TEACHING STRATEGIES THAT ENHANCE THE EDUCATIONAL SUCCESS OF COMMUNITY COLLEGE ONLINE STUDENTS

A dissertation presented
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Abstract

Community colleges in the United States of America are an integral part of the higher education system. They serve students who may have life and time conflicts, students with multiple jobs and responsibilities, and students from various socio-economic backgrounds. The flexible scheduling and open admission policies of community college have provided broader higher education access to a diverse population of students. Over the years, the increasing cost of higher education has reduced student access to colleges; therefore, the number of students who can afford to attend college has declined. In an effort to meet the educational demands of these students, community college administrators and policymakers have introduced online education as a way to serve the educational needs of communities by increasing access, promoting completion, and providing an effective pathway through which students can enter four-year colleges or universities. As online education sustains its rapid expansion, it becomes necessary to continue developing strategies for establishing and maintaining quality in the design, curriculum and instruction of online courses (Malik, 2015). This case study is intended to add to the body of research of online education and teaching strategies that lead to student success. It explores how teaching strategies can enhance the learning process, course pass rates, and academic success for students in a community college educational environment.

Keywords: community college, online education, online learning, online teaching, teaching strategies, student success
Dedication

To my wife, Shamila Imani Rodd, who has always given me the courage and support to pursue my dreams.

To the memory of my father, mother and my two brothers who sacrificed their lives for the freedom of their country.

To my teachers who helped me to achieve my educational goals.
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My family is the greatest joy and the best part of my life, without them this accomplishment was not possible. For the past a few years, my focus and activities splintered between working full-time, teaching, being with my family, and pursuing an advanced education. Their support sustained me. I dedicate all of this work, sacrifice, and accomplishment to my wife, Shamila, and my daughter, Ariana. Special thanks go to my wife and daughter for being my diehard cheerleaders and greatest inspiration, encouraging me to fulfill my wish to earn a Doctorate in Education. They certainly understand my personal passion for education and for helping teachers and learners succeed in this arena.

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Chapter One: Introduction to the Study

The advancement of information technology has created an unprecedented change in higher education with rapid growth of online-course offerings and enrollments since the year 2000 (Capra, 2011). Lokken and Mullins (2015) found that online education has accounted for nearly all student enrollment growth at community colleges over during the past 11 years. Lokken and Mullins (2015) reported a 4.68% increase in student enrollment in community colleges online programs from fall 2013 to fall 2014. Online education is a growing community college option providing broad access to higher education and increased potential for success for the less privileged members of the community with their multiple life demands and complicated schedules (Jaggars & Xu, 2011, pp. 5-7). In this research study, online education has focused on enhancing instructional strategies for teaching and learning, curriculum, some aspects of faculty development, and integrating technological teaching innovations to augment the success of students as a response to a growing population who seek “to be economically self-sufficient in the information-driven world economy” (Kuh et al., 2010, p. ix). The purpose of this case study is to explore online teaching strategies that enhance the educational success of community college online students. Knowledge generated is expected to inform community college online education. This researcher identifies many components of educational success, including student acquisition of strategies required to maximize the college experience, retention, course passing rates and ultimately, students’ graduation. For the purpose of this study, educational success is more specifically defined as online students completing their courses with passing grades and will be referred to as student success throughout the rest of the dissertation.

Despite the rapid growth of the online student population, community colleges have limited success achieving an acceptable course pass rate for students. Jenkins (2011) found that
the community college student online course pass rate is approximately 50% while the rate for traditional face-to-face classes is between 70 and 75%. Studies of this low passing rate in online courses and the resulting low program completion rate have raised important concerns with community college teachers and administrators (Shapiro & Dundar, 2015; Ya-Han, Chia-Lun, & Sheng-Pao, 2014; Johnson & Berge, 2012; Wilson & Allen, 2011; Capra, 2011). Unless these educators more thoroughly identify the learning needs of their students and introduce more effective models of instruction and teaching, the success gap between online and face-to-face education programs will continue to be at an unacceptable level (Jenkins, 2011; Jaggars & Xu, 2011; Kuh et al., 2010; Jaggars & Baily 2010).

**Context and Background**

Massachusetts Community Colleges Distance Education (MCCDE), a consortium of 15 chapters within Massachusetts Community College Council (MCCC), has striven to improve the quality of its online courses through exploration of innovative approaches that support both online students and faculty with the ultimate goal of student success. In this spirit, MCCDE has developed various methods for training faculty, introduced and implemented advanced instructional technology, and maintained a strong support presence for the students and faculty throughout each semester. Even though these strategies attracted many faculty members to teach online courses and boosted online enrollments, the student success and passing rates continues to be alarmingly low.

MCCDE was determined to examine the rudimentary causes of this low success rate in its online courses. For this reason, it utilized hypotheses recommended by Morris (2011) to address student perceptions of online learning within the theoretical construct of the Community of
Inquiry (CoI) framework (Garrison, 2007). Then, years later, the MCCDE measured the effects of the CoI model in online courses and revealed the following concerns:

1. Teachers are not present in their courses; they only post the assignments and publishers’ materials and let their courses proceed on their own. Another concern was that online teachers do not communicate effectively and do not respond to email very often, and if they do, they are very selective. Teaching presence is an integral part of online teaching strategy that promotes students’ pass rates and enhances student success. Morris’s (2011) research showed that instructor actions such as providing feedback, quick response via e-mail or discussion board to a question, and review of assignment drafts benefit many online students.

2. There is no sense of community in online courses, and students cannot build traditional societal networks for their career and future socialization. Social presence is one of the key elements in student retention that leads to student success. Morris’s (2011) research found that communication and interactions with others through discussion board participation was a major source of engagement for the participants. The ability to ask a question, to share opinions with fellow students, or to disagree with the point of view in a reading assignment are all fundamental learning activities.

3. Students have to do more work for an online course than they do for the same course presented face-to-face. Therefore, online teachers need to find a balance between their teaching materials, quality of course presentations, amount of homework requested, discussion board posting requirements, and the technical complexities that the majority of students might face. Finding this balance is part of the teaching strategy that develops
student satisfaction for online courses and encourages students to continue with online education.

Researchers such as Ganesan (2005), Johnson et al. (2012), and Meyer (2014) suggest that community college online teaching strategies are still in the experimental stages as there are no set guidelines on how to make an online course successful. The lack of existing research makes it difficult for scholars and practitioners to determine which strategies are successful and which are not. Community college leaders have long recognized that online learning and teaching experiences can be enhanced when their institutions employ knowledgeable and responsible instructional designers for ensuring the quality of components of online course offerings, and that adequate professional development opportunities are provided for faculty in the area of asynchronous pedagogy (Shelton & Saltsman, 2005; Simonson, 2001). The authors have failed to point out that faculty in community colleges are governed under teacher unions and their teaching activities are protected under academic freedom; therefore, online course instructional designers do not have all the necessary authority to control the entire design and pedagogy of their online courses. Scholars and practitioners such as Shea, Motiwalla, and Lewis (2001) and Simonson, Smaldino, Albright, and Zvacek (2003) claim that knowledgeable online administrative and technical personnel, as well as instructional designers, are the key to a successful online program and that inadequate staffing is the source of most complaint about online programs.

Massachusetts Community Colleges Distance Education continues to develop and implement innovative online methods of instruction with increased course selections and flexible scheduling to facilitate student success. MCCDE understands that teaching and learning in the online environment are relatively new experiences for many students and faculty. Therefore, this
study seeks to explore online teaching strategies that enhance the pass rates of community college online students.

**Rationale and Significance**

The rationale for this study is the researcher’s interest in exploring online teaching strategies that improve passing rates and promote the educational success of community college online students. Literature shows that enrollments in community colleges’ online education have been growing faster than in traditional education nationwide (Fishman, 2015, 2011; Capra, 2014; Johnson & Mejia, 2014; Allen & Seaman, 2013; Jaggars & XU, 2011; Jaggars & Bailey, 2010; Jackson et al., 2010). Moreover, the National Center for Education Statistics (2016) concluded from Fishman’s (2015) report that 13% of all community college students in the year 2012 were enrolled exclusively in online courses. This researcher has been a community college distance education administrator for the past 15 years and has reviewed these statistics. Although the statistical data about the overall enrollments in Massachusetts community colleges online education are sparse, this researcher found that online enrollment at these institutions has grown from 16,273 to approximately 20,261 since the fall of 2012 (National Center for Education Statistics, 2014). Despite a continuous growth in online enrollment, student success and pass rates are declining (Jaggars & XU, 2016; Fishman 2015; Johnson & Mejia, 2014) at both local and national levels.

The low pass rates for online learning at community colleges have become a serious concern for higher education (Allen & Seaman, 2014; Yahan, Chia-Lun, & Shang-Pao, 2014; Jaggars & Xu, 2011; Jenkins’s, 2011). A significant goal of this study is to improve online teaching strategies that enhance student pass rates.
This study will primarily focus on community college online teachers’ instructional methodologies exploring which strategies are working, or not working, and which strategies must be developed to improve online students’ pass rates and ultimately success rates. According to Johnson and Mejia (2014), community colleges can improve the effectiveness of online teaching methodology through strategic planning.

The concepts and ideas in this study are applicable to instructors teaching traditional or hybrid courses. Many of the principles and teaching strategies presented in this study should also be of interest to instructional technologists, designers, and other professionals involved in the design and delivery of online courses. Individuals involved with faculty development will be able to utilize techniques from this study in combination with those in their institutional instructor training manual.

This study should also be of interest to administrators of online education programs by helping them understand variables and strategies that support online students and help them successfully complete their courses. Academic deans will gain important insight into supporting the continuous quality improvement of their online teachers. Moreover, community college administrators and boards of higher education can use the outcomes of this research to identify areas of support needed by online education programs within their areas of responsibility. The results of this study should be useful to practitioners and researchers more broadly interested in best practices for increasing the rates of success of students taking online courses. This study should also serve as an example for instructional leaders to consider before embarking on inquiry projects designed to assist online teachers. Knowledge gained from this initiative’s findings should support the researcher’s development as a teacher, administrator, and change agent in Massachusetts Community Colleges Distance Education.
Online courses have provided access to higher education to student populations previously challenged to participate, especially working adults, caregivers, students with disabilities, and others who have schedules and responsibilities that hinder them from taking face-to-face courses (Fishman 2015; Lokken & Mullins, 2015; Capra, 2014, 2011; Jenkins, 2011). The flexibility and convenience of online education has become desirable to 84% of community college students who must respond to daily challenges while balancing personal obligations (Fishman, 2015; Jackson, Jones, & Rodriguez, 2010) and pursuing their educational goals. Jackson, Jones, and Rodrigues (2010) state that as online student enrollments increase, mainstream online education teachers become more aware of the importance of learning how to best address a diverse array of student educational needs.

According to Hanover Research Council (2009), there is growing evidence from research of online education that certain teaching strategies can enhance teaching and learning—just as certain tactics and strategies work in face-to-face pedagogy. However, online education can offer additional challenges and opportunities to both teachers and students. For many students at community colleges, the concept of online study is new and different because their typical experience has included the physical presence of a teacher, getting their spontaneous questions answered instantly, meeting other classmates to socialize, creating networks, and working in a team (Fishman, 2015; Capra, 2014; Community College Research Center, 2013; Jenkins, 2011). Yet, many of those students come to appreciate the opportunities of continuing education presented to them through the flexibility and availability of online courses.

An online environment with qualified instructors can benefit students when effective teaching strategies and methodology are adopted and implemented in online courses. It is therefore of paramount importance that online teachers are willing and able to design quality
online courses while guiding students toward successful online learning experiences (Hung, Chou, Chen, & Own, 2010). Narozny (2010) emphasizes that when designing an online course, faculty must think of the educational needs of a diverse online student population including why they are taking an online course. There is a need for more effective and enhanced instructional strategies to specifically support the wishes and needs of online students. Soundly designed online courses coincide with the qualifications of online teachers to meet the needs of online students in a place, according to Jackson et al. (2010), where high expectations for achievement can be possible.

Online education has shifted the educational environment from teacher-centered to learner-centered. Online instructors have become facilitators and intermediaries between students and the resources they need to become independent learners (Bower, 2001; Awalt, 2003; Gibbons & Wentworth, 2001). The role of the online teacher is defined by the needs of learners, including monitoring interaction between students, guiding discussions, and providing interactive online learning activities (Crumpacker 2001; Gibbons & Wentworth, 2001). Researchers such as Boling, Hough, Krinsky, Saleem, and Steven (2012) state that numerous studies have shown that teaching online require a different pedagogy and unique set of skills from those required in traditional classrooms. There is also a need for additional instructional strategies to specifically support the special needs of online learners. The intended methodology utilizing the community of inquiry framework proposed in this study and the analysis of collected data can help the researcher, online teachers, and administrators to create an effective teaching and learning environment with appropriate teaching strategies to enhance student success and pass rates in online education at Massachusetts community colleges Distance Education. The Community of Inquiry (COI) framework is based on social constructivist
education theory and research, which identifies and measures three principle elements: social presence, cognitive presence, and teaching presence critical to successful online learning environment.

**Research Problem**

This study is focused on the ongoing problem of low pass rates among online students at community colleges, which is a subset of the broader need to increase college completion rates nationally. Low pass rates raise serious concerns about online learning at community colleges and suggest a need for research to identify both causes and improvements that focus on resolving this problem. Many factors contribute to the lack of student success, such as students’ being the first college student in their families; from inner-cities, rural areas, and low-income communities; as well as being academically underprepared (Jaggars & Baily, 2010; Jaggars & Xu, 2011). These factors are beyond the control of teachers or the educational institution. However, there are other factors that online teachers can influence and that can improve student educational success. These include teaching strategies such as providing methods that encourage productive, efficient, and meaningful discussions; prompt but modest feedback; peer facilitation; protocol discussion prompts; incorporating student engagement; instructional technology; student motivation; and the application of current online pedagogy (Vaill & Testori, 2012; Shermis, 2011; Tinto, 2011; Pelz, 2010).

Based on longitudinal research on student and course level data from 112 community colleges, Johnson and Mejia (2014) supported Jenkins’s (2011) findings regarding low success rates in community college online courses and concluded that “Online courses in community colleges see major growth, but student success rates lag” (p. 7). Allen and Seaman’s (2014) research tracked online course offerings since 2002 and found that the pass rate in online courses
is lower for all types of students, across a wide array of subjects, and across all community
colleges in the United States. According to the National Center for Education Statistics (fall
2014), the online course offerings and enrollments for MCCDE have grown by 5.55% and 24.5%
respectively since 2002. An enrollment is defined as one student in at least one specific course.

According to Jackson, Jones, and Rodriguez (2010), “Since the focus of community
college practitioners remains centered on teaching and training, very little research examining
online education within the community colleges has been forthcoming” (p. 80). This research
focuses on teaching strategies and their effectiveness that improve student success in community
college online education. To overcome the challenges of educational success for online students,
and considering increasing access, community colleges need to assess their current online
teaching strategies to identify the causes of students’ low passing rate in online courses and
determine what needs to be improved, what needs to be added, and what needs to be eliminated
from the ways in which faculty teach online courses. This study focuses on current online
teaching strategies and collects descriptions from online teachers through interviews to analyze
their individual experiences and instructional methods. The analysis of these data uncovers the
challenges that online teachers have experienced and should delineate what instructional
strategies online teachers need to include in their courses to enhance student success and improve
the course pass rates. Online teachers and students at MCCDE should benefit from this study as
it identifies needs and remedies to improve online teaching and learning as well as enhance
student success. The methodology for this study utilizes the community of inquiry framework to
provide explicit strategies to use in the design, development, and assessment of online courses by
ensuring the presence of three interdependent elements—social, cognitive, and teaching
presences (Garrison & Arbaugh, 2007). According to Garrison, Cleveland-Innes, and Fung
(2010), these three overlapping elements in an online course provide the structure of higher quality learning and teaching experience and ultimately, improve student success and pass rate.

**Research Question**

The purpose of this qualitative, single site case-study is to explore online teaching strategies for enhancing students’ pass rates and success at the subject institution with online teachers. Understanding the motivating factors that prompted the participants to become involved in online learning could serve as a guide to online teachers for development of effective teaching strategies. This research will seek to answer one primary question: How do community college online teachers describe practices that, from their experiences, enhance the pass rates of online students? The study will also examine a related sub-question: How do community college online teachers, in general, describe teaching strategies that, from their experiences, enhance student pass rates?

The setting of this study includes online courses within online education programs at Massachusetts community colleges. Approximately 31% of the students at these colleges are enrolled in online courses. The student success rates for passing these courses remains as low as 20% less than that of students in identical face-to-face courses. Other research has shown that strategic planning for effective online teaching can help community colleges increase passing rates of their online student (Johnson & Mejia, 2014).

**Definition of Terms**

**Community college:** Defined by the American Association of Community College as a non-residential post-secondary, undergraduate educational institution offering lower-level (freshman and sophomore) courses to commuting students. These colleges provide open access to post-secondary education, preparation for transfer to a four-year college or university,
workforce development and skill training, and a range of noncredit programs, such as English as a second language, skills retraining, community enrichment programs and cultural activities.

**Online education:** Defined as credit-granting courses or education training delivered primarily via the Internet to students at remote locations, including their homes. Online courses may be delivered synchronously or asynchronously.

**Online learning:** Online learning is a type of distance education utilizing a method of delivering educational information anywhere and anytime via the Internet instead of in a physical classroom. The courses are totally online and provide opportunities for online learners to interact with content, the instructor, and other students.

**Online teaching:** Defined as delivering presentations and instructions of a course through different web-based technologies without requiring face-to-face meetings of students and faculty.

**Teaching strategies:** Guidelines for all aspects of the instructional process, including the planning and management of online instructions, online teaching techniques, and online student assessment and evaluation techniques (Hanover Research Council, 2009; Boundless Education, 2016).

**Student success:** for the purpose of this study, student success is defined as completing a course with a passing grade.

**Community of Inquiry Theoretical Framework:** Defined by Garrison (2007) to represent a process of creating deep and meaningful collaborative and constructivist learning experience through a progression of three interdependent variables: social presence, cognitive presence, and teaching presence critical to online learning environment.
Theoretical Framework

This study applies learning theory as an approach to explore online teaching strategies that enhance online educational success for students at a community college within the social constructivist education theory of the Community of Inquiry (CoI) model. The social constructivist nature of a CoI framework is grounded in John Dewey’s notion of practical inquiry (as cited in Swan & Ice, 2010). The CoI model is a dynamic process model (Swan & Ice, 2010) designed to define, describe and measure elements supporting the development of online education. The Community of Inquiry theoretical framework describes a process of developing meaningful collaborative-constructivist learning and teaching experience for a successful online education program with the three interdependent elements: social presence, cognitive presence, and teaching presence. These elements are considered to be crucial concepts in an online course, and it is understood as the ability of people “to project their personal characteristics into the community, thereby presenting themselves to other participants as ‘real people’” (Garrison, Anderson, & Archer, 2000, p.89). Real people are the online teachers and students who are engaged through the channel of communication, i.e: Learning Management Systems (LMS) and other instructional technologies.

Researchers including Capra (2014) assert that many online courses offered by community colleges could be more accurately described as electronic versions of class hand-outs. These courses usually consist of a course description, a syllabus, lecture notes, reading lists, and assignment checklists. In other words, whatever materials a student might have viewed on paper in the past are now read onscreen, and whatever presentations a student might have watched in the classroom are now observed on their computer screens. Perhaps this suffices to replicate the classroom experience for students who are participating at a distance in an online
course, but this is not the best way to use the capabilities of the Internet and a computer to support online learning.

Although computer technology and online education have provided broader access to education by offering asynchronous courses, they have not been effective in the online educational success of community college students. Moreover, massive investment in technology, training, marketing, and technological supports for teachers and students has developed sophisticated and complex educational delivery systems that are not always pedagogically sound. For example, when the nature and design of online courses demonstrate lack of social, cognitive, and teaching presence, they can amplify the dryness and boredom that often results from regimented learning; moreover, these online courses, according to Capra (2014), can become isolating, impersonal, and disengaging, even for technologically sophisticated young adults. Promoting online educational success for students in a community college requires sustainable interactions and engagements between online teachers and students. This reduces students’ sense of isolation, enables teachers to provide comprehensive opportunities for deeper thought process and critical thinking for enhanced cognitive stimulation, and allows teachers to establish an online teaching presence through the design of the online course, facilitate online discourse, and provide direct instruction to online students. These also promote student presence and interactivity in online courses since they become co-moderators and contributors in their online courses.

Garrison, Anderson, and Archer (2000) provided the Community of Inquiry (CoI) framework to describe the manner in which the elements of social presence, cognitive presence, and teaching presence exist together to develop successful educational experiences for both students and teachers.
Social presence has been defined by Garrison (2009) as “the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities” (p. 352). In an online course, social presence enables teachers and students to identify themselves with all members of the learning community and establish a sense of belonging in that course. It further establishes instructor presence, encourages collaboration, enables risk-free expression, draws in participants, and allows group cohesion and open discourse.

Cognitive presence relates to “the design and development of instructional materials, enabling students to construct and confirm meaning through related reflection and discourse” (Garrison, Anderson, & Archer, 2000). With cognitive presence, teachers establish goals for their students and the methods to achieve those goals through interaction and communication. In this process, students create and construct knowledge, either through active discourse or individual reflection, and ultimately the cognitive elements are activated when students are challenged and intellectually stimulated (Capra, 2014). Cognitive presence allows teachers to set a curriculum, set a climate for learning, inject knowledge from diverse sources, connect ideas, and apply new ideas; moreover, it enables students to move past the early phases of learning (questions and confusion phase) to phases where they can understand and apply new concepts with deeper application.

Teaching presence joins the social presence and cognitive presence with the design, facilitation, instruction, and guidance throughout the dynamic learning experience so that students can achieve the desired learning outcome. Online teachers and students can add teaching presence to the course discourse by direct instructions and by facilitating the discussion.
Critics of the Theoretical Framework

The Community of Inquiry framework has generated considerable interest and has been widely adopted and studied by scholars and practitioners (Armellini & De Stefani, 2016; Xin, 2012; Annand, 2011; Rourke & Kanuka, 2009; Garrison & Arbaugh, 2007; Garrison, 2007). This framework has allowed the development of many studies of online learning in higher education; however, few authors have shown interest in assessing and critiquing learning in the Community of Inquiry.

The CoI framework assumes that a higher learning occurs through the interaction of three core elements: social presence, teaching presence, and cognitive presence. Armellini and De Stefani’s (2016) criticism of the CoI framework entails the way in which social presence interacts with teaching and cognitive presences as described by Garrison et al. (2000). They claim that social presence has not performed well as a stand-alone construct. Armellini and De Stefani (2016) argue that since the conceptualization of CoI, social presence has evolved and embedded itself in other two presences and has now become “the central construct of the framework” (p. 1212).

The critics of the CoI framework such as Rourke and Kanuka (2009) and Xin (2012) claim that the three identified core key elements in CoI could be applied equally to face-to-face or online settings. However, Xin (2012) argues that a theory must be developed specifically for online learning to map all of the elements of CoI to corresponding functions, rather than separate components. Another of Xin’s (2012) critiques of the CoI framework is that the distinction between cognitive, teaching, and social presence identified in the CoI framework is conceptual rather than practical or real, and she reminds her readers that the presences are analytical abstractions of the “real thing,” just like a rainbow. She explained that:
The frequencies of the light in a rainbow are on a continuum; any attempt to name specific colors of the light misrepresents the thing. That being said, the colors have their function. They provide a way of describing the rainbow and locating different areas within it. In online forums, the social, teaching and cognitive aspects are mingled together in a continuous flow (Xin, 2012, p. 4).

Rourke and Kanuka (2009) assert that the CoI framework emphasizes learning and teaching processes rather than educational outcomes of online courses. These critics also claim that Garrison et al. (2001) are ambiguous about educational objectives such as the deep and meaningful learning experiences that the CoI framework advocates. For example, according to Marton and Saljo (1997) and Hay (2007), deep learning and meaningful learning are two different terms in education. Marton and Saljo define deep learning in higher education as “critical examination of new facts and the effort to make numerous connections with existing knowledge structures” and Hay relates meaningful learning with “educational approaches such as discovery and problem-based learning” (as cited in Rourke & Kanuka, 2009, p. 6). However, in the articles of the CoI framework, Garrison et al. (2001; 2000) links the terms as “deep and meaningful learning,” to investigate practically the educational transaction process for developing collaborative-constructive, successful, online learning experiences (Akyol et al. 2009).

