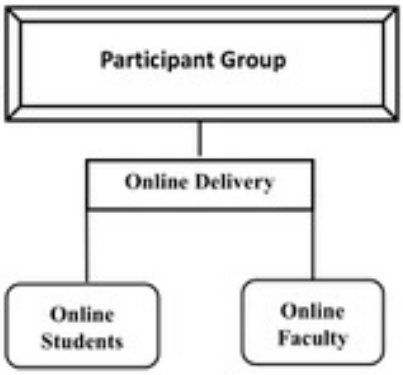


*Figure 1.* Research study participant groups.

### Criteria for Selecting Participants

**Students.** The selection criteria consisted of a two-stage process. In Stage 1, I selected all online students who were in Introduction to Computers course in the academic year 2017-2018 outside of the education program in which I teach, to avoid conflict of interest, and in order for students to not feel coerced to participate in the study. An email invitation to participate in the study was sent to the students by CCC Office of Institutional Effectiveness. Using purposeful sampling added credibility to the study (Patton, 2001). Purposeful sampling allows the researcher to understand, discover, and

gain insight from the information of persons who have things in common (Houghton, Casey, Shaw, & Murphy, 2013; Merriam & Tisdell, 2016).

In Stage 2, I used simple random sampling to select eight students from the population identified in stage one who wished to participate in the study. In the event more students needed to be added, I would have repeated the random sampling to add the required number of students. Upon receiving the students' responses to participate in the study, I arranged a date, time, and location for a one-on-one interview.

Bernard (2002) and Spradley (1979) found purposeful sampling also confirms the willingness and opportunity for participants to share experiences openly. Creswell (2012) noted homogenous strategies in purposeful sampling, like I used, enables the researcher to select specific characteristics of specific identifiable groups, and examine those groups in more detail.

**Faculty.** Faculty with 3 years or more of online teaching experiences were selected using criterion sampling for the study. Patton (2001) indicated this type of sampling adds credibility and robust information to a study. The characteristics of the faculty added relevance to the study's research questions (Merriam & Tisdell, 2016). At CCC, only two faculty members met the criterion. Faculty volunteered as participants in the study and were interviewed. Faculty with 3 or more years of online teaching experience were asked to participate in the study since they have prior knowledge of how the course is taught, how students can be successful in the course, and were not new to teaching. An invitation to participate in the study was emailed to faculty by CCC Office of Institutional Effectiveness. Once faculty had agreed to participate, a location and time

were arranged for one-on-one interviews. The perceptions of faculty participating in this study suggested challenges and suggestions for strategies to promote higher course completion and graduation rates among online learners in the Introduction to Computers course.

Sharing this knowledge with other online instructors at the study site that teach other online courses may provide instructional strategies that build upon successful engagement of online learners. Instructors new to teaching online may adopt these strategies to enhance online pedagogy. For more experienced instructors, these strategies may provide innovative ways that will lead to the success of online learners.

**Justification for the Number of Participants**

In this study, I interviewed eight students who were enrolled in the online Introduction to Computers course. Saturation occurred when new points or new themes had been exhausted, and rich, quality information had been gathered from participants (Fusch & Ness, 2015). In the event that saturation had not been reached, the sample size would have increased.

Interviews were one-on-one and semi structured. The names of all interviewees remain confidential. Interviews provided a method of data collection in qualitative studies (Creswell, 2012; Merriam, 2009). Interviews provided answers I would be unable to obtain by other means and allowed me to actively communicate with the participants. To enable a deeper exploration of the problem and potential solutions, a smaller number of participants were used.

Two faculty who taught the course online and met the criterion of teaching three years or more online were invited to participate in the study, as they are the only full-time faculty who teach the course online at CCC. Eight students in the course online were selected for interviews using a random online generator selection tool. In qualitative research, random purposeful sampling is used as people are selected and studied to gain detailed and specific information concerning a situation (Yilmaz, 2013). Using purposeful sampling ensures the experiences of various participants included in the study (Patton, 2001).

**Gaining Access to Participants**

A letter of cooperation was used to grant permission to conduct the study and gain access to participants at the local site (Appendix B). The letter of cooperation explained the purpose of the study, described participants in the study, and how the findings of the study could benefit CCC. Upon receiving approval from the CCC's IRB (IRB Approval Number 04172018), the Office of Institutional Effectiveness at CCC emailed an invitation letter to the students-to invite their voluntary participation in the study (Appendix C). The email contained the purpose of the study, my role as researcher, benefits of participating in the research, possible risks, guarantee of confidentiality, and explaining the option to end participation at any time. The letter also indicated that participants were able to schedule a date and time to meet with me for the interview, which lasted 30 minutes. Students completed the CCC informed consent for participation in research activities form and returned the form to me prior to the scheduled interview.

Interview protocol (Appendix E) for students was followed. Interview questions for online students were used for the study (Appendix F).

Using criterion sampling, faculty were selected to participate in the study with 3 years or more of online teaching experience. Once selected, CCC's Office of Institutional Effectiveness emailed faculty an invitation to participate in the study following the same guidelines listed above for student participants (Appendix D). The Faculty Interview Protocol (Appendix G) was used with faculty interviews. Interview questions for faculty who teach online were used (Appendix H).

**Establishing Researcher-Participant Relationship**

Although I have experience as an online and face-to-face instructor in another discipline, my role as a researcher was to be objective and unbiased. Respecting the confidentiality and privacy of the participants enabled me to establish a rapport with participants (Lodico et al., 2010). My role as a researcher also included collecting, analyzing, and interpreting the data. It is also important that my research was conducted without any preconceptions of past online instructional experiences to add credibility to the study.

**Protecting participants' rights.** Flick (2014) noted that ethical researchers respect and consider the needs of participants, thus avoiding harm to those involved in a study. Participants also have a right to privacy when engaged in a study (Glesne, 2011). All interviews were audio taped, transcribed, and remain confidential. The research data was stored on a flash drive, which will be kept in a fireproof locked box in my home office for five years. Participants were awarded a $5 gift card for their voluntary

participation in the study. Participants were also notified that they could withdraw from the study at any time and were provided a copy of the consent form. Process and interview protocol were the same for each participant (Lodico, 2010).

## Data Collection

Data collection for my study consisted of interviews with students and faculty. The interview method allowed me to address research questions, the purpose, and the local problem in the study. Both student and faculty interviews were conducted on campus at a time that was convenient for participants' schedules.

### Student Interviews

A student interview protocol was established, which described students that qualified to participate in the study (Appendix D). The open-ended, semi structured student interview questions are listed in (Appendix F). Open-ended questions provide experiences, feelings, and knowledge of a subject (Infosurv Research, 2016). By interviewing participants face-to-face, I received first-hand knowledge of their perceptions, challenges, and suggestions of ways to improve student pass rates in the online Introduction to Computers course for students who have completed the course. The interview questions were prepared prior to student interviews, and questions were the same for all students that participated in the study. Students chosen to participate in the study received a letter of invitation to participate in the study (Appendix B). Upon accepting the invitation, students received the interview protocol, which described the purpose of the study, and identified me as a doctoral candidate.

Data were collected using audio taped interviews, reflective note taking, and written transcription. The interviews were 30 minutes in length. Interviews also allow researchers to build inquiry-based conversation by obtaining rich, detailed information, which establishes connections to the research questions (Jones, Torres, & Arminio, 2014; Rubin & Rubin, 2012; Seidman, 2013). Reflective notetaking allowed me to systematically document data by hand, which enriched my thought processes during the study, and eliminated bias by providing clarity in the research process. Additionally, reflective notetaking enabled me to highlight issues that validated the local problem.

**Faculty Interviews**

The faculty interview protocol was established for faculty who met the criteria to participate in the study (Appendix F). The open-ended, semi structured faculty interview questions are listed in (Appendix G). Semi structured interview questions can be revised if needed, for clarification (Creswell, 2012). The interview questions had been prepared prior to faculty interviews, and questions were the same for all faculty with three or more years of teaching experience that participated in the study. The interviews were 30 minutes in length. Interview questions allow researchers to gain an understanding of participants experiences (Maxwell, 2013).

By interviewing faculty face-to-face, I received first-hand knowledge of their perceptions of student performance in the online Introduction to Computers course. Faculty chosen to participate in the study received a letter of invitation to participate in the study (Appendix E). Upon accepting the invitation, faculty received the interview protocol, which described the purpose of the study, and identified me as a doctoral

candidate. I used audio tape interviews and reflective note taking as a part of the data collection process. Through audio-taped interviews, I obtained perceptions of faculty experiences in the course. The interviews were 30 minutes in length.

**Access to Participants**

Prior to collecting data, I obtained IRB approval from CCC. The approval was needed to assure the protection of the participants, and to establish an ethical project study. Once CCC IRB approval was given, as the IRB of record, CCC's Office of Institutional Effectiveness emailed students inviting them to participate in the study. Once students volunteered to participate in the study, I selected a sample of eight students for an in-depth collection of data (Morse, 2012). Currently, CCC has two faculty who teach the Introduction to Computers course that met the study criteria. Two faculty who teach online were interviewed.

**Role of the Researcher**

I teach education courses at CCC. I do not teach Introduction to Computers, the subject of this study, nor do I teach any students who were interviewed in this study. Therefore, I was able to avoid instructor biases related to this study. Yin (2014) noted good qualitative researchers remove emotion, focusing on characteristics and engagement of participants. An unbiased approach reflects conducting the study in a professional, ethical manner.

## Data Analysis

The interviews of study participants were completed in 3 weeks. After interviews with the faculty and students, each participant's interview was transcribed within 24

hours. I reviewed each transcription three times for accuracy. After reviewing the transcripts, I began the process of coding the information. As the researcher, after collecting the data using a digital tape recorder, I transcribed the information using Atlas ti,, a data analysis software tool. Interview findings were coded in accordance with responses and themes which emerged from the participants responses. Findings were summarized in narrative form.

The purpose of qualitative data analysis is to transform data into patterns of information that provide deeper insight into the problem (Better Evaluation, 2018; Taylor, Bogdan, & DeVault, 2015). The local problem in this case is 15% lower pass rates for online students in the Introduction to Computers course. The framework for the study conceptualized the analysis by providing answers to interview questions related to how students perceived, built knowledge, and encountered challenges in the course. Additionally, information pertaining to course support, materials and engagement were obtained from students. Information from instructors that related to student challenges and instructor perceptions of the course allowed information to support the construct of the analysis.

**Qualitative Data Analysis Software**

Atlas.ti (2018) was used to code the interviews and develop themes. In addition, the software also codes data using audio, video, graphics and text to assist the researcher. The audio responses to the interview questions by participants were uploaded into the software. I read each response initially, assigning a code by utilizing the software through transcription review, in order to become more familiar with participant responses. I then

read the responses a second time, further adding codes to participants' responses. I then read the code a final time to assure that codes are added to the responses correctly.

**Transcription**

Following audio recorded interviews with students and faculty, within 24 hours, I transcribed the responses. The software also integrated and cataloged transcribed information. Participants reviewed the transcript for accuracy. Each set of data was organized in order for conclusions to be drawn and verified through analysis, known as data condensation (Miles, Huberman, & Saldana, 2014).

**Data Coding**

Coding in qualitative inquiry can consist of interviews, phrases, or words. Coding captures the core of data and its essence (Saldana, 2018). Coding also provides evolves data collection into data analysis (Saldana, 2018). After member checking was completed and participants confirmed transcripts were accurate, audio transcripts were uploaded into Atlas. ti software. The software was used to analyze differences and similarities between answers to the interview. Differences and similarities were confirmed or corrected by my replaying of audio recordings to assure that no points were missed. Reflective notes were also reviewed for themes. I began the coding process by reviewing transcribed information numerous times, keeping the research questions and sub-questions in mind. Using Atlas.ti. software, I color coded words, phrases, and sentences that related to student and faculty perceptions of the Introductions to Computers course, and the research questions. Atlas.ti. was used to further organize data and classify codes in the study.

### Thematic Development

After data were transcribed and coded, I used the codes to develop themes. Miles et al. (2014) refers to the development of themes as data display. Bruner's constructivist theory (1966; 1971) guided theme development. The theory posited that students who are engaged and active learners construct greater knowledge of learning in a subject, and that learning must be socially and personally relevant to students. This in turn, provided an understanding of students' perception of the Introduction to Computers course. Bruner (1986) further posited the constructivist teacher, by offering appropriate task and opportunities for dialogue, guides the focus of student attention, thus directing their learning, which also provided a basis for understanding instructor perceptions concerning student success in the course. A chart was created in matrix form to organize the data into themes. Once these themes were displayed, I was able to better understand based on the interviews, student perceptions as to why a gap exists in student performance in the online Introductions to Computers course. The themes also helped me to understand faculty perceptions of student performance in the online Introductions to Computers course.

## Evidence of Quality and Procedures

Member checking, random selection of participants, and triangulation were used to ensure credibility of the data in the study.

### Member Checking

Member checking involved asking participants to review transcriptions of their interviews for accuracy, and I made any corrections or changes to their comments if

needed. Varpio, Ajjawi, Monrouxe, O'Brien, and Reese (2017) stated member checking involves the researcher providing transcribed information to participants for review, which in turn, adds credibility to the data. Polit and Beck (2012) referred to credibility as the truthfulness of participant data, and how the researcher understands and represents that data. Additionally, member checking allows participants to correct any misinterpretation of wording during the interview process that may have been recorded by the researcher (Varpio et al., 2017).

I incorporated member checking by allowing participants to review the transcribed text and my reflections of their interview and to verify or modify what is needed to establish the credence of the data (Harper & Cole, 2012). Using member checking also allowed me a point to validate the experiences of students and faculty. Glesne (2011) noted four points related to the quality of research when member checking is used: (a) what the researcher notices, (b) why the researcher notices the information, (c) how to interpret what was noticed, and (d) how you support that your interpretations were correct. By using member checking, I was able to ensure that I recorded perceptions of students and faculty properly.

**Random Selection of Participants**

Random selection of students also added credibility to my study. The Office of Institutional Research assisted my random selection of research participants. Randomization improves validity.

**Triangulation**

Triangulation in this qualitative study consisted of comparing data from various groups, and individuals (Caret, Bryant-Lukosis, DoCenso, Blythe, & Neville, 2014). In this case, data were collected by analyzing transcripts and interviews from students who were in the Introduction to Computers course online, and faculty who teach the course online, which corroborated the findings of the same interview questions coming from the various perspectives. Triangulation increases credibility and validity of the data analysis.