Rourke and Kanuka (2009) further claim that there is no cognitive presence in the CoI framework and even Garrison et al. (2001) have not been able to identify clear instances of cognitive presence. In such case, deep and meaningful learning may not be possible because either a description of student activity in an online educational forum, or prescription for what students should do, is missing (Rourke & Kanuka, 2009).
Moore (2013) asserts that the CoI framework presents an approach of analyzing and planning online learning with three interdependent key elements: cognitive presence, social presence and teaching presence. However, as a proponent of the CoI framework, Moore argues that the ideas presented in the CoI overlap with the key factors of the transactional distance theory. In his comparison of these two theories, he found that cognitive presence and the idea of dialogue are related to the development of knowledge within an individual or group through open and trusted dialogue and reflection. Teaching presence and the construct of transactional distance are analogous and both are concerned with “the amount of structure, dialogue and teaching that facilitates students being able to meet the required learning outcomes” (Moore 2013, p. 253). Moore (2013) asserts that social presence does not have similar key factors in transactional distance theory, but its importance in online learning has been emphasized by Swan (2002) and Shearer (2010) “in terms of psychological connection that may lead to increased motivation and satisfaction within educational experience” (as cited in Moore, 2013, p. 254).

Rationale for Theoretical Framework

The rationale for using the Community of Inquiry framework is that it assumes basis for the study of online learning and is inherently collaborative and constructivist. The theory of the Community of Inquiry supports this study by highlighting collaborative educational experiences between teachers and students with a constructivist approach to teaching and learning, which serves as a process model for online learning (Swan, Garrison, & Richardson, 2009). The constructivist approach to teaching and learning is less content-oriented and more learner-centered (Gold, 2001).

According to Swan and Ice (2010), the CoI framework has been used to study online teaching and learning during the past decade and it highlights the importance of teaching
presence, social presence and cognitive presence in online teaching and learning environments. The researcher believes that when these three elements of the CoI framework interact in an online course, teachers are able to provide a higher quality learning experience, and students are able to gain a deeper and meaningful learning experience.

To develop a deep and meaningful learning experience, teachers should bring their pedagogical, technological, and instructional knowledge to online education and utilize the social presence, cognitive presence, and teaching presence of the Community of Inquiry in order to create teaching strategies that enhance the educational success of community college online students. This concept is illustrated in Appendix A, Figure 1. The underlying foundational perspective of the CoI framework is a collaborative constructivist view of teaching and learning (Garrison, 2007).

**Applying Theory to This Study**

The Community of Inquiry model has shown to be a useful theoretical framework and tool to study and design online learning experiences (Garrison & Arbaugh, 2007) because it recognizes the importance of the essential elements of highly successful online teaching and learning experiences in higher education. Online education is a computer-mediated environment in which teaching and learning take place. In this environment, students are not dependent on their teachers for knowledge since they have instant access to a massive amount of resources and information on the Internet. Therefore, educational pedagogy for online education should progressively adjust itself to the challenges of interactive methodologies so that the teachers and students take on new roles in the teaching-learning relationship. Ultimately, teachers must relinquish the control of learning to students, especially as online education becomes more widespread in higher education. Although the physical presence of teachers, oral interactions,
and verbal cues such as tone of voice and facial expression are absent in online courses, these courses offer text-based communication and other supporting discourse that give the online students time for reflection. As Garrison et al. (2000) pointed out, it is accepted that social context greatly affects students and their learning outcomes.

A fundamental hypothesis of the Community of Inquiry is that a meaningful learning experience must consider students’ personal and collaborative worlds as associated with a purposeful online educational structure. The educators’ challenge is to determine what is known about effective teaching and learning overall and incorporate it into online education in a manner which improves the processes and results.

Literature substantiates the need to examine how teaching strategies enhance and support community college online educational success of students by utilizing the Community of Inquiry framework to promote social, cognitive, and teaching presence in online courses and to create an optimum educational experience. The Community of Inquiry framework assumes wider depth and broader spectrum for online learning research and can lead to answers to the research questions identified in this study.
Chapter Two: Literature Review

This chapter reviews literature relating to online learning, specifically research regarding teaching strategies that can be utilized to enhance community college student success. Student success in colleges and universities has been the subject of extensive research over many years. However, few peer-reviewed studies have investigated the links between teaching strategies and student success in undergraduate online education programs (Juszkiewicz, 2015; Shapiro & Dundar 2015; Capra, 2011, 2014). There is an array of recommendations for teaching in online courses, but the literature specifically relating to community college online teaching is limited. This study intends to fill a gap in the research about teaching strategies designed to enhance the pass rate of community college online students. Considering the current challenges and concerns, this study focuses on three primary research topics: teaching strategies, student success, and online teaching and learning at community colleges. This literature review includes the following sections: teaching strategies, both face-to-face teaching strategies and online teaching strategies; existing effective teaching strategies for online courses; faculty support services for online teaching strategies; student success; student success in online education; evidence of online student success; support for student success; the role of faculty in online education; and online teaching and learning at community colleges.

Research by Harvill, Maynard, Nguyen, Robertson-Kraft, and Tognatta (2012) and Jenkins (2011) show that improved access to higher education has increased student enrollment over recent years. Meanwhile, scholars and practitioners such as Shapiro and Dundar (2015) and Juszkiewicz (2015) claim that student success is lagging at all types of academic institutions. According to National Center for Education Statistics (2016) and Tinto (2011), only half of the students who enroll in U.S. colleges succeed as evidenced by a degree or certificate within six
years. Rates are even lower for community college students (Shapiro & Dundar, 2015). According to Juszkiewicz (2015) about 39% of students who enroll in community colleges earn a degree or certificate. This underperformance is even more prevalent in community college online education (Jaggars & Xu, 2016; Capra 2014, 2011; Moore & Kearsley, 2012). Although states, institutions, and foundations have invested resources to improve student success, their efforts have not substantially improved course completion rates (Tinto, 2011). Literature by Johnson, Mejia, and Cook (2015) shows that successful online learning depends on “offering effective faculty support, setting appropriate expectations from students and promoting interaction among faculty, students, and course materials” (p. 12). However, these scholars failed to link the effects of teaching strategies with student learning and passing rates in online education.

Researchers suggest that community college students are dependent on teachers for instructions yet rarely interact with their teachers or peers (Jaggars & Xu, 2016; Juszkiewicz 2015; Jaggars 2013; Harvill et al., 2013). Community colleges must focus on improving the educational success of their online students by incorporating appropriate teaching strategies in online courses to improve students’ online learning skills in addition to enhancing their academic efficiency and ultimately, their success.

The significance of this literature review is that it contributes to the field of knowledge regarding how online teaching strategies impact student success and, in turn, how these strategies can be modified to improve the student course completion rates at community colleges. Furthermore, research in this area can potentially contribute to the field of knowledge and help prospective students make informed decisions about enrolling in online courses. Although much research exists relating to online course retention in higher education, future research may need
to focus on online teaching strategies for student success, identify learning strategies that can sustain student learning, and identify the technological complexity and solutions for more successful delivery of online instruction to community college students.

**Teaching Strategies**

In this section, the researcher reviews literature concerning teaching strategies applied to the undergraduate education courses that generally enhance student success. The literature by Hanover Research Council (2009) and Boundless Education (2016) define teaching strategies to be the principles and methods used for instruction in the classroom, online courses, or in other scenarios. Researcher Narozny (2010) points out that teaching strategies promote students’ inquisitiveness about subjects taught in courses, improve students’ critical-thinking skills, keep students on task, engage students in class discourse, and enhance the course content.

Teaching strategies for face-to-face and online education must be designed and delivered with intentions to enhance the educational success of all students even though there are variations among these two educational environments (Shi, Du, Jiang, & Bin Saab, 2011). Moreover, strategies that seek to augment student success ultimately depend on the knowledge and skills of faculty to effectively implement them. A related point comes from Tinto (2011), who suggests that faculty with previous teaching experiences have acquired higher competence in problem solving than novice teachers and that their knowledge provides a different way of planning changes into their teaching strategies.

**Face-to-face teaching strategies.** In face-to-face courses, faculty members have, and maintain, high expectations for their students’ performance. These expectations are communicated to students verbally in classrooms, through syllabi, assignments, classroom discussions, and course management sites. Students should understand what is expected of them
in the classroom and adjust their performance accordingly. According to Tinto (2011), the clarity and consistency of the levels of expectations set by faculty directly influence student success. Faculty members often provide emotional, psychological, and academic support for their students in classrooms and during office hours as efforts to improve student success. Musick (2014) states that multiple configurations of support enable students to more easily convert that support into success in classrooms. For example, researchers such as Mentzer, Cryan, and Teclehaimanot (2007) suggest that face-to-face teachers conduct active demonstrations in their classrooms as a method of instruction to allow students to learn through observations, experimentation, and explanations. Teachers demonstrate the application of a concept or skill and act out a process. These demonstrations engage students throughout a process including analyzing each step and reflecting as a whole, learning steps which are challenging to illustrate in an online environment.

According to Tinto (2011), engagement is the key to student success in a classroom. The more students are academically engaged with faculty, peers, and staff, especially in classroom activities, the more likely they are to succeed in that classroom. Tinto further states that students’ academic engagement leads to their greater involvement in learning activities and the learning they acquire. The literature by Umbach and Wawrzynski (2005) suggest that if educational practices lead to student engagement, and student engagement leads to student learning and retention, then it can be said that those educational practices indirectly lead to student success within higher education. For example, course projects are an active learning process that teachers utilize in their face-to-face courses to enhance students’ engagement. Students learn valuable skills by presenting their projects and by discussing their peers’ work. Course projects motivate students to perform at a higher level. Assessment and feedback have
been proven to be effective teaching strategies for enhancing student success in face-to-face classrooms (Tinto, 2011). Timely and formative assessment and feedback are vital to helping students maximize their learning. Students are more likely to succeed in classrooms that assess their performance and provide frequent feedback about their performance (Umbach & Wawrzynski, 2005). In a classroom, teaching incorporates feedback from the teacher, peers, and auditors. This enhances the students’ sense of responsibility toward their study and academic work. At nearly the same time as Umbach and Wawrzynski, Kinzie (2005) concluded that assessment encourages students to reflect continually on the quality of their own efforts and outcomes. Research shows that teaching strategies utilized in the face-to-face courses of undergraduate institutions resulted in a high level of student success (Zeidenger et al., 2007; Tinto, 2011; Park, Johnson, Vath, Kugiskey, & Fishman 2013; Musick, 2014).

Several of the aforementioned teaching strategies are often applied to online courses because many teachers think they can teach online and face-to-face the same way. However, the literature by Riffe (2003) and Liu, Bonk, Magjuka, Lee, and Su (2005) note that the role of teachers has progressively changed from knowledge-centered individuals to facilitators, moderators, and course designers, who assure curriculum-mapping for online courses.

**Online teaching strategies.** In online courses, it is essential for teachers to cater to the needs of individual students more than they do in face-to-face courses (Park et al., 2013). Researchers including Narozny (2010) support the assertion and emphasize that when designing an online course, faculty must think of the educational needs of a diverse online student population including the reasons why their students are taking these particular online courses. According to Umbach and Wawrzynski (2005), online undergraduate education teachers adopt a student-centered approach, empowering students to learn on their own and even to teach their
peers. Research shows that effective online teachers utilize teaching strategies to support, guide, and motivate students to learn actively online (Young, 2006; Lin, Dyer, & Guo, 2012). Furthermore, teaching strategies that prepare faculty to teach online present a unique opportunity for faculty to engage online students in collaborative learning environment where students become active contributors instead of passive receivers.

Many of the teaching strategies recommended for face-to-face and online education run parallel, particularly those relating to expectations, engagement, support, assessment, and feedback. However, in the area of communication and interaction, a gap widens because the methods are different. For example, in face-to-face courses, there is instant and synchronous communication and interaction between teacher and student, student and student, and student and content. Online courses lack the aforementioned attributes, yet the importance of these attributes is not overlooked. According to Schmieder (2008), due to the increased availability of broadband Internet, online education programs have been able to utilize enhanced multimedia communication tools such as live chat sessions, online video, live audio, email, and discussion forums to improve the scope and quality of their online course experiences, subsequently enhancing their students’ probability of success.

As an approach to online teaching strategies, Ellison-Bowers, Henderson, Sand, and Osgood (2010) suggest that online teachers should design their online courses around strong pedagogical standards rather than new, complicated modes of delivery. Therefore, scholars and practitioners such as Gold (2001) and Ellison-Bowers et al. (2010) recommend that online teachers need to be trained in online pedagogy, learning management systems, and media technologies in order to anticipate the needs of their students, provide them with instructions, and set boundaries and rules that may be common in a face-to-face classroom (Waltonen-Moore,
Stuart, Newton, Oswald, & Varonis, 2006). In addition, Ellison-Bowers et al. (2013) found that online teachers who utilized technology to fit the curriculum were more successful in improving student success than those who chose a curriculum to fit the technology. However, Jackson, Jones, and Rodrigues (2010) assert that the technology is not the biggest challenge in online education; the biggest challenge is the identification, development, and implementation of teaching strategies and techniques which match each individual online learner with effective learning opportunities. For example, scholars and practitioners such as Lehman and Conceição (2010) and Pelz (2010) argue that interactivity is an important teaching strategy in community college online courses. It is considered to be one of the most effective engagement strategies in online teaching. Through interactivity, online teachers can ensure that their expectations match those of their online students, and that their learners understand the importance of preparing and being actively involved in the course (Lehman & Conceição, 2010). Other scholars such as Ali and Leeds (2009) show that when an orientation is a part of the teaching strategies for online courses at a community college, students who have attended an orientation performed significantly better than students who did not. Fetzner (2013) found that mandatory online orientation is necessary to effectively communicate with first-time online students.

**Existing effective teaching strategies in online courses.** In online education, the concern is about how to develop effective teaching strategies that can foster relationships to establish sustainable trust, stronger performance, and satisfaction among online students. In this subsection, the researcher covers the documented teaching strategies that have been effective in enhancing student success in both undergraduate and community colleges online courses. Effective strategies are imperative in increasing student confidence, student retention, course completion, pass rates, and student success in an online education. Early research by Garrison,
Anderson, and Archer (2000) suggests that when students are in charge of their own learning and teachers promote meaningful learning experiences through social, cognitive, and teaching presence in an online course, students’ learning and success increase. Furthermore, Lehman and Conceição (2010) support the study of Garrison et al. (2000) and show that student success is augmented by telepresence and social presence. Lehman and Conceição (2010) also found that students felt that their teachers placed them in the center of the online experience and that these teachers were available for them, and that technology supported the learning process rather than being a barrier to communication and interaction. Research indicates that online teachers have established meaningful education experiences for students (Pelz, 2010).

Literature points out that effective online teaching depends on the credentials of the online teachers and course designs that follow online pedagogy: facilitating the courses effectively, adapting to student needs, communicating effectively, and showing concerns for student learning (Yang & Cornelious, 2005; Young, 2006; Yukselturk & Bulut, 2007; Pelz, 2010; Lin & Dyer, 2012; Tseng & Ku, 2011; Jaggars, 2011; Sweeney, 2013). One of the effective teaching strategies utilized in some community colleges is the student performance tracking system (SPTS) within learning management systems (LMS). With this system, online teachers can examine students’ behavior and activities as well as identify students with poor academic performance to ensure that they receive appropriate academic support (Macfadyen & Dawson, 2010; Fishman 2011; Jaggars 2013; Ya-Han, Chia-Lun, & Shen-Pao, 2014). Researcher Jaggars (2013) shows that adopting a SPTS as part of an online teaching system helped identify and intervene with students who failed to sign in, had difficulty with their online courses, or failed to turn in an assignment. Another study by Josh Fishman (2011) shows that in 2004, Central Piedmont Community College (CPCC) utilized SPTS in online courses and
experienced improved course completion with better passing grades, retention, and graduation rates over four years.

The aforementioned online teaching strategies are in addition to Schrum and Hong’s (2002) findings that they compiled from the recommendations of experts in online education, which were:

- Encourage students to post a short autobiography at the beginning of each course so that the students can get to know each other. Ideally, conduct an initial face-to-face meeting or even some informal gatherings during the course to establish a sense of community and thus, facilitate active participation.

- Interact with students one-to-one and on a regular basis, especially those who fall behind. If needed, give support over the phone or in a scheduled site visit.

- Have students work collaboratively on their assignments. Further, encourage students to share their individual work with other students so that they may benefit from peer feedback.

- Establish minimum levels of participation in discussions in order to promote ongoing contributions to reciprocal knowledge building.

- Provide readings that are up-to-date, challenging, and relevant to students’ lives.

- Create places in an online environment where students can ask each other for help and have an open forum where they can ask questions directly to a teacher.

- Be flexible in terms of course topics and procedures, allow these topics to be predominantly generated by students, and even allow students to establish their own individual learning goals.
• Design an online environment using a technologically minimalist approach, reducing technological requirements and potential difficulties.

To implement these teaching strategies across an institution, a mandatory policy must be set forth for all teachers to obtain training prior to teaching online. The training helps “faculty members develop and design their activities and interactions in new ways” (Schrum, & Hong, 2002). This training is currently absent from many community college online teaching policies.

**Faculty support services for teaching strategies.** Higher education institutions are obligated to provide support services for faculty members to establish a productive and improved educational environment. This subsection covers a review of literature regarding the supports that institutions have provided for face-to-face and online education to help implement innovative teaching strategies.

Faculty members approach teaching as experts in their field of study and as providers of content. However, they may need to utilize faculty support services provided by their institutions for the successful implementation of their teaching (Moore & Kreasley, 2012). College faculty support services connect and strengthen the links between the teaching strategies and student success in online and face-to-face courses.

According to Singer (2002) and Diamond (2005), the Teaching and Learning Centers in many four-year colleges and community colleges offer professional development services for faculty and help them to improve their professional careers, update their teaching style, and organize concepts and information so their students can learn more deeply and retain what they have learned. In addition, these centers attempt to assist faculty with developing effective teaching strategies, better courses, assignments, and exams (Singer, 2002; Diamond, 2005). These colleges also offer instructional consultants to support faculty members with their teaching
skills and pedagogical expertise (Knight, 2008). An instructional consultant is a teaching coach who helps faculty members cited with poor teaching performance, or those having difficulties in teaching or using new technology techniques.

Many of the abovementioned support services are already utilized by faculty members teaching online courses at various undergraduate and community colleges. Because online faculty members usually aren’t present on college campuses, they can benefit from the support services the department of online education of those colleges offer. Faculty development in online teaching is a critical foundation for quality online education and plays an essential role in the Sloan Consortium five pillars of quality for online learning. According to Meyer and Murrell (2014), faculty satisfaction is one of the pillars, which emphasize commitment to improving online courses. Researchers such as Meyer and Murrell (2014) and Kukulska-Hulme (2012) state that Sloan Consortium characterizes faculty satisfaction as an opportunity for “training in online instructional skills,” resulting from institutional support. Furthermore, orientation, mentoring, and ongoing support services are imperative for implementing effective teaching strategies (Vaill & Testori, 2012). With orientation, online faculty can be sure to understand the pedagogical differences between face-to-face and online education. They also can learn technical skills to fully utilize the tools available within their learning management system and other online resources for implementing teaching strategies. The literature by Vaill and Testori (2012) points out that orientation should be designed to prepare faculty to teach online successfully and to help them design or modify the course that they plan to teach. Research shows that mentoring is important to online faculty development (Hixon, Barczyk, Buckenmeyer, & Feldman, 2011). Furthermore, Vaill and Testori (2012) and Hixon et al. (2012) suggest that an experienced colleague can become a mentor and share his or her knowledge
about what works and doesn’t work in an online course. Research by Vaill and Testori’s (2012) shows that instructional designers provide support to ensure that faculty members are participating and they are utilizing the tools within the learning management system effectively.

Finally, Allen and Seaman (2010) show that when faculty members are included in planning they are committed to utilizing support services for their online courses. For example, some community colleges involved all of their faculty and staff during the process of changing its Learning Management System. As a result, these faculty members have demonstrated a higher commitment to practices of online teaching and learning. In accordance with course adaptation (MCCC Distance Education Agreement, 1998), the community colleges have provided stipends to faculty members for their participation, designing courses, and introducing innovative teaching strategies that help to augment student success, retention and grades. According to Allen and Seaman (2010), online faculty development practices strengthened the quality of online courses and programs. These initiatives included orientations for new faculty, professional development related to student learning in an online environment, technical training, a full-time helpdesk, learning techniques in designing online courses using nontraditional delivery strategies, academic integrity strategies, and faculty as mentors to help others, thus enriching the collaborative environment of working in teams.

Conclusion. In this section, the researcher examined the literature related to teaching strategies applied to undergraduate face-to-face and online courses that enhance student passing rates and success. Teaching strategies are the principles and methods utilized for instructions in classroom and online courses (Hanover Research Council, 2009; Boundless Education, 2016). This researcher learned that many teachers apply their face-to-face teaching strategies to their online courses. Although some of the face-to-face instructional methodologies may be applicable
to online courses, the role of being an online teacher has changed from knowledge-centered individuals to facilitators, moderators, media technologists, and course designers, who ensure curriculum-mapping for online courses (Liu et al., 2005; Riffe, 2003). Furthermore, online teachers should design their online courses around strong pedagogical standards rather than new, complicated modes of delivery. He also explored existing teaching strategies for online courses that have been effective in enhancing student success rates in community colleges. For example, online teachers who empower students by placing them in the center of online experience provide educational and technological supports, use student performance tracking systems to monitor student activities, and remove the barrier to communication and interaction have established deep and meaningful educational experience for online students (Pelz, 2010). Higher education institutions must provide faculty support services for the development and integration of teaching strategies to achieve a higher level of student success in their online courses. The next section covers a review of literature regarding student success in online education.

**Student Success**

Early literature defines student success as academic achievement, passing course grades or GPA, class participation, satisfaction, gaining knowledge and skills, persistence, attainment of educational objectives, and post-college performance (Kinzie, 2005; Kuh, Kinzie, Schuh, Whitt, & Associates 2010, 2005; Kuh, Kinzie, Buckley, Bridges, & Kayeek, 2006). In addition, Stanford Research Institute International (2013) defines success as completing a course. To date, Kuh et al. (2005, 2006, 2010) continues to be widely cited in the conversation on student achievement and is frequently cited in the literature on student success (York, Gibson, & Rankin, 2015). The aforementioned literature covers general definitions of student success in undergraduate online education.
**Student success in online education.** Research on student success in online education is limited in size, volume, and type of the institutions involved. However, the existing research on student success focused on student characteristics, educational background, and quality of online education. It has not adequately discussed which factors are positively related to student success (Moore & Kearsley (2012); Yukselturk & Bulut, 2007; Bunn, 2004). The literature by Bunn (2004) defines student success in online courses as completion of the course. For this study, the researcher combines Bunn’s (2004) and Kuh et al.’s (2005, 2010) assertions and defines success as completing a course with a passing grade. Scholars such as Bunn (2004), Waltonen-Moore et al. (2006), Yukselturk and Bulut (2007), Kuh et al. (2005, 2010), Moore and Kearsley (2012), Yukselturk and Top (2013), and Johnson et al. (2014) have played pivotal roles in defining student success for online education. In addition, the researchers agree that an online course becomes successful when it is designed toward the needs and characteristics of the students. In addition to the aforementioned researchers, Park et al. (2013) suggest that study of the characteristics and needs of the online students may help faculty to develop an understanding of their learners, what motivates them, and what obstacles hinder them from completing a course with passing grades. However, scholars and practitioners such as Yukselturk and Top (2013) and Johnson et al. (2014) argue that anticipation of the needs and characteristics of community college online students may not ensure student success entirely, but may inform faculty’s pedagogy to help students to persist. The literature by Rovai (2003) suggests that students must be skillful in computer literacy, information literacy, time management, reading and writing, and computer-based interaction to become successful in online courses.

**Evidence of online student success.** The delivery of courses and even complete degree programs online has become commonplace in higher education (Leist & Travis, 2010). In the
United States, online course enrollment in higher education is growing each year (Allen & Seaman, 2010; Morris, 2011) as a direct response to student demand for more convenient access to college courses. In response to such demand, institutions of higher education have increased their online course offerings, a growth quite evident in Massachusetts community colleges (Massachusetts Colleges Online, 2014). Unfortunately, the quality of course content and faculty online teaching skills appear to have lagged behind the pace of such expansion (Leist & Travis, 2010). Teaching strategies are among the factors affecting the quality of online courses but have not been sufficiently explored. Teaching strategies often lack effectiveness, and student success suffers throughout undergraduate and community college online education. Several previous studies have established that overall student success rates in online courses are lower than those in traditional courses (Wilson & Allen, 2011; Allan & Seaman, 2013; Community College Research Center, 2013; Johnson & Mejia, 2014). However, very few of these existing studies have recommended developing teaching strategies that would be effective in increasing student success with passing online courses. A study by Horspool and Lange (2012) examined student success in an online and a face-to-face microeconomics course in which the controls included the selection of course instructors, teaching methods, and teaching materials. Horspool and Lange (2012) found that students seemed to be technically proficient and well prepared to take online courses and did not find a significant difference in course outcomes such as overall course grades and course passing rates between online and face-to-face courses. Horspool and Lange claimed that teacher’s biweekly high-quality communication with students contributed to student success in their online course. Further in their study, however, Horspool and Lange (2012) conjectured that student success or perceptions of teaching effectiveness may depend on other factors such as
the role of media technology, teaching strategies (instructional methods) and prior student knowledge.

Although higher education institutions have tried to implement advanced technologies in their online learning programs more than ever during the past few years, they have not yet defined any universal teaching strategies as an effective mode for online instructors to follow. Many isolated experimental strategies have been tried in various four-year colleges and community colleges with varying outcomes. Feintuch (2010) pointed out that U.S. Department of Education reviewed more than 1,000 online courses executed between 1996 and 2008, and reported that students performed better in online courses, on average, than they did in face-to-face courses. However, Feintuch did not mention if this study surveyed online courses at community colleges, four-year institutions, or a combination of both. Researchers such as Mentzer et al. (2007) studied two groups of students in a university undergraduate introductory early childhood development course. Students were randomly assigned to either an online or a face-to-face section. At the end of the semester the researchers reported that during the semester, students in both sections had the same test scores, but those in the online group were less likely to turn in assignments, and therefore, achieved lower grades overall in comparison with the face-to-face group. Researchers including Wilson and Allen (2011) supported Mentzer et al.’s (2007) report asserting that online students seemed to have a higher withdrawal rate, higher failure rate, and more trouble completing assignments on time.

To respond to the needs of undergraduate and community colleges regarding student success, Fishman (2011) shows how Central Piedmont Community College, along with six other colleges, utilized the Online Student Portal Learning System to assess the learning styles of at-risk students (whether they learn best through reading, listening, or hands-on work). These
colleges reported that their online student success rate increased as the college responded to identified student needs. Drawing firm conclusions from these types of studies is very difficult because community college students and four-year college students generally have different characteristics, attitudes and educational needs. For reasons such as financial concerns and the purposes of community colleges, a very limited amount of research has been dedicated to community college online education. While a vast amount of literature shows the efforts of institutional support to augment online student success for four-year and community colleges, the linkage between teaching strategies and student success in online community college courses has scarcely been researched.

Support for student success in online courses. This subsection uncovers the type of support online education should provide to online students for improving their success in both undergraduate and community college online education. It has been a challenge for students with little or no experience in technology to learn both the technology and content concurrently. It is imperative that students are provided with adequate support structures to assist them as they complete their online courses. Lack of proper support for online students can result in attrition of student confidence, decreased student success, and increased withdrawals. There are multiple ways that institutions can support online students.

In this endeavor, resources must be available to help online students. Support service personnel must be able to assist students with their needs in efficient and effective ways. A related point comes from Shermis’s (2011) research stating that faculty must assist with the efforts of students’ course completion while dedicated administrative staff must assist with online education support. While many factors contribute to attrition, at the top of the list are the levels of interaction and support. To this end, some students in online courses report feelings of
isolation, lack of self-direction and management and eventual decrease in motivation levels
(Artino, 2008). Very often, this is one of the contributing factors to the low success rate with
online courses. In online courses, faculty must encourage students to develop supportive peer
groups and find personal support via the interactions that can occur within those groups.

Another cause of low success rates of online students is insufficient technical support.
Harrell’s (2008) study points out that providing adequate technical support is critical to online
students’ learning since they must give attention to course content as well as to the technology
that is being used to complete coursework. Although live technical supports are available during
the normal office hours at most community colleges, students’ technical problems often arise
after normal business office hours when students are trying to complete their assignments. This
is a considerable hurdle for community college students who are non-traditional students and
work full-time during the day. Researchers such as Harrel (2008) and Jaggars (2011) support the
idea of providing technical support “any time” and “any place” by employing professional or
student workers using Chat technology to address technical support issues from various
locations.

Although providing a range of technical support can help augment student success, this is
not the only issue to be considered. The societal aspect of online education is also critical to
retain students in online courses. A common thread adversely affecting student retention in
online classes is their feelings of disconnection and isolation, as well as deficiencies in academic
preparation and technical or online skills (Rovai, 2003; Jaggars, 2011). Rovai further explains
that successful course completion is influenced by students’ previous academic performance
(their reading and writing skills) and by more realistic expectations of the requirements and
efforts needed to complete the course.
Another student support service that gained popularity among online students is a mentoring program. This program provides opportunity for online students to interact with mentors who guide them through their online experiences. The literature by Harrel (2008), Hixon, Barczyk, Buckenmeyer and Feldman (2011), and Vaill and Testori (2012) suggest that mentors can serve as teaching assistants, social-connectedness initiators, and technical supporters (Harrell, 2008). The decision regarding who can serve as a mentor varies among higher education institutions. Normally, professional staff or previously successful online students can serve as mentors. Mentors play important roles in online education as they enable and encourage students to effectively participate in community building activities.

**Conclusion.** In this study, student success is defined as a student completing an online course with a passing grade (Kuh et al., 2010; Bun, 2004). Online education is an evolving new phenomenon in higher education and research in the area of online student success is limited in size, volume, and type of institutions, especially within online education at community colleges. However, the existing research on student success has focused on student characteristics, educational background, and quality of online education. Rovi’s (2003) study advises that students must be knowledgeable in computer and information literacy, time management, and computer-based interaction to become successful in online courses. Research shows that in recent years the increased literacy in computer information technology among students has increased online course enrollments in undergraduate and community colleges (Massachusetts Colleges Online, 2014; Allen & Seaman, 2010; Morris, 2011). However, course content and faculty online teaching skills have lagged behind (Leist & Travis, 2010), and overall student success is suffering throughout online education (Community College Research Center, 2013; Johnson & Mejia, 2014). Research points out that undergraduate and community colleges must
provide support services such as developing peer groups, mentoring to serve as teaching assistants, and technical supports to boost the success rate of online students. In the next section, the researcher reviews the literature about the role of faculty in online education that may lead to student success.

**Role of Faculty in Online Education**

The role of faculty in traditional face-to-face courses is different than that in online courses. Depending on the type of educational institution and the type of course delivery system, faculty members undertake teaching, research, and service roles to perform the academic work of their respective institutions (Hamrick & Florence, 2002). They further explain that as faculty members teach, they disseminate applied knowledge to students and assist students with the learning process and applying that knowledge. In synchronous face-to-face courses, faculty members’ teaching role is essential to the success and satisfaction of their students. In this role, according to Hamrick and Florence (2002), the teachers are the content experts, and students are regarded as learners or novices to the academic discipline or field of study. Researchers Tinto (2011), Shi et al. (2011), and Musick (2014) claim that teachers play important roles in creating an effective face-to-face classroom environment. Students often mimic a teacher’s social behavior, which is a reflection of a teacher’s action and the environment he or she sets to direct. One of the most important roles for teachers in face-to-face courses is educating their students by transmitting knowledge through lectures, small group activities, and hands-on activities.

According to Moore and Kreasley (2012), teachers are the leaders and content providers in their face-to-face courses. They make instructional decisions—both prior to and during teaching—that largely determine what and how learners engage with content.
According to Park, Johnson, Vath, Kugiskey, and Fishman (2013), the mentoring role in face-to-face courses is proven to have positive effects on students’ learning and satisfaction. In this role, a teacher can sit with students in a physical space and encourage students to strive to be the best they can. Often traditional education teachers undertake the role of advisor and guide students toward successful completion of their college goals.

Research shows that though face-to-face learning environments are complex, teachers are familiar and comfortable with them and have developed high levels of expertise and experience (McConnell, 2000; Mentzer, Cryan & Teclehaimanot, 2007). However, scholars and practitioners such as Moore and Kreasley (2012) and Musick (2014) suggest that the skills, strategies, and techniques teachers use in their face-to-face courses may not be effective in online learning. Early research shows that the role of online teachers has transformed from knowledge-centered individuals to pedagogical, social, managerial, and technical (Berge, 1995). Nearly twenty-five years later, Bawane and Spector (2009) and Hung et al. (2010) took Berge’s concept a step further and identified a list of roles adopted by online teachers: to be professional, pedagogical, facilitator, evaluator, administrator, technologist, advisor, subject matter expert, and course designer, assuring curriculum mapping for online courses.

There is no doubt that popularity of online education has skyrocketed and every higher education institution, public or private, has surpassed its capacity of enrollment (Lokken & Mollins, 2015). With the new developments in online education, faculty must utilize their previous academic experiences toward developing new roles for themselves that are responsive to both new learning environments in which they teach and new kinds of students they will teach. The role of online faculty has become more complex and can be viewed under four categories: pedagogical, social, managerial, and technical (Keengwe & Kidd, 2010). Later in
this study, Keengwee and Kidd point out that the pedagogical role revolves around educational facilitation while the social role is creating a friendly social environment necessary for online learning. The managerial role includes agenda setting, pacing, objective setting, rule making, and decision making while the technical role depends on the faculty’s first becoming comfortable with the online technology and then being able to transfer that level of comfort to their learners. The implementation of these roles with online faculty can ensure student satisfaction. Researchers agree that student satisfaction with online education is directly affected by the type and degree of interaction between the online faculty member and the online students (Jackson, Jones, & Rodriguez, 2010). The identification and integration of faculty actions which impact student satisfaction in online courses will greatly assist community colleges in providing quality online experiences and to enhance student success.

**Conclusion.** In this section, the researcher reviewed literature regarding the role of teachers in face-to-face and online courses. Literature shows that the role of teachers has gradually changed from knowledge-centered individuals to facilitators, moderators, and course designers, who assure curriculum-mapping for online courses (Liu et al., 2005; Riffe, 2003). Research suggests that teaching online requires a different pedagogy and unique set of skills from those required in traditional classrooms (Boling et al., 2012). For online teaching, the Community of Inquiry framework describes a model in which the online teacher has the role of learning coach, cheerleader, big brother, tour guide, and co-learner (Bull, 2013). Research suggests that the needs of learners define the role of online teachers (Crumpacker 2001; Gibbons & Wentworth, 2001). In the next section, the researcher reviews the literature related to online teaching and learning at community colleges.
Online Teaching and Learning at Community Colleges

Community colleges were established after 1970 in the United States and have been an essential part of higher education ever since. Online education has become an integral part of community colleges and an affordable and important gateway for access to higher education by providing a flexible and independent learning environment with the option of taking courses off-campus. Researchers such as Vaughn (1999), and Liu, Gomez and Yen (2009) state that the mission of community colleges is to provide higher education access to students from a wide range of socio-economic statuses and those who are the first generation in their families to attend college. Scholars such as Johnson and Berg (2012) support the assertion and point out that those community colleges enroll a greater number of non-traditional students than do four-year colleges. However, the literature by Johnson and Mejia (2014) and Musick (2014) shows that these types of students have lower success rates for completing online courses than traditional students enrolled in four-year colleges. One of the hurdles of student success in community college online teaching and learning is that traditional teaching styles have been utilized in most online courses.

All community colleges across the United States offer online courses in order to provide access to higher education and meet the needs of a broader community. The colleges must also maintain high academic standards for accreditation purposes as well as prepare students to transfer to four-year colleges or to find employment. Balancing these challenges is an intricate task for community colleges because of inadequate educational, technological, and financial resources. These challenges have affected online teaching and learning and have contributed to low student success rates in community college online courses (Jenkins, 2011). These phenomena highlight the urgency for developing appropriate online teaching strategies with
strong educational pedagogy that would boost student success in a community college online education program.

The literature by Hung, Chou, Chen, and Own (2010) suggest that community colleges need to assess their current online teaching strategies, identify the causes of student attrition in online courses, and determine teaching strategies that are specific to their settings and through which their students can benefit and succeed. For example, scholars such as Liu et al. (2009) state that at-risk online students should be identified early on in a course so that intervention measures can be provided to improve the likelihood of academic success for the students. Hung et al. (2010) support the assertion as well as suggesting that by undertaking these tasks, teachers can design better online courses and guide students toward successful online learning experiences. To achieve these goals, community colleges should develop online courses that help students learn better and implement effective teaching strategies to enhance the educational success of their online students. Johnson and Berge (2012) suggest that certain factors must be addressed for successful online teaching and learning to occur: identifying and developing strategies that enhance student success, providing support for faculty and students, and providing training for faculty and administration to transition to online education.

Another related point comes from Allen and Seaman (2010) who suggest students need more discipline in online courses as they control their own educational experience and pace. According to Liu et al. (2009), many students do not succeed because they are unable to identify, develop, and prepare skills and aptitudes necessary in an online course. Moreover, online learning environments are not highly teacher-centered and require students to take a more active role in their learning (Hung, Chou, Chen, & Own, 2010) and academic success, including
managing their time, keeping up with course activities, submitting homework on-time, and having a sense of responsibility for their own education.

**Conclusion.** Online teaching and learning have become integral parts of community colleges. They offer an affordable and an important gateway for access to higher education by providing students with an independent online learning environment and the ability to take courses off-campus. Research suggests that community colleges enroll many non-traditional students who work full-time during the day, have family obligations, are the first college students in their family, or are academically underprepared (Berg, 2012; Jaggars & Baily, 2010; Jaggars & Xu, 2011). Although these types of students can benefit from the flexibility of online courses and have broader access to higher education, they display a lack of discipline in online courses and lower success rates for completing online courses than traditional students (Johnson et al., 2014; Musick, 2014; Berg 2012). To enhance the completion rate of online courses and promote students’ success, online teaching and learning at community colleges should identify at-risk students early on in a course and provide prevention measures with effective teaching strategies to improve academic success, and develop online courses that help students learn better (Hung et al., 2010; Liu et al., 2009; Johnson & Berg, 2012).

**Summary**

This literature review explored many dimensions of online education with particular attention paid to the teaching strategies that enhance the success of community college online students. The review suggests that effective teaching strategies, student success, and online learning at community colleges intersect at a point where collaborative educational transaction, reflective teaching and learning, and meaningful educational experiences occurs for both online teachers and students.
Studying the experiences of community college online teachers could provide the field of online education with the identification of which teaching strategies enhance the educational success of online students. Student success in these settings is linked to students’ ability to function as independent learners striving toward completing a course with a passing grade. Effective teaching strategies should support the learning process. Researchers interested in online student retention, student success, and any other aspects of higher education have focused mostly on four-year colleges and universities because of their research-oriented environments, financial advantage, graduate work, postgraduate doctoral studies, and so on. These opportunities are not usually present in community colleges, as their financial support for research is limited. Therefore, there is a gap in the research of online course delivery in community college settings throughout the United States. However, existing research focused on community college online teaching and learning shows trends of improvement in the pedagogy, instructional design and teaching.

For faculty, the type of pedagogy used for teaching online differs from that used in face-to-face classes. The growth of online courses and programs has increased the need for faculty to gain the knowledge, skills, and comfort level necessary to make their online courses successful. Formative researchers in the field of online education, Berge (1995), Riffe (2003), Liu et al. (2005), Bawane and Spector (2009), and Hung et al. (2010) agree that the traditional role of faculty shifted from that of transmitter to a more complex role when teaching online courses. In this case, online faculty maintains a role of facilitator, teacher, organizer, assessor, mentor, role model, counselor, coach, supervisor, problem solver and course designer.

Increasing student success for online courses within the framework of a community college may be a daunting task, but colleges must be innovative and proactive to meet the
challenges of increasing student success rates. Although community colleges were created to satisfy similar missions, each community college must evaluate its own online educational setting and the institutional resources necessary to develop and implement plans to ensure the success of their online students (Harrell, 2008).
Chapter Three: Research Design

This case study investigates the experiences of community college online teachers and examines descriptions of their lived experiences and practices (Creswell, 2013) that help improve student pass rates. The primary research question as well as a sub-question that guide the study is: How do community college online teachers describe practices that, from their experiences, enhance the pass rates of online students? How do community college online teachers, in general, describe teaching strategies that, from their experiences, enhance online student pass rates?

The purpose of primary research question is to identify those principles and procedures that can be implemented by community college online teachers to enhance the pass rates of online students. The sub-question seeks to define those teaching strategies that are effective in online courses and can be utilized by community college online teachers to enhance student pass rates and ultimately improve student success.

Qualitative Research Approach

The qualitative research approach employed here is aligned with the study’s constructivist/interpretivist research paradigm. According to Cohen & Manion (1994), the constructivist-interpretivist paradigm has the intention of understanding "the world of human experience" (p. 36) as it is through a level of subjective experience. Creswell (2013) asserts that in the constructivist paradigm individuals search for understanding of the world in which they live or work. Accordingly, the goal of this research is to rely mostly on the views of the participants in the situation (Creswell, 2013), the online instructors in this study.

Ponterotto’s (2005) study points out that a characteristic of constructivism is the recognition of the importance of interaction between the researcher and the object of research.
Further, Ponterotto states that only through interaction and dialog can deeper meaning be uncovered. In this study, online teachers will be instructed to interact with the researcher and tell their stories and understanding of their roles, responsibilities, challenges, and success as well as their perceptions about teaching online at a community college. Interpretations of these stories will be used to answer the research questions.

This qualitative study is deemed an appropriate approach for determining if teaching strategies enhance the educational success of community college online students. This research will help the future design and development of effective online teaching strategies by exploring the perspectives and attitudes of individual online teachers and the strategies they implemented and considered to be successful or challenging. According to Creswell (2013), in order to develop a detailed understanding of the issues, it is appropriate to conduct qualitative research when a problem needs to be explored. For this study, it is important to recognize the personal experiences of the participants and to understand the educational experiences of the online teachers and learners. According to Bogdan and Biklen (2003), the qualitative research tradition emphasizes individuals’ stories, reflections, perspectives, and beliefs as foundational to meaning-making.

For this study, the researcher will employ a single-case holistic design to gather descriptions from teachers regarding their individual experiences and instructional methods they used while teaching online. These descriptions should help the researcher to define what instructional design and strategies online teachers need to incorporate into their courses to enhance student success and improve the course pass rates. Furthermore, the stories should divulge the challenges that the online teachers have experienced, and how they enhanced their teaching strategies to support student success in their online courses.
A single-case holistic model of inquiry can relate the research to the subjective and objective teaching experiences of the researcher and participants. The research involves the study of a case within a real-life, contemporary context (Creswell 2013). This case study will help to explain the common or shared experiences of the faculty members who teach in a community college online education program. It is imperative for online teachers to comprehend these common experiences in order to improve and develop innovative teaching strategies that can eventually enhance existing strategies and augment student success.

Mills, Duerpos, and Elden (2010) and Yin (2014) have examined the case study as a research strategy to a great extent. Their research efforts claim that a key to good research is to define a case that can be bounded or described within certain parameters such as a specific time and place. This case study will examine existing teaching strategies employed in community college online courses to gather accurate information (Creswell, 2013) about how they relate to student pass rates. A qualitative study employing case study engages the researcher and the readers in the lived experiences of the participants. Yin’s (2009) study suggests that case studies are an appropriate research method for answering questions asked with “why” and “how”. The researcher has “little control over events” and the study involves a “contemporary phenomenon within a real-life context” (Yin 2009, p. 9).

This case study attempts to best answer the research questions and explain the experiences and perceptions of online instructors and the teaching strategies they have implemented in online education courses at their community college for the past two years. The archived data and documents will be reviewed and utilized to determine the online education policies relevant to teaching, as well as teachers’ and students’ feedback regarding their satisfaction with the methods of instruction, challenges, and success they had. Furthermore, in
this study, semi-structured interviews will be used to allow the researcher to understand the perspectives of interviewees and obtain individuals’ in-depth experiences and perceptions for teaching in online education. The interviews will be guided conversations as one of the most important sources of case study evidence (Yin, 2009).

The aforementioned approaches allow the researcher to understand the common or shared experiences of the participants in online teaching and learning. Since there is little research on online teaching strategies, this case study will add to the body of research by focusing on important key elements of online teaching emerging from the Community of Inquiry model: social presence, cognitive presence, and teaching presence. This will aid in the understanding of the complexity of the teaching strategies for online courses at a community college.

**Participants**

All of the participants for this case study will be selected from Massachusetts community colleges. The participants will be full-time faculty members who taught online courses as part of their day-time load. For this study, purposeful sampling and criterion sampling approaches will be used to select the participants. Creswell (2013) points out that criterion sampling works well when all participants have experienced the phenomenon and purposeful sampling is useful when all participants have established an understanding of the research problem and central phenomenon in the study (pp. 155-156). Therefore, a study as such allows for special attention to the context in which phenomenon occurs (Yin, 2009).

For the purpose of this study, nine faculty members will be selected for interview. All selected faculty members must be knowledgeable of the community college’s online education teaching policies, online pedagogy, and must have completed faculty training for online instruction. In view of the small number of participants, gender, race, age, and number of years
teaching in higher education will not be considered as variables in this study. The interviews will be conducted face-to-face for audio recording purposes as well as to gather in-depth information from the participants regarding their teaching experiences, perceptions of student learning, and success and failures while teaching online courses.

**Recruitment and Access**

As a Coordinator of Distance Education in a Massachusetts community college and a member of Massachusetts Community College Council (MCCC), the researcher has access to many faculty members who are currently teaching online courses. Permission to interview these faculty members will be secured from the President of MCCC. The “recruitment letter” for participation in this research will be distributed by MCCC Chapter Presidents to their faculty members. Recruiting participants with the same criteria is imperative to collecting accurate data since the research results will only be as valid as the participants involved in the phenomenon of the study. The researcher plans to have nine faculty participants for interview purposes, but will recruit ten to make provision for unavoidable, last minute changes. Appendix B includes the recruitment letter that will be sent via email to the potential faculty participants. The letter will state the purpose of the study, and why they are being asked to take part in this study. If and when each of these faculty members responds affirmatively, an invitation to participate in the study will be mailed.

The invitations will acknowledge those faculty members as participants of this case study and will explain the interview process and their rights. Each invitation will also ask the participant to propose a date, time, and a location for an interview. The participants will respond either by email or phone. At the time of their interviews, the participants will read and sign an
Informed Consent Form (see Appendix C). Prior to the interview, the researcher will explain any known risks involved, and later will share the results of this study with the participants.

**Procedures**

In this section, the researcher will utilize data collection and data analysis procedures to provide responses to the primary research question: How do community college online teachers describe practices that, from their experiences, enhance the pass rates of online students? A related sub-question is: How do community college teachers, in general, describe teaching strategies that, from their experiences, enhance online student pass rates?

**Data Collection.** For this case study, the researcher will collect data from nine online course instructors by conducting in-depth, semi-structured interviews containing open-ended questions. Publicly available documents and archival materials pertaining to online education will be reviewed. According to Creswell (2013) in semi-structured interviews, the researcher has a specific topic to learn about. The researcher will utilize multiple data sources for purposes of enhancing data credibility. For this case study, data from multiple sources will be included in the analysis process. Data from each source will be collected and used as pieces of a puzzle that contributes to the researcher’s understanding of the entire phenomenon. The inclusion of data adds strength to the findings as different pieces of data will be interwoven to promote a greater understanding of this study (Baxter & Jack, 2008).

The specific focus of these interviews will be to learn whether and how online teaching strategies enhance the online educational experiences of students within a community college setting. An interview protocol guide (see Appendix D) will be designed and followed (Creswell, 2013) for this process. The interview questions are designed to focus on the case study. The qualitative descriptive data collected through the interview process will assist in answering the
research questions. Each interview will begin with open-ended questions that offer opportunities for the interviewees to become more familiar with interview process (Rubin & Rubin, 2012). The researcher will be respectful of each interviewee’s time and will stay within the time specified for the interview.