Another measure to ensure credibility is the analysis of discrepant cases. A discrepant case does not support or may contradict the data. I reviewed interview data thoroughly as participants responses to interview questions were noted, recorded and transcribed. Based upon participants responses to their performance in the Introduction to Computers course online, findings that were discrepant to the study will be documented as part of the study.

**Transferability**

Describing the local problem, setting, participants, and findings of the study may provide information to others in a similar setting, which in qualitative research defines transferability (Hudson, Newman, Hester, Magwood, Mueller, & Laken, 2014) Additionally, transferability allows findings from a study to be generalized to similar settings (Houghton, Casey, Shaw, & Murphy, 2013; Merriam & Tisdell, 2016; Polit & Beck, 2012).

**Peer Debriefer**

An unbiased colleague served as a peer debriefer for my study. The individual has a doctorate and is employed in student services administration. The peer debriefer reviewed the coding, themes, and discrepant cases (Creswell, 2014). The feedback was used to identify and correct problems, which increased the dependability of the data. Dependability also takes account of the logical order, documentation, and tracing of research methodology used by providing an audit trail (Polit & Beck, 2012).

**Reflective Note Taking**

I also used reflective note taking to improve dependability. This enabled me to compare similarity in perceptions and challenges of students who completed the online Introductions to Computer course and remove personal biases about online learning. I repeated the process during data analysis to ensure I am aware of biases that could influence my interpretation of the data.

**Confirmability**

Confirmability incorporates strategies to assure the accuracy of the study that adds to the quality and believability of the findings (Creswell, 2012). The goal is to present participants' findings instead of researchers' opinions (Polit & Beck, 2012). Confirmability allows researchers to demonstrate how they arrive at conclusions with rich descriptions from the data, which in my case will be quotes, notes, and comments from participant interviews kept in a reflective journal.

### Data Storage

Transcribed data were stored on an external hard drive on my personal computer in my home office. Information was also be stored on a flash drive, which will be kept in a fire proof locked box in my home office for 5 years.

## Findings

This section describes the findings from the faculty and student interviews. The data analysis also presents the relationship of the results within the conceptual framework. The research questions and interview findings are the foundational basis for the study. A thematic approach of data analysis from faculty and student interviews, audio recordings, and interview notes were used to identify codes and themes. The first step was to interview the participants. Next, I transcribed audio interviews, using Atlas.ti., I completed each transcription and returned it to the participant within 24 hours of the interview to review for accuracy. As I listened to each interview, I reviewed my reflective notes taken during each interview. I looked for phrases and words that were alike, different, and frequently stated by participants. I also noted links between responses and research questions.

I developed topic codes in different colors. The codes I first created were dissatisfaction, loneliness, and academic issues. The second round of codes resulted in categories of personal, preparation, procrastination, and access. Based upon these codes, themes, which are the reoccurrence of thoughts, ideas, or topics (Saldana, 2018), emerged from instructor responses—preparation, procrastination, and course accessibility. Primary themes emerged from students' responses and included preparation, prior knowledge, and

procrastination. Four research questions led this study to determine teachers' perceptions of student challenges that contribute to lower pass rates in online classes, teachers' suggestions for ways to improve student pass rates in online courses, students' perceptions of student challenges that contribute to lower pass rates in online classes, and students' suggestions of ways to improve student pass rates in online courses.

## Research Questions

**Research Question 1: What are teachers' perceptions of student challenges that contribute to lower pass rates in online classes?**

Six faculty interview questions were formulated (see Appendix H). The first research question asked faculty what they perceived as student challenges that contributed to lower pass rates in online classes. Faculty provided various reasons as to why students in the online classes had lower pass rates than students in seated classes based upon their teaching experiences and engagement with online students. Both of the faculty identified preparation, procrastination, and course accessibility as areas of concern. A discussion of each theme that supports the research question follows.

*Preparation*. Both of the faculty stated that students generally enroll in the online course within the first two semesters of entering the college, which poses a challenge to students academically as it may be the first online course taken. Both instructors stated that most students have the expectation that it is an "easy" course to take online. Instructor 1 stated:

> There is a misconception that the current generation is very computer savvy, and to some extent, that is true. However, as this course is designed to teach task-

> driven applications, many students do not know how to use task-drive applications such as Word, Excel or Power point, which are included in this course.

Instructor 2 stated, "I have asked students if they have had any experience with Microsoft at all and have found that those who have no prior experience may have some difficulty in the class." In the past, students completed a developmental introduction to computers course, which prepared students for the Introduction to Computers course, which is no longer the case. A study skills class prior to enrolling in the Introductions to Computers course will help acclimate students to the course learning management system that the college provides for online learning, as some students are not prepared to be fully engaged and successful in the course.

*Procrastination***.** Responses from the participants indicated student procrastination was perceived as a contributor to lower grade performance to online students. Instructor 1 stated:

> It is hard to impress upon students the importance of adhering to due dates—some take the approach that as long as they turn in work, they should receive credit for it. I see more students waiting to the last minute to log in and retrieve assignments and attempt to complete assignments on the assignment due date. It is safe to say, that half of the class waits until the day an assignment is due to begin working on the assignment. If a student fails the course online, it is because they simply do not submit the work, or only complete a portion of the work.

The software in the course provides the student with the necessary tools to help them succeed if they invest the time to use these tools. Instructor 2 stated:

> I have students who may not ask questions all semester concerning assignments, then wait until the semester is nearly over to ask questions about previous assignments." Time management is another factor—students may have problems managing the time needed to complete assignments and need to know they have to have the time to get the course work done. The course syllabus and course schedule are both posted in the online course, which makes students aware of assignment due dates within the semester of the course of study.

*Accessibility***.** Both participants stated that technical issues also contribute to lower pass rate for online students, including Internet connectivity. Instructor 2 stated:

Some students purchase chrome books at the beginning of the semester, which does not work with the course software used in the course." This may cause students to lag behind in the course, who will have to purchase a computer that aligns with the course software in order to have access to the course, and students who live in the more rural area of our service area may have Internet provider issues due to weather, power surges or server failure.

Both instructors noted that some students register for online courses that may not own a computer, and may depend upon families, friends or neighbors to have access to the Internet or a computer.

**Research question 2: What are teachers' suggestions for ways to improve student pass rates in online courses?**

Both participants noted that prior skills in CCC's learning management system and Microsoft applications would improve student success in the online course. Instructor 1 stated, "Enrolling students in a study skills preparation class that prepares the student for the rigor of online college classes would be most useful for learners prior to enrolling in the course." For students who have already obtained Microsoft certifications, course credit should be given by the college, which allows the student to enter into the next level of computer science coursework as the introductory course contains certification material.

Instructor 2 identified advising as a strategy for student success:

> When students are advised, inquiring about their level of comfort with online courses, time management and accessibility to tools for the online learning environment could better determine to a student if they need to enroll in an online or seated Introductions to Computers course.

**Summary of faculty findings.** Faculty interviewed agreed that preparation, procrastination, and accessibility were perceived as reasons that online are less successful in the Introduction to Computers course. First, faculty felt that student preparation in study skills needed to engage in and successfully complete an online course, prior to entering the course would be a strategy that could lead to online student success. Secondly, faculty indicated student procrastination—rushing to complete assignments at the last minute, time management, partially completing assignments, not completely understanding the scope of the coursework and syllabus requirements cause students to be unsuccessful. Thirdly, Internet connectivity, technical issues, and having the correct

software in order to engage in course assignments were also listed as areas that affected student success in the online course.

**Research question 3: What are students' perceptions of student challenges that contribute to lower pass rates in online classes?**

This research question addressed perceptions of student challenges that contributed to lower pass rates in online classes which were formulated in ten interview questions listed in Appendix F. The interview questions asked students what, if any, challenges they encountered in taking the course online, what they believed contributed to their performance in the course, strategies they recommended to improve the learning experiences in online sections of this course, and overall perceptions of the online course. Students identified preparation, prior knowledge, and procrastination as factors that contributed to performance in the online course. Students were labeled by numbers in order to protect their identity.

*Preparation.* Students felt that lack of preparation on their part contributed to challenges encountered in the course. Student 2 stated: "This was my first online class. I was not familiar with the learning management system or online learning, and whoa—it was kind of challenging." Students 4 and 5 stated they both took the course a second time as their lack of preparation in taking the course the first time caused them to drop the course mid-semester and retake the course the following semester. By taking the course a second time, students were more familiar with the course expectations and assignments and felt better prepare to be successful in the course. Students 1 and 3 noted "computer problems" as a challenge in completing coursework, such as the computer freezing in

intervals or running slower than it should in order to complete coursework, while the remainder of the participants stated they encountered no challenges in the online course.

*Prior knowledge.* Student 2 indicated that no prior knowledge of computers or task driven operations were obtained prior to taking the course. The student further indicated in conversations with at least two other classmates, they all felt unprepared to take the course online, as this was their first encounter with online learning. Students 4 and 5 both noted that lack of prior knowledge was one of the reasons that resulted in dropping the course, and reenrolling in the course at a later date. Although students 1 and 3 stated technical issues resulted in lack of course preparation, the participants noted that once they learned how to detect the issues with assistance from CCC staff, they felt better prepared to continue in the course. The remaining participants felt no prior preparation was needed on their part to successfully complete the course online as they had experienced online learning prior to taking the Introduction to Computers course.

*Procrastination.* A major theme echoed by student participants as a challenge was procrastination. Students indicated that course assignments were listed in the course syllabus with due dates indicated, and a course schedule was also posted in the course with assignment due dates listed. Participants stated that coursework was opened in advance to allow time for students to work ahead in the course if they so desired. Work, family issues, obligations and health issues were listed as reasons students may procrastinate in attempting to complete course work. One student indicated: “I knew the work was there and when it was due, but I just didn’t do it. As a result, I ended up repeating the course.”

**Research question 4: What are students' suggestions of ways to improve student pass rates in online courses?**

This research question addressed student suggestions of ways to improve student pass rates in online courses. Overall, all students stated that "understanding what and how to complete the assignments and completing assignments when they are due" would improve student pass rates in the online courses. In addition, students stated that taking copious notes on the module unit materials, and reviewing and re-reviewing the material prior to completing the assignments would also help them to be more successful in the course. Student 1 stated, "If you don't know something, you should allow yourself plenty of time to contact the instructors to answer your questions before the assignments are due. My instructor would answer me within 24 hours or less if I had a question."

Student 3 indicated that depending on a neighbor or friend to help with the course does not work. The student said, "You should ask instructors in enough time how to complete the work—don't try to figure it out on your own." Students 4, 5, and 6 indicated adding more information visually would help improve learning experiences in the course. Student 4 stated, "An introductory video showing how to work in the class with a video on the syllabus would help as I always don't understand what I read. Student 5 indicated having more structure on the learning management system in vague areas would increase knowledge in completing course work." Student 6 explained: "The first week jitters of not knowing where everything is in the online class caused me to miss information—I would like to have been familiar with learning new things before the course got started

with visuals or other help." Three of the eight students felt the course was fine as is and had no recommendations on improving online student learning experiences.

**Summary of student findings.** Findings suggest that strategies for improving student performance in an online computer science course include (a) understanding what and how to complete assignments, (b) taking notes, reviewing, and re-reviewing course module materials before completing assignments (c) contacting instructors for support and guidance on completing course assignments in a timely manner, (d) becoming familiar with the learning management system prior to enrolling in the course, and (e) having access to how to navigate, manage, and locate course information by means of video or audio information prior to enrolling in the course or at the very beginning of the course would improve online student success.

## Overall Summary of Findings

Faculty perceptions indicated that lack of prior knowledge, course preparation, procrastination in completing assignments, and accessibility in obtaining Internet connectivity and software needed to engage in the course were challenges students faced when they enrolled in the online course. Student perceptions indicated that preparation of how an online course works, how students engage in online learning, and better understanding of online learning to build prior knowledge to be successful in an online course was needed. Additionally, students stated not completing assignments in a timely manner, waiting to complete assignments at the last minute or simply not completing assignments at all were challenges encountered when completing the course online.

**Discrepant Cases**

By engaging in a thorough analysis of interview responses and transcripts, discrepant cases were unfound during the process. Member checking allowed participants to review interview information for accuracy and for my corrections to responses if needed. Using a peer debriefer also added a further review of transcripts, which added credibility and trustworthiness to the information. Similar responses were given among faculty and students, related to strategies that would enable students to be more successful in the online course, which resulted in no discrepant cases in the research findings.

**Conceptual Framework**

Bruner's constructivist theory is the conceptual framework that supported the results of the study. Bruner (1986) explained teachers drive student learning by providing opportunities and tasks, thus making learning a personable experience. Bruner (1966) further stated that students construct and build upon new knowledge based on prior knowledge and experiences. Bruner (1967) further found active engagement by students, a sense of responsibility and independence while learning, and problem-solving skills promoted student learning. Data analyzed from faculty interviews in relation to perceptions of why online students were less successful in the Introductions to Computers than students in seated sections yield that students were underprepared to take the course as this was their first online course, procrastination in completely coursework in a timely manner, and accessibility as reasons why online students were less successful in the course.

Bruner's (1966) constructivist theory also supports the conceptual framework in analysis of student interview findings. Bruner posited that students need to first learn the foundations of learning within a subject before learning a mastering the subject. The student interviews revealed lack of preparation for online learning, lack of prior knowledge related to computers, and procrastination as the reasons that online students in the Introduction to Computers course online were less successful than their seated counterparts. The four key themes in Bruner's theory—how learning is constructed, readiness for learning, how the learner is motivated, and how intuition evolves in student learning correlate with the analysis of the data in this study.

## Limitations

One limitation of this study is that it takes place at one community college, which would make the results of this study important for CCC only as the results could not be generalized to other community colleges. A second limitation is with the nature of a qualitative study, variables that may affect student perceptions were not controlled in this study.

## Conclusion

Through this qualitative study, challenges perceived by faculty and students in the online Introduction to Computers course were investigated, and strategies for improving online student performance were shared through interview findings. In Section 2, the research methodology was described and justified. I described my role and responsibilities as a researcher. I also introduced the data collection, criteria for selecting

participants, data analysis, and ethical considerations. Section 3 contains details of the project with an additional review of the literature related to the project itself.