Each interview will be designed to draw on participants’ experiences within the context of online teaching. Each online faculty member participating in the interview will be asked to provide as much information as possible about his or her perceptions of teaching online at a community college. The researcher will encourage the participants to share the challenges and success they encountered while teaching online. The interviewees will be guided to talk about their roles and responsibilities regarding student success in online education. Each interviewee will be asked to speak about skills and strategies he or she believes are important for teaching successfully online and how they can be acquired. The researcher will ask the participants to share those effective teaching strategies they employed in their online courses that enhanced student pass rates. By the end of this research, this researcher will define the experiences, training, skills, and attitudes online faculty need to successfully develop and implement online education at the community college level.

The targeted interviews with each faculty member will be face-to-face; hence, the researcher will be flexible in terms of time and location and will conduct the interviews with accommodation for the interviewees’ availability. The researcher will be mindful of interviewees’ privacy and protect the information collected from each individual. Each individual interview will take approximately 45 to 60 minutes. The researcher will ask for permission to audio record and transcribe each interview verbatim for the purpose of qualitative data analysis. Each interviewee must sign an informed consent form.
Data Storage. Data will be collected in both electronic and paper format. Those which are collected in paper format will be kept in a locked file cabinet designated for the sole purpose of this particular study. Data which are collected in digital format will be stored in a secure and password-protected electronic backup system that is only accessible to the researcher. In addition, pseudonyms will be used to mask the individual names of interviewees. A digital recording device will be used to audio record the interviews. The audio recorded information will be uploaded to the protected electronic backup system. All audio recorded files will be destroyed after they are transcribed. All computer files including transcripts, coded transcripts, documents containing data analysis, and relevant documents pertaining to this study will be backed up on a flash drive and stored in the locked cabinet. These methods of protection will add to the credibility of study and maintain anonymity for the institution and the participants. This information will be stored for three years and then destroyed.

Data Analysis. For data analysis, each recorded interview will be transcribed verbatim, and the authenticity of each transcription will be corroborated by each individual interviewee. The researcher will read the transcript meticulously and will treat the statements, quotations, and short phrases in each transcript with equal value. He will use the bracketing (Creswell, 2013, p.83) process to set off his preconceived ideas and notions about the phenomenon of this study.

The researcher will code the statements, sentences, or quotations, and map them to the keywords of research questions. Scholars, such as Saldana (2012) and Sweeny (2013), wrote that coding is a technique that organizes qualitative data in preparation for interpretation, serving as the transitional process between data collection and data analysis. The coding and mapping of the analyzed data will help the researcher to use categorical aggregation to establish themes to better understand how the online faculty experienced teaching strategies in a community college.
online education. Moustakas (1994) and Creswell (2013) called this step horizontalization. In vivo coding will be employed to code the exact words, quotations, short phrases, or statements used in the interview by each research participant. According to Saldana (2012), in vivo coding is appropriate for studies that “prioritize and honor the participant’s voice” as this study aims to do (p. 79).

The coded data will be organized into broader themes to construct credible meaning. Subsequent to in vivo coding, provisional coding will be employed because the researcher wants to highlight those teaching strategies that have or have not been effective in helping students at a community college online education to succeed (Saldana, 2012).

Upon completion of the coding, the researcher will synthesize the composite textual description of “what” the faculty participants experienced and structural description of “how” the faculty participants experienced it to develop the meanings and essence of the experience (Moustakas, 1994). The goal of this data analysis will be to pinpoint what has or has not worked, to determine the contributing factors, and to draw conclusions for recommendations. The analysis will be guided by items and factors that facilitate effective online teaching as presented in the literature review. These included the following: professional development services for online faculty (Singer, 2002; Diamond, 2005); instructional consultant to support faculty (Knight, 2008); training in online instructional skills (Meyer & Murrell, 2014; Kukulska-Hulme, 2012); orientation for online faculty (Vaill & Testori, 2012); mentoring of junior faculty by more experienced faculty (Vaill & Testori, 2012; Hixon et al., 2012); support services for faculty (Vaill & Testori, 2012; Moore & Kreasley, 2012).
Ethical Considerations

In accordance with the Northeastern University Institutional Review Board (IRB) Guidelines, a variety of measures will be taken to warrant the privacy and protection of participants in this study. To this end, approval from the University IRB will be secured prior to selecting individuals to participate in the interview. Upon approval of the research process, each participant will be contacted via a recruitment letter (see Appendix B).

The recruitment letter explains the purpose of the study and why each participant was selected for this interview (Creswell, 2013), and indicates the amount of time needed to dedicate to this study. The letter also discloses that participation is voluntary, that each participant has the right to withdraw from the study at any time, and that the interview will be audio recorded. The researcher will not share participants’ identity, location and time of the interview, or their statements with others at their workplace. He will be responsible for safeguarding the well-being of the participants of this study and ensuring that they come to no harm as a result of this research. The process of protecting the identities of the participants will be explained to individuals involved in this study. Moreover, each participant will receive a copy of the Informed Consent Form included in Appendix C.

Although the participants cannot be pressured to sign the consent form (Creswell, 2012), their individual signature on the consent form is required if they choose to participate in this research. The Informed Consent Form ensures that the individual participants are aware of the purpose of the study, the interview process, intended use of data, the type of data (interviews, documents) to be collected, and the attempts to be taken to ensure confidentiality and anonymity by utilizing pseudonyms in place of real names and that the name of the setting will be withheld in any written documentation of the preceding. The contact information of the researcher will be
included on the consent form in case a participant wants to contact him with questions or concerns (Butin, 2010).

The participants of this study will be valued as co-constructors of online educational experiences. The researcher does not have any authority over participants and does not have the ability or desire to influence their job performance evaluations. The participants have the right to participate in this research, and have the freedom to decline. If a participant is reluctant to answer any question, he or she can skip it. The consent form assures that the participants will have the right to have their data deleted from the dissertation entirely (Butin, 2010).

**Trustworthiness, Quality, and Verification**

Creswell (2013) calls this step of the qualitative research validation in place of trustworthiness because participants’ stories are formed by their subjective experiences (p.63). However, Lincoln and Guba (1985) suggest the following four criteria for evaluating trustworthiness: (1) authenticity—the researcher will share a copy of the interview transcripts with the interviewees to verify that the research findings are well developed and documented, (2) validity of the themes—themes and evidence will be shared with participating members to confirm that data are appropriately linked to findings and interpretations, (3) transferability—readers will be provided with sufficient information enabling them to transfer findings to another context, and (4) credibility—the research produces convincing findings and interpretations that will be applied to this study. Lincoln and Guba (1985) state that recording detailed descriptions of procedures of data collection and data analysis satisfy the construct of trustworthiness. Triangulation will be applied to individual interviews focusing on different teaching experiences and to the collected information in order to add validity to the study (Creswell, 2013, p. 251).
According to Lincoln and Guba (1985), the research interview requires a general plan to determine who will conduct the interviews, where and when the interviews should take place, and a general time limit for the interview. Hence, the researcher will provide detailed descriptions of the interviewees and the location of the study. A strong comprehension of the link between teaching strategies and student success will evolve through the analysis of the experiences of the participants and what it meant to those involved (Wolcott, 1994).

The researcher and the participants have already established trust through collegial interaction at the colleges. Through member checking, findings will be reported to the participants to examine any misinformation or any misinterpretation. Lincoln and Guba (1985) stated that member checking is the most crucial technique for establishing credibility. The researcher will share his role in online education and his experiences working with online teachers and the effect of enhanced teaching strategies in online courses with the participants. Personal involvement of the researcher in the process is not considered a flaw but rather is acknowledged and embraced in qualitative research (Sweeney, 2013).

The researcher will seek for interconnecting details, recurring statements, strong verbs and quotations. The researcher will also make sure that actions and behaviors in analysis process demonstrate credibility that the evidence was persuasive, and that the evidence was based on structural corroboration and consensual validation (Eisner, 1991). This study will search through many perspectives and methodologies of online teaching and learning related to student success and will develop effective teaching strategies with the Community of Inquiry model that support and enhance community college online educational success for students.
Potential Research Bias

The researcher has worked for 18 years as a college classroom and online instructor and nine years as a community college online education coordinator for faculty development and technology. While engaged in online education practices, the researcher has come to realize that online passing rates and student success are very low when compared with those of other more traditional methods of course content delivery. This led the researcher to focus more on online pedagogy and less on technology. He contributed to the development of principles of online pedagogy and helped faculty integrate them within their online courses.

The researcher’s background as an online teacher, educator, and administrator creates a strong bias toward incorporating teaching strategies as effective teaching methodology in community college online courses. His position in this study is that effective teaching strategies designed with online pedagogy in mind are catalysts of success for community college online students. They will help online education continue to grow as a great equalizer in our society.

One component of the evidence supporting the researcher’s position suggests the importance of online teaching strategies, planning and management of online instruction, instructional designs, and teacher training (Hanover Research 2009) to the success of the online environment and has led to the creation of guidelines for all aspects of the instructional process. Other evidence points to much research that has shown national passing rates of students in online courses are lower than those of students in face-to-face courses (Shapiro & Dundar, 2015; Johnson & Mejia, 2014; Capra, 2011; Jenkins, 2011). The researcher believes that instructional strategies can be modified to better address various students’ learning styles and, thus, lead to an increase in the passing rates and success of students in online classes. Lastly, online teachers should consider that teaching strategies following the same principles and settings for all online
courses, regardless of their academic environment, are not effective and do not benefit community college online students. According to Umar and Rathakrishnan (2012), teaching strategies for online teachers encompass mastering pedagogical, social, managerial, and technical roles. These competencies appear to need strengthening in many online teachers.

As an administrator of online education for a community college, this researcher understands the urgency to meet the educational needs of a highly diverse online student population. Although the college provides online teachers with the opportunity to develop and improve their online teaching strategies, there always is the question on how can we do better? For this study, this researcher will explore teaching strategies that enhance the educational success of community college online students.

Machi and McEvoy (2009) stated that personal attachment may provide the passion for research but that it may also cause bias. Throughout the research process, the author of this study will be mindful not to ask any leading questions. Questions will not be influenced by his personal interest in online education. As part of his research, he will interview teachers who taught online during the past two years.

**Limitations**

The amount of research on online student success and pass rates at community colleges is limited. Thus far, only a limited amount of research has focused on the effectiveness of online teaching for student success, especially at the community college level (Lokken & Mullins, 2015; Johnson, Mejia, & Cook, 2015, 2014; Capra, 2014; Johnson & Berge, 2012; Jaggars & Xu, 2011). Researchers interested in online student retention, success rates, and any other aspects of the higher education have primarily focused on four-year colleges and universities, due to their research-oriented environment, availability of research funding, graduate work, and other
resources (Jaggars & Xu, 2016; Meyer, 2014; Hixon, Barczyk, Buckenmeyer, & Feldman, 2011). Funding for individual research at community colleges is difficult to acquire because these colleges are not viewed as research institutions; they have limited financial resources; and they are dependent on government grants. The literature by Lack (2013) points out that there have been few rigorous efforts to produce compelling evidence of the learning outcomes associated with online courses at the postsecondary level. Literature shows that the CoI model, with its limitations, has been one of the most commonly referenced theoretical frameworks for researching online education (Armellini & De Stefani, 2016; Moore, 2013; Xin, 2012; Swan & Ice, 2010; Anderson & Archer, 2010; Swan, Garrison, & Richardson, 2009; Garrison & Arbaugh, 2007). However, one of the main limitations of the CoI framework is that it does not clearly define the boundaries between social presence and cognitive presence (Armellini & De Stefani, 2016); thus, its effectiveness is limited in describing students’ online discourse and teachers’ assessment of student critical thinking and interactions. Another limitation is that elements of the CoI framework cannot be fully mapped to their corresponding functions in online learning (Xin, 2012). Armellini and De Stefani (2016) supported Xin’s (2012) findings and claimed that social presence has been an important limitation of the CoI framework. Their research showed that social presence has not performed well as a stand-alone construct, and it has embedded itself in teaching and cognitive presence (Armellini & De Stefani, 2016). A perceived limitation of the CoI model is its focus on online learning and teaching processes and the lack of emphasizing educational outcomes of online courses (Rourke & Kanuka, 2009).

In addition, the recent research relating to online education in areas such as success rates, retention, graduation, failure, and withdrawal from online courses has shown contradictory evidence. For example, in 2009, the U.S. Department of Education conducted a study which
reviewed more than 1,000 online courses between 1996 and 2008. The study concluded that students in online education settings performed better than students in face-to-face classroom settings, on average (Feintuch, 2010). On the other hand, Wilson and Allen (2011) asserted that online students seemed to have higher withdrawal rates, higher failure rates, and more trouble completing assignments by their deadlines, if at all. The assertion confirms researcher’s findings of low success rates in online courses at Massachusetts community colleges.

Research by Johnson and Mejia (2014) shows that online teaching and student success are still in experimental stages, and there is not enough evidence yet to determine which strategies are working best. As a result, there is a need to determine which teaching strategies for online courses can be effective in augmenting students’ success within community college online education programs. This study begins to fill a gap in online education research.
Chapter Four: Findings and Analysis

The purpose of this case study was to explore teaching strategies that enhance the educational success of community college online students. This chapter reflects the descriptions and experiences of nine full-time faculty members who teach online courses as part of their daytime work load at Massachusetts community colleges. All faculty participants were trained and certified to teach online by their colleges. The interview questions used to initiate discussion were designed to answer the research questions and provide greater understanding of the teaching strategies they implemented to enhance pass rates and promote student success in their online courses.

All of the interviews were verbal, recorded and transcribed verbatim into text format. The authenticity of each transcription was corroborated by each participant. The researcher read and analyzed each transcript meticulously and utilized a bracketing process to set off his preconceived ideas and notions about the phenomena of this study. Analysis of the transcripts yielded four superordinate and several sub-themes. Superordinate Theme One was Course Organization with related sub-themes: Course Content, Course Syllabus, and Course Format. Superordinate Theme Two was Course Design and Development which yielded sub-themes: Planning for Student Learning, Design for Effective Online Teaching, Consideration of Different Learning Styles, Ensuring Teaching is Effective, and It Takes a Village. Superordinate Theme Three was Interaction and Collaboration which entails sub-themes such as Communication and Engagement Strategies, Development of Learning Community, and Setting the Tone of Communication in Online Courses. Finally, the Superordinate Theme Four was Effective Teaching Strategies with three fundamental sub-themes: Knowledge and Skills for Online
Teachers, Teachers’ Roles and Responsibilities in Online Courses, and Adapting to the Needs of Online Students.

**Superordinate Theme One: Course Organization**

The participants in this study stated that the knowledge and skills for course organization are among the most important requirements for effective online teaching and learning. They pointed out that course organization has enabled them to properly match their online courses with their department’s curriculum, make the course interface student friendly, and ensure that instructional materials are easy to follow while assisting the students with their various learning styles. Providing clear organization in online courses creates direction to success for students’ learning.

In online courses, students are dependent upon faculty to provide detailed organizational structure because they experience the course on their own, unable to turn immediately to a classmate if confused or unclear about something in the course. Well-organized structures in online courses help students avoid procrastination, keep up with the course modules and successfully accomplish their academic tasks. Thus, it is important that faculty members teaching online courses think carefully about the organization of their courses, ensuring that it encourages student participation and facilitates students learning. Monitoring the effectiveness of course organization is a continuous task for faculty members.

**Sub-Theme One: Course Content**

The participants of this study stated that online course content must be aligned and delivered with online pedagogy in mind. These faculty members explained that the pedagogical practices are imperative for the alignment and improvement of their online course content. When
responding to interview questions regarding the organization and content of an online course, Phillip, a veteran faculty member who has taught online for the past five years, responded:

In my online courses, the course content is configured to alter the learning experiences by moving students’ learning from “remember and understand” to higher levels such as “apply and analyze” and to highest levels such as “evaluate and create.” Although there are a variety of ways to organize the course content, I chose to modularize the content chronologically. In each module, I organize the content in folders labeled by weeks or class dates that correspond with the course calendar and syllabus. From my experience and feedback from students, this approach makes it easier for student to find the readings and activities as well as the assignments.

Tracy, Morgan and Jennifer, with several years of academic and non-academic experiences in their area of disciplines, also followed Phillip’s approach. They elaborated that delivering online courses requires consideration of content organization format, methods of communication and interaction, and student engagement in instruction. In addition, the three of them emphasized that each weekly module is fully self-contained. The modules are laid out properly with reading outline, lecture notes, assignments, links to video clips, and discussions, with a consistency of continuous knowledge building week upon week. They claimed that the aforementioned practices and strategies for course content resulted in lower drop out, higher grades, and more participation.

Jennifer, a highly skilled faculty member with more than 15 years of online teaching, stated:

I incorporate the elements of community of inquiry such as social, teaching, and cognitive presence in the content of my online courses to help students understand that
there is a live teacher on the other side of the spectrum who cares about them and their inclusivity, social collaboration and their development in the student network.

Shannon, who has been teaching online courses for more than three years, corroborated all the aforementioned participants’ comments and said:

When I work on the course content, I determine what content must be developed and how it must be organized to help students achieve the objectives in the most straightforward way. Once this is done, I determine how the materials should be delivered. There is a wide array of tools available to help develop, edit, and deliver content.

Clearly, course content must be mapped with the college and department’s curriculum and should be closely aligned with objectives so that students have a clear path toward learning the material. After the content organization and development, the sub-theme that surfaced as part of the data analysis was course syllabus to guide student learning.

**Sub-Theme Two: Course Syllabus**

The participants in this study unanimously stated that a course syllabus is used as the first level of reference to address student challenges and it is used to clarify policies and procedures, timeline, due dates for assignments, project, and exams. According to the Parkes and Harris (2002) study, a course syllabus serves as a contract between the teacher and the students. It details the rules of engagement that will govern the class, delineates responsibilities of students and of the teacher for various tasks, including attendance, assignments, examinations, and participation, and guides the behavior of both teacher and students (Matejka and Kurke, 1994). In addition to the standard information that an online course syllabus must contain, it must also communicate enthusiasm, mutual accountability, and a belief in students' learning potential, as
Another veteran faculty, Ashton, with more than 15 years of teaching at a community college, added:

My online course syllabus contains a list of expectations, the things that I expect from students, and the things that they can expect from me. For example, I put the assignments’ name, descriptions, due dates and grading criteria in the syllabus. Creating a comprehensive and organized course syllabus consumes a lot of my time because I make many revisions to the syllabus to meet the needs of students. I believe that faculty and student success starts with the syllabus and the organization and clarity of the course schedule really helps the online students.

Phillip conveyed similar statements as Ashton regarding a course syllabus and expressed:

A well-designed syllabus can serve as a learning tool. It generates fewer questions and less confusion. It can provide information that assists students to become more effective learners in areas that go beyond the scope of our own courses. In this approach, I divide my course syllabus into sections and organize them by topic. Each section is self-contained and can be used to assess student mastery of that unit before moving forward in the course. I make my syllabus available to enrolled students a week before class starts so that they become familiar with the course rules and expectations as early as possible. In my experience, this creates a more positive and productive experience for students.

Shannon follows the same principles as Phillip and Ashton and provides further detail in her syllabus. Shannon said:
I create and include rubrics with detailed criteria for fair grading in my syllabus for all assignments, discussions, presentations, and projects. Students are notified via a syllabus that their work is evaluated according to the related rubric. This will help students to better understand their grade and how they can improve their future work, especially in my class because all the new assignments and projects are built upon their previous activities. My course syllabus is divided into discrete segments by date. Each segment contains lecture note, PowerPoint presentation, links to external materials, video clips, and assignments with their corresponding grade value and due date. These practices have helped students more easily to find needed course materials and have reduced the number of questions regarding what is due and when it is due.

Danna has been teaching online at a community college for seven years. In her department, she was the first person to create an online course and now she is teaching several for the same department. She is very experienced and knowledgeable with online teaching pedagogy. Danna articulated:

The syllabus is often my first interaction with my online students. Therefore, before I start building my syllabus, I reflect upon what I want to teach and what I want my students to learn during the course in that particular semester. I also think about what knowledge students should acquire and what is the best way to deliver it. An online teacher like me must be mindful of what skills should students gain. My course syllabus includes language appropriate to the level of the course and is designed to the level of students and their familiarity with the subject matter of the course. Over the years, I have learned to adjust my expectations and instructional goals in course syllabus to cater to students’ needs and help students to succeed in their courses. In addition, I make sure that
the goals are stated clearly and can be measured. The syllabus contains details about every item in the course and it must be used as a resource by students during the semester.

Christian expressed the importance of the syllabus as being a road map for the instructor and students when they progress through the online course. Christian said:

In my syllabus, I make sure that each component of the course outline is integrated with the course objectives and reflects the purpose of the course as stated in the course description. In addition to providing a description for activity assessment in each component, I include a specific section in the syllabus called “method of evaluation” to inform students how and what learning objectives are met. With this in mind, students can refer to grading rubric to find out how their work is evaluated and why they received that grade for his or her tasks. In the course syllabus, I have very clear instruction for reading, doing the assignments and project, defined due dates, and I basically encourage the students ahead of due dates. I also built some flexibility for students with different learning styles, but I am very strict with the deadline.

An online course syllabus should set a positive tone for the course, support students’ confidence, and convey the teacher’s enthusiasm through the course content. The data analysis indicated that proper configuration of course format can improve teaching and learning in online environment.

**Sub-Theme Three: Course Format/ Course Layout**

All of the faculty members interviewed for this study cited that each course is unique and the layout of the course depends upon the subject matter and how an online teacher perceives student learning. In addition, they unanimously indicated that learning material must be
sequenced appropriately to promote student learning. Each participant pointed out one or more of the strategies that could be arranged for course material from simple to complex, from theory to application or vice versa, from concrete to abstract or vice versa, from known to unknown, around a set of questions, around a set of case studies, or around practical problems. Fink (2003) stated that “the goal is to sequence the topics so that they build on one another in a way that allows students to integrate each new idea, topic, or theme with the preceding ones as the course proceeds” (p. 128). Morgan shared that she teaches various courses online within a department and she adapted a course format that is appropriate for the learning objectives of that particular course. Morgan explained how she utilizes her experiences from industry to create structure that supports the learning objectives she has identified. Morgan stated:

I know that students leaving this institution need to be able to understand and apply their learning to the real world. I go from that perspective to lay out my course in a way that students can deal with it on a week-to-week basis. Certainly, consistency in online courses is very important and the way you lay it out for week 1 should be the same way as you lay out for week 14 and 15. This reduces confusion and surprises.

Phillip supported Morgan’s statements and shared that a weekly course format has helped students have quicker access to the course material and stay on track while working on particular course materials. Phillip explained:

I include a section on the top of the week 1 module and call it “General Information Center,” GIC. This section contains a general survey to help me find out the spectrum of experience in the course, announcement forum for communicating messages, announcements and notifications to students whenever necessary, rules of netiquette for online engagement and communication, links to the college library and bookstore,
textbook information and description, course description, course prerequisites, technology and technical requirement for taking the course, how to submit assignment instructions, how to email the instructor, a welcome message with video clip and the course syllabus. Finally, the GIC section contain a forum called “Water Cooler,” in which students can work together and provide responses to each other’s questions and concerns.

Jennifer shared that the learning management system (LMS) allows the faculty members to chunk up information into topics that can be presented in bite-size pieces. This lesson format enables students to read a paragraph, watch a video, and answer a question as they go through the lecture. It allows students to build upon the knowledge from earlier topics. She mentioned:

Due to the nature of my online course, I prefer to organize the learning objectives in topic format because it enables me to put the content into sections in a sequential order. Each topic section comprises resources, labels, and activities such as assignments that built upon each other and at the end of the class it culminates in a big project. I have the course set up such that it kind of guides students through the materials so it requires that they read the lectures, watch the videos, look at the handouts, before they're able to get to the assignment. This format allows me to monitor individual student performance and provide direction and support when needed. I think that this is really helpful for student pass rates.

Tracy, with several years of computer programming and teaching experience, indicated:

I organize all my course material in folder format. This is more practical for my online computer programming course and for my students because they need to go to one specific place to find what they are looking for. I have only one section in my course site that contains multiple folders: one for lecture notes, one for assignments, one for
examples and how to do a particular assignment, and one for final project. The course reading and textbook is linked to the publisher site and goes outside of our Learning Management System (LMS).

Conclusion

Superordinate Theme One, Course Organization, is supported by three sub-themes: (a) Course Content, (b) Course Syllabus, and (c) Course Format. The common thread supporting course organization is that the online faculty members need to pay attention to course components that may serve as stumbling blocks to students learning online. One particular concern that emerges is the need to have a clear and organized structure, while allowing accessibility and flexibility for making adaptations through the process. Furthermore, faculty statements indicated that the way they organized their course content and syllabus has helped their students to get clear understanding of how they must navigate through the course, learn the materials, do the assignments, collaborate and engage to achieve success.

The format of an online course determines how a course is presented to students. These research participants decided on course formats according to the course subject matter and the learning objectives they have identified. Each person interviewed indicated that his or her course format was effective, enhanced the pass rates in their online courses, and helped the students with different learning styles to overcome the challenges and succeed.

The relevancy of the required knowledge and skills for course organization and its aforementioned elements was evident among the interviewed faculty members. They acknowledged that many of their face-to-face teaching experiences can be transferred to online teaching, but the pedagogical practices for online are different from those for face-to-face environments. Online courses provide fewer opportunities for the spontaneous, real-time
exchange of the face-to-face courses. Four interviewees, Christian, Shannon, Phillip, and Tracy pointed out that online instruction requires deliberate approach to design and facilitation.

**Superordinate Theme Two: Course Design and Development**

A second theme emerging from this case study is the design and development of an online course to ensure quality of teaching and learning. The participants in this study stated that course design involves planning for the students’ learning, and the online environment is the landscape that students will leverage to develop the knowledge and skills the faculty expect them to master. According to Rovai (2002), the design of the course determines the effectiveness of the learning. When an online course is effectively designed, the objectives, assessments, and activities are in alignment. This develops a learning-centered environment that empowers online students to understand what their teachers expect of them rather than making the learning a guessing game. In a properly designed online course, the relationships between the learning activities are clearly aligned with learning objectives and the students understand why they are completing an activity. Smith (2008) describes course design this way:

Design features incorporated in [the] system course development and the learning guide will create an environment in which students are confident of their pathway. The only challenge is the course content, not the navigation of the course or figuring out what must be done in order to complete the course…this focus on course design, will free you [instructor] up to spend the semester teaching and interacting with students rather than answering questions about course navigation or specific directions about assignments.

The participants in this case study articulated the most important elements in an online course design include:
1. Identifying desired outcomes with the knowledge and skills that each faculty member expects his or her students to demonstrate as they complete the course. Certainly, the components in a course must support the overarching course skills and knowledge or outcomes that faculty already identified.

2. Determining acceptable evidence through assessments that enables faculty to conclude what their online students has learned and students can demonstrate their learning in that online course as well.

3. Planning learning experiences and facilitation through development of activities that help students grow, develop and master the objectives identified at the start of the module.

   The interviews from the faculty participants substantiated that design for high quality online instruction requires careful planning for student learning that encourages discovery, integration, application, and practice.

**Sub-Theme One: Planning for Student Learning**

Planning and designing an online course that creates meaningful educational experiences requires considerable time, training and teaching experience. Shannon and three other highly experienced faculty members emphasized that quality online instructions require effective planning and attention to details. Shannon reflected:

I think all faculty members must participate in the instructional design workshops and training of their workplace and become serious about learning and applying online pedagogy to their online courses. In my opinion, online teaching is totally different than face-to-face teaching where spontaneous connection and direct engagement are missing. I joined the online certification training in my college and learned to consider a four-step process in my course design and development. In step one; I determine the learning
objectives for the units that students need to learn to be successful in the course. Step two is planning and developing the course content. I determine what content will help students achieve the objectives in the most straightforward way. Then, I plan on how to deliver it with a college learning management system that is easily accessible to all my students. In step three, I incorporate cognitive, social and teaching presence in the design and development of homework and discussion board activities that encourage students to engage with course material, with each other, and with me. Finally, in step four, I create assessments such as exams, quizzes, projects, assignments and portfolios to evaluate student learning.

According to Shannon, this four-step process has helped her online students to develop the knowledge and skills that she expected them to master.

From a distance education administrator and an online faculty member point of view, Jennifer clarified that the goal of proper planning in online course design is to empower online students to understand what an online teacher expects of them. Most faculty members approach their course subject matter by organizing it logically in a sequence that will be delivered to students over time. Although this is part of the online course design process, it must not start at the beginning of a course. A good design requires that instructors start from the end and work backwards because they need to identify what students need to master when they complete the course. Jennifer said:

My course planning starts with the requirements for the college or the department of the course. I figure out and utilize the best features and tools of LMS to disseminate, display, assess and communicate with the students. I determine the lecture material and the handouts to present the necessary information for completing the assignments. I
incorporate assessments in forms of assignments to evaluate students learning and then following up with them. In addition, I include discussion forum so that students can exchange ideas, collaborate and provide tips to one another.

Jennifer also shared that in course design and development, ease of use is really critical in online courses. Instructors must purposefully choose all the bells and whistles that help them and their students get to the end goals and that not only improve the appearance of the course, but also ensure that it functions well.

Phillip corroborated Shannon and Jennifer and added:

You need to know the goal of the course. What do you want students to know, to understand, to recall, and to perform? All of my online courses clearly answer the aforementioned questions with “at the end of the course, the student will be able to …” This is incorporated in the design of my course to help students to understand the outcome and expectations of the course for me and the students. Criterion reference objectives are visible in a static block on the top of the course as a reminder to all students at all time in my online course.

Phillip explained that each element in the outcome indicates what can be measured at the end to determine whether these students achieved the objectives that he had in mind for them.

I prioritize, what is it that they need to know? And then, what is it that is nice to know? And maybe what is not so important? The purpose of these questions is to create the big-picture view for the design that allows me to develop more specific learning outcomes that will serve as a framework that ties the big-picture goals to the resources, activities, and assessments of my online course. From many years of teaching online, I have practiced to apply the S.M.A.R.T guidelines, developed years ago by George Doran.
These guidelines enable me to measure goals and outcomes of my online courses by making sure that the desired outcomes are specific, achievable, relevant to the course, and students’ progress is measurable. In addition, I include bi-weekly discussion forums in each module which is related to the topics of current events that students would care about and have interest in. This is to encourage students’ engagement and exchange of ideas.

Ashton and Christian are faculty members from two different colleges, but both use similar approaches in their course planning and design. Ashton said:

A few weeks before the start of a semester, I work with an instructional designer and staff of the Office of Distance Learning & Center for Academic Excellence to develop my online course. They also provide training and support on how to teach online and ways to convert my on ground course to an online course, which is easier than if I had to start from scratch because I have already a lot of material and I just have to adapt to online structure. I also create many discussion forums to encourage students’ communication and build a lot of flexibility in assignment submissions to help with students learning. I know probably this is old fashion of teaching online, but it has worked for me and my students so far. With regard to organizational issues of my online course, I think there are some aspects that would be better if I had started from scratch, rather than adapting an existing course.

And Christian stated:

I utilize the template for online course that the instructional designer at my college offered and put together the course where I add my own personal stamp on the course. The course template enables our online faculty to map their course according to the
curriculum of the department’s course and create universal look and feel. This helps our online student to be familiar with similar course structure and not to get confused from one course to another.

Danna has a different approach from other participants when it comes to planning for students’ learning. She shared that every semester before the module begins, she does a pre-assessment of her online students to determine their entry-level knowledge of the topic that she intends to teach and she alters the content if necessary. Danna added:

My online courses are organized in learning units. Each unit covers a specific topic that folds to the next unit. The learning units have clear measurable objectives, actions, performance criteria, and conditions of what are expected to be able to do by the time students complete the course. The objectives that I cover in my courses must be current and relate to the course description as well as the outline of the topics in the syllabus. To meet the objectives, I gather the latest information from the literature, social media, and the news that's happening, so that in my discussion questions, they're always relevant to today. Our theoretical and foundational knowledge that we can get from a textbook and roll forward are important, but we as faculty must make it meaningful to today. My preparation is always updating and keeping the course objectives relevant to the students’ lives and getting to know what different majors the students are in. So, my examples always go across a spectrum, whether they're in engineering, or physics, or human services, or psychology, or sociology, or general studies. So, I want to make my examples, my questions, and my assignments make sense to everyone equally.
Morgan stated that she teaches one of the most populated and biggest courses in her college. Coming from industry and keeping up with marketing industry, she knows what students need to know and what they should be able to do when they are in the workforce. She explained:

I go from this perspective and look for a basic marketing textbook to use as an outline, and use videos and readings to enhance my course. In addition, I design my online course from bottom up based on what I want students to know when they complete the course, the objectives that I want them to attain, what content they need to understand and to be exposed to. To establish connection with online student early in the semester, I allow students to log into their course one week prior to the start of the semester to view the syllabus. This gives an opportunity to the less prepared students to change their course.

Furthermore, Danna elaborated that her online course begins with an introductory forum to create a community of learners, where students introduce themselves to the class and share something that they want others to know. She said “It seems that students respond to each other thoughtfully.”

Student learning in an online environment that leads to the design for effective teaching requires careful planning, appropriate tools, training, and taking students’ needs, feedback and learning styles into consideration.

**Sub-Theme Two: Design for Effective Online Teaching**

All faculty participants in this study stated that developing online courses is time-consuming and that transitioning a successful face-to-face course to an online setting can be difficult, but it is rewarding when the online course is designed appropriately to become a student-centered environment. According to Koontz, Hoggin, and Daniel (2006), the designing of online courses requires a radical change in the way the instruction is designed and presented to
the students. Phillip, Shannon, Morgan and Jennifer articulated that design for effective online teaching involves expressing unequivocal expectations about learning objectives, policies, and procedures. They mentioned that being clear and direct about expectations helps students learn more and perform better. They also mentioned the learning objectives, instructional activities, assessments, and outcomes must be aligned for effective teaching. Shannon said:

When we teach, we do not just teach the course material, we teach students the content because diversity of student characteristics can affect learning. Thus, effective online teaching requires acquiring relevant knowledge about students and that knowledge must be used to configure our online course design and teaching strategies.

Phillip expanded on the discussion by stating

When I design my lessons, I bring in considerations about how learning actually works and how I can help students change the way they think and interact with the disciplines or professions they are learning about. For example, in my media course, I created a discussion forum about a picture called “The Falling Man”; the man was falling off the roof of the World Trade Center years ago. The New York Times wanted to know where to publish the picture, on the front page, inside, or anywhere else? Students in my course must reflect on the things that we studied and now it was time for them to apply, analyze, synthesize and conceptualize their learning to produce a meaningful document. Finally, I require that the students become thoughtfully engaged in the course forum dialogs. So, that is to me student-centered approach because it is all about students and less about me. In the design of my online course, I have virtual office hours. It is designed to answer students’ questions, concerns, and discussion about a topic that is current and relevant to the course.
Shannon, one of the pioneers in online education and a faculty member, stated:

To me, prioritizing the knowledge and skills we choose to focus on is part of effective teaching and it is kind of challenging in an online course. I develop my course before the semester begins and review it a few times and dry run all the elements that I embedded in the course such as lectures, assignments, tests, the instructional technologies, and the links to video clips. I believe the better prepared I am, the better my online teaching experience will be, and the better I can attend and serve my online students.

Although it is important to make course expectations and due dates clear, it is also significant to build in flexibility and sensitivity not only to students’ wildly varying work and life schedules, as well as school, but also to unpredicted situations that inevitably arise (NCATE, 2014). Shannon explained that building flexibility into her course structure will allow her to compensate for unexpected technological problems as well as give her opportunities to respond to students’ feedback.

Danna upheld Shannon’s aforementioned claims and added that they are the course subject matter experts and they tend to access and apply knowledge automatically and unconsciously when they teach. Sometimes, inadvertently, they may skip or combine critical steps in their teaching, which causes disasters as a course progresses. To avoid such mishaps, Danna said that she makes sure that the learning objectives relate in concept and language to both course descriptions and the concepts listed in the outline of the topics on the syllabus.

Effective teaching involves recognizing and overcoming our expert blind spots and acknowledging our students’ learning capabilities. Danna further explained:

I'm teaching digitally raised students. So, these students have been raised on videos, computer games, and computers. I make sure I integrate a lot of TED talks and YouTube
videos. During the semester, I continuously make assessments of students’ technical skills and knowledge of the topic. This is to ensure that students understand the learning objectives, and have the technical skills to access and work with the posted material. My online course is designed to accommodate a variety of learning strategies in both content delivery and learning activities. I also create learning activities that actively engage students in the promotion of their synthesis and problem-solving tasks.

Jennifer, a longtime community college faculty member who changed careers from administration to teaching, commented similarly to Danna and Shannon. She reflected:

I think effective teaching involves progressively refining our courses based on reflection and feedback. Teaching requires adapting. We need to continually reflect on our teaching and be ready to make changes when appropriate. I think when I transitioned my online course from the flat PDF lecture files, handouts, and static flat materials to doing audio lectures, voice over PowerPoint and recorded lectures that students can listen to more than once or have the voice transcripts pop up, and thinking about multiple learning styles and kind of working that into the design of the course have been effective in my online teaching. I get really great feedback from my students: “The way you set up the class, I felt confident that I can pass the course with good grades,” or “I can complete the ten-page assignment.” I think over the years, little things that I have done to streamline, enhance, and elevate the contents have worked out well. I think students are processing and submitting better assignments now than when I was an earlier teacher, just because I am better able at communicating my expectations.
Christian’s experiences were similar to Shannon’s, Danna’s, and Phillip’s. He articulated that engagement through designing assignments that are exciting to students is part of the design for effective teaching.

I design a course that is organized and mapped closely to the department’s curriculum and is student-friendly. The technologies that I employ in my online courses are all tested by me to reduce technological issues that may deter students from continuing. I also include a block called “Accessibility and Availability” where I post all my contact addresses and the ways students can contact me. (Christian)

Students are more encouraged to log back in when they see their teacher is present (Pelz, 2004) and available to respond quickly. Christian said that “to help my students to become successful, I encourage them to follow the learning guidelines for modules. All the questions and answers to the course and guidelines are collected and published in a ‘Frequently Asked Questions’ forum. Students are encouraged to review this forum before they contact me”.

After design for effective online teaching, the sub-theme that emerged from data analysis was consideration of different learning styles as teaching strategy to enhance student success.

**Sub-Theme Three: Consideration of Different Learning Styles**

Online faculty members need to identify student’s learning preferences, integrate technology tools, apply appropriate instructional technology tools, apply appropriate instructional techniques, put these techniques into practices, and generate the most suitable methods for individuals (Yang & CorneLious, 2005).

Phillip was very interested in accommodating different learning styles for online students. He elaborated that each learning style provides more opportunities for online students to become successful in their educational endeavor. Phillip added:
In my online course, for students with oral and visual learning styles, I have opening video which welcomes them to the course and informs them of what is coming next in the learning module. I have narrated PowerPoints and links to YouTube clips that are related to the topics of the modules. I include verbal learning style for students who prefer using words, text, document and other readings such as newspaper articles, or a particular case study that relate to the course. I found it is difficult to accommodate students with physical learning style in my online classes since resources are very limited at community colleges. Students with a social learning style will consider threaded discussions as a place to get connected with other classmates and do collaborative work. Finally, for students with a solitary learning style, I included reading, writing, PowerPoint presentations or a quiz in my online course.

According to Muir (2001), for a successful online course, teachers should consider all students as having different learning styles. Shannon discussed that online teachers should provide visual tools, PowerPoints slides, voice-over PowerPoints materials, video clips with captions, verbal documents for listening, physical experimentation if possible, literature and documents for reading, collaborative teamwork since some students do better in a group, and critical thinking assignments. Shannon elaborated on some of the strategies she has used in her online courses to accommodate students with different learning styles. She added:

I adapt to the needs of students and do necessary modifications to accommodate their needs. For students with learning disability or physical disability, I provide recoded learning materials and allow them to do and submit their work with recorded voice. For students with exam anxiety, I provide project-based learning tasks in place of exams. As the students progress in this task, I provide ongoing and constructive feedback until a task
is completed. For visual learners, I include pictures or cartoons of concepts, diagrams, video clips, and wire out flash cards for review of the materials. For students with auditory learning style, my lectures are developed with voiceover PowerPoint slides and contain video clips from the publisher that they can listen to. The instructions for assignments and projects are in recorded format as well as text format.

Candy’s thoughts about incorporating multiple learning styles in an online course differ from other participants’. She stated:

If you want to fit in the same lecture materials for visual, verbal, kinesthetic, and solitary learning styles, the course becomes overloaded with identical information, which may cause huge confusion for online students in that class. However, consideration of the non-textual students with visual and auditory learning styles is important to me as it relates to my own learning experience. Thus, I include multiple sensory options such as animations, hands-on simulations, video clips, charts, pictures, graphic illustrations, and diagrams, as well as audio files for auditory learners.

Jennifer teaches English writing and can only accommodate students with interpersonal or social, and intrapersonal or solitary learning styles because in her course students must read and write from the start to the end of the course.

I present the course material by building links among concepts to facilitate the synthesizing of information. My course assessment consists of a big project which is divided into small pieces. In the second week of classes, I divide students into groups with similar interests that I learned from their biography. This is to accommodate students with social learning styles. Then each member of the group can complete his or her portion of the assignment; this is to accommodate solitary learning style. Once their
assignments are complete, the students must attach them to the project and review the relevancy and the alignment of their work before they can submit it. I have seen great results from this approach. Another great thing about online learning is the discussion board because both the extroverted and introverted students have the opportunity to sit back, think about a response and be able to participate in the class in a certain way. I also have audio lectures for my auditory learners.

Ashton reflected on accommodation of learning styles and said:

I think the adaptation of learning styles is important for both on ground and online courses when trying to deliver the course materials. My online course is actually designed so that the students read the textbook for written type practices, tests or assignments. I do not write additional things for them to read, I use videos. So, I recorded videos, screen cast with my voice over a PowerPoint presentation. These modalities give students a few ways of looking at the course content. I teach astronomy online which talks about the topic of the seasons. I found out that students learn about seasons better if I include a kinesthetic part. So, I have actually introduced a video in my online course, with me waving arms to demonstrate how the seasons work. The other thing that I am conscious about is ways of accommodating students with learning and physical disabilities. I caption all my video clips to help deaf students or students who don’t have English as their native language. So, having captions can really help people who are not native speakers because then they can see it written out.

Teachers need to assess their teaching during and after each semester to figure out if their methods of teaching promote student learning. As part of the data analysis the sub-theme that surfaced was ensuring teaching is effective.
Sub-Theme Four: Ensuring Teaching is Effective

It is very difficult to determine whether teachers’ efforts are actually making a difference, or not. Teachers often look to student outcomes or student surveys as proof of their online teaching effectiveness. However, students’ results and surveys do not tell the whole story (Morrison, 2014) because students’ learning experience and outcomes can be affected by variables such as fluctuating levels of commitment to the course and student life events. Many of the influencing factors are outside of teachers’ control. There is no doubt that some factors are within the control of online teachers. They must develop a self-evaluation process to help them better design, prepare, and deliver online courses and utilize tools to ensure that students are learning, said the participants Shannon, Danna, Jennifer and Phillip. Shannon further explained:

When students ask which other courses I teach, that means they enjoyed learning with me. It also means they prefer me as online teacher and they trust me to help them with the next stage of their learning experience. This is an indication that I am making a positive impact as an online teacher. In addition, students’ responses to discussion forums, the enthusiasm in their responses, homework, projects, and questions point to effective teaching. Students’ assessment grades for exams, quizzes and homework; enhanced student pass rates and retention; and the end of term course evaluations are also indicators of teaching effectiveness. My teaching is effective when my students indicate deep and meaningful learning with their work and enhanced academic success. I create satisfied students who want to be taught by me again. That is an affirmation of my online teaching ability.

Phillip corroborated Shannon:
I try to be as effective as I can. The students evaluate me at the end of the semester, and I get a good grade which indicates that they were pleased with me. I also review students’ grades. What’s the average class grade? What's the student pass rate? What percentage of my students who enrolled in this class at the end of the semester is still there and has passed? I receive regular email from students asking for help and guidance. They send me feedback with criticism of something that they are not happy about. This open discourse means that I have created a welcoming atmosphere where students are comfortable approaching their teacher.

Ashton supported Phillip’s and Shannon’s discussions by saying:

When you are approachable, you can guide and be reliable to provide support when needed. During and after each semester, I receive many messages from my students who request advice about their majors or future courses. It seems that students establish trust with me and feel comfortable approaching me.

Morgan said that she is direct with her online students. She described:

I clearly ask my students about how they are learning. From their correspondence, I can see what works and what does not work. Typically, in the last test of the semester, I ask the students two questions “What was the most difficult thing and give me one thing that you would change for next semester?” I think it is a great feedback from them.

Danna stated:

I do not wait only for feedback from student evaluations; I do informal outreach various times through the semester. For example, once an assignment comes in, I will ask students “What was the part about that assignment that was best for you? What didn't work for you? “If a majority of students indicate struggle with that assignment, I just
strike that from the test because their feedback shows that I am not asking it correctly. So, I am always doing self-assessment, as well as student assessment because that is only fair and right. I am interacting regularly with my students as the course unfolds; thus I receive regular comments about their learning experiences. Some of these comments will be useful for improving the course and others will relate directly to my own performance. Christian and Candy expressed similar things about their teaching:

Students’ grades, feedback from students, and the fact that students want to come back to other online courses I teach indicates that my teaching is effective. Sometimes, I receive email from students who transferred to four-year colleges or universities; and they email me saying “Thank you, what I learned in your classes helped me”.

Jennifer said:

To ensure that I am an effective teacher, I make my presence noticeable and consistent to my online students and I remain persistent. I also ask for informal feedback from students because their comments can be more immediate and more honest. I utilize the feedback as guidance to adjust the course progression. Another proof of effective teaching is when I read a quality assignment from a student I know was struggling with the topic just a week ago and followed my advice for to improve his or her work. In addition, a colleague said that a group of students in his course made positive comments about me and my approaches in teaching—“I would like to know what you do in your online courses.”

Jennifer explained that these practices and strategies did not come to her overnight and that she learned them over time from students’ feedback and collaborating with other colleagues.
Sub-theme Five: It Takes a Village

An online course cannot be designed and developed in isolation by each individual faculty member alone. Online teachers cannot be the only individuals to innovate strategies for teaching online. Faculty members, instructional designers and technologists, support staff, and administrators need to collaborate to design, develop, and implement teaching strategies that lead to successful teaching and support for the outcomes of the online courses.

Ashton acknowledges that it takes a village to design, develop, and deliver an online course that is well-constructed, contains teaching strategies that promote student success, and reduces the stress of teaching. She explained:

We learn from each other’s experiences with regard to what aspects of the course design and the related strategies work or do not work. The strategies that we implement in our courses vary from course to course and from semester to semester. It all depends on the type of students who enroll in our online courses. I often work with the distance education instructional designer and technology people to figure out the appropriate assignment for individual work or assignment for collaboration with small or large groups. In my courses, individual assignments are suitable for understanding an individual student’s thought processes and measuring his or her progress.

Christian and Morgan have been teaching similar subjects at two different community colleges and have extensive experience in online education. They supported Ashton’s statements regarding the collaboration of other team players who help the online course to be finalized and be ready to deliver to online students. They explained that with online courses at a community college, everybody from the President to the departmental academic deans, the Director of
Distance Learning and the technical staff are involved in making the online education possible and seamless for students, and Christian added:

In my opinion, the most important contributor of all is the Online Learning Help Desk (OLHD) for students and faculty. The OLHD staff assists faculty and students with a variety of technical queries such as login questions, email account sign-in, navigation in an online course, and technical questions regarding personal computer systems requirements and troubleshooting. The OLHD helps students to stay on track and gives students a feeling that they are not left alone in an online course.

Shannon corroborated other participants and reflected:

I think no one individual can have a great part in online student success. Many people’s skills and knowledge are required to help students to overcome the challenges and become successful in online course. Institutional level factors like technical support, academic support, advising, and availability of resources can support student and contribute to success of online courses.