# Section 3: The Project

## Introduction

Section 3 includes a description of my project, including project goals and rationale for the project. The purpose of the project resulting from my study was to address the study's findings and to propose strategies that faculty can use to promote student success in the online learning for the Introduction to Computers course. Based on these findings, I developed a 3-day professional development for online faculty, administrators, and faculty who teach the course in the traditional setting. The project includes (a) current literature reviewed in online learning that aligns with the local problem, (b) challenges students encounter in online learning, (c) addressing barriers to online learners, and (d) instructor strategies for improving student success for online learners. The project addressed professional development for online faculty that teach the course. Providing professional development for new and existing faculty will facilitate discussion of best practices and challenges in online instruction (Mastel-Smith, Post, & Lake, 2015). Professional development can change teacher goals, learning, and create new avenues in teaching (Kennedy 2016). Although faculty who teach the course are subject matter experts, skills and knowledge acquisition in other areas results in quality instruction (Greenfield, Keup, & Gardner 2013). In this case, professional development for all faculty that teach the course online regardless of years of teaching experience will provide, introduce, and recall information for faculty and administration pertaining to best practices, curricular, and teaching methodologies.

## Description and Goals

Results from my study were used to design, develop, and deliver a professional development workshop for online instructors. The workshop is designed for faculty to share and engage in strategies that would support student success in the online Introduction to Computers course, and to reflect upon practices, perceptions, and challenges encountered by faculty and students in the online learning environment. I selected the professional development genre because findings of my study suggested challenges of the online Introduction of Computers course could be addressed by faculty teaching the course. Once initiated, each professional development session will allow participants to reflect upon knowledge learned, share ways to implement, build upon or create various practices for student success, and will offer overall communication with faculty face-to-face who usually either meet at a distance or may not have opportunities to meet at all for professional development as a group.

The participants will be faculty and administrators. As participants engage in a variety of activities, groups will be varied in order to gain differing perspectives on the course and online learning. Tables for participants will have markers, pens, large and small Post-It notes, and copies of each day's Power Point for notetaking. Daily workshop agenda are listed in (Appendix A). The workshop will include icebreakers to facilitate collaboration and cohesiveness, small and large group activities, videos, role-play activities, and presentations from students and college administrators. At the conclusion of each day, participants will evaluate the presentation, and include any questions or suggestions they may have for the following day.

**Day 1.** The goal of the first day is to develop cohesiveness and familiarity amongst all faculty that teach the course online, as they will encounter each other face-to-face, some for the first time. The workshop basis and purpose on the first day will address the local problem, research findings, and the conceptual framework of the study. Having varying perspectives from new to seasoned instructors will stimulate discussion, relax participants, and open communication. Two initial icebreaker exercises related to the foundation of online challenges by faculty and students will be introduced by the workshop facilitator. The first exercise fire or ice will allow faculty to share the amount of time they have taught online and compare their online teaching experiences using the analogy of either an iceberg or volcano, stating how these characteristics align with online teaching. The local problem, research questions, and conceptual framework will be shared with participants.

In the second exercise, a ranking of student challenges faculty perceive will be listed, with a cumulative short list of the top three to five challenges of students discussed in a role-play format. Following the role play, faculty will return to their tables to list what perceptions they now have concerning online student challenges. The training will also include a review of the college's distance learning plan by the college's administrator of distance learning, with participant discussions on the distance learning plan, and literature review exercises. For each item listed, previously related to the local problem, and the research questions, participants will be asked to present solutions that would work and why. At the end of the first day, participants will be asked to complete a

survey related to the topic of the day and will be asked to read a short scholarly article concerning challenges of online students to begin discussions on Day 2.

**Day 2.** The second day of training will focus on defining course design, analysis of the learning management system, and continuance of suggesting solutions to the local problem. Day 2 will begin with a reflection exercise of key take-away points from each participant from the previous day of training related to the local problem. Participants will then be placed in groups to share various parts of the literature that correlate with challenges to online students, and online faculty, particularly those in 2-year college settings. Participants will "close the loop" on challenges by comparing the list from the previous day and adding any new strategies for success in online learning in the Introductions to Computers course. Following the initial presentations, the next segment of the training will allow participants to demonstrate instructional design using Bruner's constructivist theory. Participants will be placed in teams with various items and asked to build a foundation with different levels that symbolize learning within a 20-minute timeframe.

The team with the most sturdy and highest foundation will win the challenge. After the challenge exercise, a series of questions will be asked to each team as to how, why, and on what basis they constructed their foundation. Participants will then access the learning management system starting with an overview of the system presented by the distance learning administrator. After this presentation, activities for the remainder of the day will focus on authentic learning, using constructivism as a teaching tool in the online learning environment, and implementing constructivist tools in the learning environment,

including seven keys to instructional design. Critical thinking exercises will be used to further reinforce Bruner's theory and how it connects to the online teaching environment. During the afternoon session, participants will be given access to the online course to analyze the instructional design and list any problems they find in the course design. Following this exercise, participants will be placed in small groups to discuss solutions and overall recommendations on how the course can support student success in the future. Leaders from each group will present the recommendations. The recommendations will be given to the director of distance learning. The workshop will end with a question and answer session, followed by completion of a survey related to Day 2 of the training.

**Day 3.** Day 3 will conclude the training. The day will begin with a reflection of the previous day of training, and to address any questions participants may have. Following the reflection, participants will be placed in varied groups to design on a large Post-It note, a graphic of characteristics of online students. Following this activity, each group will describe the characteristics they chose for their drawing and why. The director of institutional effectiveness will present information on the characteristics of online students from college data warehouse information. Following her presentation, students who have completed the course will be invited into the workshop to share their perceptions and experiences of the course, and answer questions from participants.

Following the presentation and question-and-answer activity, participants will be placed in small groups to discuss how student presence can affect online learning. Each

group will report ideas they have shared to support student presence in online learning with the group as a whole for discussion.

The next segment of training will include the vice president of academic affairs, who will present the importance of providing online learning to students, benefits of online learning, and future plans for online learning at the college. The director of academic advising will present information about advising online students, and practices related to advising students to enroll in the course. Participants will have a chance to ask questions to both presenters. Following this segment, the department chair who provides direct supervision to the faculty that teach the course will engage participants in role play related to student assessment, collaboration, and presence. Participants will discuss each scenario, and how it relates to online teaching and learning.

To introduce the segment on best practices in online instruction, there will be a 10-minute video from the community college system office pertaining to online instruction. Participants will discuss their thoughts on the information. Following the discussion, participants will be placed in small groups to list best practices for online instruction in the course and will be asked to create a “construct” plan of how the course allows students to build upon knowledge obtained throughout the semester. Faculty will combine strategies that would address how these constructs could improve success for online students enrolled in the course and present these to the group overall. The director of distance learning will review the online instructor checklist with faculty, and faculty will ask questions and offer any recommendations that would apply to online instruction.

The training will conclude with a professional development training evaluation and answering any questions participants may have.

## Rationale

Based on the analysis of data and the local problem in which online students in the course have a lower rate of success than students in the seated course, I chose professional development training for faculty that teach the course online. The data analysis revealed faculty perceived preparation, procrastination, and accessibility as factors that affected student success in the online course. Data analysis of student perceptions revealed lack of preparation, lack of understanding of the course learning management system, procrastination, and accessibility as indicators of why online students were less successful in the course. The professional development will focus on student challenges to online learning, constructivist learning in the online environment for faculty, and how students construct learning. Addressing each of these topics will allow participants to create strategies to support success for online students in the Introduction to Computers course in the future.

## Review of the Literature

The purpose of this literature review is to focus on themes that support the data collection and analysis of the study, namely student challenges to online learning and professional development for faculty that teach the Introduction to computers course online. To give credence to the literature review, literature from peer-reviewed journals, academic journals, and databases such as *Eric, Educational Research, Ebscohost, and Google Scholar* from Walden University's library were used. Keywords used during the

search based on the data analysis from faculty interviews included *online faculty professional development, professional development for online faculty, distance education faculty professional development,* and *online faculty development.* Keywords used during the search based on the data analysis from student interviews included *attrition in online courses, preparation for online learning, strategies for successful online learners, perceptions of online learners,* and *barriers to online learning.*

The following components were identified in the literature review: professional development for online faculty, barriers to success for online learners, and strategies for success for online learners. Peer reviewed and scholarly research was retrieved from the years 2012-2017.

**Professional Development for Online Faculty**

Online faculty need professional development in order to obtain new teaching strategies and to engage and retain students in online courses (Meijs, Prinsen, & de Laat, 2016; Prestridge, 2017; Saroyan & Trigwell, 2015). Faculty also need to work together in professional development opportunities to support online instructional design and learning (Ramaley 2014; Saroyan & Trigwell, 2015; Teräs, 2016). Interacting with colleagues in professional development amongst online faculty increase morale (Terosky & Heasley, 2015), and allows faculty to share teaching strategies (Golden 2016). Cicco (2013) stated preparing faculty to teach online creates quality courses and prepares a better learning environment for students. Providing professional development for online faculty is vital to the success of students and distance learning programs in higher education (Kerrick, Miller, & Ziegler, 2015). Developing new online pedagogy and new

methods of instruction lead to effective online instructors (Ching, Hsu, & Rice, 2015; Lane, 2013).

Professional development for online faculty differs from professional development for faculty that teach in traditional settings in the areas of course design, philosophy, online instructional and delivery methods (Shahdad & Shirazin, 2012; Zimmerman, 2015). Additionally, online courses must support the principles of "online engagement" (Thormann & Zimmerman, 2015). Januszewski and Molenda (2013) denoted that instructional technology encompasses learning, and appropriate uses of technology resources are needed in order to enable teachers to perform in technology-based learning platforms. Quality online programs provide professional development for online instructors. Professional development correlates with successful online instruction and pedagogy (Baran & Correia, 2015). Elliott, Jackson, and Mandernach (2015) found most faculty are prepared academically to teach subject matter as it relates to courses; however; few teachers are prepared to teach online content.

**Strategies for Online Student Success**

Online courses can be enjoyable, challenging, and provide cognitive stimulation when students are engaged. Capra (2014) noted that online learners time management skills and connection with online instructors supported online student success. Hamzah, Lucky, and Joarder, (2014) and Pehlivan (2013) noted a correlation between student success, time management skills, and that academically successful college students also manage their time wisely. Hamzah et al. (2014) further stated that academic excellence can only be increased by students further developing time management skills.

Additionally, Jaggars and Xu (2016) stated instructor and student engagement, student interaction, and student friendly technology have the largest effects on student achievement in the online learning environment.

The interview findings revealed that online students felt success in the Introduction to Computers course would be achieved at a higher rate amongst online students if they had taken an online preparation course prior to enrolling in the course to acquire the skills needed for success as an online student. Bartek and Consol (2016) posited first time online community college students that complete an orientation course which entails an introduction to the college's learning management system, time management expectations, and computer familiarity prepare students for online learning prior to enrolling in online courses, which, in turn allows students to overcome online learning barriers, and become successful online learners. An online orientation offered during registration or upon enrollment in the college would further assist students in knowing their role an online learner, what instructors expect of online learners, and the differences between students learning face-to-face versus online learning environments (Bork & Ahidiana, 2013). Offering new students online course orientation prior to course entry has proven to be successful in adjusting students to this new mode of learning (Haynie, 2014). Furthermore, preparation for online learning increases the students' interest in learning, directs learner independence, and enhances perceptions for academic success in students that engage in online courses (Krugers & Waters; Wang, Shannon, & Ross, 2013).

Effectively managing and organizing time, grouping tasks, outlining deadlines, and adjusting to changes are key indicators that support success for students (MacCann, Forgarty & Roberts, 2012). Weller and Anderson noted the term digital resilience in referring to online students and defined the term as a student's ability to continue to function and remained focus when encountering changes in learning. Simons, Beaumont, and Holland (2018) investigated challenges for online student success and discovered that time management, work life balance, and actually "sitting down" to study as barriers. In this same study, successful online students noted that studying information in pieces instead of a whole, and managing time to work on assignments during the weekends enabled their persistence in online learning.

Other factors can also contribute to the success of online students. Course usefulness, computer accessibility, and when a student actually believes they can be successful in an online course have also been noted as indicators of online student success (Barclay, Donalds & Bryson, 2018). Additionally, being successful online requires self-efficacy, which is the belief by the online learner that experiences, emotional intelligence, and success in online coursework as learning tasks are completed leads to further academic success as an online student (Bowden, Abhayawansa, & Bahtsevanoglou 2015; Bradley, Browne & Kelley, 2017). Completing of goals for an online student while enrolled in a course increases success, retention, better organization of study time, and higher course achievement overall (Ng, 2017). When students have a strong sense of accomplishment in online learning, they are more likely to remain and succeed in the course (Kaighin & Croft, 2013). Student achievement also requires

accomplishing the number of tasks, investing the amount of time to complete the quality of work online, and instructor student interactions, which are strong indications of success for online students (Kane, Shaw, Pang, Salley, & Snider, 2016).

One factor Yu and Richardson (2015) credited to the success of online students was skillful navigation of technology in the online learning environment when completing learning tasks. Ryan and Latchem (2016) noted technology tools, and student supports as key indicators of online student success. Merriam and Bierema (2015) also recognized essential, student operable technology tools in the online learning environment increase and support online student success. With all of the aforementioned factors considered, students must still be self-motivated and empowered by instructors in order to succeed as an online learner (Wichadee, 2014). Online students also feel a sense of autonomy or "self-rule" when the drive for learning occurs in an online, learner centered course (Lam, 2015). Managing the parameters flexibility, freedom in learning, and other demands in online courses are keys to success (Johnson, Mejia, & Cook, 2015). Online learning that is facilitated rather than drilled by instructors in an environment where students are supported, engaged and encouraged, the online student can be successful (Dreon, 2013). For community college students who have successfully completed an online course, James, Swan, and Dotson (2016; Wladis and Conway, 2015) noted a smoother progression in other online courses, retention, and higher graduation rates amongst online students.

**Barriers to Online Learning**

Online learning can be advantageous to students in many ways offering the flexibility that busy adults need in order to achieve success in academia and in the workforce. However, online learning can pose barriers to some students. Fetzner (2013) and Rath, Rock, and Laferriere (2013) indicated lack of completing assignments, and lack of preparation for online learning and academia were listed as barriers to online students. A lack of experience on online learning, fear of technology, connectivity to Internet services, and psychological fears also increase stress factors in online learning (Bell & MacDougall, 2013). Feelings of isolation by online students was also found to be a barrier to success as students who feel isolated are less likely to participate in online courses (Bell & Federman, 2013). Srichanyachon, (2014) found lack of student participation, instructor communication and a sense of absence of online community discourages online students from participating in current or future online courses.