Conclusion

Superordinate Theme Two, Course Design and Development, is supported by five sub-themes: (a) Planning for Student Learning, (b) Design for Effective Online Teaching, (c) Consideration of Different Learning Styles, (d) Ensuring Teaching is Effective, and (e) It Takes a Village. The common thread supporting online course design and development is to collaborate with the college instructional technologists and instructional designers to include appropriate pedagogy and technology and various learning styles in online courses. Because of changes in society and the work environment, online students are becoming very diverse. Therefore, online courses must become more flexible and creative in the types of communication, interactions, and
The design of an online course involves planning for students’ learning and an online environment is the place students will utilize to develop the knowledge and skills the faculty expect them to master. The design of the online course determines the effectiveness of the learning experiences (Rovai, 2002) and the faculty members can define acceptable evidence through assessments to find what their online students have learned and how students can demonstrate their learning in that online course as well.

By combining learning strategies, learners can afford the opportunity to learn via an assortment of styles. Scholars such as Arp and Woodard (2011) stated that “when a diversity of learning approaches is offered, all students are enabled to choose from among different environments to make learning most efficient” (p. 31). Thus, to achieve student success in an online course, teachers must implement strategies that do not transmit knowledge; rather, students become motivated to learn, to be able to construct knowledge, and to take full responsibility for their own learning.

**Superordinate Theme Three: Interaction and Collaboration**

The third major theme to emerge in this study is the importance of interaction and collaboration in online courses which enable students to connect and communicate with course content, the teacher, and their peers outside of the classroom. Lai (2011) describes interaction and collaboration as the social dimension of an online learning environment.

In a successful online learning environment, interaction has learner-content, learner-instructor, learner-learner, and learner-interface modes (Lai, 2011). These modes describe students’ experiences with course materials, teachers, other students, and the technology that they utilize while enrolled in an online course. Interaction tends to entail the student’s simply using someone such as a teacher or a peer or something else, such as computer software and
hardware, to further his or her learning. Collaboration addresses needs for social interaction and it involves the “mutual engagement of participants in a coordinated effort to solve the problem together” (Roschelle & Teasley, 1995, p.12). It is through collaboration between students that higher-order thinking skills can be developed, including critical thinking, creative thinking, and problem solving.

In an online course where individuals often feel that they are isolated, communicating with others can help each student feel part of a community and secure social support in times of need. Interaction increases feelings of belonging to a course, commitment to group goals, and trust among group members (McGrath, 1984). This aspect is particularly important to online students who cannot meet face-to-face at their college campus. Online course communication tools give students the opportunity to evaluate the course content through interactions and collaboration and create the potential for a deeper and longer lasting learning.

All participants in this study unanimously agreed that online students should be given the opportunity to reflect on what they are learning, collaborate with other learners, develop relationships and trust, develop sustainable professional growth, and contribute to shared values through interaction and collaboration.

**Sub-theme One: Communication and Engagement Strategies**

Communication is specific interaction strategies that faculty can use to encourage participation, knowledge construction, and critical thinking (Lai, 2011). Often, online teachers utilize a discussion forum as a way for students to enter the conversation and interact with peers. When asked about how faculty members foster communication and engagement among students in their online courses, seven out of the nine participants responded that they divide students into small groups to accomplish ongoing and regular communication between faculty and students.
and among students, and utilize the LMS’s discussion board as a medium of engaging students. Danna’s response was:

I encourage knowledge construction and critical thinking in discussions and monitor the level of participation. I post open-ended questions every week and bring in current examples of what is happening in the world to stimulate discussion. I like to get to know my students and establish rapport with them since this is a key to open and honest communication. When students realize that the teacher is interested in their growth, they get engaged in knowledge building.

Christian, Phillip, Candy, and Shannon had very similar perspectives on communication and engagement for online courses. They agreed that discussion questions are actually an important part of communication and engagement. In order to engage students in a discussion, the topic must not have a right or wrong answer, must be something that students can resonate with, and must be current and relevant. Students must be interested and excited about the topic, and students must be able to share their individual interests and experiences while they are engaged. Candy said:

Each small-group in my course selects a facilitator, who assigns responsibilities to each individual member of the group and gets the discussions going. I am an active participant and respond to the post of each group and help guide the discussion. After each group initial response, I ask students to share their findings with other groups. These open communications and oblige engagement among the students in my online course.

Phillip then followed the response above and stated:

Participation in discussion forum in my online course is mandatory and it is graded upon the content of individual responses. Each student must write a relevant and meaningful
paragraph online and posted by Tuesday. Then by Thursday, I want students to respond and comment on at least two other students. It is clearly communicated to students that “I agree” or “I disagree” are not acceptable responses. So, students’ responses must contain substance.

Shannon provided detail on her response by stating:

I encourage communication and engagement through introduction discussions. At the start of the course, I get the ball rolling with a personal introduction post, and encourage students to contribute their own short bio or introduction to the group. I create an open discussion forum where students can post to request assistance from each other, developing peer-to-peer support.

Shannon explained that the discussion is all about shared leadership where each student has the opportunity to facilitate discussions, summarize them at the end of the week, and share the summary with other groups in the course.

Jennifer, a skilled LMS user, described her perspective on how interaction and collaboration are the foundation of communication and engagement. She explained:

To help students to collaborate and interact with each other, I use group discussions and each group works with another group collaboratively to do a task or provide feedback to each other’s solution. I often use threaded discussion as a tool to provide interaction among students. Over-communication and reaching out to students individually are effective ways of instilling the trust between teacher and students and they help with establishing strong communication and engagement in online course.

To develop a sense of community and help with student engagement, Jennifer mentioned that she responds to each post individually, gives feedback by name, requests students upload the
pictures for their profiles, allows students to peer review each other’s work and give feedback to one another or a group.

Tracy and Ashton use only email to communicate with their online students. This leads to the next sub-theme, how to establish learning community in an online environment.

**Sub-theme Two: Development of Learning Community**

When students interact with each other, with a teacher, and with ideas, new information is acquired, interpreted, and made meaningful. Such interactions develop the foundation of a community of learners (Rovai, 2002). The challenge for the online teachers is to develop plans, techniques, and methods for establishing learning communities among online students. Morgan and Phillip are teaching different subjects at different community colleges. However, they had similar perspectives regarding online learning community. They articulated that online learning communities can be built through the integration of online communication tools such as discussion boards, group work, messaging technologies, and course activities, and maintained through effective facilitation by the teacher. Philip stated:

> In my course, I use a common project where students can post things from their communities that are relevant to the topic, concept, or theory being discussed in the course.

Tracy, a computer programming teacher, and Morgan, a seasoned marketing teacher and practitioner, claimed that it is simple to involve students as a community of learners in the course in which they are currently enrolled. Tracy and Morgan individually shared that each of them provides a space on the LMS called “Water Cooler.” There, students can post their issues to the class community, receive and give direction for a homework problem or other issues related to the course, and learn from each other. Tracy said that she also respond to unanswered issues.
Jennifer said that she takes online classes every so often to keep up with online pedagogy and technologies and for her continuous education. She indicated that it is difficult to establish personal connection in online learning, but you can use various strategies to give your online students a sense of belonging anywhere regardless of their personal goals. She added:

I try to get to know my students and their needs and offer them the specific information and skills they need to get. I ask them to conduct a survey and do online pre-assessment to find out their goals and expectations. Once this information is collected, I group them accordingly.

Jennifer sustained that the key here is to offer the students real value, something that encourages them to participate in the learning community. It is also necessary to pick the right online collaboration tool.

I teach English writing. Blogging is a good choice for developing a learning community in my course because most students are familiar with it. I have experienced that building personal connections among the members of online learning community is very important. I set up a general forum called “Ice Breaker” where enrolled students can share their interests and ideas in an acceptable manner and meaningful way. As far as group work is concerned, each group determines its own learning community leader who motivates, encourages, monitors, conducts virtual meeting with members of his or her group.

Shannon echoed Jennifer’s statements and mentioned that the development of online learning community for an online course relates to student-to-student interaction and student-to-teacher interaction. Both are challenging because students and teacher are at distance and do not have a chance to meet each other face-to-face. So, maintaining the interactions in an online
In an online learning community, the interaction among faculty and students promotes learning. Shannon added:

I divide the course into smaller discussion groups of four students. They can get to know each other in a more intimate way. I allow students to communicate among themselves and with their teacher. However, I stay out of their discussions and only interject and guide the discussion. The student-to-student aspect of online learning community provides structural opportunities for personal interaction.

An online learning community gives a much greater opportunity to students to share various experiences and opinions, but that does not mean that these differences have to turn into conflicts, especially if the teachers set the tone of communication in an online course.

**Sub-theme Three: Tone of Communication in Online Courses**

In an online course, neither the teacher nor the students has the visual cues of face-to-face communication. They must consider their words very carefully and think about how each will perceive the other’s words. An online student has limited capabilities for finding how he or she is doing in class, compared with other students. Students use the available cues from discussion board postings and responses, instructor verbal and non-verbal communications, and instructors’ written comments to help them to understand the course climate. Thus, it is up to the teacher to set the tone for an online course so that the students are at ease to communicate and build relationships with each other and their teacher. Phillip, Shannon, Danna, and Jennifer’s responses were similar in nature when they mentioned that online learning can be an isolating experience if there are not opportunities to interact with others in the course. Jennifer said:
We must be vigilant with the tone of our responses and the choice of our words because attitude emanates from writing and words can be misunderstood or misinterpreted.

For example, the writing shows if you are sounding impatient, supportive, or praising.

Phillip stated that he uses positive words and tone to develop a trusting student-teacher relationship and he reminds his students that they must avoid using slang or any comments that might be misconstrued.

Ashton’s statement was aligned with Phillip and he explained that online teachers must humanize the online experience through personal interactions and stories.

I set a warm and welcoming tone at the beginning of the course to connect with students and encourage them to share personal stories, ideas, interests and hobbies. I also require that students follow the netiquette rules while they are communicating in online discussion.

Christian and Jennifer reiterated several points mentioned earlier in the interviews and said that they send out an email to all enrolled students and explain how they can communicate and how they might be perceived. For example, in such email, “Students are informed of my expectations and how they can meet those expectations.” (Christian)

Jennifer added:

I send a video which contains a welcome message, and how to be prepared for the online course. I think if students can see my face and hear my voice, we become closer, and our communication and interaction become more intimate.

Morgan stated that she uses her phone and its text messaging to communicate with students.
Conclusion

Superordinate Theme Three, Interaction and Collaboration, has thee foundational sub-themes, (a) Communication and Engagement Strategies, (b) Development of Learning Community, and (c) Tone of Communication in Online Courses. The common thread supporting interactions and collaboration is that communication enables students to connect with course content, the teacher, and their classmates. Researchers such as Morrison (2014) and Rovai (2002) suggest that a teaching method which encapsulates collaboration and interaction would fit in the framework of online education courses. Online education courses are considered successfully designed and delivered to the community of learners if they successfully address these modes: student-content, student-teacher, student-student, and student-web interfaces. The online courses with aforementioned modes/qualities describe the interactions each online student may experience with course materials, classmates, teacher, and the instructional technologies used in an online course. Online faculty members must make the context on online learning fit for students to become active learners. Active learning strategies such as interactive learning, engagement, collaboration, learning community, and knowledge construction are being used to promote online learning via discussion boards and related communication methods.

In Sub-Theme One, Communication and Engagement, the faculty participants expressed that communications can be used as specific interaction strategies to engage students in online discussions, advance their critical thinking, and encourage knowledge construction. They use discussion boards as their primary medium for engaging and monitoring students’ level of participation. The quality of individual discussions is monitored and evaluated by either the faculty member or a designated student who accepts the leadership responsibilities.
In Sub-Theme Two, Development of Learning Community, the participants stated that the key to establishing an online learning community is manifesting clear expectations at the beginning of the course. Teachers should encourage students to be involved from the beginning with a personal introduction to the group so they can get to know each other, as well as introducing the instructor to the personalities that they will be working with; they should implement strategies that give students a sense of belonging within the online courses. An online learning community can be established through the integration of discussion forums, group work, messaging technologies, and course activities and it can be supported through effective facilitation by the online teacher.

In Sub-Theme Three, Setting the Tone of Communication, the participants articulated that when you teach online, you only get one chance to make a first impression. Thus, emails, discussion materials, announcements, and any item posted must be created carefully and with much thought. It is very important that the first post to the students is well-considered, because the tone of teacher expectations begins there. Because of the physical distance between online faculty and students, both must consider their choice of words very carefully and think about how each will perceive the words. The chosen words can be inviting and encouraging or they can be deterring, misinterpreted, or misconstrued. Thus, it is important that the first few lines of the initial post are inviting and caring so that students feel that the online teacher is sincerely interested in their learning and improvement. The tone of such communication must always end with a positive and upbeat note to let students know that the teacher cares about them, their involvement, and their overall improvements.
Superordinate Theme Four: Effective Teaching Strategies

The fourth major theme emerging from this case study is about effective teaching strategies that online teachers use to promote students’ inquisitiveness about subjects taught in online courses, improve students’ critical-thinking skills, keep students on task, engage students in class discourse, enhance the course content (Narozny, 2010), and ultimately augment student success. In online education, the concern is how to develop effective teaching strategies that can foster relationships to yield sustainable trust, stronger performance, and satisfaction among online students. In online courses, it is imperative for teachers to cater to the needs of individual students more than they do in face-to-face courses (Park, Johnson, Vath, Kugiskey, & Fishman, 2013). Effective strategies are essential in increasing student confidence, student retention, course completion, pass rates, and student success in online courses. According to scholars and practitioners such as Lin, Dyer, and Guo (2012) and Young (2006), effective online teachers employ strategies to support, guide and motivate students to learn actively.

The participants in this case study articulated that in order to be effective in an online environment, teachers must place their students in the center of the online experience, be accessible and available for them, and must employ the technologies that support the learning process rather than being a barrier to communication, interaction, and collaboration. It is very important that faculty members ensure that pedagogical principles drive the use of technology, and strive to achieve certain learning standards, regardless of the medium through which they are teaching. Scholars such as Sweeney (2013), Lin and Dyer (2012), Jaggars (2011), Tseng and Ku (2011), and Pelz (2010) pointed out that effective online teaching depends on the credentials of online teachers and course designs that follow online pedagogy: facilitating the course and communicating effectively, adapting to student needs, and caring about student learning.
Subthemes emerging during the interviews were knowledge and skills for effective teaching, instructor roles and responsibilities in online courses, modifying online courses to address students’ challenges, adapting to the needs of online students, and instituting policies and procedures within an online course.

**Sub-Theme One: Knowledge and Skills for Online Teaching**

In an online education setting, a teacher’s knowledge or mastery of the content area is as important as his or her skills and abilities to organize content information for students. National Council for Accreditation of Teacher Education (NCATE, 2014) reported that online teachers should possess technical, facilitation, and management skills to be able to teach effectively. Shannon, with extensive experience in online teaching, has collaborated with instructional designers and many faculty members across departments to develop online courses, reflected on knowledge and skills for teaching online:

I think the online teachers must be skillful in technology application and implementation since they are responsible for all the technical elements of the course design and use of online technology. For example, if a student cannot download a particular graphic that the teacher has designed for a unit topic, then the instructor must be available within a timely manner, to assist the student in diagnosing the problem and/or giving proper and specific instructions for the downloading and viewing. Online teachers must make sure that the technical elements of the course design are not too advanced for enrolled students. It is imperative for online teachers to be knowledgeable in instructional design and technology so they can utilize the right tools for their students.

Phillip, a veteran faculty member, expanded on Shannon’s thoughts and echoed:
I think about knowledge and skills required for teaching online students and try to find a match between the requirements and what the online department of the college offers. I believe the online teachers must have the knowledge and skill in order to be able to manage collaborative groups, time, online student disputes, and know college procedures and policies for implementing an online course.

According to interview responses, all participants believe that a successful online teacher must be trained and be knowledgeable in online teaching and learning pedagogy since this new modality is different from a face-to-face educational environment. Responses to the following interview questions, *What knowledge and skills do you think are essential for one to be a successful online teacher?* are documented below:

Teachers must be passionate about the subjects they teach, and have appropriate technical skills for web navigation and search, computer-related storage devices, file management, and have knowledge of the college learning management system and to be proficient using the basic elements of online courses such as email, uploading files, gradebook, discussion forums when teaching online. (Phillip)

Christian corroborated Phillip and added:

Since you are delivering your teaching in a technology-oriented environment, you have to be passionate about the subject you teach and be knowledgeable about the technologies that assist with the presentation of the course learning objectives. My knowledge, skills, and experience have helped me to promote active learning, use web conferencing tools to stay in touch with students and maintain engagement, and utilize appropriate learning theories on online courses.

Morgan elaborated on Phillip’s and Jennifer’s responses:
You need excellent computer skills in addition to being a good teacher because you try to replicate the same teaching, connections, and relationship to the online environment with students in the face-to-face classroom. Thus, the online teacher needs to be knowledgeable about the use of appropriate technologies he or she uses in an online course, be knowledgeable about various methods of assessment when measuring the success of the teaching and learning process, and proficient in the college learning management system.

Tracy explained that knowledge of instructional and general technologies as well as course management system is important because online teachers are the first level technical support for their students. They need technology skills to manage their courses.

I must also say that developing and maintaining patience is the biggest skill you need because many times students ask the same question, expect a response and do not make an effort to read the posted responses or the Frequently Asked Questions section. Nonetheless, I cannot get angry or frustrated with him or her, but I can learn to be patient and provide appropriate response.

Danna, Candy, and Jennifer explained that time management is even more critical in an online environment than in a face-to-face environment because teachers must be able to evaluate information and update course materials as necessary, provide feedback and grades for students’ activities, interject and guide students’ discourse. Students taking online courses do not attend class during normal school hours, so facilitating virtual office hours or conference time during evenings or weekends enables the online teachers to reach out to students in a confined and dedicated time frame. Jennifer elaborated:
The successful online teachers must over-communicate their expectations, establish social, cognitive, and social presences, and develop trusting relationships and connections with their students. I developed skills to ask questions, listen, and acquired knowledge to provide guidance and feedback to each individual student so they can persist and succeed in my online course. With regard to technological literacy, I think online teachers must develop skills and knowledge for utilizing and troubleshooting the instructional technology and the learning management system. If there is any problem, students know you as the first level of technical support.

The data analysis revealed that in addition to the advancement of knowledge and skills, the roles and responsibilities of online teachers have become more complex and challenging.

**Sub-Theme Two: Teacher’s Roles and Responsibilities in Online Courses**

In the online educational environment, teachers should apply their knowledge and academic experiences toward developing new roles for themselves in how they teach and the new kinds of students that they will teach. The role of online teacher has become more complex and can be viewed as pedagogical, social, managerial, and technical (Keenweg & Kidd, 2010). Keenweg and Kidd defined the pedagogical role as educational facilitator, content coach or moderator of the course; social role as social director responsible for creating a friendly social environment; managerial role to create rules and set objectives; and technical role as being a technology specialist. Shannon affirmed the aforementioned description and explained:

I adopt the role of students’ teaching coach in the online learning environment. In this role, I am more of a mentor and less of a lecturer, more of a facilitator and less of a disseminator. I have found that online teaching requires the instructor to take the role of instructional designer in a way to match the same objectives and curriculum requirements
as its on-campus counterparts. Furthermore, I take the role of technology specialist when I choose tools that are appropriate for learning goals that are within the technical capabilities of students. Finally, I must guide the students through the learning process as a content coach.

Morgan’s, Tracy’s, Jennifer’s, and Christian’s statements were aligned with Shannon’s and they added statements such as:

Essentially the roles and responsibilities are similar to an on-ground course. We design, organize, and facilitate courses. Teaching online requires higher level of technical support ability for students and assuming a technical role can help with technological solutions. For example, my online course tends to be writing and reading intensive for students and myself. Thus, I accept the role of managing correspondent. I must collect, organize all the written elements and help students to learn and understand the course materials, and complete the course requirements. The managerial role necessitates spending a large amount of time providing feedback to students’ works and responding to all written inquiries and communications from students. (Jennifer)

Phillip and Ashton echoed several points made earlier in the interviews and Ashton added:

As a content coach, the online teacher must develop course materials, assignment, and continue to update course content. In his or her technical role, an online teacher must be technical savvy and knowledgeable about the colleges’ instructional technologies and learning management system.

Danna corroborated the aforementioned discussions and added:
In my social role, I purposefully establish a sense of community and modes of interaction among all enrolled students in my online course. I assure that every one of my students feels completely visible to me. It is my responsibility to check to see that each student is actively engaged, responds to discussion questions, and collaborates with the group. In my managerial role, I monitor to ensure that there are no infractions in terms of respect and responsibilities, give students honest feedback and manage their written correspondences. I devote time to mentoring students as they process the information presented to them. The obligation to learn is more on the online students and the teacher guides them through the process. I need to show them clearly what their responsibilities are, and then live up to my own responsibilities to make sure I'm responding to them adequately.

After the discussion about the roles and responsibilities of teachers in online courses, the sub-theme that surfaced was adapting to the need of online students for their academic success.

**Sub-Theme Three: Adapting to the Needs of Online Students**

Adapting to the needs of online students and making necessary modifications to accommodate their needs is important in an online learning environment. Online instructors need to understand what types of activities learners respond to so that they can apply the same techniques in their course delivery (Muir, 2011). It is imperative that online teachers adapt and improve their skills to make their course content effective and engaging. Online courses are student-centered learning environments and online teachers must give up the need for control, allowing students to lead the flow of their own learning. Shannon explained:

Since learning and processing information differs from student to student, I decide prior to the start of the term if students should progress through the course materials together
or at their own pace. I cater to the needs of students in many aspects that are allowed by my role and the college, whether they have a learning or physical disability or just fallen behind in the course due to unforeseen circumstances. In my online courses, the synchronous office hours are recorded and made available to all enrolled students. In some of my online courses, I replaced the final examination with project-based learning assignments to accommodate students with an exam anxiety and to provoke their dynamic thinking for constructing knowledge. Project-based learning assignments have become more effective because I provide ongoing and constructive feedback. Feedback will help online learning experiences to become more informative, engaging, and motivational (Morrison, 2014) for online students.

Jennifer has taken a different approach from Shannon. She emphasized that any good teacher is going to constantly tweak his or her assignments, instructions for those assignments, lecture presentations, and discussion questions. For example, she recently changed her online course from flat lectures to more interactive lectures. Jennifer also added:

I often evaluate the effectiveness of my assignments. If students have had problems or majority of them could not complete those assignments, I will change the directions or provide additional lecture detailing the expectations because students need to understand the value of the subject, vocabulary, and skills before they devote their time and efforts. Listening and catering to the needs of students has made me a better teacher by allowing them to take charge of their learning.

Phillip echoed several points made by Shannon and Jennifer and continued that online teachers must continuously study their students and assess what they need to enhance their academic performance and stay on course:
My students communicated to me that they need to see more flexibility in their online course and they want to be able to quickly review some part of the lecture without wasting time to go through what they know. In order to accommodate this need, I redesigned my course to be learner-navigated instead of serially following modules. The lessons are in smaller bite-size content and students can use them on-demand and in the order they prefer as well as repeat or revisit as necessary. I test the accessibility of my course content from various locations and with heterogeneous devices: computer, laptop, Apple computer, smartphone, and Notepad. This enables me to know the technological glitches and solutions as well as ensure the availability of the course material.

Furthermore, Phillip articulated that students say, “Involve me and I learn,” so online teachers need to develop discussion topics that are relevant, current, engaging and are of interest to online students and involve them in the process of learning. Ashton talked about how students want to be included in planning, implementation, and assessment. Online education is a student-centered environment, and teachers should learn to allow students to participate in decision-making process. Students’ involvement and collaboration are the keys to adapting their needs (Garrison, 2001). Ashton stated:

I know when they tell me and I can adjust when I know. In my online course, students recommended that an organized syllabus with clear instructions about assignments and their deadlines, how and what technologies to use, and a rubric for their assessment can help them to focus on deep learning. Thus, I am updating and incorporating those suggestions in my syllabus. Often, I let the interests of my students drive the content that teaches skills and concepts. In one of my online courses, the students suggested writing about a social phenomenon that has touched
their mind and heart. After I complied with their needs, the diversity of topics became wider, their enthusiasm reached a higher level, and their writing showed more substance.

Conclusion

Superordinate Theme Four, Effective Teaching Strategies, has three fundamental sub-themes, (a) Knowledge and Skills for Online Teachers, (b) Teacher’s Roles and Responsibilities in Online Courses, (c) Adapting to the Needs of Online Students. The common thread exemplified by this theme is that effective teaching strategies require sustained development, and support in many area of online education. Online teachers need to promote and fulfill students’ curiosities about the subjects they teach, improve critical thinking skills, adapt to the needs of their students, know their roles in online courses and meet the terms, keep students on task, engage students in course communications, and apply their skills and knowledge to enhance student learning and success.