Students in rural areas may also encounter problems with the digital divide. In far reaching rural areas, Internet may only be offered with a certain bandwidth instead of high speed or kinetic Internet. Although the Internet may be available in some form, a divide still may exist between user comfort and understanding of technology (He, Gaisk, Farkas, & Warschauer, 2014). Additionally, due to the cost of Internet services and intermittent connectivity, students may have difficulty downloading videos, live streaming, or audio recordings, which could impede process in online courses (Mason & Rennie, 2014; Strover, 2014). First time online students who lack computer literacy skills, and prior experience with technologies encounter barriers in online learning

(Michalski, 2014). While online learning requires the learner to use autonomy, sometimes students feel this learning modality can be burdensome (Seiver & Troja, 2014). Gaza and Hunker (2015) found students whose institutions provided emotional and instructional academic support are most successful online. If higher education institutions minimize instructional and academic student support, barriers in online learning will continue to exist (Layne, Boston, & Ice, 2015). Higher education institutions must continue to move toward evaluator measures in order to support and provide quality learning experiences for online students.

## Implementation

The professional development workshop participants will include full and part faculty that teach the course online. The 3-day professional development workshop would occur prior to the fall semester face-to-face in order to for faculty to meet each other, share information, provide support, and increase morale. The workshop would be free of cost and could be used to meet part of faculty professional development requirements for the upcoming year, as classrooms, computers and other workshop materials are available. The workshop meets professional development workshop requirements at the college with the credits awarded upon workshop completion. Information in the workshop will also be presented to new online faculty each semester as a form of support and introduction to online teaching.

### Potential Resources and Existing Supports

Potential resources and existing supports include access to space, equipment, and support from information technology and facility services staff. As workshop facilitator, I

will coordinate the welcoming of participants to the training by administration and staff from the college's division of academic affairs. Materials (flip charts, pads, laptops, pens, markers, projectors, or other technology) will be at no cost to participants as these are readily available at the college. Appendix A includes workshop resources.

**Potential Barriers**

One potential barrier may be that since the workshop will be held prior to the beginning of a new semester while faculty are not yet under contract for the new year, awarding faculty stipends to attend the training may be a barrier. Internal grants could be developed to offer a stipend to all faculty that teach the course in online as an incentive to attend. The 3-day time line to present the workshop may be a barrier if faculty have previously planned engagements. It will be important to contact and notify faculty of the importance of the training, advanced notices of dates of the training, the positive implications of the training, and incentives offered as a result of attending the training. Support from distance learning staff and college administration is crucial to the success of the training.

**Proposal for Implementation and Timetable**

The workshop would occur prior to the beginning of the fall semester. Planning of the workshop would occur following graduation, in order to allow time for administration and faculty to include the training dates on their calendars. I would also reserve the space with the college event scheduler, and submit information to human resources, who in turn would email faculty the workshop information. The workshop will begin each day at 9:00

am, and end at 4:00 pm, with an hour lunch break, and one morning and evening session break.

### Roles and Responsibilities of Student and Others

As facilitator and developer of the professional development, I will work closely with faculty that teach the course online by providing the workshop and follow up sessions would be developed as requested by the department chair. The Director of Distance Learning would offer support in integrating components of the training into the learning management system for faculty in order that they may review the resources used in the workshop and be able to communicate with fellow instructors through the course messaging system. Currently, Crisfield Community College does not have an instructional designer, but anticipates this position will be fulfilled at a future date. The role of the instructional designer could also be to offer support in continuing the professional development workshop for faculty throughout the college.

## Project Evaluation

The professional development workshop will include an assessment of each workshop at the end of each day of training, and a final survey within 24 hours following the 3-day workshop to inquire if future professional development in the area of online teaching and andragogy are needed. Anonymity will be provided to participants as each survey will be reviewed during the professional development workshop daily, with information reviewed to construct additional knowledge and discussion the following workshop day. Survey results will be shared with participants each day, and the final results electronically shared following the final survey. Using these types of formative

and summative evaluations of the training will ensure that participants receive the training that is needed and answer any questions they may have related to the training.

Although faculty that teach the course online are key stakeholders, other stakeholders that would support the training would be distance learning staff, department chairs, and student advisors. Distance learning staff could add this course in an online format eventually for instructor review as needed, and the face-to-face model can be used for new faculty that teach online. Department chairs could also benefit from this training in acquiring additional knowledge on how the course is structured, and possible barriers instructors and students face. Student advisors could benefit from this training by becoming familiar with problems or barriers students encounter when enrolled in an online class, which would support advisor's informing students' of how to persist and be successful in online courses. As these indicators are utilized, stakeholders can review data of online success in the Introduction to Computers course, which can promote continuous improvement online.

## Implications Including Social Change

### Local Community

This project is important to Crisfield Community College as the number of students who complete the course online have a higher failure rate than their seated counterparts, thus preventing students from graduating in a timely manner. By providing strategies for success for online students in the Introduction to Computers course, it is hoped that students will be more successful in the online course, which will lessen their

time for obtaining a 2-year degree. The data collected in this study identified student and faculty perceptions of why students are less successful in the online course, and offered strategies to promote online student success

The results found students new to online learning were unaware of how to navigate the learning management system, were new to online learning, and faced connectivity and time management issues. By addressing challenges online students face at the college, the strategies will assist in advising students in the area of the rigor of online learning, how to management your time as an online learner, and inform students of supports that are available through instructors, tutoring labs, and instructional technology. When success strategies are implemented, students will be enabled to achieve the balancing of work, family, and other personal obligations.

By completing the degree in a timelier manner, students will be able to enter the workforce with the needed skill sets to perform functions using the knowledge acquired with software packages that are included in the course, which provided a prepared workforce to local industry and community partners. Additionally, administrators will be able to examine the increase in online success and completion rates for students who complete the course the first time, which allow students to maintain a higher-grade point average, continued financial aid eligibility, and will increase course and program retention.

**Far-Reaching**

This project study has positive implications for community colleges and four year institutions locally and nationally. A study conducted by Allen and Seaman (2018), found

over six million students enrolled in distance education courses, at higher education institutions, with a steady increase in enrollment in online classes for the years of 2012 to 2014, with an increase from 25.9% to 29.7%. Online courses provide all students opportunities to engage and complete an education regardless of time and distance. For students to be successful in online learning, faculty who teach online must be provided support and professional development in providing a student driven, successful online learning environment (Elliott & Oliver, 2015; Terosky & Heasley, 2014). With ever changing technology, faculty will continue to need training in design and instruction of online courses.

## Conclusion

While this project study addresses successful strategies for online students in an introductory computers course, the implications of this project are globally relevant. As reflected in the literature, the number of online learners in high education is increasing, and institutions of higher learning must provide supports and tools relevant to the success for all online learners, regardless of their course of study. Advising, and preparing students to become online learners is also critical to the success of the online learner. In addition, providing professional development to faculty that teach online provides an added layer of support by providing ideas, pedagogies, communication amongst online faculty, and increasing faculty morale and team building, which eliminates faculty isolation. In this section, based on the findings in section 2, a 3-day professional development workshop was developed for online faculty with a literature review on

professional development for online faculty, successful online students, and barriers to online learning. Section 4 will address reflections and conclusions of the project study.

# Section 4: Reflections and Conclusions

## Introduction

The purpose of this project study was to explore successful strategies for online students in an Introduction to Computers course and explore student and faculty perceptions as to why online students in the course failed at a higher rate than their seated counterparts. I proposed professional development for faculty who teach the course online. Professional development will enable faculty to implement strategies to support learners in the online classroom, and increase retention, completion, and graduation rates collegewide as the course is required by all programs at the college in order to complete an associate degree.

In this section I will address the project's strengths, limitations, and my personal reflections about the research process. This section also includes a reflection of my doctoral studies as it pertains to scholarship, leadership, and change. Lastly, I will address social change based upon my study and implications for future research.

## Project Strengths

This project study supports the need for professional development for online faculty as part of a strategy to support student success. I proposed a 3-day faculty professional development workshop for all faculty that teach the course online, in order to support student success in the course. Through interviews, obtaining real life experiences of online students and faculty that teach online, both sets of participants noted lack of connectivity, prior knowledge of online learning, and time management were factors that contributed to the lower online student success rate. Faculty also

indicated that lack of student engagement and procrastination affected student success. Students also indicated lack of prior knowledge of the course management system, familiarity with online learning, and personal factors as barriers to successful online learning.

The professional development workshop designed for full and part time faculty will allow all faculty to receive either initial or the most recent information related to online instruction, promote faculty support, and will allow faculty to obtain additional skill sets in supporting the success of online students. Administrators will also participate and present information relevant to their subject matter in the professional development workshop. Additionally, providing the professional development to all faculty will allow full time faculty with three or more years of teaching experience to share practices with part time and new faculty. As faculty become more aware of barriers students face in online learning, this will empower faculty to create and engage structures in place to allow for online student success.

## Recommendations for Remediation of Limitations

A limitation of the project is that the 3-day professional development workshop will be presented prior to the beginning of the fall semester. Therefore, any faculty hired after the beginning of the semester will not have the opportunity to participate in the training with their counterparts. Additionally, other professional development requirements for a new instructor may be different from instructors that have taught more than one semester. Providing the training throughout the year for new online faculty

would allow the faculty to obtain information that colleagues would also have pertaining to successful strategies for online students.

Another limitation is that the professional development was based upon findings at CCC. In order for other institutions to replicate the professional development, modify the training to meet the needs for their specific institution based upon faculty needs. Oftentimes adjuncts may or may not participate in training for various reasons. For faculty at another institution to benefit from the professional development, scheduling the professional development at various times would need to be considered.

## Alternative Approaches

This project study project included a 3-day face-to-face professional development workshop for all online faculty prior to the beginning of the semester. An alternative approach would be to offer the training online so that faculty could have access to the training throughout the academic year, and work through modules at their own pace. Including the training handouts in the faculty handbook under a section on distance education teaching practices would also be an alternative offered to faculty that teach any online courses. Offering a modified version of online course information to student advisors would allow advisors to share information with students that are new to online learning. Listing expectations of online student engagement in online courses in the college's learning management system would also prepare students to be successful. The expectations would list tips for time management, college support, and learning practices for students.

## Scholarship

The doctoral process, in my mind, parallels the experiences of mountain climbing. When entering the doctoral program, I saw the top of the mountain, the degree, and wondered, how will I get there? At the base of the mountain were the courses in the subject matter of higher education and adult learning. Applying what I learned in each course in the actual workplace helped me to climb each level of the mountain. The climb was a smooth hike. Then the rocks became bigger and rougher to climb. The journey to the top of the mountain became obvious. I soon realized that obtaining a doctoral degree was more of a challenge that obtaining the bachelor or master's degrees. I have always enjoyed college experiences, but this experience was different in every way.

Working in higher education for the past 15 years, I am a firm believer in life-long learning. As a doctoral student, scholarship leads me to the processes by which lifelong learning continues. The prospectus, research, writing, editing, reviewing, researching and obtaining of knowledge were embraced as I moved forward in each area of the study. The words qualitative, quantitative, and mixed method, which, at first seemed foreign to me, became a part of the doctoral groundwork and vocabulary. The words and the framework of being a doctoral student became, at times intimidating, unknown, and on some days, I thought were unreachable. Many questions loomed in my mind, and I wondered, what a chair would think of a student that asked so many questions.

My fears were soon relieved, as I received encouragement from my doctoral chair, colleagues, and fellow students. The doctoral chair, who had already climbed the

mountain, began to give me the insight I needed to further accomplish each task of the journey. The prospectus, though written and reviewed several times before approval, was approved. I learned all the more the value of patience and process in the doctoral study. I continued following the path on the doctoral journey, wondering how many drafts it would take for each step. Through the support of my doctoral chairs, peers, and using Walden resources, the journey became easier. I attended Skype sessions every Monday evening relevant to the doctoral process with others also on the journey. The Skype sessions helped me to persist and to realize the doctoral degree was attainable. Learning that scholarship includes knowing where, how, and what current data, trends and information are in provides a substantial and necessary support for success in the doctoral study. I became an expert in distance learning and how it affects students, faculty, administrators, and colleges as a whole. The study became more interesting and the mountain smaller.

Collecting and analyzing the data was an interesting part of the study. I could see the importance of the research questions and alignment with the study as a whole while completing this part of the process. I also learned the importance of becoming an ethical researcher and why research protocols exist. In summation, scholarship is learning how to becoming a doctoral student, grow as a doctoral student, and how research can make a positive social change for others. As a practitioner, the lessons I have learned from the doctoral study have already been applied at my employment site. I have also had the opportunity to present at local and national conferences and symposiums related to the

subject of distance education to peers from other higher education institutions, which supports the need for more research in the area of distance education.

## Project Development and Evaluation

During this process, I learned that project development does not occur overnight. When I began my doctoral studies, it seemed that any questions could be answered immediately. I soon learned project development and evaluation was broad, yet specific. Developing a project takes time, focus, and energy. It also helped me discover that no one knows everything. I also thought the study was to be used to solve problems of the institution. I soon learned that the focus was the study and how it could provide a catalyst for social change. As I gained a better knowledge of the research process, an awareness of how to develop a meaningful, relevant project study evolved. Each piece of the doctoral study was evaluated for relevance, rigor and standards that aligned with the vision of a doctoral study. For me, the answers to the research questions were found within the framework of the study. Identifying the relevant literature connected the study, which in turn supported data collection, analysis, and provided realism to the doctoral process. As I reflect upon what I have learned during this doctoral journey, evaluation is continuous when conducting research.

## Leadership and Change

Leadership and change go hand in hand. I first began teaching in higher education in 1986, on a part-time basis, and began teaching full time 15 years ago when distance education was new in the region, and I have witnessed and undergone changes throughout that time related to leadership. My philosophical belief is that leaders must

first be followers. During my doctoral study, following the advice of those who had gone before me, namely my doctoral chairs, university reviewer, and peers during virtual sessions that I participated in helped me to develop the confidence and skills that I needed to continue and complete the doctoral study.

In order to become an effective researcher, removing biases and operating in ethical manners require change, especially when you believe your study should follow one path, and you discover the path you should take requires you to change direction. I have had to change thinking patterns to an in-depth manner of analysis and synthesis, prioritize time management and discipline myself to stay on track during this process. Personal circumstances changed during this process which included house fires, family illnesses, family members passing away, and my personal life-threatening illness. All of these caused me to change my thought and life patterns, although I wanted to discontinue my studies through each incident, I kept the courage to continue. At this point, I can now lead and continue to follow a successful path as a researcher.

## Analysis of Self as Scholar

My interest in learning began at early age. I recall my mother taking me on weekly walks to the library when I was 4 years old. I was fascinated by the wonders and answers that came from books. Reading and learning became a passion for me. I enjoyed studies from elementary to high school, and it was always expected in my family that I and my three siblings would attend college. With a passion for learning, I obtained a bachelor's and master's degree. After graduate school, my husband tried to persuade me to pursue my doctorate degree, but for me at that stage in my life with two children, I had

no further interest in seeking a doctoral degree. Years later working in higher education made we realize that a doctoral degree would enable me to make a positive impact in higher education and become an advocate for those pursuing higher education. Thus, my doctoral journey began.

As a scholar, I learned that a scholar is a learner, a listener, and someone who does not have the answers to all the questions but is willing to explore for further answers. A scholar also realizes that many theories surround learning, and in order to apply and practice theory research has to occur. This experience has taught me the value of writing and communicating in a clear manner, with the realization that fellow researchers, doctoral students, and other interested persons will read what has been written in this study, and may replicate or investigate this study, resulting in a positive change in a learning or work environment. As a scholar, I will continue reading current literature related to distance education and higher education to become a positive change agent in my profession.

## Analysis of Self as Practitioner

The doctoral study has prepared me to become more informed in the need for professional development in distance learning at higher education institutions. The skills that I have acquired in my doctoral studies have allowed me to present at conferences statewide and nationally on the following topics: distance education, support for online students, barriers to online learning, and retention in online learning. I have had the opportunity to speak with instructional designers in universities concerning online course development and faculty about their perceptions of online learning. These are skills that I

will continue to practice in order to support institutions of higher education. It is my hope the presentations and ideas that I have given to colleagues and others would may a positive change in their distance education programs.

## Analysis of Self as Project Developer

I have applied the knowledge that I learned in the doctoral study by developing a 3-day professional development workshop for faculty that teach online. I have also developed other training that I have used at other conferences related to online learning. Utilizing current, relevant research has given me the skill sets to create and implement professional development that can benefit administration, faculty, student advisors, and instructional technologist in the field of distance education. The tools that I engage workshop participants are similar to the constructivist method. I build on what participants know, engage the participants in a new level of learning, and combine objectives, universal learning strategies, and reflection to support the participants new knowledge base by providing resources and real-life application to meet the participants needs.

## The Project's Potential Impact on Social Change

In this study, I examined perceptions of faculty and online students as to why online students in an Introduction to Computers course were less successful than seated students, and what strategies could be used in order for online students to be more successful. Since this course is required for students to graduate regardless of the program of study, using strategies for online student success in the course would enable students to graduate in a timelier manner, increase course success rates, and would lesson

financial aid penalties, that could hinder course completion. Additionally, program graduates would be available for the workforce, which in turn, increases the local economy as students earn a living wage, adding to the economic base in the community. The project study cannot be generalized; however, the professional development and research can be used to benefit others in higher education.

## Reflection on the Importance of the Work

Distance learning has provided community college students with access to higher education opportunities by providing coursework that can be completed without the limits of time and brick and mortar classrooms. Students can work at their own pace, without time constraints within the management of job, family, and other responsibilities. Although access provides education, success in online learning does not always occur. Through this project study, it is my hope that strategies for online student success will enable online students to graduate in a timelier manner, support degree obtainment, and empower students economically through work force preparation and employment. For faculty that teach online providing professional development face-to-face will support faculty growth and development, eliminate faculty isolation, build upon experienced faculty knowledge that have taught online for three years or more, and introduce new concepts to all faculty. This professional development will also provide continuous engagement between faculty and students, and will add to support for students. I have also learned that faculty have other job duties and also need support in how to continue to deliver the high-quality educational experiences they would like to deliver to online students.

## Implications, Applications, and Directions for Future Research

In this qualitative study, I examined strategies for success for online students. Within the study, through qualitative interviews with students and faculty, it was found that oftentimes, this was a student's first online course, and students lacked preparation for online learning. Other factors that hindered student success were procrastination, connectivity, accessibility, time management. Strategies for success included preparation for online learning for first time online students prior to taking an online course, additional college support, and more professional development for faculty that teach the course. As a result, a professional development workshop for all faculty that teach the online course was developed based on the research findings.

This face-to-face professional development workshop would be beneficial to full and part time faculty, as best practices, research, collaboration and knowledge is shared. The implication of this study could lead to professional development college wide for faculty that teach online courses in other disciplines. Additionally, the study could lead to preparing online learners at the community to be more successful in online coursework, and to investigate additional support for online students. Faculty who engage in the professional development can also review data for online student success rates teach semester, reflecting upon their applications of practice. This data could be used in program improvement and student data analysis which is required at Crisfield Community College. Future research could include data analysis of other online courses success rates that can be used to research demographic and geographic data for the college in online student success.

## Conclusion

Section 4 provided a summary of the strengths and limitations of the project study. The summary included alternative suggestions for project implementation, implications of the project, the benefits of the project to others, and how the project can be duplicated. The self-refection allowed me to look at myself as a scholar, practitioner, and project developer. This project study addresses distance education, which is increasing at higher rates in institutions of higher education. Faculty must be prepared to teach online learners and provide learning techniques necessary to facilitate and support successful learning.

Futuristically, the demand for higher education stability will determine the success of online programs through support for students and faculty alike. Preparing students to be successful online students prepares students for workforce success. Community colleges have open door policies and are seen in the community as a portal for workforce and economic success for many. Online education and student success will continue to be a topic of research interest. As technology advances, the need for a computer literate workforce also increases. Students with computer skill sets will be in demand, and educating those students is critical. It is my hope that my reflections on this study clarify the importance, purpose, and scope of the importance of online education.

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# Appendix A: Professional Development Workshop

**Title:** Strategies to Improve Online Student Success

**Purpose:** The purpose of the project is to provide full and part time online faculty and administrators with professional development related to online student learning, faculty online instruction, and, strategies for online student success.

**Goals:** The goals are to (a) examine challenges and barriers students encounter in online learning; (b) formulate solutions for improving student success for online learners in the Introduction to Computers course; (e) examine best practices in online instruction and design; and, (f) create solutions to support online teaching and student support.

**Desired Outcomes:** The desired outcome is providing online faculty with additional skills to further support online andragogy and student success practices that will increase course pass rates.

**Target Audience:** The target audience is faculty who teach the online Introduction to Computers course and administrators.

**Timeline:** A 3-day professional development workshop will be conducted.

**Training Activities and Presentations:** Activities will include critical thinking, application, large and small group discussion, written analysis, and course and instructional review. Best practices in online education, research, student engagement, peer collaboration and teamwork will also be included. A daily agenda and each presentation are included.

**Professional Development Agenda**

Day 1

| Time | Activity | Presenter |
|---|---|---|
| 9 - 9:05 a.m. | Welcome | College President |
| 9: 05 – 9: 20 a.m. | Ice Breaker 1/Group Discussion/Reflections | Participants |
| 9:20 – 9:30 a.m. | So close, but so far: Why we Are here? (local problem) Conceptual Framework | S. Little |
| 9:30 - 10 a.m. | Exercise: Ice breaker 2: Student Challenges | S. Little |
| 10 -10:15 a.m. | Small group resolutions: Hold the thought | Group Leaders |
| 10.45 - 11 a.m. | Break | |
| 11 a.m. - 11:30 a.m. | CCC Distance Learning Plan: Key Components | DL Administrator |
| 11:30 – 12:15 p.m. | Extra! Extra! Literature Review: Online Education | Participants |
| 12:15 - 1:15 p.m. | Lunch | |
| 1:15 – 2:30 p.m. | Group Discussion: Reflections on the Literature/Why teach online? | Group Leaders |
| 2:30 – 2:45 p.m. | Break | |
| 2:45 – 3:10 p.m. | Hold the thought: Resolutions revealed | Group Leaders |
| 3:10 – 3:30 p.m. | Questions and Answers<br>Evaluation/Closing | |

Materials needed: 1 projector, 1 laptop, 1 projector screen, markers, large Post It pads

Day 2 Agenda

| Time | Activity | Facilitator |
|---|---|---|
| 9 - 9:10 a.m. | **Day 1 Reflections** | S. Little |
| 9:10 – 9:45 a.m. | LMS Overview | DL Administrator |
| 9:45 -10:15 a.m. | Instructional Design: You Define: Small Group Activity | Group Leaders |
| 10.15 – 10:30 a.m. | Break | |
| 10:30 a.m. - 11:30 a.m. | 7 Keys to Instructional Design | S. Little |
| 11:30 – 12:30 p.m. | Lunch | |
| 12:30 – 2:00 p.m. | Course Analysis: Beginning to End | Group Leaders |
| 2:00 – 2:15 p.m. | Break | |
| 2:15 – 2:45 p.m. | Faculty Connect: Breakout sessions | Group Leaders |
| 2:45 – 3:10 p.m. | Action strategies/recommendations | Group Leaders |
| 3:10 – 3:20 p.m. | Question and answer session | S. Little |
| 3:20 – 3:30 p.m. | Evaluation | S. Little |
| | Closing | |

Materials needed: 1 projector, 18 laptops, 1 projector screen, markers, 1 large Post It Pads, 17 medium length legal pads, pens

Day 3 Agenda

| Time | Activity | Facilitator |
|---|---|---|
| 9 - 9:10 a.m. | **Day 2 Reflections** | S. Little |
| 9:10 – 9:45 a.m. | Snapshot: The Online Student | IE Director/ Students |
| 9:45 -10:15 a.m. | Student Presence: Small Group Activity | S. Little |
| 10.15 – 10:30 a.m. | Break | |
| 10:30 a.m. - 11:30 a.m. | Online student advising/support tools/ | Director of Advising |
| | Academic report of online learning | Vice President of Academic Affairs |
| 11:30 – 12:30 p.m. | Lunch | |
| 12:30 – 2:00 p.m. | Role Play: Student assessment, collaboration, and presence | Academic Chair |
| 2:00 – 2:15 p.m. | Break | |
| 2:15 – 2:45 p.m. | Best Practices: Online Instruction Video | Participants |
| | Best Practices Small Group Activity | Group Leaders |
| 2:45 – 3:10 p.m. | CCC Online Instructor Checklist Review | DL Administrator |
| 3:10 – 3:20 p.m. | Question and answer session | S. Little |
| 3:20 – 3:30 p.m. | Evaluation | S. Little |
| | Closing | |

Materials needed: 1 projector, 18 laptops, 1 projector screen, markers, 1 large Post It chart pad, pens, index cards

## Training Activities and Presentations

Day 1

**Ice Breaker**: The training will begin with a greeting and thanks for attending to all participants by the college president. The purpose and objectives of the professional development workshop will be reviewed. I will explain to participants that they will be involved in all aspects of the training and presenting information from group activities. Participants will be in groups at various tables and will have 15 minutes to complete the first icebreaker activity. Participants will introduce themselves to a person at another table, sharing the amount of time they have taught online, and compare their online teaching experiences with either an iceberg or volcano, stating how these characteristics align with online teaching. After completing this activity, participants will introduce the person they spoke with and share the answer to the icebreaker question. I will write key words from the answers on the large Post It chart. Participants would reflect upon the key words from the icebreaker discussion, and how they align with online teaching.

**So close, but so far**: After sharing the purpose of the workshop and goals for the day, I will share information related to the local problem and the study by engaging participants in questions or statements that led to the local problem. The conceptual framework will also be presented and discussed with the participants.

**Icebreaker 2: Student challenges**: Faculty will be asked to list three to five challenges that students encounter when enrolled in the online course. Faculty will then rank the list from the least to the most important challenges they perceive that students face. These

challenges will be further discussed in a role play format. Following the role play, participants will return to their table to list what perceptions they now have concerning student challenges.

**Hold the thought:** Faculty will be divided into small groups to share and compare the rankings of challenges students face and create a resolution to each challenge. Groups will be asked to map the challenges and the solutions on flip chart paper that I will collect. Group leaders will present these challenges and solutions later on during the day of the training.

**Distance Learning Plan: key components:** The distance learning administrator will give an overview of the college's distance learning plan, and the key components. A copy of the plan will be given to each participant. Participants will be asked to recreate, or modify the plan based on their online teaching experiences. A large group discussion will be held, comparing the two plans, and how they could possibly be merged with suggestions from faculty.

**Literature Review: Online education:** Prior to the lunch break, participants will be given literature to review pertaining to different facets of online education including student perceptions of online learning, online student retention, student engagement, and success in online learning.

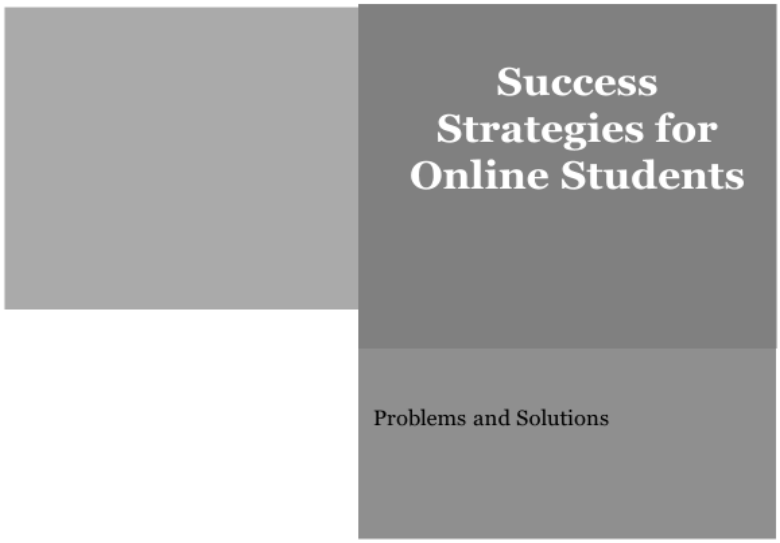
**Group Discussion: Reflections on literature:** Following lunch, the small groups will reconvene to reflect upon the literature they reviewed. Each category of literature will be discussed with its relation to online learning at the college, and participants will reflect on

the introduction statement of why they teach online. Group leaders will share findings with the entire group.