There are many elements to online teaching strategies, but the strategies that are effective must be made within the framework of a larger plan that includes consideration of strategic skills for instructions and the roles of teachers and students involved in the teaching and learning process. Scholars such as Poll, Widen, and Weller (2014) stated that online teachers should utilize their knowledge and skills to promote and engage students with course content, course discussion, and develop a sense of community. They should act as educational facilitator, social director, correspondence manager, and technology specialist to harmonize all aspects of online learning. For a successful online learning experience, it is imperative that online teachers encourage, motivate, provide feedback, and intervene when students have challenges. Students need to know that their contribution to the course is acknowledged, their needs are accommodated, and their participation and insights are valuable.
Conclusion

The purpose of this study was to explore the best practices in teaching strategies for online courses that have augmented the pass rates and success of online students within Massachusetts community colleges. This research applied the social constructivist education theory of the Community of Inquiry framework (Garrison, Anderson, & Archer, 2000) to describe a process for developing collaborative-constructivist learning and teaching experiences for successful online education programs with social, cognitive, and teaching presence. Swan and Ice (2010) support the Community of Inquiry framework by describing it as a dynamic process model designed to define and measure elements that support the development of online courses. These elements (social presence, cognitive presence, teaching presence) are considered to be contributed by the online teachers and students who are engaged through the channel of communication such as learning management systems or other instructional technologies.

Overall, achieving online educational success for community college students requires sustainable interactions, engagements, and collaborations between online teachers and students. To provide a deep and meaningful educational experience, online teachers should apply their pedagogical, social, technological, managerial, and instructional knowledge and skills to online education and utilize the social, cognitive, and teaching presences to create teaching strategies that enhance the educational success of community college online students.

This study sought to answer one primary research question: How do community college online teachers describe practices that, from their experiences, enhance the pass rates of online students? It also examined a related sub-question: How do community college online teachers, in general, describe teaching strategies that, from their experiences, enhance online student pass rates?
Findings

A single-case holistic model of inquiry (Creswell, 2013) was employed for this study to gather descriptions from teachers regarding their individual experiences and the instructional methods and strategies used while they teach online. They described the existing teaching strategies and practices that enhance the success of online student within community colleges. Included are: (1) course organization as a sustainable task for online teachers and a key to students’ success; (2) effective course design and development for alignment of the course objectives, assessments, and activities; (3) means of interaction and collaboration that connect students with course content, peers and teachers; and (4) effective teaching strategies through continuous development and support in many areas of online education.

1. Foundational findings supporting the course organization as a sustainable task for online teachers and a key to students’ success include course content configured to move students’ learning to the highest levels of evaluations and creations, course syllabus to clarify course policies and procedures, rules that will govern the class, outlines of student and teacher responsibilities for various tasks, timeline and deadlines for assignments and projects, and the course format for how the course is to be presented to online students.

2. Results supporting the finding of course design and development included planning for student learning, design for effective online teaching, consideration of learning styles, ensuring teaching is effective, and that it takes a village to design and develop an online course that is innovative with teaching practices and strategies that lead to successful teaching and the desired learning outcomes.

3. Means of interaction and collaboration that connect students with course content, peers and teachers are grounded in three foundational sub-themes: communication and engagement
strategies that engross students in online discussions, provoke critical thinking and encourage knowledge construction; development of learning community to manifest strategies that give students a sense of belonging within their online course; and set the tone of communication with a positive and upbeat note to let students know that the teacher cares about them and their overall academic success.

4. Supports for finding effective teaching strategies encompassed knowledge and skills for online teachers to promote and engage students with course content, course discussion, and to develop a sense of community; the roles and responsibilities of teachers in online courses; and adapting to the needs of online students and the types of activities to which they respond.

These four superordinate themes were corroborated by this research through the case study design. Triangulation was applied to individual interviews centering on different teaching experiences.

This case study found supporting evidence to suggest that existing teaching practices and strategies have enhanced faculty’s presentation of online pedagogy, utilization of instructional technologies, and improved the instructional design of their online courses. These ultimately have improved the success of online students in Massachusetts community colleges. The interviewed faculty members in this study stated that they must be certified as “Online Instructors” by successfully completing a rigorous six weeks online training course in order to teach online at their respective colleges. According to scholars (Tseng & Ku, 2011; Sweeney, 2013) the credentials of the online teachers ensure the quality of course design, instruction, content, communication, and engagement with students. Effective teaching strategies can be acquired through continuous faculty training, modification and experimentation with course materials and the mode of delivery, implementation of new practices, sharing pedagogical
knowledge with peers, and honing technological skills for online teaching and learning. Finally, the majority of faculty members interviewed shared experiences that indicated their support for designing online courses with inclusive attributes to meet the needs of an increasingly broad range of students with diverse learning styles.

**Validity and Trustworthiness**

Ensuring a level of trustworthiness of codes is paramount to the validity of qualitative data analysis because participants’ descriptions are formed by their subjective experiences (Creswell, 2013). Triangulation of individual interviews and the holistic analysis of the transcripts and documents made it possible to focus on different teaching experiences in online education within Massachusetts community colleges. This researcher viewed this as a step in the process of warranting a degree of trustworthiness that addressed issues of reliability.

The researcher provided detailed descriptions of the interview protocols and the location of the study with the participants. Trust was established between the participants and the researcher for reliability of data. The recorded interviews were transcribed verbatim for data analysis utilizing a Northeastern University approved transcription service, Rev.com. Lincoln and Guba (1985) suggested four criteria: authenticity, validity of themes, transferability, and credibility for evaluating trustworthiness of a research. For the purpose to authenticity, a copy of the interview transcripts was shared with participating faculty members who then checked for accuracy and accountability. This member checking procedure allowed the researcher to check for any missing information or any area of uncertainty brought forth by participants concerning the study. This procedure was critical for credibility. The researcher ensured that actions and behaviors in the analysis process were demonstrated credibility, that the evidence was persuasive, and that the evidence was based on structural corroboration and consensual validation (Eisner, 1991). To
support transferability, the researcher shared adequate information with the participants to enable them to transfer findings to another educational context. The superordinate and corresponding sub-themes were shared with participants to validate and confirm that the themes were appropriately linked to findings and interpretations. They verified that the research findings are well developed and documented.

The researcher has explored many perspectives for the purpose of this study. He found that Community of Inquiry framework with social, cognitive, and teaching presence has been the most effective and trustworthy methodology for the development of teaching strategies that enhanced the pass rates and success of online students.
Chapter Five: Discussion and Implications for Practice

This chapter commences with a purpose statement for this study, reviews the rationale for the single-site case study design approach and follows with an overview of the theoretical framework upon which this case study is founded. Further, the researcher provides a short review of the research design, research questions and a brief discussion for key findings. He describes the findings with the help of the theoretical framework and the literature review. This chapter’s conclusions identify recommendations for effective teaching and recommendations for future studies.

The purpose of this case study was to explore online teaching strategies that enhance the educational success of community college online students. At the conception of this study, educational success was defined as online students completing their courses with passing grades and has been referred to as student success throughout this dissertation. The rational for the design of this case study was the researcher’s interest in searching for effective online teaching strategies that improved passing rates in online courses and enhanced student success in community college online education. The design approach for this study allowed collecting online teaching experiences and perspectives from different participants who taught various online courses in diverse disciplines. The implication of this study was to benefit faculty members who teach online and traditional courses, instructional designers and technologists, practitioners and researchers interested in best practices for augmenting the rate of success for students taking online courses. The Community of Inquiry framework (Garrison et al., 2000) and the analysis of collected data yielded insights and perspectives into the thoughts of online teachers and administrators to create an effective teaching and learning environment with
appropriate teaching strategies to enhance the pass rates and student success in community college online education.

The methodology for this study utilized the Community of Inquiry (CoI) framework to provide explicit strategies to use in the design, development, and assessment of online courses through social presence, cognitive presence, and teaching presence critical to successful online learning environment (Garrison & Arbaugh, 2007). The rationale for using the CoI framework was that it aligns with the goals of this study since it is inherently collaborative and constructivist. The CoI model supports this study by highlighting collaborative educational experiences between faculty members and students with a constructivist approach to teaching and learning (Swan et al., 2009). Effective teaching strategies put students in the center of online education where they become in charge of their own learning and accountable for their own actions including respecting the abilities, contributions, and feedback of their group members and classmates. The teachers are facilitators who guide the online students to maximize their learning through exploration of current and relevant matters relating to online course subject matter. As the faculty members take on pedagogical and administrative tasks throughout online courses to promote interactions and collaboration among students, their (social, cognitive, and teaching) presence, helpfulness, prompt feedback, and ongoing communications are directed toward successful online teaching. The CoI framework assumes a wider depth and broader spectrum for online learning research and can provide answers to the research questions identified in this study.

**Research Questions**

This study sought to answer one primary research question: How do community college online teachers describe practices that, from their experiences, enhance the pass rates of online
students? It also examined a related sub-question: How do community college online teachers, in
general, describe teaching strategies that, from their experiences, enhance online student pass
rates?

To answer the aforementioned research questions, the researcher applied the social
constructivist education theory of the Community of Inquiry model as an approach and explored
the current teaching strategies that online faculty members have implemented within
Massachusetts community college online education to enhance the pass rates and the success of
their online students. This research employed a single-site case study approach to best answer
the research questions. To collect data, the researcher explored the experiences of nine
community college faculty members who taught online as part of day-time work load by
conducting in-depth, semi-structured interviews containing open-ended questions. Other criteria
for selecting these faculty members were that they must be knowledgeable of online pedagogy
and their college’s online education policies, and have completed training for online education.

Understanding the motivating factors that prompted the participants to become involved
in online teaching and learning has served as a guide to online teachers for development of
effective teaching strategies. Thus, the goal of this study was to increase understanding of the
online education experiences and improve the faculty members’ performance as they develop
and implement teaching strategies for student success.

In Chapter Two, the literature review provides an array of recommendations for teaching
strategies in online courses. Many of them corroborate the findings of this study with regard to
course organization, course design and development, interaction and collaboration, and effective
teaching strategies requiring sustained development. Unfortunately, only a few peer-reviewed
studies have explored the link between teaching strategies and student success in community
college online education programs. This qualitative doctoral study intends to fill a gap in the research about teaching strategies designed to enhance pass rates and promote the educational success of community college online students.

The presentation of key findings in this chapter describes each of them in the context of current literature and their alignment to the theoretical framework. Recommendations for practice, limitations of the present study, and recommendations for future research will be discussed.

**Presentation of Key Findings**

The key findings supported the notion that the online students may have benefited from the teaching strategies and practices that the participating faculty members in this study implemented in their online courses. The key findings were categorized into four superordinate and related sub-themes to support teaching strategies that enhanced the educational success of current online students within Massachusetts community college settings. This study revealed four themes experienced by nine faculty participants. The first theme was Course Organization supported by the following sub-themes: Course Content, Course Syllabus, and Course Format. The second theme was Effective Course Design and Development supported by the following sub-themes: Planning for Student Learning, Design for Effective Online Teaching, Consideration of Different Learning Styles, Ensuring the Teaching is Effective, and It Takes a Village. The third theme was Interaction and Collaboration supported by the following sub-themes: Communication and Engagement Strategies, Development of Learning Community, and Tone of Communication in Online Courses. Finally, the fourth theme was Effective Teaching Strategies supported by following sub-themes: Knowledge and Skills of Online Teachers, Teacher’s Roles and Responsibilities in Online Courses, and Adapting to the Needs of Online Students.
The holistic approach for data collection in this study allowed faculty members to share descriptions related to their individual experiences, their instructional methods and strategies utilized while they teach online courses. The data analysis of the transcribed interviews led to the subsequent key findings.

**Course Organization that Facilitates Learning**

The preparation for course organization commences with collection of all resources that a faculty member uses to teach a course. Then, the faculty members must review their online course components to identify the parts they need to organize in a way that facilitates student learning. In addition, they must determine how course assessments, material, and activities within the unit structure (module) are aligned with the course learning objectives. The course organization must assist students to easily recognize and understand how a course is modularized, and how to navigate through the modules, and how to locate the course materials seamlessly. According to Shank (2010), “A logical course structure and intuitive course navigation supports effective and efficient student learning” (p.20).

A thoughtful course organization is critical in any online course because it ensures that the course content is in alignment with course curriculum, and students can follow the instructional materials. Providing well-defined organization in online courses helps students learn more effectively, avoid procrastination, keep up with the modules and successfully complete their course work without being overwhelmed or getting lost, as well as create direction to success for students’ learning. Thus, it is important that faculty members teaching online courses think carefully about the organization of their courses, ensuring that it encourages student participation and facilitates students learning. Monitoring the effectiveness of course organization is a continuous task for faculty members. Anderson (2008) stated that in a learning
environment where faculty and students do not meet face-to-face, an intuitive, organized, and well-structured course design is especially critical to facilitate learning. Scholars such as Clark and Mayer (2008) and Bransford, Brown, and Cocking (1999) claim that learning can be more efficient and effective when faculty members use organization and sequencing strategies in their online courses. The participant faculty members in this study reported that a course organizational structure must be consistent throughout the course, and the course content must be aligned with online pedagogy; meaning that all elements in the course must be clearly described, marked, and labeled when they are delivered online so that students can find and use the course materials to enhance their learning as they progress sequentially through the course.

According to Wiley (2000), consistency and intuitive navigation in online courses create patterns to help students progress successfully through the modules and course materials. The study participants shared that expectations and responsibilities must be clearly articulated to online students so that they know what is expected from them and what they can expect from their teacher. Research supports this study’s recommendations of teaching strategies regarding course organization from the perspective of online teachers that enhance educational success of online students (Clark & Mayer, 2008). The study participants shared that effective teaching practices and strategies start with course organization which entails current and relevant course content aligned with the department’s curriculum; and a course syllabus used to provide an outline of the course, address student challenges, and clarify the course’s policies and procedures and the deadlines for homework, projects and exams. Research also shows that an organized, approachable, and accessible syllabus helps to communicate enthusiasm, promote mutual accountability, and set a positive tone that supports students’ confidence in online teachers (Sulik & Keys, 2014; Parkes, & Harris, 2012; Matejka & Kurke, 1994). The participating faculty
members shared that consistent design of course format is a major factor in alleviating students’ anxieties from logging into their online course to completing their course work. The conclusion of discussions with each individual study participant indicated that learning materials must sequence topics so that they build upon each other and enable students to incorporate each sequence with the previous one.

Knowing how to best organize the course content for students is as important as knowing how to upload the content to the college’s Learning Management System. In an online course, students’ primary contact with faculty, course elements (discussion forum, lecture notes and material, syllabus, exams, projects, and instructional tools), the college, and technology support staff is with the LMS content and interactive tools. The study participants indicated that when the course content, course syllabus, and course format are in alignment, they facilitate students’ learning and promote students’ success. Fink’s (2013) research supports this finding of the study stating that “creating a good structure also enables the teacher to identify problems or assignments for students to work on that gradually become more complex and challenging” (p.128).

Although the importance of course organization is the initial finding of this case study, online instruction also requires a thoughtful and vigilant approach to course design and development to ensure the quality of teaching and learning.

**Course Design and Development to Ensure Quality Learning**

Quality learning in an online environment must nurture students’ enthusiasm for a higher level of learning and encourage curiosity as well for the discovery of new ideas. The faculty members must design and develop their online courses in ways that are complementary to each other because the design creates a blueprint for the development of the course. The study
participants reported that design and development for high quality online instruction must provide an intuitive navigation path for online students so that they will be able to easily locate all the elements in a module and ultimately in an online course. According to Morrison (2014), “Course design plays a significant role in students’ potential for learning online, given that students engage with course content, instructor and peers through the course platform” (“Course design”, para 1). The faculty participants in this study shared that course design involves planning for the students’ learning and online environment is the landscape that students will leverage to develop knowledge and skills the faculty expect them to master. During the design process, the faculty members and the instructional designer must determine what learning objectives, instructional activities, assessments, and outcomes help to promote students’ learning and enhance educational success.

A well-designed online course fosters better student time management skills and enables students to concentrate and spend a majority of their time completing course work rather than being frustrated with the complexity of the course and wasting their time looking for what to do. The study participants reported that when students understand the demands of an online course at the beginning, they are better enabled to succeed in that course. They also emphasized that when course objectives, assessments, and due dates are clear from the beginning of a course, students have an opportunity to plan ahead to complete their course activities and better manage their time to attend to their daily workloads. Faculty members need to clearly define course goals and outcomes when designing an online course because these could determine the choice of technology tools, which influences the format of the online activities and assessment techniques (Zhu, Payette, & DeZure, 2003). One of the study participants stated that in her online course, the goals and outcomes are measureable, achievable, and aligned with the course objectives. This
arrangement has helped her measure student progress seamlessly and develops quality learning for her online students.

Three participants in this study unanimously, but in separate interviews, discussed that when a faculty member designs an online course, he or she must also include in the design blueprint: what students need to learn, to understand, to know, and to apply to a solution of a real-world problem. During online course design, the faculty members must build components to identify specific learning activities that relate to learning objectives, formulate appropriate feedback and assessment procedures, and ensure the components are entirely incorporated in that course.

The development of an online course follows the design structure. Online course development is a sustainable task for the online faculty members and the instructional designers because it continuously goes through a cycle of developing, teaching, evaluating, and revising. In the development stage of the course, the faculty members must include a review of course objectives, an analysis of the textbook, content module development and content chunking, the creation of content, the development of learning objectives, student assessments, and additional resources (Shelton & Saltsman, 2008). They may also need to work with instructional technologists and designers to incorporate appropriate technology tools, pedagogical approaches, and methodologies that ensure quality learning and enhance students’ pass rates and success in their online courses. This phase of online course development also helps the faculty members to assemble the elements of the design into a coherent entity for which they must select or create a teaching strategy, and integrate the course structure and the instructional strategy to build up an overall outline of learning activities. During this development, the faculty members must create grading schema, troubleshoot if there is any problem, and evaluate their teaching. According to
the participating faculty members in this study and as detailed in the data analysis, the design and
development of an online course for quality learning involves strategic planning with a detailed
outline of the course, considering different learning styles, establishing expectations about
learning goals as well as ensuring that proper policies and procedures are in place, ensuring that
teaching is effective through assessments and feedback, and incorporating social, cognitive and
teaching presences to encourage students’ engagement and collaboration, not only with course
content but also with other students and their teachers. Support for this finding in the current
study is substantiated by Smith’s (2008) study which described the design and development of an
online course as a comprehensive process and learning guide that create a milieu in which
students become confident on their pathway to achieving educational success. The study
participants shared that design and development for online courses present some unique
challenges for students and teachers, but they also provide exciting opportunities for engaging
students in their learning. While quality learning is established through comprehensive and
careful course design and development, the interaction and collaboration in an online course
enable the students and their teachers to connect and communicate, engage in the course
discussions, and develop strong working relationship.

**Interaction and Collaboration: Foundation of Communication and Engagement**

Interaction and collaboration are in the center of online educational experiences through
which student learning is accomplished and enhanced. Communication is a process that
establishes interactions between online students and their teachers. Engagement is a way to
promote collaboration among these individuals. According to Garrison et al. (2001),
collaboration and interaction contribute to deeper levels of learning, shared understanding,
critical thinking, and long-term retention of learned material. This statement supports a finding
of the current study. The study participants reported that through interactive online instruction and collaborative work, online students could construct knowledge since they must take the initiative to learn and share knowledge with other students and their faculty members. The more students are involved academically and socially, the more likely they are to become involved in their own learning and to invest time and energy in the learning process (Tinto, 2011). The participating faculty members reported that developing discussion forums, group projects, and synchronous interactions using their college Learning Management Systems’ communication tools has provided opportunities for their online students to stay connected with each other and their instructors, reflect on their learning experiences, develop strong and trusting working and professional relationships, and collaborate on solutions for any given task. The study participants also described that the college instructional designer and technologist help them to select and frame appropriate activities to sustain students’ communications and engagement and to select and utilize proper technology tools that are not costly for students and support the online course learning objectives for interaction and collaboration.

According to Puzziferro and Shelton (2008) and the Quality Matter Rubric, interactive activities promote interaction among online students and with instructors, and are tied directly to learning objectives. The design of activities prompts the faculty member to be present, active, and engaged with students. The careful analysis of transcribed interviews indicated that the participating online faculty members interact and communicate with their students on a regular basis and showed that they found over-communication to be the key to engagement, which is an effective ingredient of online student success. The interactive activities engage students with the application of the information in a meaningful and interactive way so that they can construct new
knowledge in a collaborative environment which originates from constructivism learning theory (Purzziferro & Shelton, 2008).

The literature review supports the online faculty members efforts to develop teaching strategies that include interactive and collaborative activities in online courses in order to sustain communication and engagement among online students, increase students’ sense of belonging to a course, foster commitment to group goals, develop trust among group members, and construct and share knowledge (Serdyukov & Serdyukova, 2015; Moore & Kearsley, 2012; Lai, 2011; Purzziferro & Shelton, 2008; Rovai, 2002; Garission et al. 2001; Roschelle & Teasley, 1995; McGrath, 1984). The collaborative and respectful online environment that has been established through teaching strategies fosters a sense of connectedness and success. The faculty members attributed the effectiveness of the learning environment for students to the connectedness and success that they enjoyed. According to the study participants, interaction and collaboration require strategies to properly establish communication and engagement, develop learning community, and set the tone of communication in online courses so that students are at ease to communicate and develop relationships with each other and their faculty member.

Effective collaboration provides an optimal environment for developing rich, dynamic, and interactive online courses. The collaboration among the members of a group in an online course, who must work to find solutions to a problem, provides real-life experience of working closely with each other, and allows them to use their higher-order thinking skills. According to Anderson (2008), “When assigning students for group work, membership should be based on the expertise level and learning style of individual group members, so that individual team members can benefit from one another’s strengths” (p. 31). The need for interaction and collaboration in online courses for effective teaching and learning to take place is certainly obvious to the faculty
members. Research indicates that effective learning can be promoted by communication and collaboration among students as well as faculty members (Serdyukov & Serdyukova, 2015).

The findings from this study indicate that the participating faculty members believe that interaction in an online course must be between the student and other students, between the student(s) and the faculty member, and between the student and the knowledgeable members of the course to collaborate, participate in shared knowledge, develop professional and academic networks, and set up social presence. Although interaction and collaboration promote a system for online students to retain their learning long-term, their educational success depends to a great extent upon faculty members to develop effective teaching strategies.

**Effective Teaching Strategies and Student Success**

Teaching strategies are approaches faculty members take to achieve learning objectives. Effective teaching strategies that enhance educational success for online students require that students apply, analyze, synthesize, and evaluate their own work as they progress in their course from where they were, to where they are, and to where they are going. Students can track this progression through assessments, projects, assignments, discussion board posts, and collaboration with other members in the course. Effective online teaching that allows students to apply the information in real life should also be included to conceptualize the learning and to facilitate deep processing.

According to Poll, Widen, and Weller (2014), for teaching strategies to be effective, online faculty members must include students in planning, implementation, and assessments. Involving the students in these decisions will place more work on them and make them responsible for their own learning which ultimately leads to greater success in their online education. The study participants explained that teachers must provide a variety of learning
activities that aid online students to achieve the online course learning outcomes and must accommodate students’ individual needs. Seven out of nine participating faculty members expressed that teachers must embrace the possibilities students could bring into their courses by allowing their students to be part of the decision-making process, giving up the need for control in teaching and learning so students can bring their experiences to the course that engage and deepen the construction of their knowledge, and giving students the chance to lead and take charge of their activities. Recognizing students’ past experiences will increase their buy-in and involvement. McCarthy (2015) stated that students’ “confidence rises as they understand how their expertise fits into the new concepts being taught” (“Recognize That Students”, para 1).