**Resolutions revealed:** Participants will return into the smaller groups from earlier in the training day and reveal resolutions to student challenges. Questions and answers pertaining to training for the day and the day one evaluation will be completed. Participants will be given a journal article related to online students to read in preparation for day two training.

**Power Point Day 1**

**Slide 1**




The College president will greet participants. Participants will be informed that they will be an active part of the professional development for the next three days with interactive discussions, engagement and collaborative activities. Each table will have markers, and large sheets of flip chart paper. These items will be used for discussions throughout the day.

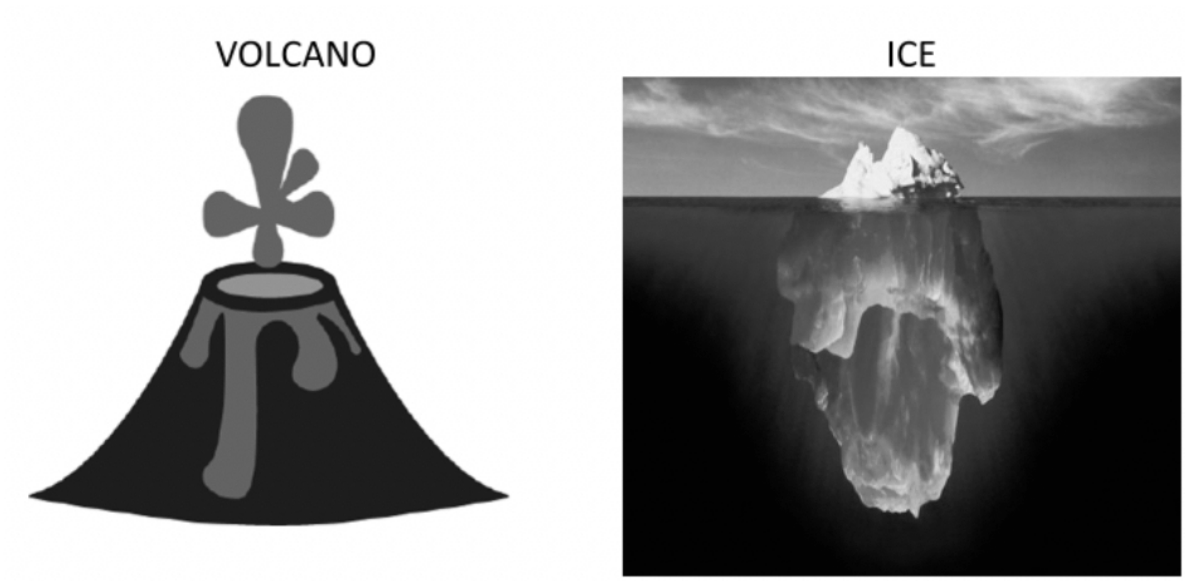
**Slide 2**

## Objectives for Today

Participants will:

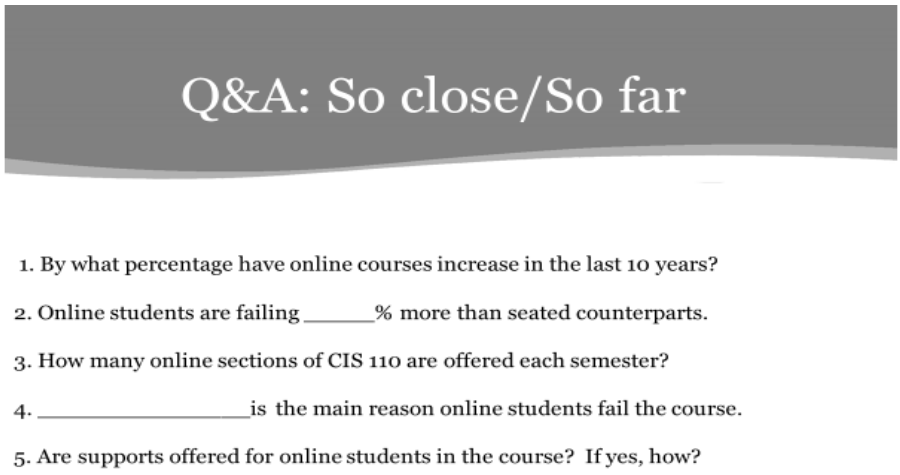
- recognize reasons for low pass rates in online Introduction to Computers course
- examine current research and Bruner's constructivist theory
- identify student online challenges
- Discuss solutions to improve student success

**Slide 3**



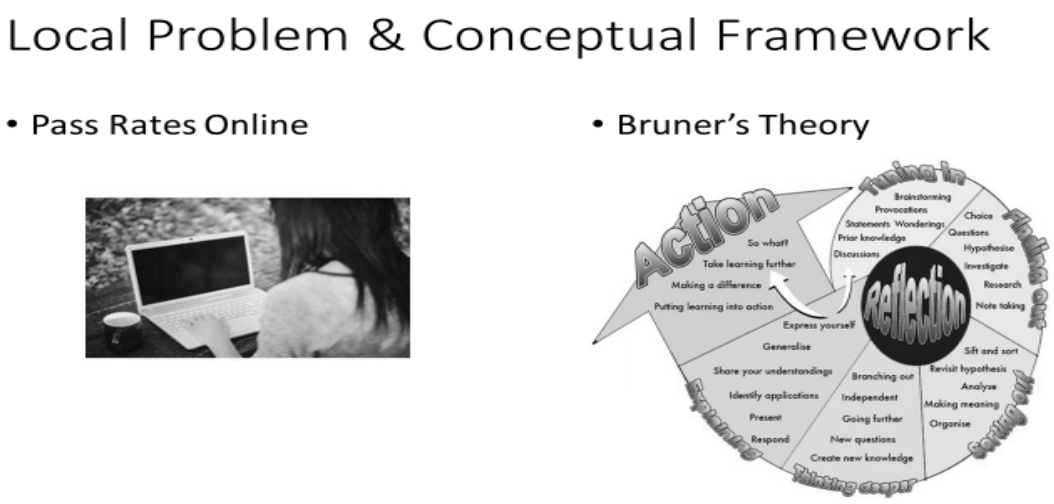

Each participant pairs with a participant at another table to get acquainted and discuss how their teaching style (volcano or ice) benefits students. Participants then introduce each other to the group, describing the teaching style. Answers will be recorded on a large Post-It chart, followed by a group discussion.

**Slide 4**




Participants will be asked to answer these questions, which will develop further discussion and conversation concerning the course in the research study.

**Slide 5**




I will share information related to the local problem and the study by engaging participants in questions or statements that led to the local problem. The conceptual framework will also be presented and discussed with the participants.

**Slide 6**


Participants will discuss in small groups challenges online students face. The entire group will then discuss and rank the challenges from the least to most important. Participants will role-play challenges. Small groups will discuss possible resolutions and place them on a flip chart paper, which will be used by group leaders later in the workshop day.

**Slide 7**


Distance learning administrator will give an overview of the college's distance learning plan and key components. A copy of the plan will be given to participants who will be asked to modify the plan based on their online teaching experiences. A large group discussion will follow to compare the two plans, and to add suggestions.

**Slide 8**


Prior to the lunch break, participants will be given literature to review pertaining to different facets of online education including student perceptions of online learning, online student retention, student engagement, and success in online learning.

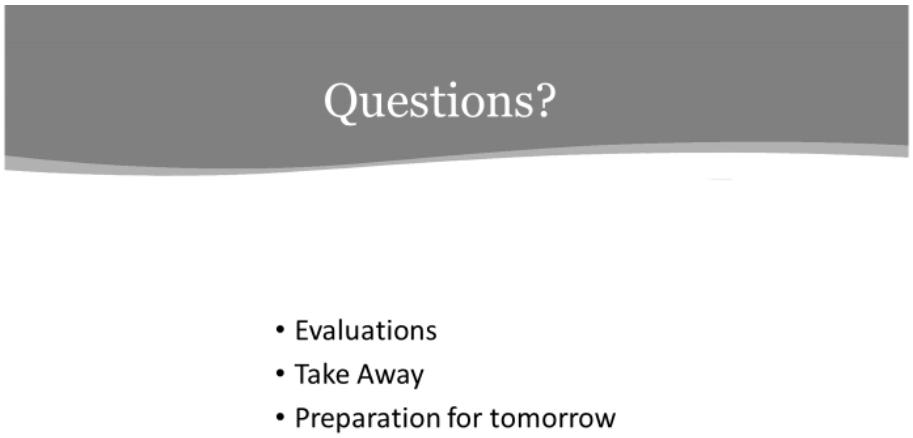
**Slide 9**


Small groups will reflect upon the literature they reviewed to relates to the college online practices. Group leaders will share findings with the entire group.

**Slide 10**


Participants will return into the smaller groups from earlier in the training day and reveal resolutions to student challenges. Questions and answers pertaining to training for the day and the day one evaluation will be completed. Participants will be given a journal article related to online students to read in preparation for day two training.

**Slide 11**




Participants will complete evaluations of today's workshop.

## Training Activities and Presentations

Day 2

**Day 1 reflections**: Following morning greetings to participants, we will reflect upon activities and key points participants gleaned from the first day. We would then work in small groups reflecting on the literature reading article assigned on day one. A flip chart with key indicators from the literature will be created to use in day three.

**LMS Overview**: Participants will use laptops for this interactive section of the training. The distance learning administrator will provide an overview in a treasure hunt format, of the learning management system, with the participants engaging in activities for using extra tools in the learning management system that support online learning.

**Instructional Design**: For this activity, participants will be divided into three small groups. Group one will be asked to design a course schedule and one unit in the learning management system for a student who has previous experience with computers and online learning. Group two will be asked to design a course schedule and one unit in the learning management system for a student who has previously taken an online class with no prior knowledge of computers. Group three will be asked to design a course schedule and one unit in the learning management system for a student without prior knowledge in both online class and computers. Following this activity, participants will discuss as a group the differences in the instructional designs and how they affect student success. Group leaders will discuss the information that each group designed. Participants will also create an instructional design based on Bruner's Theory in teams. The team with the

most sturdy and highest foundation will win the challenge. Following this exercise, the importance of building a quality instructional design will be discussed amongst the large group.

**Seven Keys:** Prior to lunch, I will facilitation a segment on the 7 keys to online instructional design. Seven pieces of individual flip chart paper will be posted around the room with the heading of each principle. In small groups, participants will address each instructional design key on a rotating basis until all participants complete the information. A group discussion will be held on each of the keys to instructional design.

**Course Analysis:** Following lunch, one set of participants will review the online Introduction to Computers course for one hour in pairs using a college online course checklist. Another set of participants will review information from the traditional course. Following the course reviews, participants will analyze the course, presenting their findings by group leaders to the group overall, noting how the course components benefit or differs for traditional and online learners.

**Faculty Connect:** The full-time faculty that teach the course in the traditional classroom will be invited to share their perceptions of students and challenges faced in the traditional course, and we will compare those challenges faced to students who enroll in the course online. Following their discussion, a breakout session where participants will think, pair, and share using critical thinking skills concerning how connections can be made to support each other in the online learning environment. Full time faculty that have more than three years teaching experiences will be paired with new and or part time faculty that teach the course online, and faculty that teach the course in the traditional

classroom will also be invited to participate in this portion of the training. Group leaders will discuss their conversations with the entire group of participants.

**Action Strategies:** Participants will be asked to write two strategies that they would believe support the success of online learners. Based on these strategies, categories will be created on large Post It paper, and success strategies will be shared with reports from group leaders. The recommendations will be given to the director of distance learning for further consideration. The conclusion of the training will include a question and answer section, and evaluation.

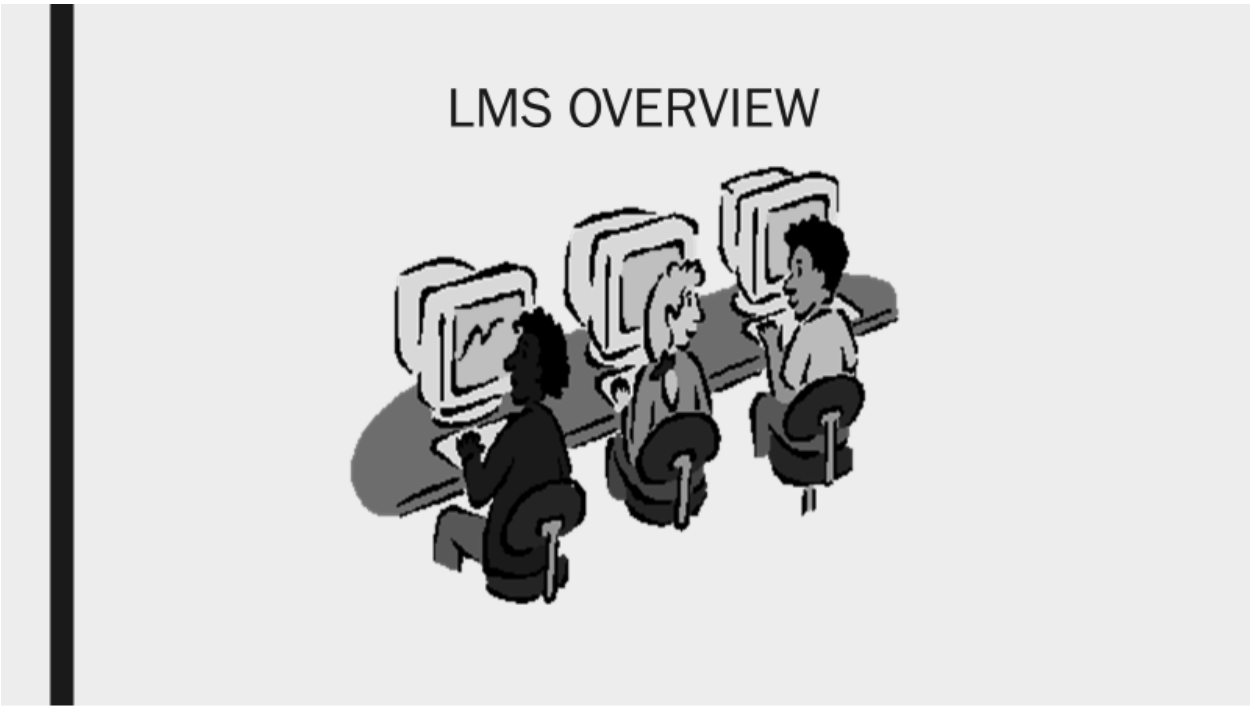
**Power Point Day 2**

**Slide 1**


**Slide 2**


Following morning greetings, participants will reflect upon activities and key points from Day 1. Small groups then reflection on the articles assigned in Day 1. Key indicators will be identified, placed on a chart, and discussed.

**Slide 3**

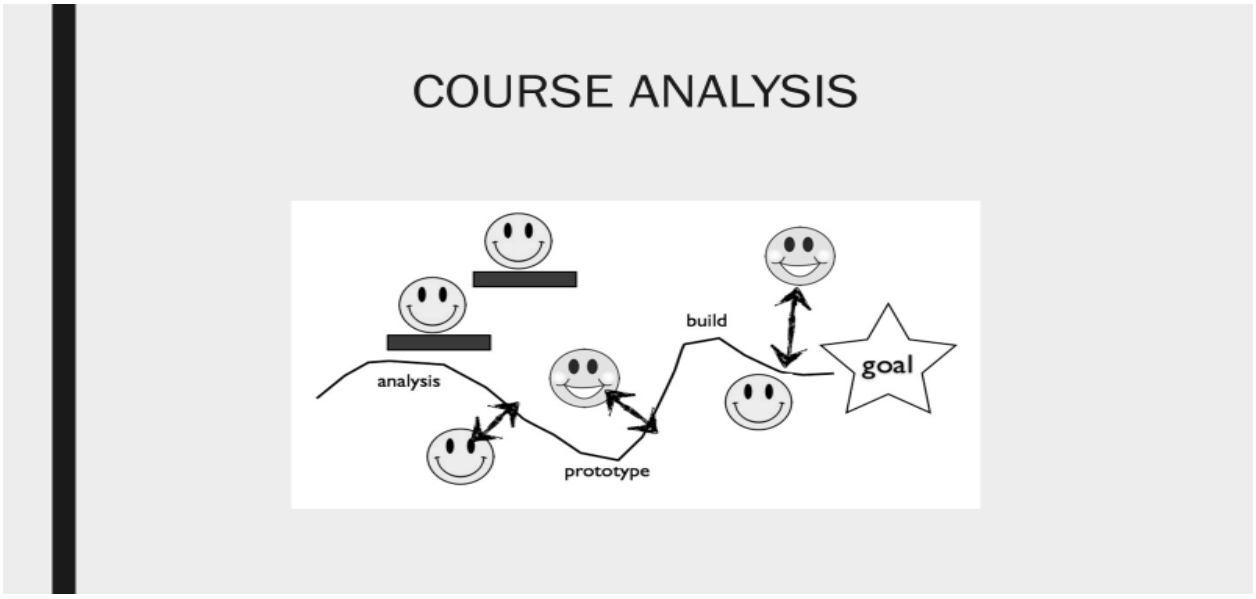



Participants will use laptops in this interactive group exercise to find LMS learning tools that support online learning. The distance learning administrator will explain the treasure-hunt format for searching the LMS to find the online learning tool treasures.

**Slide 4**

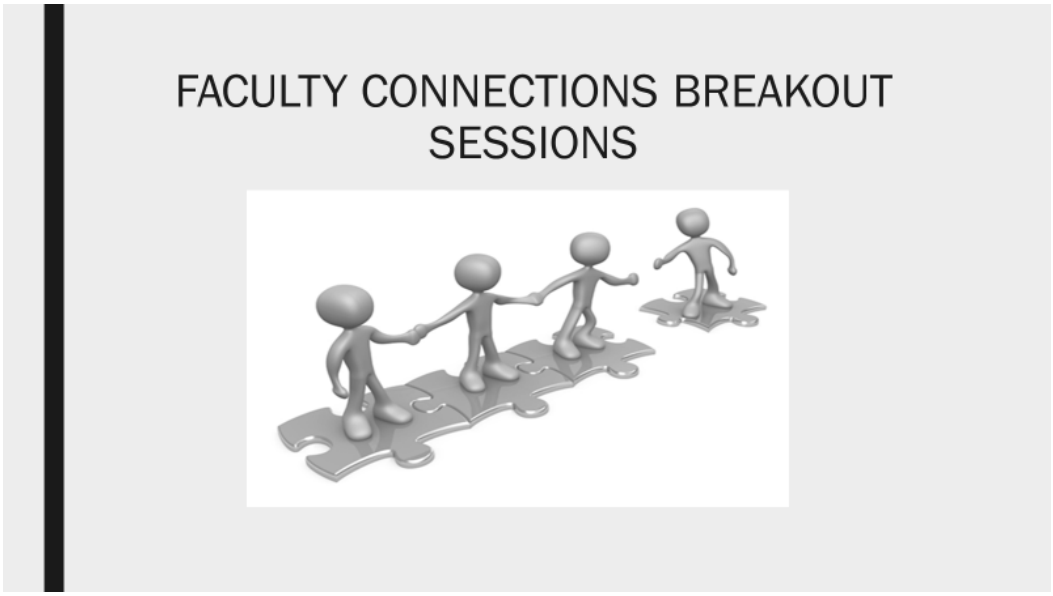

Groups will discuss differences in instructional designs and how they affect student success. Group leaders guide the discussions. Teams will also create an instructional design based on Bruner's theory.

**Slide 5**




Participants will review the online Introduction to Computers course in pairs using a college online course checklist (1 hour).

**Slide 6**

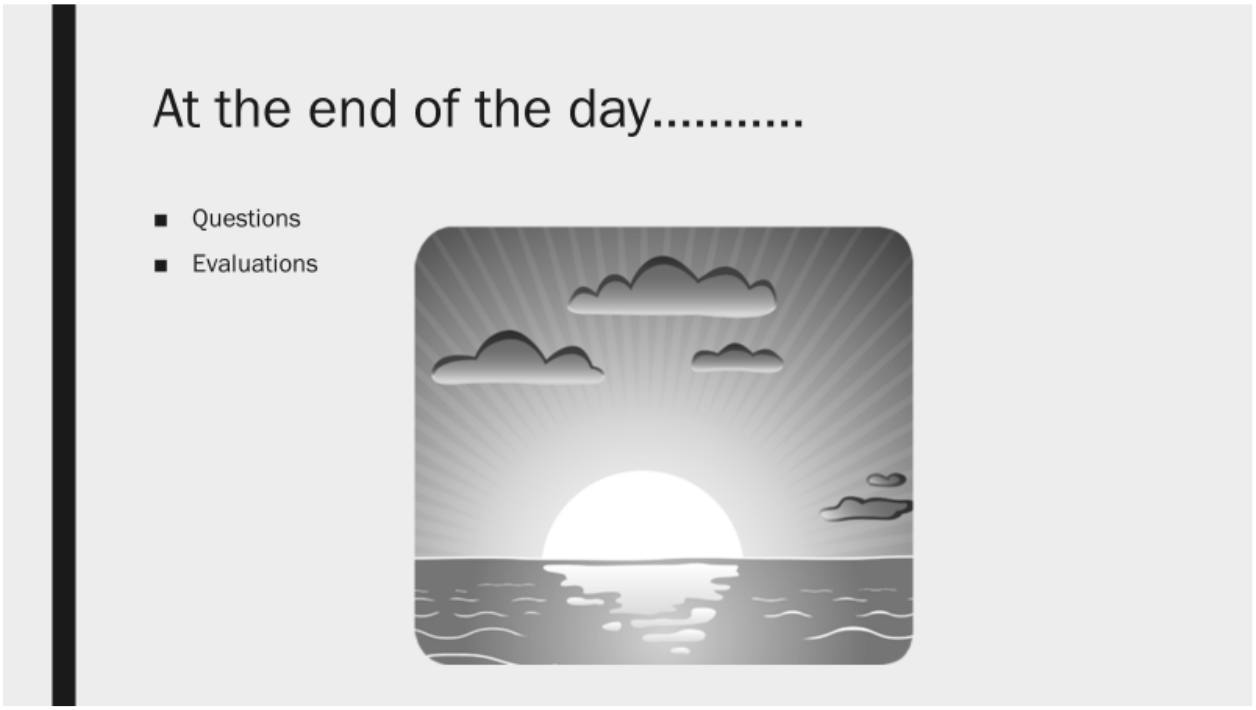



Full-time faculty that teach the course in the traditional classroom will share their perceptions of student challenges faced in the traditional course. Online leaders will summarize distance-learning challenges. Then, all participants will compare challenges and suggest ways to improve student success in both online and face-to-face sections of the course.

**Slide 7**


Participants will be asked to write two strategies that they would believe support the success of online learners. Based on these strategies, categories will be created on large Post It paper, and success strategies will be shared with reports from group leaders.

**Slide 8**




Participants will complete workshops evaluations, and any questions concerning the day will be addressed.

## Training Activities and Presentations

Day 3

**Reflection**: After morning greetings and welcoming all participants we will have a reflective discussion on activities from day two.

**Snapshot: The online student**: Participants will be divided in three groups. Using flip chart paper and markers, students will create a portrait of their perceptions of an online student, using words to identify the drawing. Each group will describe interpret their drawings and discuss their perceptions of online students. Following this exercise, the director of institutional effectiveness will present information on the characteristics of online students from the college's data warehouse. Following the presentation, students who have taken the course online will be invited into the room to share their perceptions of the course and answer any question from participants.

**Student Presence**: As an introduction to this part of the training, I will ask each participant to define the word presence, and how it relates to online learning. I will then ask participants to share definitions that were written with the group. Following this exercise, I would have note cards at each table, with three individual pictures, that would include a computer, a brain, and an instructor. Participants will be grouped together based upon the icons chosen to discuss the three types of student presence that occurs in the online learning environment. Participants with the computer icon would define and describe social presence, participants with the brain icon would define and describe cognitive presence, and participants with the instructor icon would define tutoring

presence. After each group presents the information, I will review the information and share points from a journal article related to student presence in online learning.

**Academic report**: The vice president of academic affairs and director of advising will facilitate this segment of the workshop. The vice president will present the importance of online learning to the institution as a whole, and future plans for online learning at the college.

**Online Student Advising/Support/Tools:** The director of advising would open this part of the training by having participants to do a one-minute quick write by creating one sentence on how they advise students concerning online learning at the beginning of the course. Participants will then turn to the person next to them to discuss the quick write and the relevance of what they feel online students should know about the online course prior to registering for the course. Based on those findings, in two large groups, participants can create a five-item advising checklist that would include information students should know at the start of the course to share. Following these activities, the director would engage participants in a fun quiz related to technology and college support offered at the college online. Each participant would take the quiz, and we would review the answers together as a large group. This will help familiarize participants with technology and support offered to online students. The director would end the segment reviewing advising and support tools the college offers for online students.

**Role Play:** The academic chair that supervises faculty that teach the course will facilitate this segment of the workshop. Participants will volunteer for role play scenarios with online students based on the findings of this study that would include procrastination,

accessibility, and unfamiliarity with online learning. We will discuss each scenario, and how discuss best practices on how to resolve each scenario. As the discussion extends related to best practice, we would discuss the college assessment plan that is currently used with the course. Participants would be asked to review the plan, and based on their professional development experience thus far, using a web-based handout, to hypothetically recommend two to three changes. We would discuss the variations on the web planning as it relates to assessment.

**Best Practices:** Next, a 10-minute video on best practices in online instruction from the state community college system office will be viewed by all participants, which would lead to an open discussion on best practices for online learning instruction. We would also reflect on the types of student presence noted earlier in the training. To introduce this exercise, participants will share their first online teaching experience in comparison with current practice, noting the similarities and differences in teaching to share with the group as a whole. Using an activity, participants will name the pieces of the puzzle. I would have various aspects of headings related to online teaching for each table in small groups to describe how their piece of the puzzle applies to best practices.

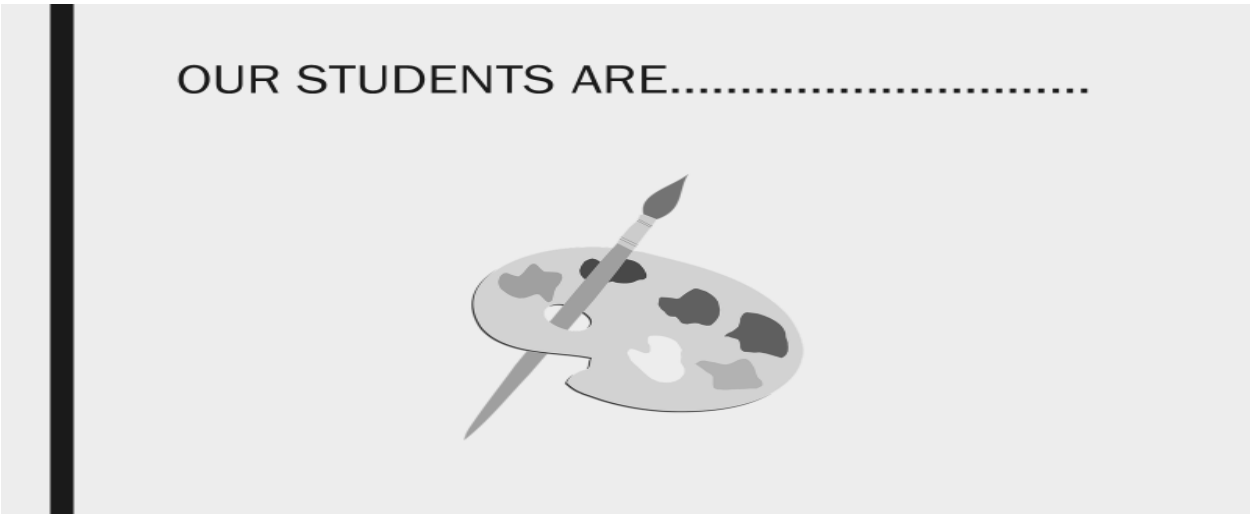
**Instructor Checklist:** The distance learning administrator would provide participants with a copy of the college's online course checklist and allow five minutes for participants to quickly review the document. Following the review, each table will review a category of the checklist for small group discussion. We will reconvene as a large group to discuss each group's findings. Following this exercise, the question and answer session and day three evaluation will be completed by participants.