To ensure student success with effective teaching strategies, the faculty members teaching online must first to get to know their students. This acquired knowledge provides a nurturing and dynamic online interaction that allows students and the faculty member to introduce themselves in an introductory forum (Crawford & Wiest, 2012). More than two third of the interviewed faculty members reported that they start their online course with an introductory discussion forum to introduce themselves to their students and allow students to post a brief biography or tell something about themselves to their teachers and classmates. These faculty members also explained that they use polls during a synchronous class meeting to check in with students or to check for understanding so they can modify their approach in real time. The current study reveals that setting clear expectations helps students learn better and perform better. Research shows a significant correlation between clarity, consistency, and simplicity in course design that students perceive while learning in online courses (Sulik & Keys, 2014; Koontz, & Compora, 2006; Fink, 2003). These findings support the need for clear goals and expectations for students. The study participants shared that they use a syllabus and course
announcements to establish norms for students behavior and interaction, and to inform students of the course goals and expectations. Another effective strategy that enhances online student success is to establish an active presence in the online course.

The comprehensive literature review presented in Chapter Two includes multiple research studies that corroborate the findings of the present study with regard to the faculty member’s presence in an online course as associated with effective instruction, greater depth of learning, and students’ satisfaction with the online process consequently promoting greater student success. A careful analysis of data from transcribed interviews revealed that eight out of nine faculty members created communication bridges to establish their role as a facilitator and mentor. It is important to maintain highly visible social and teaching presences in an online course providing opportunities to virtually connect with students through synchronous and asynchronous activities. A majority of the study participants reported that they create a personalized welcome message to establish the tone and build excitement for the start of the term and establish weekly virtual office hours so that students can stop by and ask questions as needed. One participant stated, “I host synchronous class meetings during the term, record the meetings, and post the link in an announcement so the students could review it at their convenience.” Two participants reported that they attended to their online courses at least four times a day, are active in browsing the discussion boards, and respond to their students directly and to the group as a whole.

One of the most important tasks of an online faculty member is to provide prompt and effective feedback that guides students to greater understanding of course content and improved student engagement. This effective teaching strategy allows students to assess existing knowledge, reflect on what they have learned and what they still need to learn, and receive
suggestions for improvement in future work (Chickering & Gamson, 1999). The participants shared that good feedback must indicate the good or successful features of the assessed work, the poor and less successful features of the assessed work, and how the students can improve in that product of their work. Good feedback is also timely. If feedback is provided too soon, it may stop students themselves from reflecting on their work. If feedback is provided too late, it may no longer be salient. Scholars such as Crawford-Ferre and Wiest (2012) stated that teacher’s immediacy of response can lessen the psychological distance between teachers and their students leading to greater learning.

Building a learning community is one of the most important and effective teaching strategies in online courses where students could easily feel disconnected. Brindley, Walti, and Blaschke (2009) stated that “learning in the digital age relies on the connected learning that occurs through interaction with various sources of knowledge, including the Internet and learning management systems, and participation in the communities of common interest, social networks, and group tasks” (p.2). The study participants reported that they must establish norms for student interaction while maintaining positive and motivational tone when communicating with them. One participant stated that “I include an icebreaker forum so the students can get to know one another.” Four other participants shared that they actively engage in discussion boards and encourage students to share resources and at the end of each week, consider providing a summary of key points for students. These faculty members also shared that at the end of each term they invite students to reflect on their journey and share their key takeaway from the course.

Another effective teaching strategy is to respect diversity in an online learning environment. It goes without saying that each and every student brings his or her own unique experiences to any learning situation. Scholars Chickering and Gamson (1999) claimed that
students are different from one another and they need various opportunities to show their talents and how they learn. It is important to keep in mind that an awareness of learning styles aids in instructional design and ultimately the retention of students in online courses. In addition, exposure to different learning styles and perspectives increases students’ ability to adapt to real-world situations. Three of the faculty participants explained that they assess their students’ learning styles in the beginning of the course and incorporate a variety of styles to meet the needs of those students. All participants shared that they provide easy access to recorded lectures, course notes, and additional resources to appeal to different learning styles.

Finally, engaging in best practices for online education and sustainable training is the most effective teaching strategy since students, course materials, pedagogy for online teaching, and technology are evolving all the time. In online learning, the value of good pedagogy for course design and instructional effectiveness supersedes the use of technology. The environment most conducive to online learning is one that balances the interactions between the players and the technology medium.

**Conclusion**

This research sought to answer one primary question: How do community college online teachers describe practices that, from their experiences, enhance the pass rates of online students? The study also investigated a related sub-question: How do community college online teachers, in general, describe teaching strategies that, from their experiences, enhance online student pass rates?

Results indicate that current teaching practices and strategies are enhanced through the teachers’ application of online pedagogy, utilization of instructional technologies, and implementation of instructional design in online courses, which were the central findings
contributing to the educational success of online students. For faculty members, keeping up with course updates including course organization, knowledge and skills for new technologies, and new approaches to instructional design have become sustainable tasks. Many of them did not have an awareness of these responsibilities among others before committing to teach online courses. Although training helped them for initial setup of their online courses, they have realized that online courses and the related technologies are evolving and they need to be up to date and skillful with technologies since they are perceived by online students to be the first level technical support experts.

The interviews revealed that teachers are provided with assistance in many areas of teaching practice relating to integrating technology in their online courses, whether it be to set up assignments, configure quizzes or exams, help with course design, or review a subject in order to ensure that the course content meets appropriate quality standards. The staff members of the Academic Innovation and Instructional Design Center (AIIDC) at community colleges have provided personalized and group support sessions to all faculty members and students so they can teach and learn more pedagogically, improve online courses technologically, and utilize the college course delivery system and related technology in more effective way. Even after a course is designed, the college instructional designer and faculty member should review the course with an Outcome Assessment Rubric for online course design to make sure that all components in the course are in the appropriate place and functioning seamlessly. The instructional designer also evaluates the course design for alignment of teaching and learning activities and assessments with the objectives.

Due to the aforementioned supports from the AIIDC and the guidance from the instructional designers and technologists, the faculty members have been able to develop
effective teaching strategies that are inclusive, collaborative, interactive, engaging, sensitive to different learning styles, and adapted to the needs of online students. Although there is room for further enhancement in online courses, online education has seen improvement in the enthusiasm of teachers and witnessed a higher quality of teaching as well as augmentation of pass rates and success of community college online students.

**Recommendations for Practice**

In an online teaching and learning environment, the instructors bring their knowledge of subject matter, skills, and training. They apply effective teaching strategies to their online courses in order to create a more enhanced learning situation where students benefit from the teachers’ knowledge and experiences as they work together. The aforementioned teachers’ attributes promote and engage students with course content, course discourse, and encourage students’ collaboration and help students to develop a sense of belonging within the online courses as well as help faculty members to adapt to the needs of online students and the types of activities to which they respond. The findings from this case study show:

1. If the teaching strategies are to improve the success rate of online students as projected from this study, online education must create supporting learning environments for faculty members and students that engage both of them on many different levels.

2. An online learning environment must look at teaching strategies with pedagogical issues such as case learning, engagement, and collaboration that help with students’ deep and meaningful learning. These interactivities are critical elements of a Community of Inquiry Framework (social, cognitive, and teaching presence) that help with deep learning strategies and promote educational experiences, long-term knowledge retention, personal growth and
understanding for students at many different levels that are meaningful, lasting and applicable to real-world situations (DeLotell, Millam, & Reinhardt, 2010).

3. Although online education is envisioned as a student-centered learning environment, faculty members are at the center of this educational experience and undertake multiple roles: pedagogical role, social role, managerial role, and technical role and have the ability to encourage and motivate students to visualize and achieve a higher level of success in online courses.

4. Faculty members who teach online courses must give their students opportunities to construct knowledge through engagement in realistic problem-solving or decision-making activities; doing so enables online students to reflect on what they are learning, collaborate with other students, and check their progress.

5. Faculty members and instructional designers must work collaboratively to include teaching strategies and activities for adapting to different learning styles. These can accommodate a diverse body of students and can help to enhance the pass rates and success in online courses.

6. When organizing an online course, faculty members must allow maximum flexibility and accessibility for course materials. They must build measurable and clear objectives that outline what is expected from their students. The objectives streamline the content of a course and help students to evaluate their learning outcomes. Course organization is a dynamic and continuous task for online faculty members, yet it is an important step in course design because it enhances teaching and learning and promotes student success.

7. Instructors in online education environments of public and private higher education institutions must design and develop online programs for graduate, undergraduate, and certificate levels focusing on building skills, increasing earning potential, and strengthening
students’ marketability. These programs must accommodate the unique needs of undergraduate and graduate students who are working full-time or part-time. In addition, online education must support the diversity of students through intentional inclusion of role models such as peers, mentors, instructors, and course content to reflect the diversity of the real world. Educators at all levels need to continue developing and implementing answers to the question, ‘How can we increase the success rate of our online education students?’

Online education with its growing student population needs faculty and administration to explore how to best service all students. Educators need to look at the roles and responsibilities of all online faculty members and how everyone can contribute to the needs of online students. By doing so, they can promote an inclusive setting for all students. For faculty members, this develops and encourages the shared responsibility of teaching and learning. While this research can benefit the online education within community colleges, there remain limitations, whereby this research could be extended.

Limitations

The findings of this case study are not generalizable to all faculty members who teach online at a community college. The scope of this study is narrow and only includes the voices of nine full-time faculty members who met the research criteria and teach online courses as part of their day-time work load at Massachusetts community colleges. The researcher recruited full-time faculty members of Massachusetts Community College Distance Education (MCCDE) with permission of the President and the Board of Directors. Faculty recruitment letters were sent to all colleges, but only nine full-time faculty members from four community colleges volunteered and participated in this study. While there was much similarity in their comments, a larger group of participants would have improved the validity of this study. Other limitations are that this
study did not include the voices of adjunct faculty members who teach online courses, online faculty members from private two-year colleges, and faculty members of public or private 4-year institutions. The small sample size is a limitation. In view of the small number of participants, gender, race, age, and number of years teaching in higher education were not considered as variables in this study.

The size, variety, and depth of the sample of participants who took part in the study are also limitations (Yin, 2009). The responses of these faculty members may not be representative of the entire Massachusetts community college faculty members. In future studies, more participants may add to what researchers currently know about online teaching strategies to enhance student educational success. While the faculty participants provided primarily positive feedback regarding their online teaching strategies and practices, future access to archive documents such as end of the term course evaluations, faculty evaluations and other performance data can only lead to program improvements and increased online student rates of success.

**Recommendation for Future Research**

Although the findings of this study deserve to be considered as means of understanding the teaching strategies applied in online courses at the community colleges, future research and further considerations could expand the depth of findings while expanding the number and variety of colleges and universities (Yin, 2009). Lack (2013) claimed that there have been limited rigorous efforts to produce compelling evidence of learning outcomes associated with online courses of the community colleges. The Online Education Department at community colleges has generally invested very little energy in fully understanding who their teachers are, what their needs are, and how the department and college can sustain their support for them.
Online teaching and student success are still in experimental stages (Johnson & Mejia, 2014) and there is not enough evidence to determine which teaching strategies for online courses are working best. The need for additional research determining which online teaching strategies can be effective in enhancing student pass rates and promoting students’ educational success rates within the online education of the community colleges is apparent. With that in mind, it would seem possible that any new qualitative or quantitative research would contribute to the current body of the knowledge of teaching strategies and student success in the online education.

The data for this study revealed that the faculty participants had a variety of backgrounds and educational training. It was difficult to establish explicit connections between their professional and personal histories and their current experiences as face-to-face and online education faculty members. One way to further investigate the aforementioned connection is to increase the sample size in this study.

The results from this study led to the need for a similar study with a larger sample size that includes online faculty members with teaching experience in both two and four-year colleges and universities. Increasing the sample of online faculty members would allow for additional patterns to be revealed related to the teachers’ training, teaching practices, and online teaching experiences. Additional sites would also allow for a more nuanced understanding of contextual differences.

This case study can be replicated in four-year private or public colleges and universities with more specificity regarding the selected faculty participants. The design of this study could target this research at a specific department of a college or university if a department dean wanted to determine factors relating to success and failure in their online courses.
In addition, further studies needed to determine how online teaching and learning could create a supportive learning environment and how it can give academic and technical supports around the clock to students in order for them to become effective learners. The faculty members are very critical to online achievement. They hold copyright and intellectual property rights in high importance. Incentives were essential to their accepting and being involved in course design, development and delivery (Amason, 2007a). Since effective teaching strategies is one of the most important aspects of online education, future research needed to investigate exemplary faculty members and preparation training programs at each college.

This study explored the teaching strategies that the faculty members, who teach face-to-face and online courses at the community colleges, implemented to enhance online student success. It has not directly investigated the experiences of students, nor student learning outcomes. Further study is needed to determine the effects of teaching strategies with online pedagogy, technology, and proper training on preparing faculty and students to succeed in online teaching and learning environment.

**Conclusion**

In an online environment, learning must embrace the elements of the Community of Inquiry Framework: social presence, cognitive presence, and teaching presence to develop teaching strategies that enhance the educational success of online students. Among the varying tasks in online teaching and learning, such as guiding student learning or facilitating student connections, it is evident that the role of the online faculty member has changed from a “sage on stage” to a facilitator and mentor who help students to construct new knowledge and guide them in constructive ways (Morrison, 2014). The utilization of effective teaching strategies, such as the ones featured in this case study, will help online faculty members in developing a deep and
meaningful online learning experience that enhances pass rates and student success, and manage the demand of online instruction while engaging students in learning.

According to Puzziferro and Shelton (2008), quality online courses are well-organized into learning modules, have clear learning goals and objectives, include materials and activities that directly support the learning goals and objectives, engage the learner through interaction with content, other students and the instructor, and offer sufficient and relevant resources for students. Moreover, Dimeo (2017) states that teaching an online course can create a more engaging, interactive and collaborative experience for the online students if the online faculty member takes full advantage of all available technology.

It is further evident from this case study that faculty members’ passion and enthusiasm are the driving force for the development of effective teaching strategies which enhance educational success for online students and are influenced by the knowledge and skills of online teachers, faculty members’ roles and responsibilities in online courses, and adapting to the needs of online students.
References


doi: 10.1080/10668920903323948


doi: http://dx.doi.org/10.5204/intjfyhe.v3i1.119


doi: 10.1007/s11162-004-1598-1


Figure 1. Community of Inquiry Framework. Adopted from “Community of Inquiry Model” by D. R. Garrison (2007). *Journal of Asynchronous Learning Networks*, 11(1). The framework is based on social constructivist educational theory and illustrates three principle elements critical to teaching strategies in an online environment.
APPENDIX B: Internal Review Board Consent

Northeastern University
Institutional Review Board

NOTIFICATION OF IRB ACTION

Date: March 9, 2018
IRB#: CPS17-07-03

Principal Investigator(s): Mounira Morris
Yazdan Shaghaghi Rodd

Department: Doctor of Education
College of Professional Studies

Address: 20 Belvidere
Northeastern University

Title of Project: Teaching Strategies that Enhance the Educational Success of Community College Online Students

STATUS: CONCLUDED

The Northeastern University IRB has closed the above mentioned project in accordance with your report in which you indicated the project has concluded as of February 26, 2018. If you would like to resume this project or re-analyze the data for a purpose unrelated to your original approval, you will need to seek approval for the new research.

Please contact The Office of Human Subject Research Protection at 617-373-4588, with any questions or concerns.

Nan C. Regina, Director
Human Subject Research Protection

Northeastern University FWA #4630
APPENDIX C: Recruitment Letter

Dear ____________________

I am a doctoral student at Northeastern University and a member of the Massachusetts Community College Council (MCCC). I invite you, a faculty member in a Massachusetts community college, to participate in a research study that will investigate best practices in teaching strategies that enhance passing rates and promote educational success of online students. This study is important because there is a limited amount of current research on this subject. The results, therefore, will be of importance to all online teachers. You can contribute by sharing your thoughts and experiences.

The goal of this study is to increase our understanding of the online education experience and improve our performance as we develop and implement teaching strategies for student success. This study will improve our understanding of how online teachers can work with their academic departments and the online education department to support a teaching and learning environment that can lead to enhanced passing rates and student success.

Faculty members who teach online as part of their day-time load at Massachusetts community colleges are being invited to participate in this research. Participation is voluntary and you may withdraw from the study at any time. Your position teaching online at a community college will not be impacted by your decision to participate. If you agree, you will be interviewed for no more than 45 minutes about your online teaching practices and experiences. Each interview will be audio recorded to ensure accuracy. Interviews will be conducted outside of working hours at a time and location convenient for you. Your participation in this study will remain confidential. Any records or publications based on this research will not identify you, your department or your college.

If you decide to participate in the study, please contact me by September 12, 2017. You will be asked to sign a consent form at the interview. I have attached a consent form that provides additional information about the study. If you have any questions before you decide, please do not hesitate to contact me at shaghaghi.y@husky.neu.edu or call my Cell Phone 781-913-1352.

If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, 960 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.7570, Email:irb@neu.edu.

Thank you for your consideration of this study.

Yazdan Shaghaghi Rodd
APPENDIX D: Informed Consent Document

Northeastern University, Department
Name of Investigator(s): Principal Investigator’s name- Dr. Mounira Morris
Student Researcher’s name- Yazdan S. Rodd
Title of Project: Teaching Strategies that Enhance the Educational Success of Community College Online Students

Informed Consent to Participate in a Research Study
We are inviting you to take part in a research study. This form will tell you about the study. You may ask the researcher any questions that you may have regarding this study. When you are ready to make a decision, you may tell the researcher if you want to participate or not. You do not have to participate if you do not want to. If you decide to participate, the researcher will ask you to sign this statement and will give you a copy to keep.

Why am I being asked to take part in this research study?
We are asking you to be in this study because you are teaching online courses at a Massachusetts community college. The researcher, Yazdan Rodd, is investigating best practices in Teaching Strategies that Enhance the Educational Success of Community College Online students.

Why is this research study being done?
The purpose of this research is to explore best practices in online teaching strategies that enhance the educational success of community college online students. There is a limited amount of research on teaching strategies for community college online education in connection with student success. Our goal is to gain a better understanding of how and what teaching strategies can be universally effective in teaching online and augment online students success.

What will I be asked to do?
If you decide to take part in this study, the researcher will ask you to participate in an individual interview in person. The purpose of the interview is to learn about your teaching strategies, practices, experiences and perceptions of community college online education. Each interview will be audio-recorded and transcribed to ensure that the researcher have an accurate record of your comments. The researcher will ask you to review the transcribed interview for the purpose of accuracy. Your participation in this study is completely confidential. Any reports or publications based upon this research will use pseudonyms and will not identify you, your department or any other individual as being affiliated with this study.

Where will this take place and how much of my time will it take?
Should you consent to participate in this study, you will participate in an interview in person, no longer than 45 minutes, between the months of August-December at a time and place of your choice. The researcher will contact you via your personal e-mail to arrange a convenient time and location for the interview.
**Will there be any risk or discomfort to me?**

There is no foreseeable risk or discomfort to you for participating in this study. Participating in the study is voluntary. You may withdraw from the study at any time. During the study, you can skip over any particular question and you can respond to any question as little or as much as you want. Your position as an instructor at your college will not be impacted by your decision to participate or not to participate in the study.

**Will I benefit by being in this research?**

There will be no direct benefit to you for taking part in this study. However, the information learned from this study may help participating online faculty gain an understanding of online educational experiences when developing and implementing teaching strategies for the success of online students. In addition, this study identifies how online faculty could be helped, supported, prepared, advised, and equipped to do a better job in helping community college students adjust to the future of online education. It may inform our understanding of how online faculty can support and learn from each other shared experiences.

**Who will see the information about me?**

Your part in this study will be confidential. Only the researchers on this study will see the information about you. No reports or publications will use information that can identify you in any way or any individual as being of this project.

Pseudonyms will be created for the individuals studied to protect the identity of the participants. The audio-recorded interview files will be uploaded into the password protected electronic backup system, and it will be kept in the locked file cabinet designated for the sole purpose of this study. The audio-recorded files will be destroyed once they are transcribed. All collected data: transcripts, coded transcripts, document containing data analysis, or documents collected for this project will be stored in a secure and password protected electronic backup system that is only accessible to the researcher and they will be kept in the locked file cabinet of the student researcher’s house. These data will be destroyed after three years.

In rare instances, authorized people may request to see research information about you and other people in this study. This is done only to be sure that the research is done properly. The only individual who would possibly review this data is my Faculty Advisor, Dr. Mounira Morris, or the individuals on the Northeastern University Institutional Review Board.

**If I do not want to take part in the study, what choices do I have?**

A participant can withdraw during any point in this study.

**What will happen if I suffer any harm from this research?**

No special arrangements will be made for compensation or for payment for treatment solely because of your participation in this research.

**Can I stop my participation in this study?**

Your participation in this research is completely voluntary. You do not have to participate if you do not want to. You may withdraw from the study at any time. During the study, you can skip over any question or particular question. You can respond to any question as little or as much as you want and you can refuse to answer any question.
Who can I contact if I have questions or problems?
If you have any questions about this study, please feel free to contact Yazdan S. Rodd at ysrodd@bhcc.mass.edu, the person mainly responsible for the research. You can also contact Dr. Mounira Morris at Mo.morris@northeastern.edu, the Principal Investigator.

Who can I contact about my rights as a participant?
If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, 490 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@neu.edu. You may call anonymously if you wish.

Will I be paid for my participation?
Your will be given a $25 Visa Gift Card as soon as you complete the study.

Will it cost me anything to participate?
You will incur no cost to participate in this study.

Is there anything else I need to know?

I agree to take part in this research.

____________________________________________  __________________________
Signature of person agreeing to take part in this research Date

____________________________________________
Printed name of person above

________________________
Signature of person who explained the study to the participant above and obtained consent

____________________________________________
Printed name of person above

Depending upon the nature of your research, you may also be required to provide information about one or more of the following if it is applicable:
1. A statement that the particular treatment or procedure may involve risks to the subject (or to the embryo or fetus, if the subject is or may become pregnant) which are currently unforeseeable.
2. Anticipated circumstances under which the subject’s participation may be terminated by the investigator without regard to the subject’s consent.
3. Any additional costs to the subject that may result from participation in the research.
4. The consequences of a subject’s decision to withdraw from the research and procedures for orderly termination of participation by the subject.
5. A statement that significant new finding(s) developed during the course of the research which may be related to the subject’s willingness to continue participation will be provided to the subject.
6. The approximate number of subjects involved in the study.
APPENDIX E: Interview Protocol

Participant 1A
Date:
Part I.

[Begin Audio]

Interviewer- Hello. You have been selected to speak with me today because you are being identified as a faculty who has a great deal of experience to share about teaching in a community college online education. My research project focuses on the experiences of online faculty who teach in a community college online education with a growing student population. Through this understanding we hope to gain more insight into the doctoral experience and how students transition into their roles as scholar practitioners who engage in research. Hopefully this will allow me to identify effective teaching strategies that can enhance the educational success of community college online students.

Because your response is important and I want to make sure to capture everything you say, I would like to audio record our conversation today. Do I have your permission to record this interview? I will also be taking written notes. I can assure you that all responses will be confidential and only a pseudonym will be used when quoting from the transcripts. I will be the only one privy to the recorded file, which will be eventually destroyed after they are transcribed.

To meet our human subject requirements at the university, you must sign the consent form I have with me. Essentially, this document states that: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) there is no intent to inflict any harm. Do you have any questions about the interview process or how your data will be used?
We have planned this interview to last no longer than about 45 minutes. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. Interviewer - Do you have any questions at this time?

Participant -

Interviewer: We will learn a great deal together on this subject.

Interviewer - with your permission, I will begin recording and taking notes.

Participant -

**Interviewee Background**

1. Interviewer: How long have you been teaching online at a community college?
2. Interviewer: How were you trained to be an online teacher?

Part II.

**Teaching Online**

1. Interviewer: What are your perceptions of online teaching?
2. Interviewer: What are your roles and responsibilities as an online faculty member?
3. Interviewer: What knowledge and skills do you think are essential for one to be a successful online faculty member?
4. Interviewer: How do you design and develop your online course?
5. Interviewer: What policies and procedures do you apply in your online course(s) to enhance learning and pass rates?
6. What should be considered during the design of online courses to accommodate students with different learning styles?
7. What strategies do you use to cultivate students’ higher order thinking skills?
8. How do you provide opportunities for your students to interact and collaborate with each other?

9. What strategies do you use in your online courses to encourage students’ engagement?

10. Interviewer: What are some effective teaching strategies that you employ in your online courses? How do they impact your course pass rates?

11. Interviewer: How have you modified your online course(s) over time to address student challenges?

12. Interviewer: How do you ensure that your teaching is effective?

13. Interviewer: How can the online teaching-learning processes be improved?

[End Audio]