**DAY 3 PowerPoint**

**Slide 1**


We will have a reflective discussion on activities from day two.

**Slide 2**




In small groups participants will create a portrait of online students using markers and large sized flip chart paper, discussing their perceptions of online students.

**Slide 3**


The director of institutional effectiveness will present information on the characteristics of online students from the college's data warehouse. Following the presentation, students who have taken the course online will be invited into the room to share their perceptions of the course, and answer any question from participants.

**Slide 4**


Participants will be grouped together to discuss the three types of student presence that occurs in the online learning environment.

**Slide 5**


The vice president of academic affairs will present the importance of online learning to the institution as a whole, and future plans for online learning at the college.

**Slide 6**


The director of advising will review advising and support tools the college offers for online students. An interactive quiz related to various student support tools will be given to all participants before the presentation.

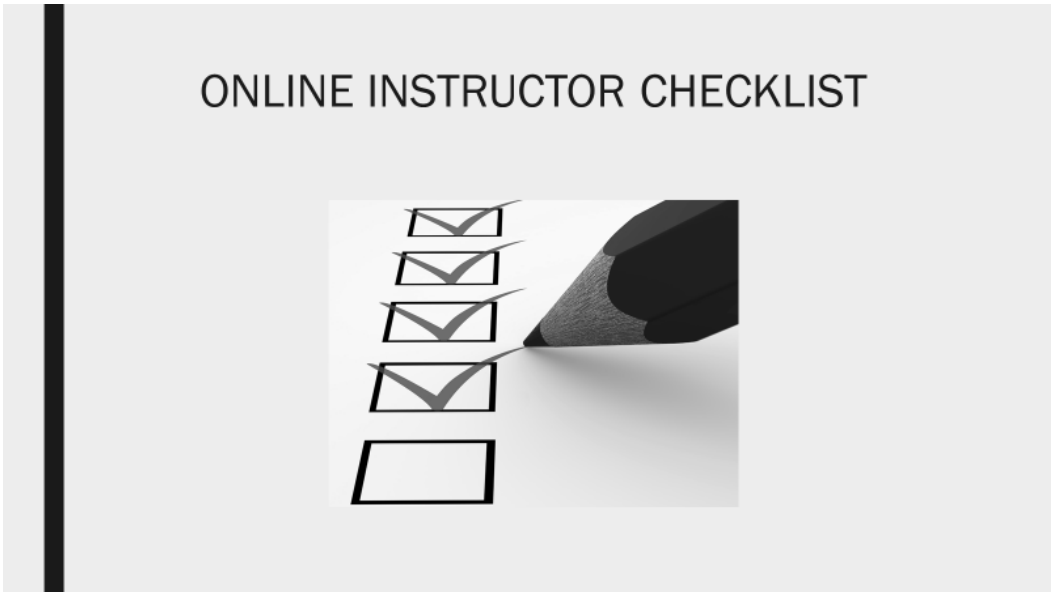
**Slide 7**


Participants will volunteer for role play scenarios with online students based on the findings of this study that would include procrastination, accessibility, and unfamiliarity with online learning. We will discuss each scenario, and how discuss best practices on how to resolve each scenario.

**Slide 8**


Next, a 10-minute video on best practices in online instruction from the state community college system office will be viewed by all participants, which would lead to an open discussion on best practices for online learning instruction. Puzzle pieces will be used to categorize each practice, placed in the workshop area.

**Slide 9**




The distance learning administrator would provide participants with a copy of the college's online course checklist and allow five minutes for participants to quickly review the document. Following the review, each table will review a category of the checklist for small group discussion. We will reconvene as a large group to discuss each group's findings.

**Slide 10**


The question and answer session and day three evaluation will be completed.

**Day 1 & 2 Evaluations**

| **Strategies to Improve Online Student Success**<br><br>Please check the box that best fits your answer: |
|---|

1. The presenter had expert knowledge of content presented.

| | | | | |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

2. I was provided an opportunity to ask questions and engage in the training

| | | | | |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

3. Activities were relevant to the focus of the subject matter.

| | | | | |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

4. The information presented was just the right amount.

| | | | | |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

5. Time allotted to complete activities was adequate.

| | | | | |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| |
|---|
| 6. The strong points of the workshop session were |
| 7. An idea I have to improve this session would be |
| |

**Evaluation (Day 3)**

| **Strategies to Improve Online Student Success**<br><br>Please check the box that best corresponds to your answer: |
|---|

1. Information in this training enables me to support online learners.

| | | | | |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

2. "Strategies to Improve Online Student Success" will assist in supporting my teaching/instruction as online faculty.

| | | | | |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

3. I have deepened my knowledge of current research, best practices, and tools related to online education.

| | | | | |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| |
|---|
| 4. Three key points I enjoyed in this training included: |
| 5. Suggestions for future online professional development: |
| |

Appendix B: Letter of Cooperation from Crisfield Community College

Community Research Partner Name
Contact Information
Date

Dear Researcher Name,

Based on my review of your research proposal, I give permission for you to conduct the study Strategies for Improving Student Performance in an Online Computer Science Course at [redacted] As part of this study, I authorize you to interview students, faculty, collect data, conduct member checking, and share results of this study. Individuals' participation will be voluntary and at their own discretion.

The purpose of this study is to examine student and faculty perceptions and experiences in the online Introduction to Computers course. Participation in this study is completely voluntary. Participants in the study will consist of student who have taken the online course, and faculty that teach the course online with three or more years teaching experience.

The findings in this study may benefit the college by providing strategies to further support online student performance and success in the course. We understand that our organization's responsibilities include: provision of rooms, resources, and other necessities in order for you as the researcher to complete this study.

The student will not be naming our organization in the doctoral project report that is published in ProQuest.

This letter of cooperation will not be signed for approval until after the project proposal is approved by CCC IRB. Per CCC IRB recommendations, this letter must be signed by a member of the CCC Senior Leadership Team. By signing this document, I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

Data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the CCC IRB.

Sincerely,

Authorization Official
Contact Information

Appendix C: Initial Email Invitation Participant Letters (Students)

Dear {participant's name},

You are invited to participate in a research study investigating strategies for improving student performance in online Introduction to Computer courses. This study is being conducted by Sharon Little, a graduate student at Walden University, and faculty member at SPCC. The purpose of this study is to acquire a greater understanding of the perceptions of recent [redacted] Community College students in regard to program experiences that influenced performance in the Introduction to Computers course. If you choose to participate in this research, I am asking that you notify me via the e-mail address provided below. You will be placed on a list from which I will randomly select participants. If you are selected, you then will be contacted to arrange a 1:1 recorded interview at a time and day that is convenient for you in a private study room in the campus library. The interview should take about 30 minutes to complete. **After your interview, within 24 hours, you will be asked to review an emailed transcription of your interview in order to ensure accuracy o**f the transcribed interview, known as member checking. Your review of the transcript will take an additional 15-20 minutes.

Once participation is confirmed and a date/time is agreed upon for meeting, you will be given an informed consent to review, sign and return. Participation in the study will be validated via signature on the informed consent for participation in research activities form. All of the information exchanged will be recorded and kept anonymous and confidential. Data from the study will be locked and stored for a period of five years, after which, it will be destroyed. No damages will occur related to your decision to participate, answers or decision to withdraw from the study. You will receive a $5 gift card for your participation in this study.

Disclosure of information: In order to further minimize risks, any non-academic threatening behaviors or violations would be reported to the Vice President of Student Services/Student Coordinator of Title IX. Should students report violations of the Student Code of Conduct such as: threat to self or others, cyberbullying, sexual misconduct, other violations of the Student Code of Conduct, or any violations of academic integrity, this information would be reported to the Vice President of Academic Affairs/Chief Academic Officer**.**

I look forward to hearing from you and hope you will consider participating in the study. Please feel free to contact me if you have any additional questions.

Sincerely,
Sharon Little
Walden University Doctoral Candidate
E-mail: sharon.little@waldenu.edu

Appendix D: Initial Email Invitation Participant Letters (Faculty)

Dear {participant's name},

You are invited to participate in a research study investigating strategies for improving student performance in online Introduction to Computer courses. This study is being conducted by Sharon Little, a graduate student at Walden University, and faculty member at [redacted]. The purpose of this study is to acquire a greater understanding of the perceptions of [redacted] Community College faculty in regard to program experiences that influenced student rates of performance in the online Introduction to Computers course. If you choose to participate in this research, I am asking that you notify me via the e-mail address provided below. You then will be contacted to arrange a 1:1 recorded interview at a time and day that is convenient for you in your private office setting. The interview should take about 30 minutes to complete. **After your interview, within 24 hours, you will be asked to review an emailed transcription of your interview in order to ensure accuracy o**f the transcribed interview. Your review of the transcript will take an additional 15-20 minutes.

Once participation is confirmed and a date/time is agreed upon for meeting, you will be given an informed consent to review, sign, and return. Participation in the study will be validated via signature on the informed consent to participate in research activities form. All of the information exchanged will be recorded and kept anonymous and confidential Data from the study will be locked and stored for a period of five years, after which, it will be destroyed. No damages will occur related to your decision to participate, answers or decision to withdraw from the study. You will receive a $5 gift card for your participation in this study.

Disclosure of information: In order to further minimize risks, any non-academic threatening behaviors or violations would be reported to the Vice President of Student Services/Student Coordinator of Title IX. Should students report violations of the Student Code of Conduct such as: threat to self or others, cyberbullying, sexual misconduct, other violations of the Student Code of Conduct, or any violations of academic integrity, this information would be reported to the Vice President of Academic Affairs/Chief Academic Officer.

I look forward to hearing from you and hope you will consider participating in the study. Please feel free to contact me if you have any additional questions.

Sincerely,
Sharon Little
Walden University Doctoral Candidate
E-mail: sharon.little@waldenu.edu

Appendix E: Interview Protocol (Students)

Interview#_____ Date: _____

***Strategies for Improving Student Performance in an Online Computer Science Course***

Thank you for your time and willingness to participate in the interview today. My name is Sharon Little and I am an instructor of Early Education at the community college and a doctoral degree candidate in Higher Education and Adult Learning at Walden University. As explained in your invitation letter and consent form, the purpose of this study is to acquire a greater understanding of the perceptions of recent [redacted] Community College students in regard to program experiences that influenced performance in the online Introduction to Computers course.

You have agreed to participate in this study because you are a student who completed the course in the online environment at the college, and your perceptions are a valuable part of this study. The interview will last no longer than 30 minutes and I will be taking notes during the interview and audio-recording the interview with your consent. Please let me know if you wish to discontinue the interview at any time. Your responses will remain confidential and may be used to develop student success strategies for future students in the course.

The data collection to be used will be the audio tape recording of the interview, written transcription of the interview, notes written during the interview that I will write as the researcher that will be written during and after the interview. I will organize and categorize the data by hand and using a data analysis tool. Within 24 hours after the interview, you will receive an interview transcript by email to review for accuracy. This will take an additional 15-20 minutes to review. I ask that you please verify that all of your transcript information is correct by email.

Audio recorded data will be erased after the data is uploaded into data analysis software. Reflective notes will be shredded after the information is uploaded into data analysis software. Data stored on a flash and external drive will be kept in locked storage for a period of 5 years. Qualitative software is password protected and will be deleted after five years.

The goals of the study are to provide valuable information to the faculty and college as a whole in the student perceptions of online the Introduction to Computers course and how the course will suit the needs of the students that will complete the course in the future. This study may also possibly provide strategies for student success for other online courses, which in turn could help students obtain a degree in a timelier manner

since this course is required by all degree programs regardless of the program of study. For faculty, this study may be used to provide professional development opportunities on strategies for improving student success for online students.

Appendix F: Student Interview Questions

**Student Interview Questions**

1. Why did you choose to take this course online rather than face-to-face?
2. What are the positive experiences in taking this course online?
3. Do you prefer to take courses face-to-face or online?
4. Follow up question: Why is that?
5. How do students and the instructor interact in the course?
6. Did you encounter any challenges taking this course online?
7. What do you believe contributed to your performance in the course?
8. What strategies, if any, would you recommend to improve the learning experiences in the online sections of this course?
9. Overall, what are your perceptions of the online course?
10. Do you have any final comments?

Appendix G: Interview Protocol (Faculty)

Interview#_____ Date: _____

***Strategies for Improving Student Performance in an Online Computer Science Course***

Thank you for your time and willingness to participate in the interview today. My name is Sharon Little and I am an instructor of Early Education at the community college and a doctoral degree candidate in Higher Education and Adult Learning at Walden University. As explained in your invitation letter and consent form, the purpose of this study is to acquire a greater understanding of the perceptions of [redacted] Community College faculty in regard to program experiences that influenced student performance in the online Introduction to Computers course.

You have agreed to participate in this study because you are a faculty member who has taught the course online for three years or more at the college, and your perceptions are a valuable part of this study. The interview will last no longer than 30 minutes and I will be taking notes during the interview and audio-recording the interview with your consent. Please let me know if you wish to discontinue the interview at any time. Your responses will remain confidential, and will be used to develop strategies students may have to improve the course.

The data collection to be used will be the audio tape recording of the interview, written transcription of the interview, notes written during the interview that I will write as the researcher that will be written during and after the interview. I will organize and categorize the data by hand and using a data analysis tool. Within 24 hours after the interview, you will receive an interview transcript by email to review for accuracy. This will take an additional 15-20 minutes to review. I ask that you please verify that all of your transcript information is correct by email.

The goals of the study are to provide valuable information to the faculty and college as a whole in student's perceptions of the online Introduction to Computers course and how the course will suit the needs of the students that will complete the course in the future. This study may also possibly provide strategies for student success for other online courses, which in turn could help students obtain a degree in a timelier manner since this course is required by all degree programs regardless of the program of study. For faculty, this study may be used to provide professional development opportunities on strategies for improving student success for online students.

Appendix H: Faculty Interview Questions

**Faculty Interview Questions**

1. What are the positive and negative experiences you encounter teaching this course online?
2. How do students interact with each other and with you in the online course?
3. What are the positive and negative experiences students encounter when taking this course online?
4. What are the reasons students fail the course when it is taught online?
5. What strategies, if any, would you recommend to improve the learning experience in the online sections of this course?
6. Do you have any final comments?